Australian Energy Market Commission

RULE DETERMINATION

National Electricity Amendment (Connecting Embedded Generators Under Chapter 5A) Rule 2014

Rule Proponent
Clean Energy Council

13 November 2014

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About the AEMC

The AEMC reports to the Council of Australian Governments (COAG) through the COAG Energy Council. We have two functions. We make and amend the national electricity, gas and energy retail rules and conduct independent reviews for the COAG Energy Council.

Summary

The Australian Energy Market Commission has made a more preferable final rule providing eligible embedded generator proponents a choice of which framework to use when negotiating connection to a distribution network.

The ability to choose a connection framework has been created to address the difficulties that some embedded generator proponents may face in attempting to connect to a distribution network. In making a selection, embedded generator proponents will be able to use a process that best suits their needs when seeking to connect to a distribution network. This should result in efficient and timely connection of smaller generators to the distribution network. It will also promote generation competition and contribute to efficient investment in embedded generation and distribution networks.

The final rule determination and the final rule have been made in response to a rule change request from the Clean Energy Council. Alongside the AEMC's Power of Choice reforms the final rule supports the continuing, consumer driven, transformation of Australia's energy markets.

Connection frameworks in the National Electricity Rules

There are two connection frameworks for embedded generator proponents in the National Electricity Rules:

- the embedded generator connection process in Chapter 5; and
- the connection process in Chapter 5A.

Chapter 5 also includes connection processes for load and other generation.

The embedded generator connection process in Chapter 5 applies to generating systems greater than the standing exemption from the requirement to register as a participant with AEMO (currently 5MW). This new process was created by the AEMC specifically for these embedded generators in April 2014 in response to concerns raised about a lack of clarity in the general connection provisions in Chapter 5 at the time. It addressed these concerns by providing a more prescribed process. In particular, it provides detailed requirements in regard to the process, timeframes and the provision of information before and during the connection process.

Chapter 5 applies in all jurisdictions in the National Electricity Market.

The second connection framework is in Chapter 5A. It applies to embedded generator proponents seeking to connect a generating system of less than the standing exemption to register as a participant with AEMO. These are known as non-registered embedded generators and micro embedded generators (embedded generator connections that comply with Australian Standard AS4777).

There are three different connection options within Chapter 5A that are relevant to embedded generators:

- basic connections for micro embedded generators (for example, residential roof top solar systems);
- standard connections for embedded generator proponents that are not covered by a basic connection but for which there is an AER approved model standing offer; and
- negotiated connections for all other embedded generator proponents in Chapter 5A and those that elect to use this option.

The negotiated connection process in Chapter 5A is open, flexible and generally shorter than the Chapter 5 embedded generator connection process. It also accommodates the connection of load customers. The Chapter 5A negotiated connection process is available in those jurisdictions which have implemented the National Energy Customer Framework. These are Tasmania, South Australia, New South Wales and the Australian Capital Territory. The Queensland and Victorian Governments have announced that they intend to implement the NECF from 1 July 2015 and 31 December 2015 respectively.

In non-NECF jurisdictions, embedded generator proponents seeking a connection of less than the standing exemption can use an applicable process in a relevant jurisdictional instrument or can seek to use the Chapter 5 process. Where no jurisdictional instruments for the connection of embedded generators exist, the relevant DNSP would determine the connection process.

The rule change request and proposed rule

The rule change request submitted by Clean Energy Council focussed on the less prescriptive nature of the Chapter 5A negotiated connection process as it relates to embedded generators. It reflected the concern of some embedded generator proponents that the less detailed process may be a barrier to the efficient connection of embedded generators across the National Electricity Market.

The Clean Energy Council's proposed rule included a number of amendments to the Chapter 5A negotiated connection process with the aim of improving clarity and certainty for proponents of embedded generators. In particular, the Clean Energy Council sought greater prescription regarding:

- the structure of the connection process and the timing of actions within the process;
- information to be provided by distributors;
- the level of power transfer capability that the distributor would provide;
- fees and charges relevant to the connection of an embedded generator;

- the liability of an embedded generator proponent to a distributor; and
- the matters that may be the subject to dispute resolution.

Many of the issues raised by the Clean Energy Council are similar to the issues that the Commission addressed in its development of the new embedded generator connection process in Chapter 5.

The final rule

In making the more preferable final rule, the Commission has decided that broadening the scope of the Chapter 5 embedded generation connection process would address the main concerns of embedded generator proponents regarding the level of prescription currently found in the Chapter 5A negotiated connection process without creating another connection process.

The final rule amends Chapters 5 and 5A of the National Electricity Rules. It applies to non-registered embedded generators, that is, generators with a generating capacity of less than 5MW but who are not micro embedded generators.

Proponents of embedded generators for whom a standard connection offer is not available will be eligible to use the Chapter 5 embedded generator connection framework instead of the Chapter 5A arrangements if they wish to do so. The final rule provides that the selection of the Chapter 5 framework is at the discretion of the embedded generator proponent: it is not subject to agreement by the distributor.

The ability of an embedded generator proponent to select the Chapter 5 embedded generator connection process is only available to that proponent prior to it commencing the Chapter 5A connection process. In making the choice to use Chapter 5, proponents of embedded generators should be aware that all other provisions of Chapter 5, including its schedules (where relevant) would also apply to their project. These include: information provisions; fees and charging arrangements and the Chapter 8 dispute resolution provisions.

It is important that the eligible embedded generator proponents to whom Chapter 5 would be available are in a position to make an informed decision regarding which connection process to use. For this reason, the final rule includes additional requirements in Chapter 5A regarding the information that distributors are to provide on their websites for non-registered embedded generators. This includes information on possible connection charges and fees, general technical information and a register of generating plant. It is expected that the additional information would be incremental in nature and build on the information that is provided under similar provisions in Chapter 5.

In addition to the concerns expressed regarding the less prescriptive nature of the Chapter 5A negotiated connection process, the Clean Energy Council proposed a number of other specific amendments to some provisions. The Commission has considered each of these additional matters and the nature of the concerns identified. In some cases, where a key issue is the less prescriptive nature of Chapter 5A,

amendments to Chapter 5A do not appear necessary. This is because under the final rule eligible non-registered embedded generator proponents would be able to use the more detailed process set out in Chapter 5 which addresses some of the issues raised.

In relation to issues such as power transfer capability, augmentation for forecast load growth and dispute resolution, the Commission has concluded that on balance, the proposed amendments do not appear to be required as the relevant Chapter 5A provisions are sufficiently clear in their scope and intent or are otherwise appropriate. On the matter of an embedded generator's liability to a distributor, this is most appropriately managed through usual commercial negotiation taking into account the particular circumstances of the embedded generator project. The final rule does not make any change to this arrangement.

In not making significant amendments to the process for connecting an embedded generator under Chapter 5A the Commission has also taken into account that the process is relatively new and has not had extensive use to date.

The final rule will take effect on 1 March 2015. At present, the National Energy Customer Framework, of which Chapter 5A is part, does not apply in Victoria or Queensland. Until the NECF commences in those states, Chapter 5A and any amendments to it resulting from this rule change process will not apply in those states.

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1 The Clean Energy Council's rule change request

1.1 The rule change request

On 19 April 2013, the Clean Energy Council (CEC) made a request to the Australian Energy Market Commission (AEMC or Commission) to make a rule regarding negotiated connections for embedded generators under Chapter 5A of the National Electricity Rules (rule change request). The rule change request and proposed rule sought to amend the negotiated connection framework in Chapter 5A of the National Electricity Rules (NER) for embedded generators. It did not propose to make any changes to the connection process available to any load customer or to the frameworks for basic and standard connections for embedded generators.

1.2 Overview of current arrangements

There are two connection frameworks for embedded generator proponents in the National Electricity Rules:

- the embedded generator connection process in Chapter 5; and
- the connection process in Chapter 5A.

The embedded generator connection process in Chapter 5 applies to embedded generator proponents seeking to connect a generating system greater than the standing exemption from the requirement to register as a participant with AEMO (currently 5 megawatts). This new process was created by the AEMC specifically for these embedded generators in April 2014.

Chapter 5 applies in all jurisdictions in the National Electricity Market.

The second connection framework is in Chapter 5A. It applies to embedded generator proponents proposing seeking to connect a generating system of less than the standing exemption from the requirement to register as a participant with AEMO. These are known as non-registered embedded generators and micro embedded generators (embedded generator connections that comply with Australian Standard AS4777).[1]

There are three different connection options within Chapter 5A that are relevant to embedded generators:

- basic connections for micro embedded generators (for example, residential roof top solar systems);

1 The AEMC understand that Standards Australia is reviewing AS4777 and that the threshold for compliance with this standard may increase to 50 kW per phase.

- standard connections for embedded generator proponents that are not covered by a basic connection but for which there is an AER approved model standing offer; and

- negotiated connections for all other embedded generator proponents in Chapter 5A and those that elect to use this option.

The Chapter 5A negotiated connection process is available in those jurisdictions which have implemented the National Energy Customer Framework (NECF). These are Tasmania, South Australia, New South Wales and the Australian Capital Territory.[2] The NECF is expected to commence in Queensland on 1 July 2015.[3] The Victorian Government has announced that it intends to implement the NECF by 31 December 2015.[4]

In non-NECF jurisdictions, embedded generator proponents seeking a connection of less than the standing exemption can use an applicable process in a relevant jurisdictional instrument or can seek to use the Chapter 5 process. Where no jurisdictional instruments for the connection of embedded generators exist, the relevant DNSP would determine the connection process.

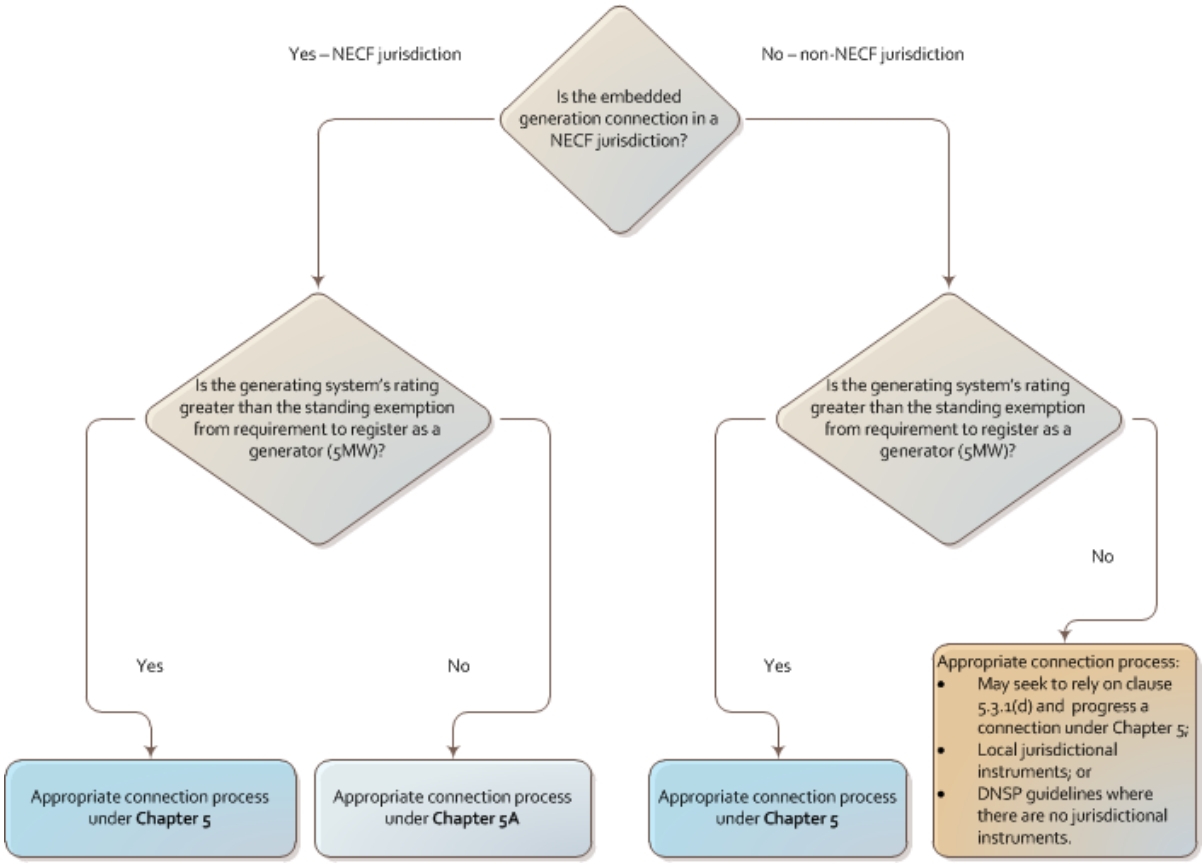
A diagrammatic representation of the appropriate connection process for different embedded generator connection applicants is provided in Figure 1.1.

2 The NECF has become effective at different dates: ACT, 1 July 2012; Tasmania, 1 July 2012; South Australia, 1 February 2013; New South Wales, 1 July 2013.

3 The National Energy Retail Law (Queensland) Act 2014 is expected to commence on 1 July 2015. The Hon Mark McArdle (Minister for Energy and Water Supply), Families to benefit from electricity reforms, media release, Queensland Government, 10 September 2014.

4 On 13 October 2014 the Victorian Government announced that its retail energy regulatory arrangements will transition to the NECF by 31 December 2015. See: Department of State Development, Business and Innovation, Victoria's Energy Statement, 13 October 2014, p20.

Figure 1.1 Diagrammatic representation of appropriate connection process



Source: AEMC, *Connecting Embedded Generators, Rule Determination*, 17 April 2014, p52.

1.3 Reason for the rule change request

The CEC considered that embedded generator proponents negotiating a connection to a distribution network under Chapter 5A of the NER will experience unexpected costs, significant delays and an uncertain investment environment.[5]

Although the CEC acknowledged that some standard connection offers will become available to embedded generator proponents over time, it questioned the extent to which distribution network service providers (DNSP) will develop these. The CEC suggested it will be impractical for DNSPs to develop standard connection offers for all embedded generators within the scope of Chapter 5A.[6] The CEC claimed that as a result, the negotiated connection process will be used by the vast majority of embedded generator proponents with a capacity between 10 killowatts (kW) and 5 megawatts (MW).[7]

The cause of the overarching problem of a long and difficult connection process is, according to the CEC, that the negotiated connection process in Chapter 5A lacks

5 CEC rule change request, 19 April 2013, pp2-3.

6 ibid. p8.

7 ibid. p6.

sufficient prescription.[8] It suggested that this lack of prescription is due to the approach taken in the drafting of Chapter 5A. The CEC contended the drafting approach was intended to not significantly disrupt the existing jurisdictional processes. It also considered that the drafting of Chapter 5A unnecessarily treats embedded generator connections in the same way as load connections.[9]

1.4 Solution proposed in the rule change request

To address these concerns, the CEC proposed amendments that would increase the level of prescription in the Chapter 5A negotiated connection process. The majority of the amendments proposed by the CEC related to information to be exchanged between the parties and the structure and timing of the process. In particular, it proposed to:

- amend the structure and timing of the process such that embedded generator proponents receive the information they need to assess the viability of proposed projects at the earliest possible time and that DNSPs are prevented from delaying the process or providing information that is not accurate or up to date;

- prescribe in detail the information that DNSPs must provide embedded generator proponents before making a "negotiated connection application". For example, the proposed rule prescribed, in a new schedule to Chapter 5A, specific information that the DNSP must provide an embedded generator proponent prior to it submitting a negotiated connection application. This would include information such as proposed technical standards, design and planning information and interface requirements such as switching and isolation facilities;

- require the express provision of information about power transfer capability at a number of stages in the connection process from the DNSP to the embedded generator proponent and other parties that may be affected by a proposed connection. The proposed rule also expressly allowed an embedded generator proponent to seek distribution network user access arrangements at any level of power transfer capability. In addition, DNSPs would be required to use reasonable endeavours to make a connection offer that complies with the distribution network user access arrangements reasonably sought by the proponent, including the location of the proposed connection point and the level and standard of power transfer capability that the network will provide;[10]

- require DNSPs to consider the technical merit of the connection arrangements proposed, or determine the technical requirements for the connection when assessing negotiated connection applications;

- require DNSPs to describe the technical requirements for connection, including any relevant technical standards, when assessing negotiated connection applications;

8 ibid. p2.

9 ibid. p7.

10 Power transfer capability relates to the rate at which the network can transport energy.

- make clear that any matter relevant to a connection is subject to negotiation. The CEC considered that the current provision indicates only connection charges are negotiable;

- require that all information exchanged between the parties as part of the negotiation process be treated as confidential information;

- require DNSPs to provide an embedded generator proponent access to their legal personnel in order to negotiate the terms and conditions of an offer, after the offer has been made; and

- require a more detailed breakdown of connection costs and process fees in the connection offer.[11]

The CEC also proposed a number of other amendments to Chapter 5A of the NER. These were:

- restrict the ability of DNSPs to charge for the provision of information that they are required to maintain;

- prevent DNSPs from charging a fee to cover the costs of negotiation and processing a negotiated connection application until the proponent has been advised by the DNSP that the relevant application is complete;

- remove the ability for embedded generator proponents to be charged for augmentations relating to forecast load growth;

- expressly provide that a negotiated connection offer must not include a charge that is inconsistent with Chapter 5A;

- limit connection costs that DNSPs can charge embedded generator connection proponents to those which could have been reasonably identified by the proponent from the information initially provided by the DNSP. The purpose of this limitation is to encourage DNSPs to provide complete, correct information to the embedded generator proponent in the first instance;

- require a limitation on embedded generator liability in the minimum content requirements for a connection contract under Schedule 5A.1. The CEC did not propose what this limit should be or how, conceptually, liability should be limited and for what actions or omissions; and

- amend the definition of a "relevant dispute" under Part G of Chapter 5A to broaden the scope of issues that can be considered under it. Specifically, to include in the definition of a "relevant dispute" a dispute between a customer and a DNSP about the requirements of Chapter 5A and any material produced by a DNSP under Chapter 5A. This proposed change addresses the CEC's concerns that the Chapter 5A dispute resolution process is too narrow and

11 ibid. pp22-52 and Attachment 1.

excludes aspects of the negotiation process that may be subject to disagreement.[12]

1.5 Relevant background

In April 2014, the AEMC completed an assessment of a rule change request relating to the connection of embedded generators to distribution networks under Chapter 5 of the NER (the Chapter 5 rule change request).[13] Chapter 5 of the NER caters for embedded generator connections that are above the Australian Energy Market Operator's (AEMO) standing exemption from the requirement to register as a generator in the National Electricity Market (NEM). AEMO has set this minimum threshold at 5MW of generating capacity.[14]

Following extensive consultation with stakeholders, the Commission made substantial amendments to the connection process as it applies to embedded generators in Chapter 5 in its final rule. The final rule commenced on 1 October 2014. The key amendments were:

- DNSPs are now required to publish an 'information pack' setting out information to guide embedded generator proponents on matters such as the process requirements and potential costs;
- DNSPs are now required to publish a register of generating plant that has been successfully connected to the network in the preceding five years to allow embedded generator proponents to better understand the types of equipment that have been able to connect to a distribution network;
- the introduction of a two-stage connection enquiry process consisting of a preliminary enquiry stage followed by a detailed enquiry stage;
- the introduction of clear, relevant information requirements and timeframes for both parties at each stage of the connection process; and
- clarifying that the existing dispute resolution process set out in the NER is applicable to technical issues as well as other matters arising during a connection process.

Many of the issues considered as part of the Chapter 5 rule change request are similar to those raised by the CEC in regard to Chapter 5A. Where relevant, the AEMC has drawn on work carried out during the Chapter 5 rule change process to assist in its consideration of the CEC's rule change request.

12 ibid.

13 AEMC, Connecting embedded generators, rule determination, 17 April 2014. The rule change request was lodged by ClimateWorks, Property Council of Australia and Seed Advisory.

14 AEMO, *NEM Generator Registration Guide*, May 2013, pp35-36.

In addition, and also of relevance to the issues raised by the CEC, is the AEMC's final rule on a distribution network planning and expansion framework.[15] The rule, which commenced on 1 January 2013, established a national framework for distribution network planning and expansion. This included new obligations on DNSPs to develop and document a demand side engagement strategy and to engage with non-network providers. In addition, DNSPs are now required to publish an annual planning report that includes information on demand forecasts and system limitations.

1.6 The rule change process

On 15 May 2014, the Commission published a notice advising of its intention to commence the rule making process and the first round of consultation in respect of the CEC's rule change request. The assessment of this rule change request had been deferred until it was practical to consider the request it in light of the amendments made to the Chapter 5 connection process specifically for embedded generators on 17 April 2014. A consultation paper prepared by AEMC staff identifying specific questions for consultation was also published with the rule change request. The Commission received 11 submissions as part of the first round of consultation.

On 21 August 2014 the Commission published the draft rule determination and draft rule. The Commission received 15 submissions on the draft rule determination and one supplementary submission.

All submissions are available on the AEMC website.[16] A summary of the issues raised in submissions, and the Commission's response to each issue, is contained in Appendix A.

In addition to considering written submissions, the AEMC discussed various issues relating to the connection of embedded generators under Chapter 5A with a number of stakeholders. The issues arising from these discussions were also considered in making the draft and final rule determinations.

15 AEMC, Distribution network planning and expansions framework, rule determination, 11 October 2012.

16 www.aemc.gov.au

2 Final rule determination

2.1 Commission's final rule determination

The Commission has determined to not make the proposed rule by the CEC and instead to make a more preferable final rule.[17]

The final rule is attached to and published with this final rule determination. Its key features are described in Chapter 3. The final rule includes a number of drafting changes from the draft rule. They are largely the result of issues raised in submissions to the draft rule as summarised in Appendix A.2.

Having regard to the issues raised in the rule change request and by stakeholders, the Commission is satisfied that the final rule will, or is likely to, better contribute to the national electricity objective (NEO) than the proposed rule.

The final rule applies to proponents of non-registered embedded generators, that is generators with a generating capacity of less than 5MW but who are not micro embedded generators. Where a DNSP does not provide a standard connection offer to these proponents they will be eligible to use either the Chapter 5 embedded generator connection process or the negotiated connection process set out under Chapter 5A. This compares to the proposed rule which replaced the existing negotiated connection process in Chapter 5A with a new more detailed process in the same chapter. Giving embedded generator proponents a choice under the final rule will enable them to select the connection process which best suits their needs. The negotiated connection process in Chapter 5A provides a flexible and potentially shorter process that may be relevant for some embedded generator proponents. For this reason, it should remain in place.

However, other embedded generator proponents may consider that the more detailed Chapter 5 embedded generator connection process would be more appropriate for their needs. For example, to the extent that the lack of prescription in the Chapter 5A process is a concern to an eligible embedded generator proponent, then the more detailed provisions included in the Chapter 5 embedded generator connection process may address these concerns. For this reason, the Commission has decided to allow such embedded generator proponents to select the Chapter 5 embedded generator connection process.

This approach will, or is likely to, better contribute to the NEO as it provides prescription where this may be useful without creating an additional connection process and associated administrative burden. It also allows the Chapter 5A process, which may be useful for some embedded generator proponents, to be used and tested further.

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17 Under s. 91A of the NEL the AEMC may make a rule that is different (including materially different) from a market initiated proposed rule (a more preferable rule) if the AEMC is satisfied that having regard to the issue or issues that were raised by the market initiated proposed rule (to which the more preferable rule relates), the more preferable rule will or is likely to better contribute to the achievement of the national electricity objective.

The final rule also includes additional requirements regarding the information that DNSPs are to provide on their websites. Specifically, the type of public information relating to embedded generators that is to be provided in accordance with Chapter 5 will also need to be provided in regard to non-registered embedded generators. There will be some cost to distributors in providing this additional public information. However, these costs would be likely to be outweighed by the benefits of this information being made available.

In summary, the Commission is satisfied that the reasonable needs of both the DNSPs and embedded generator proponents are met. In addition, the final rule is expected to support the efficient connection of embedded generators to distribution networks while not undermining the security and reliability of a network.

The final rule does not represent a significant administrative burden on the parties. The Commission is satisfied that the cost to implement the rule would be likely to be outweighed by the benefits of efficient connections being able to occur under appropriate processes and non-registered embedded generators having access to more up-front information.

The CEC proposed other changes related to Chapter 5A negotiated connections for embedded generators. They broadly related to:

- specific amendments associated with the structure of the process and information to be provided by the parties;
- the level of power transfer capability that the network will provide;
- process fees and connection charges;
- embedded generator liability; and
- dispute resolution.

The final rule does not include any of the specific proposed amendments on these issues. However, some of the issues are addressed by providing eligible embedded generators proponents with access to Chapter 5.

Commencement of final rule

The final rule will commence operation on 1 March 2015. This will provide DNSPs with time to undertake preparations to comply with the provisions. It is expected that much of this preparation will build on work already undertaken in accordance with other NER provisions. Any connection processes that have commenced under Chapter 5A prior to this date must be completed using the process in that chapter.

At present, the NECF, of which Chapter 5A is part, does not apply in Victoria or Queensland. The NECF is expected to commence in Queensland on 1 July 2015.[18] The Victorian Government has announced that it intends to implement the NECF by 31 December 2015.[19] Until this occurs, Chapter 5A and the amendments to it resulting from this rule change process will not apply in those states.

The Commission's reasons for making this final rule determination are set out in Chapters 3 and 4. Appendix B sets out further detail on the legal requirements for the making of this final rule determination.

2.2 Rule making test

The Commission may only make a rule if it is satisfied that the rule will, or is likely to, contribute to the achievement of the NEO. This is the decision making framework that the Commission applies.

The NEO states:

> "The objective of this Law is to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to:
>
> (a) price, quality, safety, reliability and security of supply of electricity; and
>
> (b) the reliability, safety and security of the national electricity system."

The objective captures the three dimensions of efficiency: productive (efficient operation), allocative (efficient use of) and dynamic efficiency (efficient investment).[20]

For this rule change request, the Commission considers the relevant aspects of the NEO are:

- efficient investment in embedded generation and distribution networks;
- efficient operation of distribution networks; and

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18 The National Energy Retail Law (Queensland) Act 2014 is expected to commence on 1 July 2015. The Hon Mark McArdle (Minister for Energy and Water Supply), Families to benefit from electricity reforms, media release, Queensland Government, 10 September 2014.

19 On 13 October 2014 the Victorian Government announced that its retail energy regulatory arrangements will transition to the NECF by 31 December 2015. See Department of State Development, Business and Innovation, Victoria's Energy Statement, 13 October 2014, p20.

20 Productive efficiency means goods and services should be provided at lowest possible cost to consumers; allocative efficiency means that the price of goods and services should reflect the cost of providing them, and that only those products and services that consumers desire should be provided; dynamic efficiency means arrangements should promote investment and innovation in the production of goods and services so that allocative and productive efficiency can be sustained over time, taking into account changes in technologies and the needs and preferences of consumers.

- efficient use of electricity services.

The Commission is satisfied that the final rule will, or is likely to, contribute to the achievement of the NEO.

The final rule will give eligible embedded generator proponents under Chapter 5A the ability to choose whether to connect under the more prescribed connection process in Chapter 5 or the more flexible connection process in Chapter 5A. Giving embedded generator proponents this choice will allow them to connect under a process that best suits their needs. Connecting under the process that best suits their needs allows embedded generator proponents to connect in an efficient and more timely manner. This will promote generation competition and contribute to efficient investment in embedded generation and distribution networks. This will also enable DNSPs to make better informed decisions when planning and operating their networks.

In this way, the final rule will promote efficient investment and operation of distribution networks and efficient use of electricity services and thus promote the long term interests of consumers in respect of the price of electricity services.

There will be an additional administrative burden for DNSPs in making relevant information available. Such information is necessary to allow eligible embedded generator proponents to make an appropriately informed choice. However, these costs would be unlikely to outweigh the benefits that will arise by giving eligible embedded generator proponents in Chapter 5A the choice of which process to connect under.

2.3 Assessment approach

In the context of making an assessment about the proposed and final rules and their consistency with the NEO, the Commission has developed an assessment framework.

The Commission considers that an efficient negotiated connection process for embedded generators would generally have the following characteristics:

- meet the reasonable needs of embedded generator connection proponents;
- support connection services being priced in a cost reflective manner;
- support connection services being provided at least cost; and
- does not undermine the security and reliability of the relevant distribution network.

The Commission considers these outcomes would support investment and competition in embedded generation. It will also support investment in, and efficient use of, distribution networks.

To support its assessment of whether the CEC's rule change request and any final rule is likely to promote these outcomes, the Commission considered the following issues:

- transparency: the NER should facilitate the provision of accurate and timely information to embedded generator connection proponents. This includes information by which the costs of connection can be reasonably assessed. Better and more transparent information promotes allocative efficiency. It also promotes dynamic efficiency by enhancing confidence in, and predictability of, the process;

- allocation of costs (and risks): efficient contracting arrangements allocate costs and risks to the party best able to manage (reduce) them. This typically means those whose decisions cause the costs or risks to be incurred (assuming that causes can be clearly identified). Efficient risk and cost allocation supports productive and dynamic efficiency;

- transactions costs: the connection process should be timely and easily understood by stakeholders. An overly complex or burdensome process for negotiating connection is likely to deter efficient connections (with implications for investment and innovation in embedded generation). Low transactions costs support both productive and dynamic efficiency;

- security and reliability of supply: connections should not undermine the ability of DNSPs to meet their performance obligations for the safety, security and reliability of the network; and

- administrative burden: the NER should not impose an unnecessary administrative or compliance burden on either embedded generator proponents or DNSPs. Higher administrative costs will be reflected in prices and passed through to consumers, which reduces productive efficiency.

In addition, the Commission has also had regard to the following in making its decision:

- the extent to which experiences in connecting embedded generators to distribution networks in recent years relates to the use of the negotiated connection process currently set out in Chapter 5A of the NER;

- the recent implementation of the distribution and network planning and expansion framework rule and the extent to which these amendments, particularly in relation to information provision, may address the concerns of the CEC and embedded generator proponents;

- the similarity and differences between the issues raised in the CEC rule change request and those identified through the recent assessment of the connection process for embedded generators under Chapter 5 of the NER; and

- the extent to which the changes to Chapter 5, which commenced on 1 October 2014, may appropriately address the issues identified by the CEC and other embedded generator proponents in relation to Chapter 5A of the NER if they are made available to non-registered embedded generator proponents.

2.4 Strategic priority

This final rule determination relates to the AEMC's strategic priority of market arrangements that encourage efficient investment and flexibility. It affects the process by which embedded generator proponents are able to negotiate a connection to a distribution network. Use of appropriate processes would support the efficient connection of embedded generators.

3 The negotiated connection process

This chapter sets out the Commission's broad response to the issues raised by the CEC in regard to the negotiated connection process for embedded generator proponents under the AEMO standing exemption registration threshold of 5MW.

3.1 Amending the current connection process

As set out in Chapter 1 of this final rule determination, the CEC has proposed a number of amendments to the Chapter 5A negotiated connection process for embedded generators. The amendments focused on increasing the level of prescription within the process to improve clarity and certainty for parties.

However, the Commission considers that the particular changes included in the proposed rule are not the most appropriate way to achieve the CEC's aim of a clearer connection process. Similarly, the amendments to Chapter 5A suggested by the CEC in its submission to the draft rule determination are not considered appropriate. The Commission's assessment of these proposed amendments is set out in Chapter 4 of this final rule determination.

Accordingly, the final rule provides an alternative, and more preferable, approach to address the issues regarding the Chapter 5A negotiated connection process. Rather than amend the current Chapter 5A process, the final rule broadens the scope of the Chapter 5 embedded generation connection process. That is, some embedded generator projects that have a generating capacity of less than 5MW will, under the final rule, be able to use the Chapter 5 embedded generator connection process. In this way, embedded generator proponents who value a more detailed connection process will be able to use one by accessing the Chapter 5 process. This allows the issues arising from using a less prescribed process to be addressed without substantial amendments to Chapter 5A.

In deciding not to amend the Chapter 5A negotiated connection process as proposed by the CEC, the Commission notes that:

- while the number of embedded generation connections is growing, experience in using the Chapter 5A negotiated connection process is still limited;
- the Chapter 5A negotiated connection process may be suitable for, and preferred by, some embedded generation proponents; and
- the current Chapter 5A negotiated connection process is relevant for load connections as well as embedded generators.

Each of these points is discussed below.

3.1.1 Experience in using Chapter 5A

The CEC has submitted that the negotiated connection process in Chapter 5A lacks prescription and that, as a result, embedded generator proponents wishing to connect to a distribution network under this chapter face a long and unpredictable connection process. Such difficulties may impact on the final size and cost of an embedded generation project and the financing of such projects.

The CEC has provided information that it claims shows that some embedded generator proponents under 5MW have experienced difficulties in connecting to a distribution network in the past.[21] This included a survey of the connection experiences of embedded generator proponents over the last two years. The information also indicates that the number of embedded connections continues to increase across the NEM.

While this information provides an important context for assessing the CEC's rule change request, the information provided only suggests that there has been some experience in using the negotiated connection process under Chapter 5A of the NER. It is unclear whether all of the examples provided relate to connecting to distribution networks under Chapter 5A. Nor is it clear whether there were difficulties in achieving connections under Chapter 5A and how extensive the difficulties were. This is because:

- The number of small-scale technology certificates (STC) claimed by embedded generator proponents which was used by the CEC in its analysis does not provide a reliable measure of completed connections at a particular point in time. This is because the right to create an STC exists for 12 months after the embedded generating system has been installed, this being the day the unit is first able to produce and deliver electricity.[22]

- The earliest adoption of Chapter 5A was in July 2012 in Tasmania and the ACT. Allowing for a period for negotiations to be carried out, it is possible that some completed connections since January 2013 would have been negotiated under the Chapter 5A process in these jurisdictions. Connections finalised earlier are likely to have been negotiated under previous relevant jurisdictional arrangements.

- A similar time lag to that identified above needs to be taken into account when considering how many connections would have been completed under Chapter 5A in New South Wales and South Australia. The estimated time lag is consistent with the CEC's view that negotiated connections are taking between 1 and 12 months.[23] Taking this into account, it is likely that many of the responses to the CEC embedded generator connection experience survey may reflect connections that were completed under previous jurisdictional arrangements.

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21 CEC submission to consultation paper, pp3-5; CEC submission to draft rule determination, p3-4. CEC supplementary submission to draft rule determination.

22 Renewable Energy (Electricity) Regulations 2000, rr. 19D(2)(a)&(d).

23 CEC submission to draft rule determination, p5.

It should also be noted that Chapter 5A has not yet been implemented in all jurisdictions and the period that Chapter 5A has been available to parties is relatively short, as noted in a number of submissions.[24]

The Commission does not consider it appropriate to make significant amendments to a process that is relatively new and has had limited use. It also notes that the information provided by the CEC has not set out clear specific examples of problems occurring under Chapter 5A. Further discussion of the information provided by the CEC in support of making amendments to the Chapter 5A negotiated connection process is provided in Chapter 4.

3.1.2 Usefulness of the Chapter 5A process

In addition to the above, the Commission considers that the current negotiated connection process in Chapter 5A may be useful and relevant to some embedded generator proponents. This is likely to remain the case in the future.

In particular, embedded generator proponents negotiating the details of connections based on either a basic or standard connection offer may find the more flexible and less prescriptive process suitable for their needs. This is because it is expected that the basic or standard connection offer will provide the starting point for negotiations. The Commission does not consider it appropriate, based on the information it has received, to alter the processes available to these categories of embedded generator proponents.

Some proponents of less complex or relatively small embedded generation projects may also find that the flexible and less prescriptive negotiation process is suitable for their needs. This view was supported in submissions to the draft rule determination by embedded generator proponents that considered that smaller embedded generators may not find the Chapter 5 process helpful due to its complexity.[25] The Chapter 5A negotiated connection process may also be appropriate for experienced embedded generator proponents familiar with the needs and processes of a DNSP.

The Commission has concluded that the current negotiated connection process in Chapter 5A is relevant for some embedded generator proponents both now and will continue to be so in the future and should therefore remain unchanged and available to all parties who are currently eligible to use it. This approach also does not create any new connection processes in the NER.

3.1.3 Load connections

The negotiated connection process currently set out in Chapter 5A of the NER is relevant for both load and embedded generator connections. To make amendments to

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24 Submissions to consultation paper: Energy Networks Association (ENA), p1; Department of Manufacturing, Innovation, Trade, Resources and Energy (DMITRE), p2; Energex, p1; Ergon, p2; NSW DNSPs, p1; and Victorian DNSPs, p1.

25 See for example: CEC submission to draft rule determination, p6; City of Sydney submission to draft rule determination, p3.

the process as proposed by the CEC may impact on both groups of connection applicant. However, in its rule change request the CEC clearly stated that it has not intended to impact on the process for load applicants. The CEC's focus was to amend the negotiated connection process for non-registered embedded generator proponents only.[26]

However, in its submission to the draft rule determination the CEC proposed amendments to the timing of stages within the negotiated connection process in Chapter 5A which would equally apply to load connections. It suggested these were non-controversial changes that would benefit all connecting parties while having negligible impact on DNSPs.[27]

The Commission's assessment of the rule change request and the issues raised in consultation throughout the process have been carried out with regard to the CEC's intention set out in its rule change request. Consistent with this, this final rule determination and the final rule address the negotiated connection process available to proponents of embedded generator projects that are less than the AEMO standing exemption registration threshold. As a result, no changes are made to the Chapter 5A negotiated connection process that will impact on potential load connections that will make use of this process.

3.2 Accessing the Chapter 5 connection process

3.2.1 Overview

The key issue raised by the CEC in regard to the Chapter 5A negotiated connection process is its lack of prescription. The CEC has asserted that this less prescriptive process has, and will, result in long and difficult connection processes for embedded generator proponents.

Similar issues were raised in regard to the connection process set out in Chapter 5 of the NER.[28] In response to those concerns, a connection process was developed in Chapter 5 specifically for embedded generators greater than the AEMO standing exemption threshold for registration as a generator. The Commission developed the process following extensive consultation with stakeholders. It addressed concerns about a lack of clarity by providing a more prescribed process. The amendments to the NER included detailed regulatory requirements for both parties in regard to process, timeframes and the provision of information before and during the connection process.

The CEC was an active participant in the Chapter 5 connecting embedded generators rule change process. It has also commented that there may be cases where Chapter 5 could be an applicable process for non-registered embedded generators.[29] Similarly,

26 CEC rule change request, p24.

27 CEC submission to draft rule determination, p6.

28 AEMC, Connecting embedded generators, rule determination, 17 April 2014, pp10-11.

29 CEC submission to consultation paper, 12 June 2014, p11.

some other stakeholders have commented that the Chapter 5 connection process is a relevant consideration when assessing the issues raised in relation to the Chapter 5A negotiated connection process.[30]

The Commission has concluded that the main issues raised by the CEC and other stakeholders in regard to the negotiated connection process in Chapter 5A can be addressed by providing eligible embedded generator proponents access to the Chapter 5 embedded generator connection process. In this way, eligible proponents of embedded generator projects that are less than 5MW will be able to use a connection process that more clearly prescribes the negotiation process, the information to be exchanged during the process and the timeframes relevant to the various stages within the process. This level of detail provides greater transparency and certainty for parties considering a potential embedded generator connection.

Using the Chapter 5 process should assist some embedded generator proponents seeking to connect to a distribution network as it provides greater detail on the process to follow and the actions and timing within the process. However, there may be other embedded generator proponents that find the less detailed and more flexible Chapter 5A negotiated connection process more suitable for their needs. For this reason, the final rule does not replace the existing Chapter 5A process. It provides eligible embedded generator proponents with the ability to select the Chapter 5 embedded generator connection process if they wish to do so.

Importantly, this approach does not create any new connection processes in the NER or impact on load customers. In this way, the administrative burden on DNSPs and embedded generator proponents is minimised.

It should also be noted that there was general support from stakeholders in submissions to the draft rule determination for the broad concept of providing Chapter 5A embedded generators access to the Chapter 5 process.[31] Nevertheless, some embedded generator proponents retained the view that some amendments were also required to the Chapter 5A negotiated connection process (see section 4.7). In addition, the CEC considered that the scope of who can access Chapter 5 should be broadened. This is discussed in section 3.2.2 below.

3.2.2 Who can choose

As indicated above, the final rule provides only certain proponents of embedded generator projects that currently fall within the scope of Chapter 5A with the ability to select the Chapter 5 embedded generator connection process.

The CEC considered that Chapter 5 should be accessible to any embedded generator in Chapter 5A due to the perceived poor connection experiences of embedded generator

30 Submissions to consultation paper: ENA, June 2014, p1; Energex, 12 June 2014, p1; Victorian DNSPs, 12 June 2014 p2; NSW DNSPs, 17 June 2014, p1.

31 See, for example, submissions to draft rule determination: City of Sydney, p2; Victorian DNSPs, p1; Department of State Development (South Australia), p1.

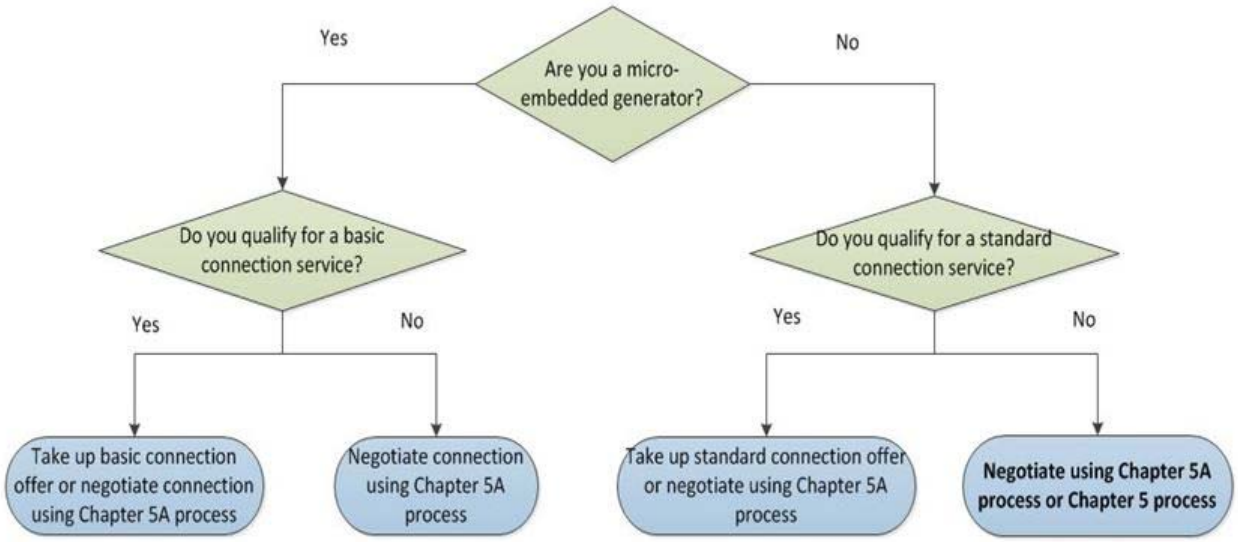
proponents.[32] This is contrary to its view that smaller embedded generators may not find the Chapter 5 process helpful (see section 3.1.2).

Micro embedded generator proponents or embedded generator proponents to whom a standard connection offer applies will not be able to use the Chapter 5 process. These embedded generator proponents would have access to an existing model offer (either the basic offer or the standard offer) that has been approved by the Australian Energy Regulator (AER). Any alterations to finalise such contracts and the requirements of connection should be of a nature that would be best managed through the Chapter 5A negotiated connection process rather than commencing the more detailed Chapter 5 embedded generator connection process. The Chapter 5 connection process is more defined and requires detailed information to be exchanged between the parties at different stages of the process. It assumes the absence of pre-existing offerings, including contractual terms and conditions, that could be used as the basis of negotiations.

In short, the level of detail in, and some of the requirements associated with, the Chapter 5 process should not be necessary in circumstances where an applicable model offer developed by the DNSP is available. For this reason, the final rule provides the option to select the Chapter 5 embedded generator connection process for certain embedded generator proponents. A diagram setting out the connection options available to embedded generator proponents in jurisdictions in which NECF applies is provided in Figure 3.1.

32 CEC submission to draft rule determination, pp8-9.

Figure 3.1 Connection options for Chapter 5A embedded generator proponents



Note: This decision tree is only relevant to non-registered embedded generator proponents located in jurisdictions where NECF applies. Until NECF applies in Queensland and Victoria, a non-registered embedded generator proponent in these states will be able to seek to connect under a jurisdictional process, a DNSP specific process, or under Chapter 5 of the NER (subject to the agreement of the relevant DNSP). Proponents registered as embedded generators, or those who have registered with AEMO as intending participants, can seek to connect to a distribution network under Chapter 5 of the NER.

3.2.3 What is an embedded generator proponent choosing

In brief, the choice between the Chapter 5A and Chapter 5 processes is a choice between two different frameworks for the connection of an embedded generator. The connection provisions in each of the chapters are part of a whole package of arrangements that fit together.

Where an embedded generator proponent chooses to use the Chapter 5 embedded generator connection process, then the whole of the Chapter 5 framework as it relates to embedded generators would be relevant. That is, not only would the parties use the multi-stage process to achieve a connection agreement but the associated schedules (where relevant), information provisions, timeframes, fees and charging arrangements would also be relevant. In addition, the dispute resolution mechanism under Chapter 8 of the NER would be the applicable dispute process.

The alternative to selecting a 'whole package' in either Chapter 5A or Chapter 5 would be to require parties to use parts of one chapter in combination with parts from the other chapter. For example, requiring parties to use the multi-stage connection process and associated information and process fee provisions in Chapter 5, while retaining Chapter 5A for other aspects of the connection such as charging arrangements and dispute resolution.

Similarly, the ENA and Networks NSW considered that embedded generator proponents that choose to connect under Chapter 5 should not be eligible for payments from the DNSP for avoided transmission use of system (TUOS) charges as currently provided for by Chapter 5.[33,34] They claimed that the administrative costs that would be incurred by DNSPs in processing these payments to smaller generators would not be proportionate to the amount paid. Accordingly, they proposed amendments to exclude the requirement for DNSPs to make these payments to non-registered embedded generators that choose to use Chapter 5.

This suggestion has not been included in the final rule. It is appropriate that the choice an embedded generator proponent makes is a selection of the whole package of either Chapter 5A or Chapter 5. This is simpler and less burdensome for the parties involved. There may be some administrative cost for DNSPs in processing avoided TUOS payments to embedded generators that elect to use Chapter 5. However, DNSPs already have systems in place and all of the necessary information to calculate and process these payments. Further, many embedded generators under 5MW will not be exporting at times of peak demand. Therefore the additional costs that would be involved in providing this exception are not significant enough to move away from the general 'whole of package' approach.

Noting that both Chapters have different processes that are designed as an integrated package, the Commission considers that requiring parties to use parts of one chapter but excluding other parts of that chapter from applying to them would be complex and burdensome. It would also effectively result in the creation of an additional connection process. Consequently, the 'whole package' approach is considered to be preferable.

To provide an understanding of the differences between the connection processes relevant to embedded generators under Chapter 5A and Chapter 5, a comparison of the two frameworks is provided in Appendix C.

It is important to note that the final rule does not amend the process to connect load to a distribution network. As a result, where an embedded generator is also connecting load, then the load connection will be progressed under either Chapter 5 or Chapter 5A, whichever is relevant.[35] The relevant process for connecting load will depend on various factors including the size of the load and how it is to be connected.

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33 ENA submission to draft rule determination, pp5-6; Networks NSW submission to draft rule determination, pp2-3.

34 NER clause 5.5(h) requires a DNSP to pass through the locational component of prescribed TUOS services that would have been payable by the DNSP to a TNSP had the connection applicant not been connected to the distribution network (avoided TUOS charges) .

35 Chapter 5 is relevant to connect load for a registered or intending participant. In non NECF jurisdictions, other potential applicants may also connect under Chapter 5 with the agreement of the relevant DNSP. Under Chapter 5A (clause 5A.D.3) applications to connect load may be made by a retail customer, a retailer or other person on behalf of a retail customer, or a real estate developer.

3.2.4 How does an embedded generator proponent choose

The election to use the Chapter 5 embedded generator connection process is at the discretion of the embedded generator proponent. The final rule does not include any requirement to seek the agreement of the relevant DNSP.[36] Nor is the DNSP able to veto the choice made by the embedded generator proponent. To do so would undermine the purpose of enabling embedded generator proponents to choose the connection process most suitable for their needs.

Nevertheless, an embedded generator proponent is not excluded from conducting initial discussions with the relevant DNSP that may assist it in making its selection.[37] In fact, as suggested by the ENA, it is appropriate that embedded generator proponents have initial discussions with DNSPs about their choices as it in their interests to do so.[38] Given that it is also in the interest of DNSPs for embedded generator proponents to select the appropriate process, DNSPs should encourage preliminary discussions without being required to do so.

In making the decision on what connection framework to use, an embedded generator proponent should consider the 'whole package' of each framework. While both aim to facilitate the connection of embedded generators, there are key differences. It is for the embedded generator proponent to decide, on balance, which framework will most suit their circumstances. Factors such as the level of complexity of the project, their degree of experience in connecting to the network and their experiences with the relevant DNSP may be factors to consider in making a decision.

Information published by DNSPs about the processes themselves as required by the NER will be important in helping an embedded generator proponent make a choice.[39] This information will be useful in enabling embedded generator proponents to compare processes. In addition, as discussed in section 3.3, the final rule amends Chapter 5A to require DNSPs to publish information on connection fees and charges, general technical information and a register of completed projects for embedded generators in Chapter 5A above the micro size. Currently this information is only required to be provided for embedded generators in Chapter 5.

Where an eligible embedded generator proponent does not elect to connect under Chapter 5, the Chapter 5A negotiated connection process will apply. That is, the Chapter 5A process is the default.

3.2.5 When does an embedded generator proponent choose

The final rule provides for an embedded generator proponent to select the Chapter 5 embedded generator connection process before the preliminary enquiry or application

36 Energex submission to draft rule determination, p2; Ergon submission to draft rule determination, pp1-2.

37 In addition, information regarding the connection processes must be published by DNSPs.

38 ENA submission to draft rule determination, p2.

39 NER clauses 5.3A.3 and 5A.D.1.

stage in Chapter 5A, whichever is first. The drafting of the final rule is slightly different from the draft rule to reflect that the preliminary enquiry phase in Chapter 5A is not compulsory and to provide additional clarity about the timing of the choice.[40]

It is important that the choice to opt-out of the default Chapter 5A process and use the Chapter 5 process is made before the Chapter 5A process commences. Upon selecting the Chapter 5 embedded generator connection process, the embedded generator must notify the relevant DNSP of its decision.

The Commission acknowledges that to enable an embedded generator proponent to make an informed decision at this point, it must have certain information available. This is discussed further below in section 3.3.

Once an embedded generator proponent commences the connection process under either Chapter 5 or Chapter 5A then it cannot change from one process to another mid-stream. The steps in each of the processes and the information to be provided at each point are not equivalent such that this would be possible.

Unlike the draft rule, the final rule does not attempt to prevent an embedded generator proponent from starting a connection process, abandoning it, and then starting again under the other process for the same project. The cost and delay involved in such a course of action naturally creates a strong incentive for an embedded generator proponent not to do so. Nevertheless, it is appropriate that this option be available to embedded generator proponents. For example, if there is a significant change in the nature and size of a proposed connection.

3.3 Information to make a choice

The final rule provides for certain proponents of embedded generator projects below the standing exemption from registration threshold of 5MW to elect to use the Chapter 5 embedded generator connection process. This decision must be made prior to making an enquiry or application under Chapter 5A, whichever is first. To enable this to occur, the final rule also requires certain information relevant to any such decision be available.

As Chapter 5A embedded generator proponents have the ability to connect under Chapter 5, it is appropriate that they be in the same position in terms of information as those proponents that are already within the scope of Chapter 5.

Therefore, the final rule requires DNSPs to provide the same upfront information as required under Chapter 5 for the relevant Chapter 5A embedded generators (where this information is not already required to be published under Chapter 5A). The effect of this aspect of the final rule is to align Chapter 5A with Chapter 5 in regard to information that is to be made available upfront. The Commission notes that there was general support for 'alignment' of Chapter 5A with Chapter 5 in submissions to the

40 See ENA submission to the draft rule determination, p2.

consultation paper.[41] Some embedded generator proponents considered that requiring this information to be published will enable them to better understand the expectations of DNSPs during the connection process.[42]

The specific information to be required to be published by DNSPs is in the Chapter 5 provisions on the information pack and register of generating plant as set out below.

3.3.1 Information pack

In addition to the public information currently prescribed in Chapter 5A, DNSPs would be required to publish relevant information of the nature described in the Chapter 5 'information pack' provisions. That is:

- a list of services relevant to the connection that are contestable;
- single diagrams and schematic representation of protection and control systems;
- worked examples of connection service charges;
- details of any minimum access or plants standards;
- technical requirements relevant to the processing of a connection enquiry; and
- a model connection agreement.

As DNSPs will be able to leverage off the equivalent information they would publish in accordance with Chapter 5, this requirement is not expected to create a significantly greater administrative burden for DNSPs. The benefits that Chapter 5A embedded generator proponents will receive from having ready access to this information early in a project's life would be expected to outweigh these costs.

Where DNSPs do not have standard connection services for all or some non-registered embedded generators, the final rule also requires that a statement to this effect be made. The purpose of this is to make clear to embedded generator proponents whether they will be able to choose to connect under the Chapter 5 embedded generator connection process.

Stakeholders did not raise any concerns with this particular aspect of the draft rule determination in submissions.

3.3.2 Register of generating plant

The Chapter 5 embedded generator connection process includes provisions requiring DNSPs to publish a register of completed embedded generation projects for embedded

41 Submissions to consultation paper: ClimateWorks Australia, Property Council of Australia and Seed Advisory (ClimateWorks, Property Council and Seed), p2; Energex, p1; ENA, p1; and Victorian DNSPs, p2.

42 Submissions to draft rule determination: LAROS Technoloies, p2; Neoen, p2; AGL, p2; SMA, p2.

generators that have a capacity of at least 5MW. As noted above, to place Chapter 5A embedded generator proponents in the same information position as those proponents already under Chapter 5, similar provisions have been included in Chapter 5A. Specifically, the final rule has the effect of requiring all completed Chapter 5A embedded generator projects other than micro embedded generation projects to be included in a public register (subject to confidentiality provisions).

Embedded generator proponents with projects in the generating capacity range of between 30kW (which is currently the maximum threshold for micro embedded generation projects in the NER) and 5MW will benefit from a public register including technical information relevant to the size of their own projects. Similarly, the CEC considers that the register may assist understanding of opportunities for standardisation.[43]These benefits would be likely to outweigh any costs that DNSPs will incur in effectively extending the scope of the register.[44]

The final rule does not specify the details of how the requirements regarding the register are to be implemented. DNSPs will be able to choose whether two separate registers or one single register is preferable to maintain. In addition, if connections are similar it may be possible for a DNSP to streamline the information in its register by cross-referencing across projects. Similarly, the register requirements are flexible to allow a DNSP to provide a level of detail that it considers appropriate and helpful for embedded generator proponents that may want to connect to its network.[45]

Related to this, and in response to an issue raised by the ENA and Victorian DNSPs, the Commission has clarified that the requirement to provide information on voltage control and reactive power capability in the register only has to be provided where it is relevant to do so.[46] This recognises that either one or both of these connection features may not always be required for embedded generators under 5MW. In addition, it is understood that many such generators usually include power factor control instead of voltage control. The Commission has therefore required that information on power factor control also be provided where it is relevant to do so.

Chapter 5A provides that the information in the register is to be made available regarding successfully connected embedded generation projects that occur following the commencement of any final rule made by the AEMC for an initial five year period. After this time, this register will also be a rolling five year register similar to the Chapter 5 register.

43 CEC submission to draft rule determination, p12.

44 As this is implemented through changes to Chapter 5A, only DNSPs in jurisdictions that have implemented NECF will be required to comply.

45 ENA submission to draft rule determination, p3; Energex submission to draft rule determination, pp1-2.

46 ENA submission to draft rule determination, p3; Victorian DNSPs submission to draft rule determination, p2.

4 Other issues

The CEC raised a number of other issues in its rule change request related to negotiating the connection of an embedded generator to a distribution network. This Chapter responds to these issues. It also sets outs other related issues that were raised in response to the draft rule determination.

4.1 Process and information requirements

4.1.1 Background

The broad issue raised by the CEC in its rule change request was a lack of prescription in the negotiated connection process in Chapter 5A.

It proposed amendments to the structure and timing of the negotiated connection process. The proposed amendments also specified in more detail the information to be provided by DNSPs. In addition, the CEC sought other specific amendments associated with the negotiated connection process in Chapter 5A of the NER. These were:

- requiring DNSPs to provide an embedded generator proponent access to their legal personnel in order to negotiate the terms and conditions of an offer, after the offer has been made;[47]
- requiring DNSPs to provide information on proposed technical standards prior to submitting a negotiated connection application;[48]
- requiring DNSPs to consider the technical merit of the connection arrangements proposed, or determine the technical requirements for the connection when assessing negotiated connection applications;[49]
- requiring DNSPs to either accept or reject the negotiated connection application. If the DNSP does not respond within 65 business days, it is deemed to have accepted the application;[50]
- specifying that any matter relevant to a connection is subject to negotiation;[51] and
- requiring that all information exchanged as part of the negotiation process be treated as confidential information for the purposes of the NER.[52]

47 CEC rule change request, 19 April 2013, p31.

48 ibid. pp22 and 28-29.

49 ibid. p27.

50 ibid. p34.

51 ibid. p24.

4.1.2 Stakeholder submissions

DNSPs did not support the CEC's proposal to require them to provide access to their legal personnel after an offer has been made in order to negotiate terms and conditions of an offer with the embedded generator proponent. It would be impractical due to the conflict of interest facing the legal counsel but may also constrain the ability of DNSPs to retain access to legal advisers as they see fit.[53] There were no other comments on this issue from other stakeholders.

Ergon did not support the proposed requirements for DNSPs to provide proposed technical standards prior to submitting a negotiated connection application. It submitted that different standards would be required depending on the characteristics of the embedded generator. In addition, it considered the requirement for DNSPs to describe technical requirements when assessing negotiated connection applications may be unnecessary.[54] The NSW DNSPs did not support the inclusion of the proposed schedule of information requirements. They submitted that this information is disproportionate to the type of generators envisaged to be connected in Chapter 5A.[55]

In addition, DNSPs have not supported the proposal for a negotiated connection application to be deemed to be accepted if the DNSP does not explicitly accept or reject the application within the stipulated timeframe.[56]

Lumo expressed support for the CEC's proposal to make it clear in the NER that any matter relevant to a connection is subject to negotiation.[57] It also supported the proposed requirement that all information exchanged as part of the negotiation process be treated as confidential information.[58] Ergon submitted that it does not support the proposed changes to confidentiality.[59]

ENA and Networks NSW supported the draft rule determination to not require DNSPs to provide access to their legal personnel during the connection process.[60] Other submissions did not comment on these issues.

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52 ibid. p27.

53 Submissions to consultation paper: Energex, pp3-4; ENA, p2; NSW DNSPs, p4; and Victorian DNSPs, p2.

54 Ergon submission to consultation paper, pp4-5.

55 NSW DNSPs submission to consultation paper, p3.

56 See, for example, Ergon submission to consultation paper, pp3-4.

57 Lumo submission to consultation paper, p4.

58 ibid. p6.

59 Ergon submission to consultation paper, p5.

60 ENA submission to draft rule determination, p1; Networks NSW submission to draft rule determination, p1.

4.1.3 Commission's assessment

The Commission does not consider it appropriate for the NER to require DNSPs to provide access to their legal personnel to enable an embedded generator proponent to finalise a connection offer. This is because each DNSP is best placed to determine who in its business should be involved in negotiating connection arrangements. The proposed rule would constrain this decision.

In addition, legal counsel act on instructions and are not necessarily able to finalise negotiations of a technical nature independently of a DNSP's staff. As with other aspects of the negotiation process, any concern held by an embedded generator proponent about the terms and conditions of an offer could be the subject of dispute resolution.

The final rule does not provide for a technical standard to apply to embedded generators under the scope of Chapter 5A. However, as noted in section 3.3.2, embedded generator proponents with projects in the generating capacity range of between 30kW (which is currently the maximum threshold for micro embedded generation projects in the NER) and 5MW will benefit from a public register including technical information. The CEC considers that the register may assist understanding of opportunities for standardisation.[61]

In addition, the Commission does not consider it necessary to provide a requirement in the NER to require a DNSP to respond to different technical solutions proposed by an embedded generator proponent. The Commission understands that an embedded generator proponent may have a number of possible projects under consideration, particularly in the early stages of project development. It may discuss these with the relevant DNSP. Chapter 5A does not prevent or limit any such discussions or considerations. The CEC's proposal for DNSPs to consider technical aspects of various potential projects is able to occur under the current framework.

The final rule provides eligible embedded generators the use of the Chapter 5 process. This may be beneficial for some embedded generator proponents if they prefer more specific requirements regarding the provision and consideration of technical information.

The final rule also applies the requirement set out in the Chapter 5 embedded generator connection process for DNSPs to publish certain technical information on their websites to Chapter 5A embedded generators greater than the micro size. This will improve the information position of embedded generator proponents seeking to connect under Chapter 5A. The additional information will, in turn, support more informed decision making for embedded generator proponents. This may include the decision of whether to use the Chapter 5 embedded generator connection process. However, embedded generator proponents need to recognise that some information may not be relevant to their proposed connection due to the characteristics of the plant and requirements of the location.

61 CEC submission to draft rule determination, p12.

The CEC also proposed a new provision in Chapter 5A where a DNSP would be deemed to have accepted a connection application if it had not responded within 65 business days. The final rule does not include such a provision as it is not appropriate or necessary. A DNSP must be able to respond to an incomplete application appropriately. The information in the application may not meet the technical standards required which could ultimately put at risk DNSPs' obligations relating to the reliability, safety and security of the network. Such matters may require considerable work to be resolved. If DNSPs are not complying with stipulated timeframes in the NER then this is a compliance issue that should be reported to the AER.

In regard to the matters relevant to the connection of an embedded generator that are open to negotiation, the Commission does not consider that the NER limits these matters to connection charges. This is consistent with the AER's view that the current Chapter 5A framework can deal with various types of disputes, including procedural aspects around the timing and quality of information required to be provided by DNSPs.[62] Therefore, the final rule makes no change to the NER on this matter.

The final rule does not specify that all information exchanged as part of the negotiation process be treated as confidential information as proposed by the CEC. Not all of the information exchanged during the process would necessarily be confidential in nature and some information may already be in the public domain. It would therefore be inappropriate to treat all information in the way proposed. Clause 5A.C.3(c) of the NER appropriately provides for the confidentiality of negotiations. The Commission does not consider it desirable or necessary to make other specific provisions in Chapter 5A, with the result of making it different to other connection processes. This would also add administrative compliance costs to connecting parties.

4.2 Power transfer capability

4.2.1 Background

The CEC sought to amend the negotiated connection process with respect to power transfer capability to:

- explicitly enable negotiated connection applicants to seek distribution network user access arrangements at any level of power transfer capability between zero and the higher of the expected maximum demand or the maximum power input of the relevant embedded generator. This is consistent with clause 5.5(d) of the NER;[63]
- require DNSPs to consult with other network users or prospective users who may be adversely affected by the proposed connection, connection alteration, or the distribution network user access arrangements sought by the applicant.

62 AER submission to consultation paper, p1.

63 CEC rule change request, 19 April 2013, p25.

Currently DNSPs may consult with other users who may be affected by the proposed new connection;[64]

- require DNSPs to make reasonable endeavours to make a connection offer that complies with the distribution network user access arrangements reasonably sought by the applicant, including the location of the proposed connection point and the level and standard of power transfer capability that the network will provide. Currently DNSPs are required to make reasonable endeavours to make a connection offer that complies with the connection applicant's reasonable requirements;[65] and

- require DNSPs to provide details of the connection point, including the level and standard of power transfer capability that the relevant network will provide, along with correlating network conditions, in the connection offer. Currently DNSPs are required to provide details of the connection point and the maximum capacity of the connection to import and export electricity.[66]

4.2.2 Stakeholder submissions

In submissions to the consultation paper, DNSPs broadly considered that the existing requirements relating to power transfer capability are adequate. They noted that power transfer capability is an issue that should be subject to negotiation.[67] In contrast, Lumo supported the CEC's proposals.[68]

In responding to the draft rule determination, the ENA and Networks NSW noted their support stating that amendments relating to power transfer capability are not required.[69] Other stakeholders, including the CEC, did not comment on this issue.

4.2.3 Commission's assessment

The CEC proposed to include a specific provision in Chapter 5A explicitly enabling embedded generator applicants to seek distribution network user access arrangements at any level of power transfer capability between zero and the higher of the expected maximum demand or the maximum power input of the relevant embedded generator. The Commission considers that Chapter 5A does not prevent an embedded generator applicant from seeking relevant distribution network user access arrangements. Further, there is not sufficient evidence to suggest that this needs to be explicitly provided for in Chapter 5A. Where this issue is important to an embedded generator

64 ibid.

65 ibid. pp31-32.

66 ibid. p25.

67 Submissions to consultation paper: Energex, pp4-5; ENA, p3; and Ergon, pp5-6.

68 Lumo submission to consultation paper, p7.

69 ENA submission to draft rule determination, p1; Networks NSW submission to draft rule determination, p1.

proponent then it may elect to connect under the Chapter 5 embedded generator connection process which contains this provision on power transfer capability.

Similarly, the final rule does not amend the Chapter 5A provisions regarding consultation with other network users. Given the short history of Chapter 5A at this stage, the Commission considers that the current provisions in clause 5A.C.3(4) of the NER are sufficient. There could be large numbers of potentially affected users and it may not always be efficient or necessary to mandate DNSPs to consult with them all. The DNSP is best placed to decide who it should consult with. Consequently, the current level of discretion is appropriate.

The CEC also proposed amendments relating to the making of an offer to an embedded generator proponent. Chapter 5A already requires DNSPs to make reasonable endeavours to make a connection offer that complies with the connection applicant's reasonable requirements.[70] This does not appear to be deficient and would reasonably provide for the specific suggestions made by the CEC. Providing more detail in the clause could also inappropriately limit its scope. For these reasons, this proposed change is not included in the final rule.

For similar reasons, the final rule does not specifically require DNSPs to provide details of the level and standard of power transfer capability that the relevant network will provide, along with correlating network conditions, in the connection offer. Chapter 5A currently requires DNSPs to provide details of the maximum capacity of the connection to import and export electricity. In this way, it effectively requires DNSPs to provide the level of power transfer capability that the network will provide at the connection point. Further, Chapter 5A does not preclude embedded generator proponents from seeking additional information in the connection offer such as network conditions associated with a level of service to be provided. The existing requirements are therefore sufficient.

4.3 Process fees and connection charges

This section considers issues raised by the CEC relating to fees and charges imposed by DNSPs to embedded generator proponents for:

- the costs of the negotiation process (process fees); and
- capital expenditure relating to the connection (connection charges).

70 NER clause 5AC.3(6).

4.3.1 Process fees

Background

Currently, under Chapter 5A DNSPs may charge negotiated connection proponents fees to cover expenses directly and reasonably incurred by the DNSP for assessing the proponent's application and making a connection offer.[71]

The CEC has proposed amendments to:

- restrict the ability of DNSPs to charge for the provision of technical information that they are required to maintain;[72] and
- prevent DNSPs from charging a fee to cover the costs of negotiation and processing a negotiated connection application until the applicant has been advised by the DNSP that the relevant application is complete.[73]

Stakeholder submissions

Submissions to the consultation paper indicated that DNSPs did not support restricting their ability to charge for the provision of information that they are required to maintain.[74] The ENA noted that information maintained by a DNSP may require significant alteration when being applied to an individual connection.[75] Similarly, DNSPs were not supportive of restricting fees from being charged until the application is determined as being complete.[76]

Following the draft rule determination, the Department of State Development (South Australia) expressed support for the decision to not amend the NER to restrict DNSPs ability to charge fees as proposed by the CEC. It noted that the draft rule determination is consistent with its view that a DNSP should have the ability to charge a reasonable and fair fee to cover the costs of processing a connection.[77] Networks NSW also supported the draft rule determination on this issue.[78] Submissions from other stakeholders including the CEC did not comment on this issue.

71 NER clause 5A.C.4.

72 CEC rule change request, 19 April 2013, p36.

73 ibid. pp35-36.

74 Submissions to consultation paper: ENA, p4; Ergon, p6; NSW DNSPs, pp4-5; and Victorian DNSPs, p3.

75 ENA submission to consultation paper, p4.

76 Submissions to consultation paper: Energex, p5; ENA, p4; Ergon, p6; and NSW DNSPs, p5.

77 Department of State Development (South Australia) submission to draft rule determination, p2.

78 Networks NSW submission to draft rule determination, p1.

Commission's assessment

It is not appropriate to restrict the ability of DNSPs to charge for the provision of technical information that DNSPs are required to maintain in the manner proposed. A DNSP may still be required to carry out work to provide the information in a form that is appropriate and relevant to the embedded generator proponent. If this is the case, a DNSP should be able to recover the reasonable costs of doing so as currently provided. This is consistent with the broad approach taken in the final rule determination on the Chapter 5 rule change request where fees can be charged for the detailed enquiry response but not the preliminary enquiry response. The Commission has not made any change to the NER on this issue.

More generally on this issue, it should be noted that recent developments are expected to improve the information available to parties considering embedded generation projects. These include the Chapter 5 rule change and the distribution network planning and expansion rule change.[79] In addition, the final rule sets out similar requirements regarding information that DNSPs must publish on their websites to those which are required in Chapter 5 (see section 3.3). This is expected to improve the information available to these generators to help them when considering their projects including which Chapter of the NER to connect under.

The second fee related proposal by the CEC was to prevent a fee being charged until the embedded generator proponent has made a complete application. This does not appear appropriate or consistent with the Chapter 5 embedded generator connection framework. If Chapter 5A was to prevent a DNSP from charging fees until an application is complete, then a DNSP would bear a risk of not being able to recover any costs that it has incurred to confirm the completeness of an application. However, by being able to charge fees up front, a commitment to the project from the embedded generator proponent is established as well as the DNSP's recovery of relevant costs. For these reasons, the final rule does not amend Chapter 5A in a manner that would be inconsistent with the Chapter 5 embedded generator connection framework.

4.3.2 Connection charges - augmentation for forecast load growth

Background

Under Chapter 5A the capital cost of connecting an embedded generator may be recovered from embedded generator connection proponents, as appropriate, through:

- a reasonable capital contribution towards the cost of an extension necessary to provide the connection service;
- a reasonable capital contribution towards the cost of augmentation of premises connection assets necessary in order to provide a connection service; and

79 AEMC, Distribution Network Planning and Expansion Framework, rule determination, 11 October 2012.

- if augmentation of the distribution system is necessary in order to provide a connection service under a negotiated connection contract, connection charges may include a reasonable capital contribution towards the cost of augmenting the distribution system to the extent necessary to provide the service and to any further extent that a prudent service provider would consider necessary to provide efficiently for forecast load growth.[80]

However, a capital contribution may only be sought in these circumstances if the costs are not to be recovered through use of system charges or a tariff applicable to the connection.[81]

In its rule change request, the CEC stated that clause 5A.E.1(c)(4) allows DNSPs to charge embedded generator proponents connection-related augmentation costs for forecast load growth. It submitted that this creates the opportunity for DNSPs to transfer the financial risk of network expansion for load growth to embedded generators.[82] In its view, this is inconsistent with the principles relating to charging for negotiated distribution services.[83]

To resolve this issue, the CEC proposed to amend clause 5A.E.1(c)(4) to remove any application this clause may have to embedded generator proponents within the scope of Chapter 5A.[84]

Stakeholder submissions

In submissions to the consultation paper, DNSPs and DMITRE stated that they did not consider it appropriate for embedded generator proponents to be excluded from the operation of clause 5A.E.1(c)(4) of the NER as proposed by the CEC.[85]

In contrast, Lumo supported the CEC's proposal. However, it suggested that the proposal does not go far enough. It considered that as embedded generators do not receive property rights for funding augmentation they should not be required to pay for the assets at all.[86]

The Department of State Development (South Australia) supported the draft rule determination conclusion that clause 5A.E.1(c)(4) of the NER is consistent with the general principle that users of a distribution network should pay for the reasonable costs in providing services to them. It suggested that retaining the clause will ensure that other users of the network are not left to bear the costs related to the embedded

80 NER clause 5A.E.1(c)(4)

81 NER clause 5A.E.1(c)(6).

82 CEC rule change request, 19 April 2013, p21.

83 CEC submission to consultation paper, p10.

84 CEC rule change request, 19 April 2013, p36.

85 Submissions to consultation paper: DMITRE, pp2-3; ENA, p4; Ergon, p7; and NSW DNSPs, p6.

86 Lumo submission to consultation paper, pp8-9.

generator.[87] Networks NSW also supported the draft rule determination on this issue.[88]

However, the City of Sydney suggested that the AEMC's approach does not have sufficient regard to the reasonableness of connection costs incurred by embedded generators.[89] It proposed that DNSPs not be able to transfer the costs of network upgrades that would otherwise be required from the load customer base to embedded generators.[90] The Southern Sydney Regional Organisation of Councils (SSROC) expressed similar views.[91]

Other stakeholders, including the CEC, did not comment on the draft rule determination on this issue.

Commission's assessment

In general, it is not appropriate for DNSPs to transfer the financial risk of network expansion for general load growth from the load customer base to embedded generators. As set out in the Chapter 5 rule determination, the Commission's general approach is that appropriate price signals can be achieved by allocating costs to the users that impose those costs on the network. That is, an embedded generator proponent should pay for the costs it has caused. If embedded generators do not contribute to the augmentation costs relating to their connection then other users of the distribution network would be inappropriately required to pay these costs.[92]

More specifically, clause 5A.E.1(c)(4) does provide for DNSPs to recover augmentation costs associated with any forecast load growth relating to the connection service. This includes the connection of an embedded generator.[93] Embedded generators often require supply from the network as a back-up. In such circumstances DNSPs are able to recover the cost of any future load growth related to the connection of the embedded generator as a load customer.

Clause 5A.E.1(c)(4) also appropriately allows for a DNSP to charge a reasonable capital contribution towards an augmentation that is required to provide for future general load growth to the extent that the cost is not recovered by any other means (clause 5A.E.1(c)(6)).

For example, consider where the connection of an embedded generator requires some augmentation to a substation to connect to the network and, at the same time, the DNSP reasonably considers other augmentation to the same substation is needed to

87 Department of State Development (South Australia), submission to draft rule determination, p1.

88 Networks NSW submission to draft rule determination, p1.

89 City of Sydney submission to draft rule determination, p3.

90 ibid. p4.

91 SSROC submission to draft rule determination, p2.

92 AEMC, Connecting embedded generators, rule determination, 17 April 2014, pp104-107.

93 See for example, ENA submission to consultation paper, p4.

accommodate forecast load growth in the area. In this case, instead of carrying out two separate capital works, the DNSP may conduct them at the same time as this is likely to be more efficient. Clause 5A.E.1(c)(4) would allow the DNSP to recover a reasonable capital contribution towards this augmentation from the embedded generator proponent to the extent that the work undertaken relates to the connection of the embedded generator. The remainder of the costs would be allocated to, and recovered from, the relevant load customers which could include load associated with the embedded generation connection.

Accordingly, the Commission's assessment is that clause 5A.E.1(c)(4) is consistent with the general principle that users of a distribution network should pay for the reasonable costs in providing services to them. The Commission does not consider any amendments to the clause are necessary. However, if further explanation about this clause would be beneficial to users and prospective users of distribution networks then this would be most appropriately provided by the AER's connection charge guidelines.

4.3.3 Information on process fees and connection charges

Background

The CEC sought to limit connection costs that DNSPs can charge embedded generator proponents to those which could have been reasonably identified by the proponent from the information initially provided by the DNSP. The purpose of this limitation is to encourage DNSPs to provide complete, correct information to the embedded generator proponent in the first instance.[94]

In addition, it proposed that any fees charged by DNSPs for negotiation be accompanied with information on the basis of their calculation, together with an explanation for any departure from any estimate of charges previously provided by a DNSP.[95] The CEC has also proposed to significantly expand the itemised statement of connection charges that the DNSP has to provide and an explanation of any divergence of costs from cost estimates previously provided.[96]

More broadly, the CEC proposed that the NER expressly disallow any charges which are inconsistent with Chapter 5A in a negotiated connection offer for an embedded generator .[97]

Stakeholder submissions

There were mixed views from DNSPs on whether connection charges should be limited to those which could have been reasonably identified by the embedded generator proponent from the information initially provided by the DNSP. Some

94 CEC rule change request, 19 April 2013, p21.

95 ibid. p.35

96 ibid. pp35-36.

97 ibid. p37.

supported this proposal subject to the parties being able to agree on variations as the project progresses.[98] Others did not agree, noting that the information provided by the DNSP depends on the information initially provided by the embedded generator proponent. In addition, network studies, which could identify a number of issues that have cost implications, would not be carried out in the earlier stage of the connection process.[99]

In its submission to the consultation paper, the CEC expressed support for the provisions now included in Chapter 5 on DNSPs providing information on cost breakdown for process fees and connection charges.[100]

Ergon did not support the CEC's proposed changes.[101]

No submissions responding to the draft rule determination commented on the issue of process fees and charges.

Commission's assessment

The CEC's proposed amendment to limit charges to those reasonably identified by information initially provided by the DNSP reflects its general concern that DNSPs do not provide relevant information to embedded generator proponents in a timely manner.

However, this issue is appropriately addressed by providing eligible embedded generator proponents with the ability to access the Chapter 5 embedded generator connection process. Where an embedded generation project is sufficiently complex, the more structured and detailed process, which includes detailed provisions regarding information requirements, may be preferable. Consequently, the final rule does not include amendments to Chapter 5A on limiting the ability of DNSPs to charge embedded generator proponents as proposed by CEC.

The CEC also proposed that the NER require DNSPs to provide greater detail on process fees and connection charges imposed on embedded generator proponents. On this matter, Chapter 5A currently includes a requirement on DNSPs to provide a breakdown of connection charges. While these requirements are different to those proposed by the CEC, they are suited to the overall flexible and less prescriptive approach of Chapter 5A.

In addition, Chapter 5A does not prevent embedded generator proponents from seeking more detailed information than what is already specified under Chapter 5A. Further, there is presently not sufficient evidence to suggest that the additional detail proposed is required, particularly for smaller embedded generators. Nevertheless, for eligible embedded generator proponents that would prefer more detailed requirements

98 Submissions to consultation paper: Energex, pp5-6; and ENA, p4.

99 Submissions to consultation paper: Ergon, p7; Victorian DNSPs, p3; and NSW DNSPs, p6.

100 CEC submission to consultation paper, p10.

101 Ergon submission to consultation paper, p6.

on fees and charges, the use of the Chapter 5 embedded generator connection process is expected to address these concerns.

Finally, it is noted that the final rule does not include the CEC's proposed amendment to expressly allow only connection charges which are consistent with Chapter 5A. This provision is not necessary. A DNSP's connection charges should be consistent with any charging requirements in the chapter without this provision. Otherwise, it would not be in compliance with the NER. Any concerns regarding a DNSP's compliance with these requirements may be raised with the AER.

4.4 Embedded generator liability

4.4.1 Background

Presently, there is no relevant rules-based guidance, restriction or limitation on the liability of an embedded generator for damage caused to a network.

The CEC proposed an amendment to the NER that would require DNSPs to include a limitation on embedded generator liability in connection offers on the basis that DNSPs have often been unwilling to do so.[102] The CEC has not specified what this limit should be or how, conceptually, liability should be limited and for what actions or omissions.

Nevertheless, it is understood that the liability the CEC seeks to limit is liability for loss, harm or damage to the DNSP caused by the actions or omissions of the embedded generator or its agents. For example, if an embedded generator negligently caused damage to a piece of network equipment, it would, in the normal course of events, be liable to the DNSP to compensate it for the damage it caused.

4.4.2 Stakeholder submissions

Lumo supported the CEC's proposal, suggesting that the limitation of liability for damage to a network be restricted to a dollar value. Given the relevant size of embedded generators that connect under Chapter 5A, it suggested embedded generator liability should be limited to $100,000-$200,000. In addition, Lumo suggested DNSPs should also be liable for any damages that they have caused to the embedded generator while connected to the network.[103]

In contrast, DNSPs did not support the CEC's proposal. They considered the issue of liability to be a commercial matter that is properly addressed between the DNSP and connection applicant. In addition, DNSPs expressed concern that a limit on embedded

102 CEC rule change request, 19 April 2013, pp31-32.

103 Lumo submission to consultation paper, p9.

generator liability in the NER could lead to the network, and therefore customers generally, bearing the risk of potential damage caused by an embedded generator.[104]

The ENA and Networks NSW supported the draft rule determination to not make amendments to Chapter 5A on embedded generator liability.[105] The CEC and others did not comment on the draft rule determination on this issue.

4.4.3 Commission's assessment

The final rule does not include an amendment to the NER reflecting the CEC's proposal that DNSPs should be required to include a limitation of liability clause in a connection offer made to an embedded generator proponent. If a DNSP is forced by the NER to provide a limitation on the liability of an embedded generator proponent then this may not be consistent with the principle that risk should be allocated to the party that is best able to manage it.

Similarly, the final rule does not include a maximum limit of liability as proposed by Lumo. The Commission considers this would not be appropriate. This is because the level of potential damage an embedded generator may cause to a network depends on the individual circumstances of a connection as well as the incident. For example, the potential damage that an embedded generator may cause to a distribution network will depend on the location of the connection and the size of the embedded generator. It would therefore be extremely difficult to specify a set dollar amount in the NER that would be applicable to the wide range of possible embedded generators that may connect to any of the distribution networks.

Related to this, if the NER was to include a specific limit on the level of liability, there is a risk that the limit would be set too low. This would result in DNSPs, and ultimately all other customers, bearing any shortfall that may arise. This outcome indicates that even if it were possible, setting a liability amount in the NER would not be consistent with the principle that risk should be allocated to the party that is best able to manage it. It would therefore not promote the NEO.

In addition, there is also a risk that any limit in the NER would become the default position for DNSPs. This could result in inappropriately high levels of liability for some embedded generators and impact on the viability of an otherwise feasible project. This would not be in the interests of embedded generator proponents or promote the NEO.

In general, Chapter 5A of the NER does not prevent embedded generator proponents and DNSPs from negotiating the level of liability that an embedded generator proponent should be exposed to. Indeed, it is understood that a limitation on embedded generators' liability is often provided for in connection contracts. Similarly,

104 Submissions to consultation paper: Energex, p6; ENA, p5; Ergon, p7; NSW DNSPs, p7; and Victorian DNSPs, p3.

105 ENA submission to draft rule determination, p1; Networks NSW submission to draft rule determination, p1.

the liability of a DNSP to a proponent of a connected embedded generator is also a matter that is most appropriately addressed through negotiations between the parties. The parties have access to the dispute resolution process should they not be able to agree on this issue. Therefore, the Commission does not propose to change the NER as proposed by the CEC or Lumo.

4.5 Dispute resolution

4.5.1 Background

Currently, clause 5A.G.1(a) of the NER defines a relevant dispute as:

> "(1) A dispute between a Distribution Network Service Provider and a customer about:
>
> (i) the terms and conditions on which a basic connection service or a standard connection service is to be provided; or
>
> (ii) the proposed or actual terms and conditions of a negotiated connection contract; or
>
> (2) a dispute between a Distribution Network Service Provider and a customer about connection charges."

The CEC has proposed an amendment to this definition such that a relevant dispute would include:

> "(iii) the requirements of this Chapter and any material produced by a Distribution Network Service Provider subsequent to this Chapter.[106]"

In other words, to include any dispute between a DNSP and a customer about any matter under Chapter 5A.

The CEC considered that the proposed change would enhance the ability of embedded generator proponents to access the dispute resolution process.[107]

4.5.2 Stakeholder submissions

In its submission to the consultation paper, the CEC expanded on its reasons for its proposed amendment to clause 5A.G.1(a). It noted that if the NER was not sufficiently clear on what matters could be the subject of a dispute then the AER, as the dispute resolution body, would be likely to refer to the relevant DNSP's connection policy. However, the CEC opined that the provisions regarding the context of a connection

106 CEC rule change request, 19 April 2013, p32.

107 ibid. pp32 and 34.

policy are also 'vague'. In its view, clarity about disputable matters should be addressed through its proposed amendments.[108]

The ENA questioned the value of the CEC's proposal. In its view, the Chapter 5A dispute resolution framework is sufficient to facilitate the resolution of a wide range of disputes that may arise.[109] The ENA submitted that any changes made to the Chapter 5A provisions should be consistent with the equivalent in Chapter 5. That is, to use Chapter 8 of the NER as the dispute resolution mechanism.[110]

Energex similarly noted that Chapter 5A appeared sufficient. It stated that as the mechanisms in Chapter 5A and Chapter 5 both have some benefits it would accept the use of either approach.[111]

The AER noted that the current framework can manage various types of disputes, including procedural aspects around timing and the quality of information required to be provided by DNSPs.[112]

In its response to the draft rule determination, the City of Sydney stated that consideration should be given to introducing additional formal dispute resolution mechanisms to hold DNSPs to account in relation to connection applications.[113] It suggested this could be a dispute resolution process within the DNSP or the jurisdictional ombudsman schemes. Alternatively, the City of Sydney suggested that the NER provide more accessible information on the dispute resolution process for embedded generators and reporting on DNSP timeframes to provide connections.

The ENA and Networks NSW supported the draft rule determination.[114] Other submissions, including the CEC did not comment on the draft rule determination regarding this issue.

4.5.3 Commission's assessment

The CEC has stated that as the requirements regarding the content of a DNSP's connection policy are not sufficiently prescriptive, then an amendment to the NER to clarify what matters could be the subject of a dispute resolution is needed.[115] However, the Commission notes that the CEC has not raised any specific concerns regarding the requirements for connection policies. It also notes that the first

108 CEC submission to consultation paper, pp10-11.

109 Submissions to consultation paper: ENA, p5; Victorian DNSPs, p3; and NSW DNSPs, p7.

110 ENA submission to consultation paper, p5.

111 Energex submission to consultation paper, p6.

112 AER submission to consultation paper, p1.

113 City of Sydney submission to draft rule determination, p4.

114 ENA submission to draft rule determination, p1; Networks NSW submission to draft rule determination, p1.

115 CEC submission to consultation paper, pp10-11.

connection policies under Chapter 5A have only been effective from 1 July 2014.[116] There is no evidence of a problem on this issue to date.

The CEC appears concerned that there may be connection related matters that fall outside the scope of the Chapter 5A dispute resolution framework. However, the AER has clearly indicated that it considers the framework to be established in a way that its scope is broad. The AER also noted that it regards its compliance role as sufficient in relation to connecting embedded generators under Chapter 5A of the NER.[117]

The current Chapter 5A dispute resolution framework is drafted in a broad way that covers all outputs from the negotiated process. Further, what the AER must give effect to when determining a dispute is similarly broad.[118]

In response to the suggestion made by the City of Sydney, Chapter 5A currently provides that the AER may pass a dispute to a jurisdictional ombudsman where it considers the dispute can be effectively resolved by this means.[119] Similarly, DNSPs are required to develop and publish on their websites an internal procedure for dealing with small customer complaints and disputes.[120] These DNSP procedures may provide alternative means of dispute resolution that may be relevant for some embedded generator proponents. In terms of reporting on timeframes to provide connections, this could be undertaken by the AER as part of its performance monitoring role.

Having regard to these matters, the Commission has concluded that the current clause 5A.G.1(a) is suitable for its purpose and the proposed change is not required. The final rule does not include an amendment as proposed by the CEC.

4.6 Experience of using the Chapter 5A process

The Commission's views on whether there have been difficulties arising with the negotiated connection process in Chapter 5A is discussed in section 3.1.1. In the draft rule determination, the Commission considered that experience in using the Chapter 5A negotiated connection process was still limited.

4.6.1 Stakeholder submissions

In response to the draft rule determination, the CEC did not agree that the negotiated connection process was relatively new and untested.[121] It considered there had been considerable experience with the application of Chapter 5A citing that there have been

116 The AER approved the connection policies of the NSW and ACT DNSPs as part of the latest round of regulatory determinations. These connection policies came into effect on 1 July 2014.

117 AER submission to consultation paper, p1.

118 NER clause 5A.G.2.

119 NER clause 5A.G.3.

120 s. 81 of the National Energy Retail Law.

121 CEC submission to draft rule determination, pp3-4.

nearly 600 connections that have been negotiated in South Australia and NSW since NECF commenced in these states.[122] The CEC also suggested that the results of its connection experience survey largely reflected experiences with the negotiated connection process in Chapter 5A and not previous jurisdictional processes.[123] It claimed that 75 per cent of the connections completed during the period covered by the survey would have been completed under the Chapter 5A negotiated connection process.[124]

4.6.2 Commission's assessment

The CEC has used the number of small-scale technology certificates (STCs) claimed after the NECF was introduced as a proxy for the number of connections completed under Chapter 5A. However, the right to create an STC exists for 12 months after the embedded generating system is first able to produce and deliver electricity.[125] Therefore, the number of STC claims in a particular month does not provide a reliable representation of when a connection was completed and therefore which process the connection was completed under. For example, an STC that was claimed in NSW in September 2014 may represent a connection that was completed in October 2013. This would reflect that negotiations would have commenced under the previous NSW arrangements.

In addition, the CEC suggests that embedded generators can expect a timeframe of between 1 and 12 months to negotiate a connection offer.[126] Taking the mid-point of this range, it is possible that some completed connections since January 2013 would have been negotiated under the Chapter 5A process in the Tasmania and the ACT where the NECF commenced in July 2012. Similarly, some completed connections since August 2013 in South Australia and January 2014 in NSW would have been negotiated under the Chapter 5A process. Connections finalised earlier are more likely to have been negotiated under previous relevant jurisdictional arrangements. This would indicate that there were far fewer connections negotiated and completed under Chapter 5A than the CEC suggests.

The Commission does not consider that the results of the CEC's connection experience survey directly reflects experiences with the negotiated connection process in Chapter 5A and not previous jurisdictional arrangements. The survey asked respondents for their experience of the negotiated connection process during the last two years. Given the timing of the commencement of the NECF in NSW and South Australia and allowing a sufficient time for negotiations to occur it is likely that fewer connections covered by the survey would have been completed under Chapter 5A than the CEC suggests.

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122 ibid, p4.

123 CEC, supplementary submission to draft rule determination, p7.

124 The CEC confirmed this by email on 22 October 2014.

125 Renewable Energy (Electricity) Regulations 2000, rr. 19D(2)(a)&(d).

126 CEC submission to draft rule determination, pp4-5.

The Commission does not consider the evidence provided by the CEC to support its claim that there are difficulties in using the negotiated connection process in Chapter 5A is sufficiently specific and clear such that the Commission can rely on it to make amendments to the negotiated connection process in Chapter 5A.

4.7 Amendments to Chapter 5A process timing

The proposed rule included amendments to provisions regarding the timing of various tasks within the Chapter 5A negotiated connection process. The draft rule did not include these specific proposed changes. It addressed the potential issue of process timing by increasing the availability of the Chapter 5 embedded generator connection process.

4.7.1 Stakeholder submissions

Some embedded generator proponents considered that the option of using the Chapter 5 process may not be helpful for smaller embedded generators in Chapter 5A due to its complexity.[127] Further, the CEC has stated the negotiated connection process in Chapter 5A is not delivering efficient outcomes as embedded generators are not able to manage their risk under this process.[128]

In light of this, some embedded generator proponents suggested that amendments relating to the timing of the negotiated connection process in Chapter 5A be included in the final rule.[129] Specifically the CEC suggested that the AEMC:

- remove the wording "if practicable" and from NER clause 5A.C.3(b)(1) and replace it with the option for the DNSP to extend the 20 business day timeframes "by agreement between the parties";[130]
- amend NER clause 5A.C.3(b)(2) to require DNSPs to provide connection applicants with information they need to negotiate within 20 business days from when the application is received or at another time by agreement between the parties;[131]
- amend NER clause 5A.C.3(b)(2) such that if a DNSP seeks more information from a connection applicant after it has received a completed application, then this will not extend the time the DNSP has to provide information to the applicant for it to

127 See for example, CEC submission to draft rule determination, p6; City of Sydney submission to the draft rule determination, p3.

128 CEC submission to draft rule determination, p6.

129 See for example, CEC submission to draft rule determination, pp5-7; SMA Australia submission to draft rule determination, p.2.

130 NER clause 5A.C.3(b)(1) requires DNSPs to seek additional information from a connection applicant within 20 business days after receiving the application if practicable.

131 NER clause 5A.C.3(b)(2) requires DNSPs to provide information required by the connection applicant to negotiate as soon as practicable after the DNSP receives the application, or if the DNSP requests additional information, as soon as practicable after the DNSP receives this information.

negotiate. The CEC stated that the DNSP has already had three opportunities to seek the appropriate information at this stage; and

- place a ten business day limit on a DNSP's request for additional information or provide notification of defective information after receiving an application in NER clauses 5A.D.3(d) and (e).[132,133]

The CEC considered these amendments would reduce uncertainty and risk for embedded generator proponents while having negligible impact on DNSPs.[134] It noted that the amendments would equally apply to the connection of load customers under Chapter 5A but considered that the changes were non-controversial and would benefit all parties.[135]

4.7.2 Commission's assessment

As set out in section 3.1.3, the Commission's assessment of the rule change request and the issues raised during consultation have been carried out with regard to the CEC's intention in its rule change request, that the changes should only apply to embedded generators and not load customers. Consistent with this, the final rule determination and the final rule address the negotiated connection process available to non-registered embedded generators (generators with a generating capacity of less than 5MW but who are not micro embedded generators). As a result, the CEC's recent suggested changes to the timing of the negotiated connection process for embedded generators and load customers have not been made. Load customers have not been involved in this process and have not had sufficient opportunity to comment on these proposals.

The Commission considered the changes proposed by the CEC for connecting embedded generators only, not impacting on load, consistent with the intent of the rule change request. However, although the CEC regard the amendments to be minor, they would have the effect of creating another connection process in the NER adding administrative burden for DNSPs and connecting parties. As set out in section 3.1, it is not appropriate to make significant amendments to a process that is relatively new and had limited use.

For these reasons, the Commission has not made the amendments relating to the timing of the Chapter 5A negotiated connection process as suggested by the CEC recently.

132 Currently there are no timeframes for DNSPs to request additional information or notify of defective information after receiving an application in these NER clauses.

133 CEC submission to draft rule determination, pp5-7.

134 ibid, p1.

135 ibid, p6.

4.8 Publication of standard connection offers

The CEC's rule change request focused on the negotiated connection process under Chapter 5A. This set the scope for the rule change process and the draft rule determination reflected this. No changes to Chapter 5A were made in relation to standard connection offers in the draft rule determination.

4.8.1 Stakeholder submissions

Embedded generator proponents have stated that embedded generator connections should be standardised to greatest extent possible.[136] In light of this, some embedded generator proponents suggested in submissions to the draft rule determination that Chapter 5A should be amended to require DNSPs to provide standard connection offers for three different embedded generator classes such as co-generation plants, medium scale solar installations and small hydro plant.[137]

The CEC stated that requiring DNSPs to provide standard connection offers for three embedded generator classes would create a significant benefit for embedded generators who fall into one of these classes.[138] For example, the CEC considered standard connection offers would provide more up-front information on expectations from the generator enhancing transparency.[139] The CEC observed there have been no clear signs that DNSPs are developing standard connection offers to date. It therefore considered that a requirement for them to develop these offers is appropriate.[140]

4.8.2 Commission's assessment

The final rule does not amend Chapter 5A to require DNSPs to develop standard connection offers for three embedded generator classes as suggested. Mandating a certain number of standard offers is out of scope of this rule change. First, as noted above, the CEC's rule change request only related to negotiated connections, not standard connection offers, and this has determined the scope of this rule change process.

Second, the issue is not as straight forward as mandating the existence of three standard connection offers. Further work would be needed to consider the question of why no standard connection offers exist, what an appropriate number of standard connection offers might be, whether standard connection offers should be in relation to certain classes of embedded generator and, if so, how to define those classes. A range of potential solutions would need to be considered and assessed against the NEO.

136 See for example, CEC submission to draft rule determination, p9; SMA submission to draft rule determination, p2.

137 See for example, CEC submission to draft rule determination, pp9-11; City of Sydney, pp3-4.

138 CEC submission to draft rule determination, p10.

139 ibid.

140 CEC submission to draft rule determination, p11.

In addition, and as acknowledged by the CEC, while standardisation of technical requirements may provide benefits to embedded generators, it is important to note that where a standard connection offer is available some negotiation may still be required to finalise the offer.[141] This is because there are often issues specific to a connection at a specific location that need to be resolved.[142] Chapter 5A is appropriately flexible to accommodate these negotiations.

141 CEC submission to draft rule determination, p10.

142 ibid.

Abbreviations

AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
CEC	Clean Energy Council
Commission	see AEMC
DMITRE	Department of Manufacturing, Innovation, Trade, Resources and Energy (South Australia)
DNSP	distribution network service provider
kW	kilowatt
MW	megawatt
MCE	Ministerial Council on Energy
NEL	National Electricity Law
NEM	National Electricity Market
NEO	national electricity objective
NER	National Electricity Rules
NECF	National Energy Customer Framework
STC	Small-scale technology certificate
SSROC	Southern Sydney Regional Organisation of Councils

A Summary of issues raised in submissions

A.1 First round of consultation

Existing arrangements and evidence of a broad problem

Stakeholder	Issue	AEMC response
CEC (pp1, 6, 9)	A member survey shows that the negotiated connection process in Chapter 5A is not effectively supporting the negotiate-arbitrate arrangements in the NER and the principle of countervailing market power. The member survey shows that a large number of micro embedded generators are connecting under the negotiated connection process in Chapter 5A. This implies that DNSPs are largely not offering basic connection services to micro embedded generators. This problem is created by the lack of prescription in the negotiated connection process in Chapter 5A. The member survey shows that DNSPs are imposing export limitations on embedded generators which can impose significant additional costs on the embedded generator. As the negotiated connection process in Chapter 5A is not prescriptive, the opportunities for an embedded generator to fully understand alternative opportunities are significantly diminished.	The Commission's assessment on the extent of a problem is set out in section 3.1.

Stakeholder	Issue	AEMC response
ClimateWorks, Property Council and Seed (p2)	Barriers to the connection of embedded generators identified in the Chapter 5 rule change process are relevant to embedded generators in Chapter 5A.	As above.
Energex (p1) , ENA (p1), Ergon (p2), NSW DNSPs (p1), DMITRE (p2), Victorian DNSPs (p1)	Chapter 5A has only recently been applied in some, but not all, jurisdictions and therefore it is questionable whether there is any evidence that the negotiated connection process in Chapter 5A is not working to achieve the NEO.	As above.
ClimateWorks, Property Council and Seed (p2)	No evidence that DNSPs intend to provide model standard connection offers. In addition, the concept of allowing DNSPs to develop multiple standard connection offers as opposed to developing a wider standard is not consistent with the NEO.	Noted. Although there may be scope for more standard connection offers by DNSPs over time.
Energex (p3)	Model connection offers may not be suitable for micro embedded generator connections that require network augmentation and are technically complex in nature.	As above.
ENA (p1), Victorian DNSPs (p2)	Each connection point in the network is unique; therefore it is likely that the majority of non-basic connections will be negotiated connections.	As above.

Structure and timing of the connection process

Stakeholder	Issue	AEMC response
CEC (p7)	The structure of the proposed rule is consistent with that set out in the Chapter 5 rule change final determination. That is, the provision of information is early in the process and that the provisions are specific about what information is required. The survey results show that achieving a connection agreement in a certain timeframe is more important than achieving a connection agreement in the tightest timeframe. However, the existing process allows DNSPs to stop-the-clock with information requests and there is no requirement on DNSPs to be clear about the information they require. This creates an uncertain environment for investment. The risk associated with this uncertainty is carried by embedded generator proponents.	No changes to the structure and timing of the connection process in Chapter 5A have been made. However, the final rule provides for eligible embedded generator proponents in Chapter 5A to select to use the more structured Chapter 5 process.
ClimateWorks, Property Council, Seed (p2)	The length of time allowed in Chapter 5 from a preliminary enquiry to making a connection offer is too long for embedded generator applications in Chapter 5A.	As above. The embedded generator proponent should consider the timeframes in each of the processes when deciding which process to use.

Stakeholder	Issue	AEMC response
ENA (p2)	Delays to the process generally arise when the DNSP is not provided with sufficient information to assess an application and make a complete offer.	No changes to the structure and timing of the connection process in Chapter 5A have been made. However, the final rule provides for eligible embedded generator proponents in Chapter 5A to select to use the more structured Chapter 5 process.
ENA (p2), Ergon (p4), NSW DNSPs (p3), Victorian DNSPs (p2)	Do not support the proposal that the connection application by the embedded generator proponent is deemed to have been accepted if the DNSP does not acknowledge or accept/reject the proposal within the stipulated timeframe. Timeframes should be able to be extended with the agreement of both parties.	The final rule does not include this proposal. See section 4.1.
Energex (pp3-4), ENA (p2), Ergon (p4), NSW DNSPs (p4), Victorian DNSPs (p2)	Do not support the proposal to require DNSPs to provide embedded generator proponents access to their legal personnel. This would be impractical due to the conflict of interest facing the legal counsel but may also constrain the ability of DNSPs to retain access to legal advisers as they see fit.	As above.
Ergon (pp3-4)	Does not support requiring DNSPs to: • advise embedded generator connection proponents whether a negotiated connection application is complete within ten business days; and • require DNSPs to make a connection offer within 65 business days (it supports the current requirement of 'best endeavours'.	As above.

Stakeholder	Issue	AEMC response
	Remaining proposed amendments to structure and timing of the negotiated connection process are either unnecessary or not controversial.	
Lumo (pp3-5)	Supports changes to the structure and timing of the negotiated connection process. The proposal for a negotiated connection application to be automatically accepted after 65 business days should expedite the connection process.	No changes to the structure and timing of the connection process in Chapter 5A have been made. However, the final rule provides for eligible embedded generator proponents in Chapter 5A to select to use the more structured Chapter 5 process.
NSW DNSPs (p3)	Do not support the introduction of a "negotiated connection application" stage. The DNSP will not be able to provide all the relevant information needed to support a negotiated connection application before the proponent has provided a detailed project scope including the type and nature of the equipment to be used.	As above.

Information requirements

Stakeholder	Issue	AEMC response
CEC (p7)	The member survey results indicate that a lack of information and changes to information during the connection process are a significant concern for embedded generator proponents. Considers information requirements set out in its rule change request are required to support an	The final rule allows eligible embedded generator proponents to use the Chapter 5 embedded generator connection process which includes more specific information requirements. To enable eligible embedded generator proponents to effectively use the Chapter 5 process the final

Stakeholder	Issue	AEMC response
	effective negotiation process. In particular, the proposed amendment to clause 5A.C3(a)(3) to require the DNSP to provide an embedded generator proponent with information it reasonably requires to fully assess the commercial significance of the access arrangements sought. The survey results suggest that requirements on DNSPs and embedded generator proponents are vague and that embedded generator connection proponents rely on information from the DNSP. This makes a case for the NER to be unambiguous about obligations at each stage of the connection process.	rule requires DNSPs to provide the same upfront information as required under Chapter 5 with respect to non-micro embedded generators in Chapter 5A. See Chapter 3.
CEC (p9)	Limited opportunity for embedded generator proponents to understand alternative technical solutions as a result of DNSP limitations on export. This is caused by a lack of prescription in the negotiated connection process in Chapter 5A.	No changes to the relevant provisions in Chapter 5A are included in the final rule. See section 4.1.
ClimateWorks, Property Council, Seed (p3)	There should be technical performance standards for the connection of medium sized embedded generators.	The final rule does not include this proposal. See section 4.1.
Energex (p4)	Energex currently provides information to proponents to enable them to assess the commercial implications of their proposals.	The final rule does not include the specific provision proposed by the CEC to which this comment relates.
ENA (pp2-3), Victorian DNSPs (pp2-3)	The ENA considers the effort and costs required to develop and maintain a register of generating plant for negotiated connections under Chapter 5A (similar to the register required under Chapter 5) would outweigh any potential benefits for	To enable eligible embedded generator proponents to effectively use the Chapter 5 process the final rule requires DNSPs to provide the same upfront information as required under Chapter 5 with respect to non micro embedded generators in

Stakeholder	Issue	AEMC response
	connection proponents. Any register should only be required to include connections greater than 1MW and cover a shorter timeframe than in Chapter 5. The Victorian DNSPs expressed similar views.	Chapter 5A. See section 3.3.2.
Ergon (pp4-5)	Does not support requiring DNSPs to provide proposed technical standards prior to submitting a negotiated connection application as different standards would be required depending on the characteristics of the embedded generator. Considers the requirement for DNSPs to describe technical requirements when assessing negotiated connection applications may be unnecessary. Does not support proposed changes to the confidentiality provisions in Chapter 5A of the NER.	The final rule does not include the proposals to which Ergon refers. See section 4.1.
Lumo (pp5-6)	Supports the proposed changes that relate to the information that needs to be provided to embedded generator proponents by DNSPs during the connection process in Chapter 5A of the NER. Connection proponents will have more power to request the necessary information they require up front in the connection process to help them assess cost early on in the process.	The final rule provides eligible embedded generator proponents access to the Chapter 5 embedded generator connection process which sets out information requirements in greater detail.

Stakeholder	Issue	AEMC response
NSW DNSPs (p3)	Do not support the proposed schedule of information requirements to be provided in a negotiated connection application. The inclusion of technical schedules in Chapter 5A is disproportionate to the type of generators envisaged to be connected under Chapter 5A (that is, non-registered embedded generators). Such onerous information requirements could cause costs and delays.	The final rule does not include a technical schedule in Chapter 5A. See section 4.1

Power transfer capability

Stakeholder	Issue	AEMC response
CEC (pp8-9)	Does not agree with the AEMC's interpretation of power transfer capability in the consultation paper. It appears to restrict it to the permitted power transfer at the connection point. A DNSP's obligations in relation to power transfer capability extend beyond the connection point.	The Commission recognises that power transfer capability may extend beyond the connection point. See section 4.2.
Energex (pp4-5), ENA (p3), Ergon (pp5-6)	Ergon considers the existing requirements in Chapter 5A are reasonable and appropriate and the additional prescription requested by the CEC is not necessary. The ENA and Energex had similar views.	As above. See section 4.2.
ENA (p3), Victorian DNSPs (p3)	The level of power transfer capability should be a matter that is subject to negotiation.	As above.

Stakeholder	Issue	AEMC response
Lumo (p7)	Supports the CEC's proposals.	As above.
NSW DNSPs (p4)	Information requirements outlined in Chapter 5 address connection proponents reasonable expectations of the level and standard of power transfer capability.	As above.

Charges for augmentation for forecast load growth

Stakeholder	Issue	AEMC response
CEC (p10)	On its proposal to exempt embedded generators from being charged for augmentation for forecast load growth, it suggests that Chapter 5A is inconsistent with the principles relating to charging for negotiated distribution services. Clause 6.7.1(3) of the NER refers to the incremental costs above the network performance requirements. This clause expects that the negotiated service only extends to the level of service required to efficiently maintain network performance. Additional costs for future load growth related investment which not needed by a generator should not be borne by that party. Further, the costs of augmentation should only be related to the generator's needs (not future load growth on the network overall).	The final rule does not include any changes relevant to this issue. As outlined in the final rule determination on the Chapter 5 rule change, embedded generators should not be exempt from paying a reasonable contribution for augmentation to the shared network. See section 4.3.2.

Stakeholder	Issue	AEMC response
DMITRE (pp2-3)	Embedded generator proponents should not be excluded from the operation of clause 5A.E.a(c)(4) providing for connection charges to include a reasonable capital contribution towards the cost of augmentation of the distribution system.	As above.
ENA (p4), NSW DNSPs (p6)	Do not support CEC's proposal to exempt embedded generator proponents from being charged costs for forecast load growth. The existing clause also allows the DNSP to recover the cost of augmentation for forecast load growth from an embedded generator where it has load. The NSW DNSPs note that the AER connection charge guidelines do no exempt embedded generators from the payment of augmentation charges which can include those relating to load growth.	As above.
Ergon (p7)	Does not support CEC's proposal to limit the ability of a DNSP to charge an embedded generator proponent for augmentation for future load growth. This issue is sufficiently considered under the AER's connection charge guidelines and relevant classification of service decisions.	As above.
Lumo (pp8-9)	Supports the CEC's proposal to limit the ability of a DNSP to charge an embedded generator proponent for augmentation for future load growth. However, the proposal fails to go far enough. As embedded generator proponents do not receive property rights for funding augmentation they should not be required to pay for these assets.	As above.

Stakeholder	Issue	AEMC response
ClimateWorks, Property Council, Seed (pp2-3)	The obligations for DNSPs to reimburse the use of assets funded by the connection proponent to provide services to other connections are not being observed in practice.	This is a NER compliance issue that should be raised with the AER.

Other fee and connection charge issues

Stakeholder	Issue	AEMC response
ENA (p4), Ergon (pp6-7), NSW DNSPs (pp4-5), Victorian DNSPs (p3)	Do not support restricting the ability of DNSPs to charge for the provision of information that they are required to maintain. The ENA notes that information maintained by the DNSP may require significant alteration when being applied to an individual connection. Ergon considers this issue is dealt with through the classification of services determined by the AER in the regulatory determination process. The NSW DNSPs consider DNSPs should not be prevented from charging a fee for a preliminary enquiry fee. The Victorian DNSP support applying a consistent approach to the Chapter 5 rule change request on this issue.	DNSPs are able to charge a fee that represents the reasonable cost of carrying out work required to address matters raised by the embedded generator. The final rule makes no change to the charging of fees under Chapter 5A. See section 4.3.1.

Stakeholder	Issue	AEMC response
DMITRE (p3)	Reasonable recovery of costs associated with processing a connection application should be allowed.	As above.
CEC (pp9-10)	The benefits to embedded generator proponents from preventing DNSPs from charging a negotiation and process fee until the applicant has been advised that the application is complete outweigh any risks to DNSPs.	No changes to the charging of fees under Chapter 5A have been made by the final rule. See section 4.3.1.
Energex (p5), ENA (p4), Ergon (p6), NSW DNSPs (p5)	Do not support preventing DNSPs from charging a negotiation and process fee until the proponent has been advised that the application is complete.	As above.
Ergon (p7), Victorian DNSPs (p3), NSW DNSPs (p6)	Do not support proposal to limit connection costs to those which could have been reasonably identified by the embedded generator proponent from the information initially provided by the DNSP. The NSW DNSPs and Ergon note the information provided by the DNSP is dependent on the information initially provided by the embedded generator proponent. The Victorian DNSPs consider it is not appropriate as network studies would not have been carried out at that stage. Similarly, Ergon also noted that the scope of works might change during the process.	As above.
Energex (pp5-6), ENA (p4)	Support proposal to limit connection costs that DNSPs can charge embedded generator proponents based in the information initially provided by the DNSP although variations should be able to be agreed between the parties as a project progresses.	As above. See section 4.3.3.

Stakeholder	Issue	AEMC response
CEC (p10)	Supports cost breakdowns for connection fees and charges in Chapter 5.	Chapter 5A requires cost information to be broken down by DNSPs and does not prevent an embedded generator proponent from seeking additional detail. The Chapter 5 process requires more detailed cost breakdown information to be provided. Eligible embedded generator proponents may elect to use the Chapter 5 process.
Lumo (p8)	Supports costs breakdown for connection fees and charges put forward by the CEC. DNSPs should not be able to charge a fee to recover the "reasonable" costs of responding to a detailed connection enquiry as DNSPs use information that is already in their possession.	Cost breakdown information is specified in Chapter 5. It is appropriate that DNSPs be able to charge for responding to a detailed connection enquiry. See section 4.3.3.
Ergon (p6)	Information requirements on fees and costs in the connection offer should not be any more onerous than it is for other connections in Chapter 5A.	The final rule does not include any changes related to this issue.
NSW DNSPs (p5)	DNSPs are unable to provide certain information in the connection offer where an accredited service provider is undertaking the work.	The requirements in Chapter 5 and Chapter 5A are flexible enough to accommodate this scenario.

Embedded generator liability

Stakeholder	Issue	AEMC response
Energex (p6), ENA (p5), Ergon (p7), NSW DNSPs (p7), Victorian DNSPs (p3)	Do not support this proposal. Consider the issue of liability to be a commercial matter that is properly addressed between the DNSP and connection applicant. Concerned that a limit on embedded generator liability in the NER could lead to the DNSP, and therefore customers generally, bearing the risk of damage caused by an embedded generator.	The final rule does not include any changes to the Chapter 5A provisions as they are appropriate. See section 4.4.
Lumo (p9)	Supports the proposal to limit embedded generator liability, suggesting that the limitation of liability for damage to the network be restricted to a dollar value and could be set in proportion to the size of the connecting embedded generator. Given the relevant size of embedded generators that connect under Chapter 5A, their liability should be limited to $100,000-$200,000. DNSPs should also be liable for any damages that they have caused to the embedded generator while connected to the network, which would make it fairer for all parties.	As above.

Dispute resolution

Stakeholder	Issue	AEMC response
AER (pp1-2)	The key to reduce disputes is to increase the level of clarity regarding the requirements on DNSPs and embedded generator proponents. The level of disagreement between embedded generator proponents and DNSPs would not be reduced by broadening the definition of what is a relevant dispute. The current framework can deal with various types of disputes, including procedural aspects around timing and quality of information required to be provided by DNSPs. Would like clarifying amendments on the inter linkages between Chapter 5A disputes and the dispute resolution framework under Part L of Chapter 6.	The final rule does not change the Chapter 5A provisions. Embedded generator proponents electing to use the Chapter 5 process will have access to the Chapter 8 dispute resolution process including the Wholesale Energy Market Dispute Resolution Adviser. See section 4.5. The final rule does not amend the NER to provide for, or clarify, inter linkages between Chapter 5A disputes and the dispute resolution framework under Part L of Chapter 6 as proposed by the AER. Any such amendments go beyond the scope of this rule change process on the negotiated connection process for embedded generators. Further, there is an intention in Chapter 5A to exclude services negotiated under that chapter from the Chapter 6 negotiating framework. In any event, disputes about the terms and conditions of access to direct control services under Part L of Chapter 6 and disputes under Chapter 5A are both treated as an access dispute under the NEL.
Energex (p6), ENA (p5), NSW DNSPs (p7), Victorian DNSPs (p3)	Do not support proposed amendments. Current dispute resolution arrangements under Chapter 5A are sufficient. ENA and Energex would support consistent arrangements with Chapter 5.	The final rule does not change the Chapter 5A provisions. Embedded generator proponents electing to use the Chapter 5 process will have access to the Wholesale Energy Market Dispute Resolution Adviser. See section 4.5.

Stakeholder	Issue	AEMC response
CEC (pp10-11)	A lack of prescription in the in the negotiated connection process in Chapter 5A allows DNSPs to develop their connection policies with broad freedom. Further, there is an incentive on DNSPs to limit prescriptiveness in their connection policies as the AER would rely on these when considering a dispute.	The NSW and ACT DNSPs have been the first DNSPs to be required to have a connection policy approved by the AER. These connection policies have been effective from 1 July 2014. To date, there is a lack of evidence of a problem on this issue. The provisions regarding the scope of dispute resolution in Chapter 5A are appropriate.

General approach for way forward

Stakeholder	Issue	AEMC response
CEC (p11)	There may be cases where Chapter 5 could be an applicable process for non-registered embedded generators. However, if adopted into Chapter 5A, an obligation must be placed on the DNSP to meet the embedded generator proponent's request to use the Chapter 5 process. The option should not be by agreement between the parties.	The Commission's approach to resolving the overarching issue in the rule change is set out in Chapter 3.
ClimateWorks, Property Council and Seed (p2)	There is merit in aligning the negotiated connection process in Chapter 5A with the connection process for embedded generators in Chapter 5. DNSPs in non-NECF jurisdictions should be prevented from refusing an application from an embedded generator to be connected to the Chapter 5 process.	As above. The final rule does not amend the provisions in Chapter 5 that provide DNSPs with some discretion on using rule 5.3 to connect non-registered embedded generators to a network. This issue is out of scope for this rule change request process.

Stakeholder	Issue	AEMC response
Energex (p1), NSW DNSPs (p1)	AEMC should draw on relevant work carried out during the Chapter 5 rule change process.	The Commission's approach to resolving the overarching issue in the rule change is set out in Chapter 3.
Energex (pp1,7), ENA (p1), Victorian DNSPs (pp1-2)	Support general alignment of Chapter 5 and 5A processes to the extent possible to reduce regulatory compliance costs and improve certainty for embedded generator proponents. Chapter 5 solutions are appropriate for the reasons raised with Chapter 5A. The Victorian DNSPs consider that the processes should be aligned for all embedded generator connections in Chapter 5A with the exception of micro embedded generators.	As above.
Energex (p7)	Does not support allowing Chapter 5A embedded generator proponents to use all or part of the Chapter 5 embedded generator connection process. A clear delineation between the Chapters provides regulatory certainty for DNSPs and proponents and will avoid process shopping.	As above.

Stakeholder	Issue	AEMC response
Lumo (p1)	Supports the CEC rule change request. It will make the negotiated connection process clearer, more transparent and more prescriptive. As a result of requiring more information from DNSPs the negotiated connection process will become more efficient under the proposed rule. The additional clarity, transparency and prescription that the CEC rule change will bring to the negotiated connection process will more than offset the additional administrative costs it will create.	As above.

Other

Stakeholder	Issue	AEMC response
John Herbst (private individual)	Customers should be made aware that the installation of micro embedded generators may result in tariff changes for them.	This issue is out of scope of this rule change request as it relates to micro embedded generators that are eligible for a basic connection service and supply tariffs.

A.2 Second round of consultation

Overall approach

Stakeholder	Issue	AEMC response
Victorian DNSPs (p1) Department of State Development (South Australia) (p1),	Supported providing non-registered embedded generators access to the Chapter 5 process as a solution to the problem.	Noted.
CEC (p4) (supplementary submission, p7)	Considered there has been considerable experience with the application of Chapter 5A. For example, nearly 600 connections that have been negotiated in South Australia and NSW since NECF commenced in these states. In addition, the results of the CEC's connection experience survey reflects experiences with the negotiated connection process in Chapter 5A and not previous jurisdictional processes.	The Commission considers that the negotiated connection process is relatively new and has limited use to date. In addition, the information provided by the CEC does not provide evidence of grounds to consider otherwise. See section 4.6.
City of Sydney (p3) and Southern Sydney Regional Organisation of Councils (SSROC) (p2)	The AEMC has not taken sufficient account of asymmetry of power between the parties. Prescription is required in Chapter 5A of the NER to address this.	Embedded generator proponents in Chapter 5A now have the ability to select the more detailed Chapter 5 process where this suits their needs. See Chapter 3.
CEC (p6), City of Sydney (p3)	The option of using the Chapter 5 process may not be helpful for smaller embedded generators in Chapter 5A due to the complexity of this process.	Noted. For these embedded generators the Chapter 5A connection process may be more suitable. See section 3.1.2.
CEC (pp5-7)	Proposed amendments to the negotiated connection process in Chapter 5A relating to timing to assist embedded generators manage their risk.	No change made. See section 4.7.

Stakeholder	Issue	AEMC response
CEC (pp9-11), City of Sydney (pp3-4), SSORC (p2)	DNSPs should be required to create standard connection offer for three connection classes. This would create significant benefit for embedded generators who fall into one of the classes. Without a requirement there is no incentive on DNSPs to develop standard connection offers for any type of embedded generator.	No change made. See section 4.8.

Accessing the Chapter 5 connection process

Stakeholder	Issue	AEMC response
CEC (pp8-9)	Chapter 5 should be accessible to any embedded generator which has to negotiate any part of a connection.	The Chapter 5 process is not designed to accommodate negotiations associated with basic or standard connection offers and is not appropriate in that context. See section 3.2.2.
CEC (pp8-9)	The NER should clarify that where an embedded generator is eligible for a basic or standard connection offer and it is required to negotiate some aspect of that offer, the DNSPs basic or standard connection offer must form the basis of those negotiations.	It is in the interests of both parties to base negotiations on a basic or standard connection offer where one is available. To stipulate this in the NER may create unintended limitations on parties.
CEC (pp8-9)	The DNSP should advise that the embedded generator can use Chapter 5 at the time that a connection is to be negotiated, and consider that the progress in Chapter 5A thus far constitutes a Chapter 5 connection enquiry.	An embedded generator proponent must choose which Chapter to connect under before commencing the Chapter 5A process (assuming there is no relevant standard connection offer). See section 3.2.5.

Stakeholder	Issue	AEMC response
ENA (p2), Networks NSW (p2)	The choice should be made at the time the preliminary enquiry is made in Chapter 5A or when the application is submitted (whichever is first). The preliminary enquiry phase may be passed.	As above. The drafting of the final rule clarifies that the choice of process is to be made before the enquiry or application stage (whichever is first).
ENA (p2)	Embedded generator proponents should be encouraged to consult with DNSPs on the choice of process.	DNSPs can be reasonably expected to encourage embedded generators to discuss the options available and are required to provide information on their websites. See section 3.2.4
Energex (p1), Ergon (p1)	Embedded generator proponents should be required to seek agreement from the DNSP to choose Chapter 5, and that agreement must not be unreasonably held.	The final rule does not require an embedded generator to seek the DNSPs agreement on which connection process to use. See also above.
ENA (pp3-4), Networks NSW (pp2-3)	Non-registered embedded generators that opt-in to Chapter 5 should not be eligible for avoided TUOS payments from the DNSP. A requirement to pay avoided TUOS and the administrative burden of calculating it would not be proportionate to the payments involved.	The administrative burden from some Chapter 5A embedded generators becoming eligible for avoided TUOS payments does not appear so significant that the 'whole of package' approach should be amended. See section 3.2.3.

Information to make a choice

Stakeholder	Issue	AEMC response
CEC (pp11-12), LAROS (p2), Neoen (p2), AGL (p2), SMA (p2), City of Syndey (p2)	Supported requiring information to be published in Chapter 5 to be required in Chapter 5A as well. Some embedded generators suggested the information requirements will enable embedded generators to better understand the expectations of the DNSPs during the connection process. The CEC considered the register may assist in understanding of opportunities for standardisation.	Noted. See section 3.3.
ENA (pp2-3), Energex (p1), Ergon (p2), Victorian DNSPs (pp1-2)	Concerned that the requirement to establish and maintain a register will result in costs that outweigh the benefits. The Victorian DNSPs note that issues are specific to a connection point; the speed of evolution of technology may mean information redundant over time; limited number of embedded generators that consented to this information in the Chapter 5 register. Seeking permission and publishing information will be much more significant than was the case for the Chapter 5 register due substantially more embedded generator connections at this level.	Consistent with the Chapter 5 final rule determination, the public register will improve the level of available technical information for embedded generator proponents when they are preparing to negotiate with a DNSP. This may assist understanding of opportunities for standardisation. The Commission acknowledges that there will be more embedded generator connections under 5MW than above this level. However, as many connections will be similar it may be possible to streamline the information a DNSP publishes in the register by cross-referencing across projects. It is for the DNSP as to how it develops the register. The Commission considers the benefits of providing the register for smaller generators outweigh the costs. See section 3.3.2.

Stakeholder	Issue	AEMC response
ENA (pp2-3), Victorian DNSPs (p2)	Due to the high administrative burden and rate of obsolescence in technology the register should be limited to generators above 1MW and cover a period of two years.	The final rule does not reduce the scope of the register as proposed by DNSPs. The number of potential projects to go on the register provided by DNSPs in submissions does not appear overly burdensome. Further, if connections are similar it may be possible for a DNSP to stream line the information it publishes in the register by cross-referencing across projects. See section 3.3.2.
ENA (p3), Energex (p1-2)	The requirement to provide single line diagrams should be removed as these would be difficult to manage from an operational perspective and would not be helpful or informative at this level. (ENA only) Requirement to provide information on protection and communication systems should be removed as the information is highly prescriptive and confidential in nature. If retained, the clause should be revised to reduce the level of prescription. Requirement to provide information on voltage control and reactive power capability should be removed as this is not required for this level of generation. If retained, the clause should be revised to make clear the level of detail required. The requirement to publish details specific to location are broad and require clarification. There is also potential for privacy and confidentiality issues arising out of any requirement to publish the address of a facility.	The Commission has retained the information to be provided for the register on each completed project as the information will be useful for embedded generators under 5MW. However, the final rule clarifies that information on voltage control and reactive power capability has to be provided where relevant to do so. This recognises that these features may not always be required for embedded generator connections under 5MW. It is not necessary to revise the clauses to reduce the level of prescription required. The rules are flexible for DNSPs to determine an appropriate level of detail that is helpful. Chapter 5A allows parties to manage confidential information and privacy obligations are not displaced. Therefore, privacy or confidentiality concerns should be managed in accordance with either privacy law (where relevant) or obligations around confidential information. Also see section 3.3.2.

Stakeholder	Issue	AEMC response
Victorian DNSPs (p2)	The information in the register should be limited to that required in sub-clauses (1) to (4) of the draft rule as this is most relevant to embedded generators in Chapter 5A.	As above.

Other issues raised

Stakeholder	Issue	AEMC response
City of Sydney (pp3-4), SSROC (p2)	The AEMC's approach does not have sufficient regard to the reasonableness of connection costs incurred by embedded generators. Propose that DNSPs not be able to transfer the costs for network upgrades that would otherwise be required.	Appropriate price signals can be achieved by allocating costs to the users that impose those costs on the network. That is, an embedded generator proponent should pay for the costs it has caused. Clause 5A.E.1(c)(4) of the NER is consistent with this principle. See section 4.3.2.
City of Sydney (p4), SSROC (p1)	Consideration should be given to introducing additional formal resolution mechanisms to hold networks to account.	See section 4.5.

Stakeholder	Issue	AEMC response
Kristian Handberg (private individual) (pp1-3)	Agreed with the CEC that the negotiated connection process in Chapter 5A will result in unexpected costs and delays for embedded generator applicants. The 4.1MW Hepburn Wind project in Victoria provides an example of the challenges associated with a negotiated connection process. Grid connection costs for this project blew out significantly. Uncertainty related to the connection process is impacting on project risk and finance. DNSPs do not have an incentive to provide standard connection offers.	The Commission notes that the particular experience identified in the submission was not under the Chapter 5A connection framework. An assessment of the extent of a problem is set out in section 3.1.

Drafting issues

Stakeholder	Issue	AEMC response
ENA (p2), Networks NSW (p2)	Draft clause 5A.A.2 (b) and (c) may inadvertently allow embedded generators with a basic connection service to choose Chapter 5.	No change to drafting made. Basic connection services are only available to micro embedded generators who are not defined to be non-registered embedded generators. These parties will not have the right to access Chapter 5.
Networks NSW (p2)	Draft clause 5A.A.2(e) refers to a valid election under paragraph (c). A more accurate description would be to refer to paragraphs (c) and (d).	The word "valid" has been removed. Without this word there is no need for (e) to cross reference to (d). The cross reference in (d) to (c) is sufficient.
ENA (p2), Ergon (p2)	Micro embedded generators may be inadvertently caught under the definition of connection applicant as it applies to draft clause 5.3.1A. Of particular concern is draft clause 5.3.1A(c)(2).	No change made. The rule only allows non-registered embedded generators to use the Chapter 5 process and not micro embedded generators.

Stakeholder	Issue	AEMC response
Networks NSW (p2&5)	Drafting does not appropriately support intention to allow DNSP to choose whether to maintain a single register or two separate registers.	Amendments have been made to address this concern.
Networks NSW (p5)	The meaning of "review date" in draft clauses 5A.D1A(d)(2) and 5.4.5(d)(2) should be clarified.	Amendments have been made to address this concern.
Networks NSW (p6)	Draft transitional clauses 11.69.1 and 11.69.2 are not required.	Amendments have been made to address this concern.
Victorian DNSPs (p2)	Reference to expedited connection in draft clause 5A.D.1(5) should be clarified as this is not a NER term.	No change made. Clause 5A.F3 of the NER refers to expedited connections.
Clayton Utz (p1)	Concerned that an ambiguity arises from the use of the term "retail customer" in the definition of micro embedded generator. Proposes to amend the definition of micro embedded generator to " a person who operates, or proposes to operate, an embedded generating unit for which a micro embedded generator connection is appropriate."	The current definition of 'micro embedded generator' requires a micro embedded generator to be a retail customer, (a person who is having their electricity supplied by a retailer to a connection point at their premises). This means that to be a micro embedded generator you must be a person who has an existing supply relationship. This policy setting allows for credits/offsets from various jurisdictional schemes in place that address micro embedded generating units. The local definition of retail customer, by the use of 'includes' is intended to include those things that may not otherwise fall within the NEL definition of retail customer (non-registered embedded generators and micro embedded generators). Taken together with the definition of 'micro embedded generator', it is clear that the 'threshold' requirement to be a retail customer must first be

Stakeholder	Issue	AEMC response
		met to be a micro embedded generator, before then being able to fall with the expanded Chapter 5A meaning of retail customer. This is consistent with the balance of the drafting in Chapter 5A (see for example clause 5A.B.1 (b)(2)). A person cannot be a retail customer solely by reason of the operation of an embedded generating unit of the kind contemplated by AS4777. The suggested drafting from Clayton Utz would have the effect of undoing the above mentioned policy settings and so has not been adopted. However, some of the confusion may arise from the note included with the definition of retail customer in Chapter 10. This note has now been amended.
Clayton Utz (pp1-2)	Concerned that the reference to agent of a retail customer in clause 5A.A.2 creates a doubt as to whether a connection applicant that is a retail customer in relation to the connection process but a registered participant in other respects can act as an agent for itself in order to have Chapter 5A available to it.	Where a connection applicant was otherwise a registered participant, it could only utilise Chapter 5A for micro embedded generator connections in relation to embedded generating units if it is acting in a capacity other than its registered capacity. Each corporate entity involved must decide on what capacity it is acting in. For example, a 'gentailer' can be registered as both a market generator and a market customer in the NEM . The suggested drafting is therefore not necessary and could in fact lead to unintended consequences.
Clayton Utz (p2)	Suggest there are several missing italicisations of retail customer in clause 5A.A.3.	There is no need to italicise the references to retail customer in clause 5A.A.3. This is because the reference is intended to be to the local definition of retail customer found in Chapter 5A which includes micro embedded generators and non-registered embedded generators.

B Legal requirements under the National Electricity Law

This appendix sets out the relevant legal requirements under the NEL for the AEMC in making this final rule determination.

B.1 Final rule determination

In accordance with s. 99 of the NEL, the Commission has made this final rule determination in relation to the rule proposed by the CEC.

B.2 Commission's power to make the rule

The Commission is satisfied that the final rule falls within the subject matter about which the Commission may make rules. The final rule falls within s. 34 of the NEL. This is because the rule change relates to regulating the activities of persons participating in the national electricity market or involved in the operation of the national electricity system. Further, the final rule falls within the matters set out in items 11-13 of Schedule 1 to the NEL as it relates to:

- the operation of distribution systems;
- the augmentation of distribution systems; and
- access to electricity services provided by means of distribution systems.

B.3 Commission's considerations

In assessing the rule change request the Commission considered:

- its powers under the NEL to make the rule;
- the rule change request;
- submissions received during the first and second rounds of consultation;
- feedback provided at stakeholder meetings with embedded generator proponents and DNSPs; and
- the Commission's analysis as to the ways in which the proposed rule will or is likely to, contribute to the NEO.

There is no relevant Ministerial Council on Energy (MCE) statement of policy principles that apply to this rule change request.[143]

143 Under s. 33 of the NEL the AEMC must have regard to any relevant MCE statement of policy principles in making a rule. The MCE is referenced in the AEMC's governing legislation and is a legally enduring body comprising the Federal, State and Territory Ministers responsible for energy.

Under s. 91(8) of the NEL the Commission may only make a rule that has effect with respect to an adoptive jurisdiction if it is satisfied that the rule is compatible with the proper performance of the Australian Energy Market Operator's declared network functions. The final rule is compatible with AEMO's declared network functions because it does not the affect the performance of the functions at all (and will not do so in the event Victoria implements the NECF, including Chapter 5A).

On 1 July 2011 the MCE was amalgamated with the Ministerial Council on Mineral and Petroleum Resources. The amalgamated Council is now called the COAG Energy Council.

C Differences between Chapter 5 and Chapter 5A

In making a choice as to whether to connect under Chapter 5 or Chapter 5A, an eligible Chapter 5A embedded generator proponent will need to take into account the differences between the two chapters and consider these against its own requirements and circumstances. This appendix sets out the key differences between the Chapter 5 embedded generator connection framework that came into effect from 1 October 2014 and the Chapter 5A negotiated connection framework. A high level comparison of the differences is provided in Table C.1.

Broadly, Chapter 5 includes a connection process that currently applies to embedded generators that are registered, intending to register with AEMO or are required to seek exemption from registration as a generator from AEMO. Therefore, an embedded generator proponent whose generating system is greater that the standing exemption from registration with AEMO (which is currently 5MW), can use Chapter 5 when seeking to connect to a distribution network. Chapter 5 is relevant to all jurisdictions in the NEM.

Chapter 5A is relevant to embedded generator proponents whose generating system is less than the AEMO standing exemption threshold. It includes a negotiated connection process that is flexible to accommodate negotiations associated with basic and standard service offerings from DNSPs. Chapter 5A is part of the NER in jurisdictions that have implemented the NECF. These are currently South Australia, Tasmania, NSW and the ACT. The NECF is expected to commence in Queensland on 1 July 2015.[144] The Victorian Government has announced that it intends to implement the NECF by 31 December 2015.[145]

144 The National Energy Retail Law (Queensland) Act 2014 is expected to commence on 1 July 2015. The Hon Mark McArdle (Minister for Energy and Water Supply), Families to benefit from electricity reforms, media release, Queensland Government, 10 September 2014.

145 On 13 October 2014 the Victorian Government announced that its retail energy regulatory arrangements will transition to the NECF by 31 December 2015. See: Department of State Development, Business and Innovation, Victoria's Energy Statement, 13 October 2014, p20.

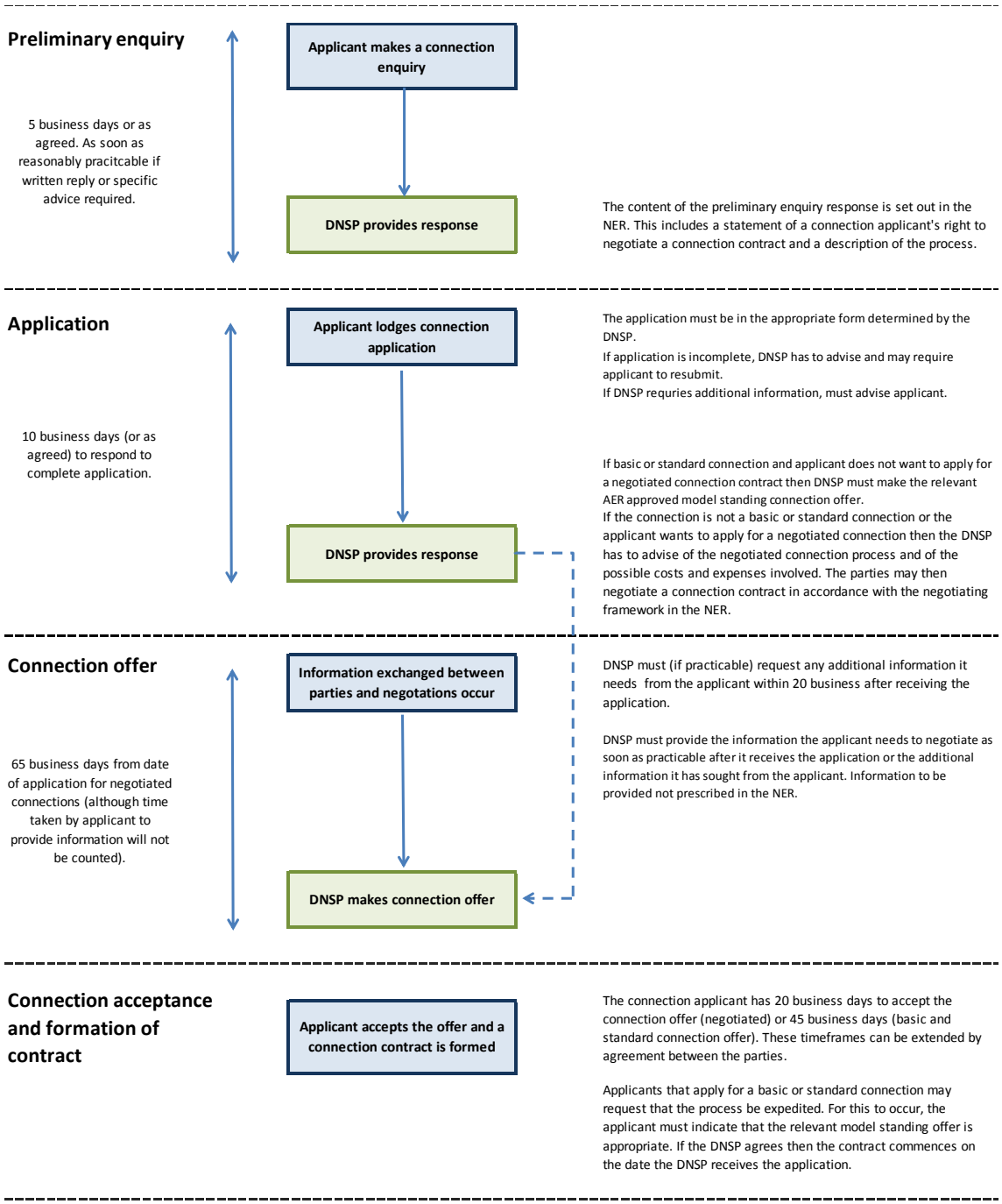
Table C.1 Key differences between connection processes

Issue	Chapter 5	Chapter 5A (existing)
Process and information	Stages of the process and the information to be provided at each stage are explicitly set out. Envisages a longer process.	Less specific but more flexible about when information is to be provided by the parties throughout the process. Envisages a shorter process.
Fees related to the connection process	Specific about what DNSPs can charge and when they can charge fees. Implicit that fees cannot change after an application is lodged.	DNSPs can charge reasonable fees for assessing an application and making a connection offer. Requires DNSP to estimate fees before entering into negotiations.
How connection charges are calculated	Requires DNSP and embedded generator to negotiate in good faith.	Provides a framework for how connection charges should be determined by DNSPs.
Information on connection charges in the connection offer	Specifically identifies items which should be provided in the connection offer. DNSPs are also required to provide an explanation of any variation in amounts of any of the components from information given earlier.	Requires itemised statement of connection costs (but not as detailed as Chapter 5).
Dispute resolution arrangements	The Chapter 8 dispute resolution framework applies. Under this framework the Wholesale Energy Market Dispute Resolution Adviser may resolve disputes.	The AER resolves disputes under specific arrangements in Chapter 5A itself.

C.1 Process and information requirements during the process

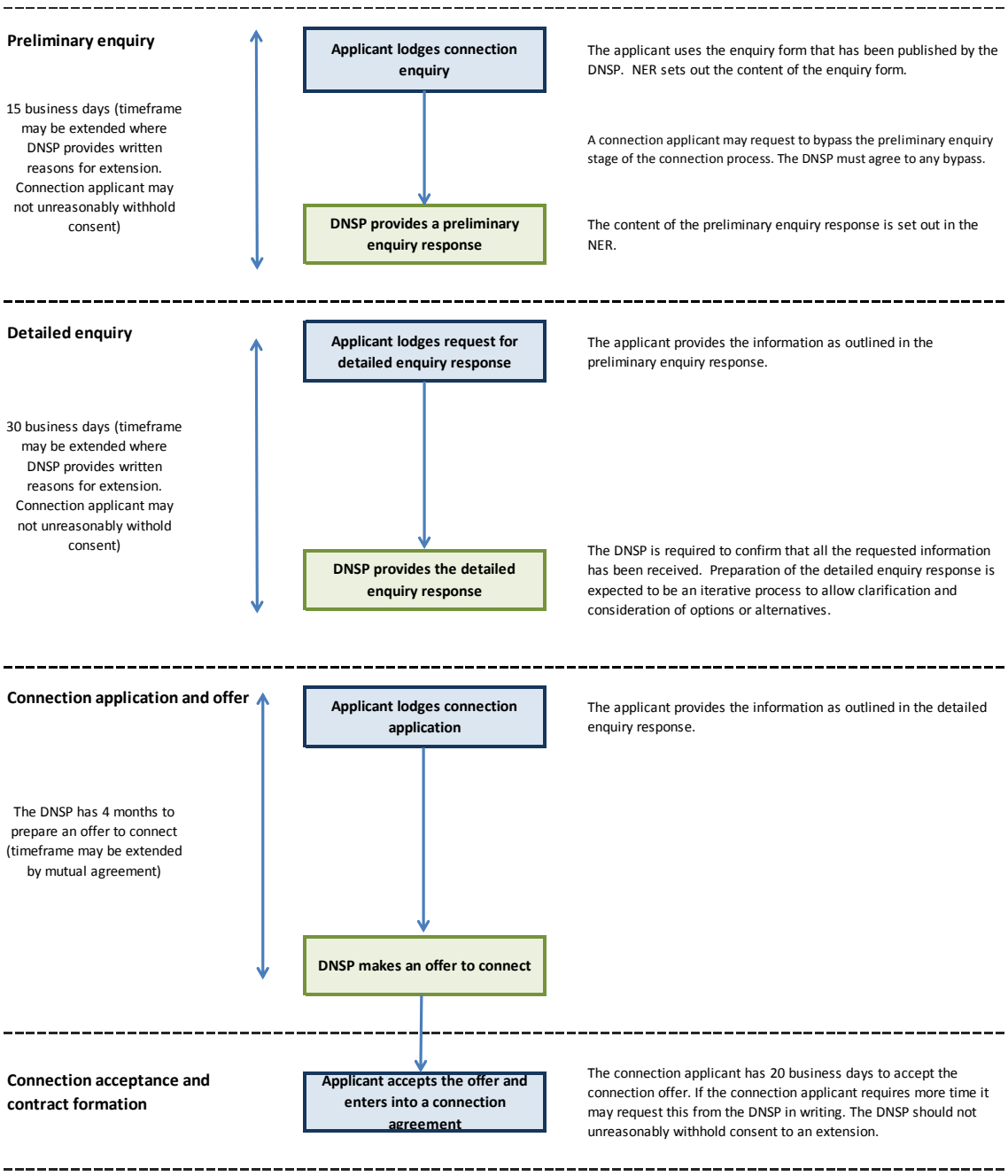
The Chapter 5A and Chapter 5 connection processes are set out in Figure C.1 and Figure C.2 respectively. In addition to the connection application processes themselves, DNSPs are required to publish certain information on their websites so that embedded generator proponents have ready access to relevant information before they commence a connection process. As discussed in Chapter 3, the final rule aligns Chapter 5A with Chapter 5 in regard to the information that is to be published by the DNSPs.

Figure C.1 The Chapter 5A connection process



Source: AEMC; Chapter 5A of the NER.

Figure C.2 The Chapter 5 connection process



Source: AEMC, Factsheet – Connection process for embedded generators, 17 April 2014.

The Chapter 5 process clearly sets out the stages of the process and the information that should be provided by the parties at each stage. Importantly, before an application is made it provides for a two-stage embedded generator enquiry process known as the preliminary and detailed enquiry stages. DNSPs are required to provide the information specified in the NER to proponents at these stages. An embedded generator proponent can then develop its application in light of the information provided by the DNSP taking into account its own commercial considerations. This is similar to the process that the CEC sought in its rule change request.

By comparison, Chapter 5A is more flexible on what information is to be provided by the parties and when. Based on the drafting of Chapter 5A, it is expected that much of the information exchange between the parties would occur following the making of a connection application by an embedded generator proponent. Although the precise information that must be exchanged is not specified in detail in the NER.

In addition, the Chapter 5A process is generally expected to be shorter in length than the Chapter 5 process. Excluding the time taken by embedded generator proponents to provide information, Chapter 5A provides DNSPs with approximately 16 weeks to make a connection offer. This compares to approximately 25 weeks under the Chapter 5 embedded generator connection process.

C.2 Fees related to the connection process

The Chapter 5 embedded generator connection process specifically permits DNSPs to charge a fee to recover the reasonable costs incurred to respond to a detailed enquiry.[146] These fees are payable by the embedded generator proponent before the DNSP embarks on providing this information.[147]

DNSPs are also allowed to charge an application fee payable on lodgement of the application by the embedded generator proponent.[148] There are specific provisions regarding what this fee can include. That is, the fee must not:

- include an amount for work that was completed in preparing the detailed enquiry response;
- exceed more than necessary to cover the costs of work and expenses reasonably incurred by the DNSP in assessing the application and making an offer; and
- be more than necessary to meet the reasonable costs anticipated to be incurred by AEMO and other network service providers whose involvement is required.[149]

Fees to recover the preliminary enquiry response have not been provided for.[150] The response to a preliminary enquiry is intended to be sourced from information already available to the DNSP.

Chapter 5A contains a general provision that DNSPs may charge an embedded generator proponent a reasonable fee to cover expenses directly and reasonably incurred by the DNSP in assessing an application for a negotiated connection and making a connection offer.[151] It also requires a DNSP to provide an estimate of the

146 NER clause 5.3A.4.

147 NER clause 5.3A.4(c).

148 NER clause 5.3A.4(e).

149 ibid.

150 NER clause 5.3A.4(d).

151 NER clause 5A.C.4 (a).

amount to be charged for the assessment of the application before entering into negotiations with the embedded generator proponent.[152]

C.3 Connection charging arrangements

The Chapter 5 embedded generator connection process requires the DNSP and the embedded generator proponent to negotiate in good faith to reach agreement on connection charges.[153]

By comparison, Chapter 5A provides a framework for how connection charges for embedded generator proponents should be determined by DNSPs. This framework includes:

- a set of principles in Chapter 5A of the NER which DNSPs must use to determine connection charges;
- a DNSP connection policy approved by the AER setting out how the DNSP will determine connection charges; and
- AER connection guidelines which DNSPs must follow in developing their connection policies.[154]

C.4 Information on connection charges

Chapter 5 obliges DNSPs to provide an itemised statement of connection costs in its detailed enquiry response and offer to connect where these items are relevant.[155] The items which should be included in the statement are specified in the NER. Importantly, DNSPs are also are required to provide an explanation of any variation in the amounts of any of the components between the two stages in Chapter 5.[156]

Chapter 5A requires DNSPs to provide an estimate of connection charges and the basis on which they are calculated at the commencement of the negotiation process.[157] Following on from this, it requires the connection offer to be accompanied by a schedule containing an itemised statement of connection costs.[158] The list includes some, but not all of the specific information required by the Chapter 5 process.

152 NER clause 5A.C.3(a)(3)(i).

153 NER clause 5.5(f).

154 Part E of Chapter 5A of the NER.

155 NER clause S5.4B(h).

156 NER clause 5.3.6(b2)(2).

157 NER clause 5A.C.3(a)(3).

158 NER clause 5A.E.2.

C.5 Dispute resolution arrangements

For an embedded generator proponent seeking to connect under Chapter 5, the relevant dispute resolution process is in Chapter 8 of the NER which includes the Wholesale Energy Market Dispute Resolution Adviser.

If an embedded generator proponent in Chapter 5A is not satisfied with the terms and conditions or charges in a negotiated connection contract, and it cannot resolve the issue directly with the DNSP, it can seek dispute resolution assistance from the AER.