Australian Energy Market Commission

RULE CHANGE

DRAFT RULE DETERMINATION

National Electricity Amendment (Release of Generator information by AEMO) Rule 2010

Rule Proponent(s)

Senergy Econnect Australia Pty Ltd

Commissioners

Henderson
Pierce
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21 October 2010

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For and on behalf of the Australian Energy Market Commission

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Reference: ERC0112

Citation

AEMC 2010, Release of Generator information by AEMO, Draft Rule Determination, 21 October 2010, Sydney.

About the AEMC

The Council of Australian Governments, through its Ministerial Council on Energy (MCE), established the Australian Energy Market Commission (AEMC) in July 2005 to be the rule maker for national energy markets. The AEMC is currently responsible for rules and providing advice to the MCE on matters relevant to the national energy markets. We are an independent, national body. Our key responsibilities are to consider rule change proposals, conduct energy market reviews and provide policy advice to the Ministerial Council as requested, or on AEMC initiative.

Summary of draft Rule determination

The Australian Energy Market Commission has decided to make this draft Rule determination for the Release of Generator information by AEMO Rule change request. This Rule change request was submitted to the Commission by Senergy Econnect Australia Pty Ltd on 6 June 2010.

In this Rule change request, the Proponent seeks to bring forward the date on which the Australian Energy Market Operator is required to release certain information relating to connecting generators, to third parties. The proponent proposes that this date should be revised, such that it is the earlier of:

- the date of the execution of the connection agreement for the relevant plant; or
- three months before the proposed start of commissioning of the plant.

Commission's decision

The Commission has decided to make a Draft Rule adopting the changes proposed by the Proponent, with some additional amendments.

Reasons for the Commission's decision

The Commission is satisfied that the Draft Rule meets the Rule making test and will, or is likely to, contribute to the achievement of the National Electricity Objective.

In particular, the Commission considers that the Draft Rule will contribute to more efficient investment in and operation of electricity services for the long term interests of consumers of electricity, with particular respect to the price and reliability of supply of electricity.

In coming to this view, the Commission considered that the earlier availability of generator information will allow new Generators to connect more promptly, in a more cost effective manner, at those locations and at those times where price signals are appropriate. More efficient generation entry is likely to result in price and reliability benefits for customers.

The Draft Rule also includes a number of amendments in addition to those proposed by the Proponent. These further changes aim to ensure that participants are fully aware of the stage of development of the generation project for which information has been provided, in order to be able to make an assessment as to the likely ultimate accuracy of this information.

Consultation on the Rule change request

The Proponent requested that assessment of the Rule change request be expedited. However, the Commission determined that the Proposed Rule was neither urgent nor non-controversial, and decided not to exercise its power to expedite the Rule.

On 15 July 2010, the Commission commenced a standard Rule change process by issuing a notice under section 95 of the National Electricity Law. Seven submissions were received in response to this first round of consultation.

In accordance with the notice published under section 99 of the NEL, the Commission now invites submissions on this draft Rule determination, including the Draft Rule, by Thursday 2 December 2010.

In accordance with section 101(1a) of the NEL, any interested person or body may request that the Commission hold a hearing in relation to the draft Rule determination. Any request for a hearing must be made in writing and must be received by the Commission no later than Thursday 28 October 2010.

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1 Senergy's Rule change request

1.1 The Rule change request

On 6 June 2010 Senergy Econnect Australia Pty Ltd (Senergy or the Proponent) made a Rule change request to the Australian Energy Market Commission (AEMC or Commission) regarding National Electricity Rule (the Rules or NER) clause 3.13.3(l4). This clause restricts the Australian Energy Market Operator's (AEMO's) release of certain information to third parties, where that information relates to plant currently in the process of connecting to the National Electricity Market (NEM). This information includes encrypted generator model source code and a Releasable User Guide (RUG).

Currently, AEMO may not release this information until two specific dates in the connection process of the relevant plant have both passed: the execution of the connection agreement for the plant, and 3 months before the proposed start of commissioning of the plant. The Rule change seeks to bring forward the date when AEMO may release this information, to the earlier of these two dates.

1.2 Rationale for Rule change Request

The Proponent suggests that clause 3.13.3(l4) of the Rules prevents intending Generators[1] from gaining timely access to encrypted generator model source code and a RUG[2], where this information relates to other connecting generation plant in their vicinity.[3]

The Proponent considers that this information is needed to conduct effective load flow and dynamic power system studies, which allow an intending Generator to assess how its plant will interact with other generators. These power system studies inform the negotiation of performance standards, which in turn form the basis of connection agreements for new generation plant, and the upgrade of existing plant.

The Proponent suggests that lack of timely access to the information will frustrate development of generator performance standards, which will in turn create difficulties for new Generators seeking to develop connection applications. As such, lack of timely access to the information can act as an impediment to connection of new generation and upgrade of existing generation.[4]

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1 Note that the capitalised term "Generator" refers to the entity that owns and operates generation equipment. The non-capitalised term "generation" or "generator" refers to a physical generation system or plant.

2 Throughout this document, the term "the information" refers to that information which is released to registered participants by AEMO under clause 3.13.3(k)(2) of the Rules. Specifically, this refers to an encrypted version of the generator model source code and the RUG. These documents are originally provided to AEMO by connecting generators under clause S5.2.4 of the Rules.

3 Senergy, Rule change proposal, p.1.

4 Ibid.

The Proponent suggests that as the market responds to climate change polices and growth in peak demand, there will be a significant increase in the number of new generators seeking connection to the network, many in similar locations.[5] This may exacerbate the issues relating to connection or upgrade of generators highlighted above, with consequent increased price and reliability implications for the NEM.

1.3 Solution proposed in the Rule change Request

Senergy has proposed that the above issues should be addressed through the making of a Rule change.

The Proposed Rule amends clause 3.13.3(l4) of the Rules to allow the earlier release by AEMO of information relating to plant in the process of connection.

Specifically, the proposed Rule would require AEMO to release the information to third parties by the earlier of:

- the date when the relevant connection agreement is executed; or
- three months before the proposed start of commissioning of the plant.

1.4 Relevant Background

This Rule change follows a number of earlier Rule changes which have sought to establish a framework for the provision of generator model information to AEMO, and the subsequent release of that information to third parties.

1.4.1 Technical Standards for Wind and Other Generator Connections

The *Technical Standards for Wind and Other Generator Connections* Rule change was proposed by the National Electricity Market Management Company (NEMMCO) , with the Rule made by the AEMC in March 2007. This Rule change assessed the appropriate balance between provision of information to AEMO, Network Service Providers (NSPs) and third parties, against the appropriate level of protection of intellectual property, in particular that intellectual property belonging to manufacturers of wind turbine technology.

This Rule change determined that while detailed models should be provided to AEMO and relevant NSPs for the development of power system studies, it was not appropriate to release this information to third parties.

5 Ibid., p.2.

1.4.2 Confidentiality Arrangements in Respect of Information Required for Power System Studies

The *Confidentiality Arrangements in Respect of Information Required for Power System Studies* Rule change was proposed by the National Generators Forum with the Rule made by the AEMC in February 2009. The Rule change developed a mechanism which sought to balance the protection of intellectual property against the provision of information to third parties for the purposes of conducting power system studies.

This Rule change introduced a requirement on connecting Generators to provide AEMO with specific information at the time of connection application. This information included generator model source code, which is effectively a mathematical representation of a generating plant. AEMO was then required to provide this information to registered participants on request. However, to ensure protection of the intellectual property of plant manufacturers, AEMO could only release this information to registered participants in an encrypted or otherwise protected form.

This Rule change also required Generators to provide to AEMO a RUG at the time of connection application. The RUG is a document that is designed to allow other registered participants to make use of the encrypted version of the generator model source code, for the purposes of conducting power system studies. AEMO is also required to release the RUG to registered participants upon request.

In a first round submission to the Rule change, AEMO proposed that the release of the encrypted model source code and RUG, where it relates to plant currently in the process of connecting, be restricted until the later of two dates had passed: the date of execution of the connection agreement, or 3 months before the proposed start of commissioning of the plant.

AEMO stated that this restriction was necessary in order to prevent information being released prematurely, on the grounds that such information may be inaccurate, subject to significant change, or subject to concerns of commercial sensitivity.[6] The AEMC accepted this amendment in its Draft Rule Determination, and no comments were received from stakeholders in second round submissions. This clause was subsequently included in the Final Rule as clause 3.13.3(l4).

1.5 Commencement of Rule making process

On 15 July 2010, the Commission published a notice under section 95 of the national electricity law (NEL) advising of its intention to commence the Rule change process and the first round of consultation in respect of the Rule change request. A consultation paper prepared by AEMC staff identifying specific issues or questions for consultation was also published with the Rule change request. Submissions closed on 12 August 2010.

6 NEMMCO, 1st Round Submission to *Confidentiality Arrangements in Respect of Information Required for Power System Studies* Rule change, p.11, 6 June 2008.

The Commission received seven submissions on the Rule change request as part of the first round of consultation. These are available on the AEMC website.[7] A summary of the issues raised in submissions and the Commission's response to each issue is contained in Appendix A.

The Proponent requested that the Commission exercise its power to expedite the Rule making process under section 96 of the NEL. Section 96 allows the Commission to proceed directly to the publication of a Final Determination following publication of a section 95 notice, where the Commission considers that the Rule change is either urgent or non-controversial. However, the Commission decided that the Rule change request was neither non-controversial nor urgent and therefore decided to commence the Rule under the standard Rule making process.

1.6 Consultation on draft Rule determination

In accordance with the notice published under section 99 of the NEL, the Commission invites submissions on this Draft Rule Determination, and the Draft Rule, by 2 December 2010.

In accordance with section 101(1a) of the NEL, any person or body may request that the Commission hold a hearing in relation to the draft Rule determination. Any request for a hearing must be made in writing and must be received by the Commission no later than 28 October 2010.

Submissions and requests for a hearing should quote project number "ERC0112" and may be lodged online at www.aemc.gov.au or by mail to:

Australian Energy Market Commission
PO Box A2449
SYDNEY SOUTH NSW 1235

7 www.aemc.gov.au

2 Draft Rule Determination

2.1 Commission's draft determination

In accordance with section 99 of the NEL the Commission has made this Draft Rule determination in relation to the Rule proposed by Senergy.

The Commission has determined it should make, with amendments, the Proposed Rule by Senergy.[8]

The Commission's reasons for making this Draft Rule determination are set out in section 3.1.

A draft of the Rule that the Commission proposes be made (Draft Rule) is attached to and published with this Draft Rule determination. The Draft Rule is different from the Rule proposed by the Proponent. Its key features are described in section 3.2.

2.2 Commission's considerations

In assessing the Rule change request the Commission considered:

- the Commission's powers under the NEL to make the Rule;
- the Rule change Request;
- the fact that there is no relevant Ministerial Council on Energy (MCE) Statement of Policy Principles;[9]
- submissions received during first round consultation;
- issues raised in bilateral meetings with stakeholders;
- previous relevant Rule changes, including the *Technical Standards for Wind and Other Generator Connections* Rule change, which was made by the Commission in March 2007, and the *Confidentiality Arrangements in Respect of Information Required for Power System Studies* Rule change, which was made by the Commission in February 2009; and
- the ways in which the proposed Rule will, or is likely to, contribute to the achievement of the NEO.

8 Under section 99(3) of the NEL the draft of the Rule to be made need not be the same as the draft of the proposed Rule to which the notice under section 95 relates.

9 Under section 33 of the NEL the AEMC must have regard to any relevant MCE statement of policy principles in making a Rule.

2.3 Commission's power to make the Rule

The Commission is satisfied that the Draft Rule falls within the subject matter about which the Commission may make Rules. The Draft Rule falls within the matters set out in section 34 of the NEL with respect to regulating:

> "the activities of persons (including registered participants) participating in the national electricity market or involved in the operation of the national electricity system."

Further, the proposed Rule falls within the matters set out in Schedule 1 to the NEL, specifically item 35 which relates to:

> "confidential information held by Registered participants, the AER, the AEMC, AEMO and other persons or bodies conferred a function, or exercising a power or right, or on whom an obligation is imposed, under the Rules, and the manner and circumstances in which that information may be disclosed."

2.4 Rule making test

Under section 88(1) of the NEL 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 must apply.

The NEO is set out in section 7 of the NEL as follows:

> "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."

For this Rule Change Request, the Commission considers that the relevant aspect of the NEO is the promotion of efficient investment in, and efficient operation of, electricity services for the long term interests of consumers, with particular respect to price and reliability of supply of electricity.[10]

The Commission is satisfied that the Draft Rule will, or is likely to, contribute to the achievement of the NEO, as it is likely to result in benefits in terms of the price and reliability of supply of electricity.

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10 Under section 88(2), for the purposes of section 88(1) the AEMC may give such weight to any aspect of the NEO as it considers appropriate in all the circumstances, having regard to any relevant MCE statement of policy principles.

In particular, the Draft Rule is likely to result in the earlier availability of the information to registered participants, particularly Generators seeking to connect new plant or upgrade existing plant. The Commission considers that this earlier availability of information will reduce the extent of the risks and related costs faced by connecting Generators, therefore allowing for the timely entry or upgrade of generation plant in response to market price signals. This will have beneficial market impacts in terms of price and reliability of supply.

Further discussion of how the Draft Rule will or is likely to contribute to the NEO is included in section 3 below.

2.5 Compatibility of the Draft Rule with the proper performance of AEMO's declared functions

Under section 91(8) of the NEL the Commission may only make a Rule that has effect with respect to an adoptive jurisdiction if satisfied that the proposed Rule is compatible with the proper performance of AEMO's declared network functions. The Draft Rule is compatible with AEMO's declared network functions as it will not interfere with or impede AEMO's performance of these functions.

3 Commission's reasons

The Commission has analysed the Rule change Request and assessed the issues related to the Rule change request.

For the reasons set out below, the Commission has determined that a Draft Rule be made. Its analysis of the Rule proposed by the Proponent is also set out below.

3.1 Assessment

3.1.1 Proponent's identification of issues

In this Rule change request, the Proponent seeks to require AEMO to release the information to registered participants earlier than is currently the case.

Clause 3.13.3(l4) of the Rules currently restricts AEMO from releasing this information until the later of when a connection agreement is executed for the relevant plant, or three months before the proposed start of commissioning of the plant.

The Proponent states that the current restrictions in the Rules prevents Generators from accessing this information in a timely fashion.[11]

Lack of timely access to the information may prevent intending Generators from conducting power system studies, which, in order to be accurate and effective, require information relating to all plant within the electrical vicinity of the intending Generator's connecting plant. Effective power system studies are necessary for the negotiation of efficient generator performance standards, which are a component of the process of connecting new plant or upgrading existing plant.

Lack of access to all information necessary to underpin the negotiation of generator performance standards can therefore create significant risks for intending Generators, including significant technical compliance risk.

The Proponent stated that consequently, lack of access to the information meant that Generators faced disincentives to invest in new generation plant, or upgrade existing generation plant.[12]

The Proponent also considered that the impacts on the market of climate change policies (including the expanded Renewable Energy Target (RET) scheme) are likely to drive increased connection of new renewable and open cycle gas generation, much of which may be locating within the same electrical vicinity. This increase in the level of

11 Senergy, Rule change proposal, p.1.

12 Ibid.

new generation entry is likely to increase the materiality of the issues highlighted above.[13]

3.1.2 Commission's consideration against the NEO

The Commission considers that the risks faced by Generators described above may create disincentives to investment in new generation plant, or upgrade of existing plant.

By allowing registered participants earlier access to the information, the extent of these risks may be reduced. In doing so, the Commission considers that this will facilitate efficient investment, improving the ability of Generators to enter the market, or upgrade existing plant, when and where appropriate market price signals exist.

Removing potential impediments to the ability of Generators to invest in response to price signals will help to ensure that there is efficient entry in the generation supply side. This is likely to encourage competition between Generators, with direct beneficial consequences in terms of the prices paid by consumers for electricity.

Furthermore, by facilitating timely investment in new generation, or upgrade of existing generation, at those times and in those regions where price signals indicate it is most needed, the Commission considers that the market will be better able to ensure that reliability of supply is maintained.

3.2 Draft Rule

The Proposed Rule has been adopted by the Commission, subject to some amendments. While the policy intent of the Proposed Rule has been maintained, the Commission's amendments seek to provide users of the information with a clearer indication as to the relative reliability of that information, and to ensure that AEMO is better aware of the connection status of generating plant.

The Draft Rule includes amendments to clause 3.13.3(l4), which generally reflect the original drafting in the Proponent's proposed Rule. This will clarify that AEMO must release the information on request to registered participants, by the earlier of either date.

As highlighted above, the Commission considers that further amendments to the Rules are necessary, in order to ensure that AEMO is informed of the connection status of the relevant plant. Accordingly, Clause 5.3.7(g) has been amended in order to impose a time obligation on when the relevant NSP and Registered Participants must advise AEMO that a connection agreement has been executed. This clause has also been amended to require Generators to establish arrangements for updating the RUG and notifying AEMO if a connection agreement is terminated.

13 Ibid, p.2.

The Commission considers that the Rules should be amended to provide users of the information with a clearer indication of the relative reliability of that information. Accordingly, the Chapter 10 RUG definition has been updated so that it contains information relating to when specific dates in the connection process of the relevant plant have occurred or are expected to occur.

Transitional arrangements

The Commission notes that several of the new provisions included in the Draft Rule will have implications for existing market participants and AEMO. These new provisions will commence from the date when the relevant version of the Rules is released.

In particular, all Generators will be required to update the RUGs which they have provided to AEMO, in order to ensure that their RUG matches the requirements included in the amended Chapter 10 definition included in the Draft Rule. The Commission notes that under clause S5.2.4(d)(2), Generators are required to keep this information up to date at all times.

The Commission notes clause S5.2.4(d)(3), which allows AEMO to request Generators to update any information provided to AEMO under S5.2.4(b). It may be appropriate for AEMO to utilise this power to remind Generators of their new obligations as contained in the Draft Rule.

Accordingly, the Commission considers that transition between the existing Rules and the Draft Rule can be managed under the existing Rules frameworks, and does not require any specific transitional arrangements.

3.3 Civil Penalties

The Draft Rule amends clause 5.3.7(g), which is currently classified as having civil penalties attached. The Commission considers that the amendments proposed to clause 5.3.7(g) do not materially alter its purpose, and do not affect its continued classification as a civil penalty clause.

4 Commission's assessment approach

This chapter describes the analytical approach that the Commission has applied to assess the Rule change request in accordance with the requirements set out in the NEL (and explained in Chapter 2).

4.1 General analytical framework

As noted in section 2.4, the Commission may give such weight to any aspect of the NEO as it considers appropriate in all the circumstances, having regard to any relevant MCE statement of policy principles. For this Rule change request, the Commission considers it appropriate to give weight to the following aspects of the NEO: the efficient investment in, and efficient operation of, electricity services for the long term interests of consumers of electricity with respect to price and reliability of supply of electricity.

Economic efficiency is a concept that is central to the NEO. As the Commission has discussed in relation to previous Rule change requests, economic efficiency is commonly considered to have three elements:

- Productive efficiency - i.e. the electricity market should be operated on a least cost basis given the existing and likely network and other infrastructure;
- Allocative efficiency - i.e. electricity generation and consumption decisions should be based on prices that reflect the opportunity cost of the available resources; and
- Dynamic efficiency - i.e. ongoing productive and allocative efficiency should be maximised over time. Dynamic efficiency is commonly linked to the promotion of efficient long-term investment decisions.

In the context of regulated energy markets, a relevant consideration is the extent and form of market intervention. Interventions in the operation of the market should be minimised. This enables resources to be allocated primarily on the basis of prices established through market mechanisms, hence supporting productive, allocative and dynamic efficiency.

The Commission seeks to apply principles of good regulatory design and practice as it considers that the NEO has implications for the means by which the regulatory arrangements operate (in addition to their ends). In applying these principles, the Commission seeks to have regard to the need, where practicable, to:

- promote stability and predictability - market Rules should be stable, or changes to them predictable, so that participants and investors can plan and make informed short and long-term decisions; and
- promote transparency - to the extent that intervention in the market is required, it should be based on, and applied according to, transparent criteria.

4.2 Application of the analytical framework to the Rule change Request

In the present circumstances, the application of the analytical approach has focussed on the following issues:

- whether the earlier release of the information will allow participants to make more informed investment decisions;
- whether these decisions are likely to have an impact, in terms of prices paid by customers and reliability of supply of electricity;
- the extent to which the reliability of the information, or commercial sensitivity of the information, may affect the overall efficiency gains achieved by its earlier release;
- the extent to which concerns relating to potential liability may affect any efficiency gains achieved from earlier release of the information; and
- whether the restrictions on AEMO's release of the information should apply for different classes of market participants.

In order to address these issues, the Commission's assessment of the Draft Rule has attempted to address and answer the following questions:

- what is the optimal date for release of the information by AEMO?
- what are the responsibilities of various parties in providing and utilising the information?
- should the restriction on AEMO's ability to release the information apply only to generation plant?

The Commission has focussed on these issues as they were:

- raised by the proponent in the Rule change proposal;
- raised by stakeholders during the first round of consultation; and
- considered by the Commission to be of material significance as to whether or not the proposed Rule would meet the Rule making test.

The Commission undertook significant consultation with the Proponent, AEMO, Generators and Generator proponents, NSPs and large end users to inform its analysis of this Rule change. This included bilateral meetings with stakeholders, as well as consideration of first round submissions.

5 Optimal date for release of the information

The Commission's consideration of the optimal timing of the release of the information has sought to address specific issues:

- the extent to which changing clause 3.13.3(l4) will bring forward the release of the information in time;
- the extent of any potential market benefits if the information is made available at an earlier point in time; and
- the factors which may affect the extent of these benefits, including reliability of the information and questions of commercial sensitivity.

In addressing these questions, the Commission has sought to qualify whether earlier release of the information would allow participants to make better investment decisions, and whether this in turn might lead to improved reliability and price outcomes for customers.

5.1 Rule change proponent's view

In the Rule change Proposal, the Proponent stated that the appropriate timing for AEMO's release of information relating to connecting plant was the earlier of either the date of execution of connection agreement, or 3 months prior to the proposed start of commissioning of the relevant plant.

The Proponent stated that, at present, it was not common for new connecting generators to encounter situations that required the detailed consideration of the technical performance of other generators in their electrical vicinity that had executed connection agreements, but were more than three months away from commissioning.[14]

However, this situation is likely to change, as:

- the effects of climate change policies, including the Renewable Energy Target (RET) and Solar Flagships, result in increased entry of new renewable generation;
- continued peak demand growth, and the impacts of increased intermittent generation, result in increased entry of new open cycle gas generation; and
- a number of currently pending large scale transmission connected wind farms and peaking plants in the NEM achieve financial close, execute connection agreements and lock into construction schedules.

The Proponent suggested that given these changing market circumstances, there would be an increased likelihood that intending generators would be seeking to locate in areas where there were large numbers of other generation plant who had passed the

14 Senergy, Rule change request, p.2.

connection agreement stage, but who were more than 3 months away from commissioning, and whose information would therefore not be available for the purposes of conducting power system studies.

The Proponent stated that "it seems reasonable for information on a connecting party to be withheld prior to execution of a connection agreement (and hence meaningful financial commitment to the project as an indicator of certainty)." It also suggested that "it would also seem reasonable to make information available to other connecting parties no later than three months prior to commissioning even if a connection agreement has not been executed, as construction of the generator would generally be well advanced by this point."[15]

5.2 Stakeholder views

A number of stakeholders made submissions related to the AEMC's consideration of this issue. These submissions discussed the range of benefits which may follow different release dates of the information. Stakeholders also commented on issues relating to the reliability of the information, and issues of commercial sensitivity.

5.2.1 AEMO

AEMO's first round submission agreed that earlier release of the information could provide some benefits to the market.

However, AEMO stated that any market benefits that flowed from the earlier release of the information may be limited by the level of the reliability of the information at the earlier stages of the connection process. AEMO also stated that it had concerns about the potential misuse of the information due to this possible inaccuracy. AEMO noted in particular that while the load flow data component of the information is likely to be relatively reliable early in the connection process, the dynamic model data component is less likely to be reliable until later in the connection process.[16]

Noting the difference in the levels of reliability of these two components, AEMO proposed that the timing of the release of the information should be split into two separate stages.[17] This would allow AEMO to release load flow data at the earlier of the two dates, and load flow plus dynamic model data at the later of the two dates, as follows:

- a "preliminary RUG" containing the information necessary for load flow simulation purposes and information about the proposed technologies to be used. This would be updated after execution of the connection agreement and made available from AEMO under clause 3.13.3(l) at the ***earlier of*** the execution

15 Ibid.

16 AEMO, 1st Round Submission, p.3.

17 Ibid, p.5.

of a connection agreement or three months before commencement of commissioning; and

- A "full RUG" containing all load flow and dynamic modelling information. This would be used in the first instance by the NSP and AEMO for their assessments of the connection application. The plant proponent would keep this updated over time, as required under the Rules, and it would be made available from AEMO under clause 3.13.3(l) at the ***later of*** the execution of a connection agreement or three months before commencement of commissioning.

AEMO asserted that this two stage release of the information would mean that useful information would be made available to market participants, at the time when that information could be considered most reliable.

5.2.2 National Generators Forum

The National Generators Forum (NGF) made a submission to the Rule change which commented on the optimal timing for the release of the information. The NGF supported the proposed changes to the Rule, and noted that there was value to the market if the information was made available as soon as practicable.[18]

However, the NGF stated that the relative reliability of the information should be clearly expressed to users of the information. This was primarily related to circumstances where the date of 3 months prior to start of commissioning of a plant had passed, but a connection agreement had not yet been executed. The NGF noted that in such a circumstance, the modelling data cannot be considered to be finalised and reliable.

Accordingly, the NGF suggested that in such a situation, the Generator should be able to provide a "draft" RUG for release by AEMO. This would reflect "the best available information at the time" but would not be "legally binding" and would be subject to change.[19]

5.2.3 Hydro Tasmania

Hydro Tasmania made a first round submission which supported the timing for release of information as contained in the Proposed Rule. Hydro Tasmania suggested that it was acceptable to release the information at an earlier stage, provided that appropriate caveats were noted.[20]

Hydro Tasmania were in favour of broader dissemination of this data to the market, at an earlier stage in the connection process. The submission proposed that AEMO should be able to "[publish] this data". The Commission understands this to mean that Hydro

18 NGF, 1st Round Submission, p.2.

19 Ibid.

20 Hydro Tasmania, 1st Round Submission, p.2.

Tasmania are in favour of the publication by AEMO of information equivalent to the RUG and encrypted model source code, as opposed to making this information available only to registered participants upon request.[21]

Hydro Tasmania discussed the possibility of changes to the Rules to allow release of the information at much earlier stages of the connection process, potentially at the time of lodgement of connection application or enquiry. Hydro Tasmania conceded that such suggestions may however be out of scope for this Rule change process.[22]

5.2.4 Clean Energy Council, Pacific Hydro, Union Fenosa, Windlab Systems

The Clean Energy Council (CEC), Pacific Hydro, Union Fenosa and Windlab systems all broadly supported the Rule change proposal. However, some of these parties, including the CEC and Pacific Hydro, noted that data released prior to final commissioning of plant must be considered preliminary, and that users of the information should exercise appropriate caution.[23]

Pacific Hydro suggested that the current arrangements place generators at a disadvantage when negotiating performance standards, as they do not have access to the same range of information as NSPs. Pacific Hydro suggested that lack of access to this information could result in poorly negotiated performance standards, with the potential to create significant costs to participants, including constrained output.[24]

Pacific Hydro noted that the information may be subject to change, particularly in the instance where a Generator decided to change turbine manufacturer after executing a connection agreement.[25]

5.3 Commission's Analysis

5.3.1 Current timeframes for release of information

In regards to the optimal timing for the release of information, the Commission has considered the extent to which amending clause 3.13.3(l4) would result in the information being made available to registered participants materially sooner than is currently the case.

Based on bilateral discussions with stakeholders, the Commission understands that the average amount of time to elapse between execution of connection agreement and commissioning of a plant is normally between 12 to 24 months, and in some instances substantially longer than this. Stakeholders also suggested that such lead times were generally based on connection of generation in areas with existing transmission lines,

21 Ibid.

22 Ibid, p.3.

23 Pacific Hydro, 1st Round Submission, p.2; CEC, 1st Round Submission, p.2.

24 Pacific Hydro, 1st Round Submission, p.2.

25 Ibid.

and that longer times would be needed for connection of generation plant where there was less existing transmission infrastructure.

The Commission therefore considers that changing the Rules to bring the release of the information to the earlier of either dates would mean that the information is likely to be made available to the market at a significantly earlier point in time than is currently the case.

Stakeholders may wish to address this matter in submissions to this draft determination.

5.3.2 Impact on generation connection and upgrade under the current and proposed Rule

Given that the information is likely to be made available earlier under the Proposed Rule, the Commission considered whether this would be likely to improve the generation connection and upgrade process.

Use of the information

Power system studies are used by Generators, NSPs and AEMO to determine how new plant will function within the power system. These studies analyse how the power system will function, under both steady-state conditions (load flow studies), and during transitions following a disturbance (dynamic studies). Necessary inputs for these studies include models of each connection point on the network, including models of those generators connected at that connection point.

These studies form the basis of the negotiation of generator access standards (or performance standards), which in turn form part of the connection agreements entered into between Generators and NSPs. Performance standards describe how the generation plant must interact with the rest of the power system, and represent minimum levels of compliance that a Generator must fulfil.[26]

Under the current Rules, NSPs and AEMO consider the expected performance of existing generating plant and other "relevant projects" when carrying out their assessments of proposed performance standards.[27] Although there may be some discretion exercised by NSPs as to what generation plant is included in this definition of relevant project, the Commission understands that this is likely to include models of plant that is in the process of connecting to the network.

Risks and costs associated with lack of access to the information

While AEMO and NSPs have access to models of connecting plant, clause 3.13.3(l4) restricts the access by market participants, including intending Generators, to these models. This may create significant uncertainty for connecting Generators, or existing

26 These processes are described throughout chapter 5 of the NER. The various performance standards are described in S5.2.5 to S5.2.8.

27 National Electricity Rules, S5.2.5.12(c)(1)(ii).

Generators seeking to upgrade their plant, as without access to the models of all relevant connecting and connected plant, Generators' ability to accurately model the power system to determine how their new plant will interact is significantly reduced. Generators have advised the Commission that this lack of access to the information, and the uncertainty it creates, causes significant risks to Generators when connecting or upgrading plant.

As highlighted by Pacific Hydro[28] and noted by other stakeholders during consultation, this includes a risk of "technical non-compliance", if Generators negotiate performance standards based on power system studies that have utilised incomplete information. For example, a consequence of being unable to accurately model the interactions between their plant and other connecting plant on the network may mean that a Generator is unable to meet generator performance standards relating to fault ride-through, potentially resulting in the Generator having its output constrained.

The information asymmetry described above may also mean that a connecting Generator may negotiate more onerous performance standards than what would have eventuated under a scenario where that Generator had access to the same information as its counter parties. The resultant performance standards and related connection agreements may therefore not reflect the most efficient allocation of costs between the counter parties. Any subsequent increased costs faced by the Generator is likely to be passed on to customers in the form of increased electricity prices.

The Commission considers that the extent and subsequent cost of the risks described above may disincentivise Generators from investing in or upgrading plant, until these risks can be reduced. Any disincentives reducing efficient entry of new generation may reduce the extent of upstream competition, with direct impacts on prices paid by customers. A reduction in new generation entry may also have negative reliability impacts.

Alternatively, Generators may choose to negotiate performance standards based on inaccurate power system modelling, with the related risk that the Generator's output might be constrained to avoid breach of power system security standards. Such an outcome affects the security of the system, while the incidence of constrained output directly affects the reliability of supply.

Generators could equip their plant to deal with the risk of any such potential interactions with other plant and subsequent risk of constrained output. However, stakeholders have advised that the likely cost of such equipment is significant and will not provide a complete solution in all cases. In any case, it is likely that the cost of this equipment would be factored into Generator offer prices and contracting. Such an outcome would simply see an indirect passage of the costs of this risk into the prices paid by end use consumers.

Increasing materiality under changed market conditions

While the Commission considers that there are risks as described above, it notes that the impact to date of these risks may have been relatively minor. This is due to the reasonably gradual levels of new generation entry in the NEM over the last 10 years.

Furthermore, new generation entry to date has generally been of larger plant, with a likelihood that this plant has located in areas where there is not a large number of other plants currently in the process of connection. As such, the circumstances discussed above may not have arisen to the extent that they have materially delayed entry or upgrade of plant.

However, the Proponent suggests that, due to the effect of climate change policies and growth in peak demand, these market conditions are likely to change. Specifically, it is suggested that the quantity of new generation seeking to enter the NEM is likely to increase, as policies such as the RET encourage increased investment in large numbers of smaller renewable generators. Furthermore, due to the location of specific renewable resource areas, there is a potential that many of these new plant will be seeking to connect in relatively close proximity to one another.

The Commission considers that the Proponent's suggestion of a changed market environment is reasonable. The AEMC's own analysis[29], and AEMO's 2010 Electricity Statement of Opportunities[30] supports the proposition that large quantities of new generation, in particular wind generation, is likely to enter the market over the coming five to ten years in response to climate change policies and other market developments.

The Commission therefore considers that the risks, and related consequences to investment behaviour described above, are likely to become more material as the effects of climate change policies drive increased levels of new generation entry.

Impacts on connection and upgrade processes

The Commission considers that the materiality of the risks described above, and the subsequent disincentives against investment in new generation or upgrade of existing generation, are significant enough to justify amendments to the Rules to allow for the earlier release of the information by AEMO.

By changing the Rules and reducing these risks, Generator proponents will be better able to connect new generation, or upgrade existing generation, in response to market price signals. Faster entry of new generation will encourage competition in the supply of electricity, with subsequent beneficial price outcomes for customers. Furthermore,

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28 Pacific Hydro, 1st Round submission, p.2.

29 AEMC, Survey of Evidence on the Implications of Climate Change Policies for Energy Markets, December 2008, p.68.

30 AEMO, 2010 Electricity Statement of Opportunities, Chapter 5 supporting tables. AEMO's reporting indicates that there is approximately 5550MW of publicly announced or advanced wind generation forecast to enter the NEM over the next 10 years. This figure increases to over 8000MW if projects with no announced commissioning date are included.

by allowing for faster entry of new generation, reliability of supply can be more easily achieved.

However, while the Commission considers that there is likely to be a market benefit from the earlier release of the information, in determining the optimal timing for the release of the information, it is also necessary to consider when the information will be most reliable, and how issues of commercial sensitivity may be affected by earlier release.

5.3.3 Factors affecting the benefits of earlier release of the information

Reliability of the information

The Commission considers that information relating to plant that has not yet physically connected to the network and commenced exporting power is essentially "design" information, and is likely to be subject to varying degrees of change. This is due to the fact that the load flow and dynamic models describing a generator are subject to adjustment and cannot be considered "final" until some time after connection of the plant to the power system, and the completion of the commissioning process.

The Commission therefore considers that the appropriate measure of the relative "reliability" of the information is the extent to which it is likely to accurately represent the final makeup of the relevant plant, both in terms of physical componentry and control/parameter settings. As the process of connecting a plant continues, the relative level of this reliability can be considered to improve. This is related to the passing of a number of "milestones" in the connection process, such as execution of connection agreement and completion of commissioning. These milestones in turn reflect the physical development of the plant itself, including the finalisation of its physical components and the settings of the plant control mechanisms.

Reliability of information at the date of connection agreement execution

The Commission considers that execution of a connection agreement represents a point in the connection process where there is likely to be a significant increase in the reliability of the information. The execution of a connection agreement requires the establishment of generator performance standards, which in turn require the provision of reasonably detailed models of the connecting generator. The Commission considers that as these models are sufficient to allow the relevant NSP, and in some instances AEMO, to develop the performance standards underlying the connection agreement, they are also likely to be reliable enough to be of value to registered participants.

Hydro Tasmania's first round submission suggested that the information should be made available for release earlier than the execution of connection agreement, potentially as early as the date of connection enquiry or application. However, the Commission considers that prior to the date of execution of connection agreement, the information is increasingly likely to be speculative. The Commission has therefore decided that the information should not be made available for release any earlier than

the date of execution of connection agreement, or, as discussed below, three months before proposed start of commissioning.

Release of load flow and dynamic model information

In its first round submission, AEMO suggested that there is likely to be a significant difference in the accuracy of the load flow and the dynamic components of the information at the time of the execution of connection agreement. Accordingly, AEMO suggested splitting the RUG into a load flow and dynamic component.

The Commission considers that releasing only load flow data at the earlier of the two dates would significantly reduce the extent of any subsequent market benefits flowing from earlier release, noting that one of the major risks cited by Generators due to a lack of access to the information is the inability to model interactions between the connecting generator and other plant under dynamic situations, such as reactions to fault conditions. While the Commission acknowledges that the information may be subject to change earlier in the connection process, it considers that the extent of the benefit to market participants of having access to the dynamic model data exceeds the costs associated with any potential inaccuracy.

The Commission understands that the reliability of the dynamic component of the information may depend on the type of plant being installed. For example, the Commission understands that the dynamic model data relating to asynchronous plant, such as wind turbines, is often relatively established when the turbine is first purchased, while dynamic models relating to synchronous plant, such as gas turbines or thermal coal, may be subject to significant adjustment throughout the final commissioning process. However, the Commission considers that users of the information are also aware of this, and will make use of the earlier available information with the appropriate degree of caution.

Information may be subject to change after execution of the connection agreement

The Commission notes the comments of stakeholders, including AEMO and Pacific Hydro, that the relative reliability of the information at the time of the execution of connection agreement is subject to a range of other factors that may cause the information to change. For example, a proponent may change turbine supplier after it has negotiated a connection agreement, which may necessitate alteration of the original model information provided. While there is a risk that this may occur, the Commission considers that Generators face incentives to maintain their original connection agreements (and underlying performance standards) once these have been negotiated, as renegotiation may incur significant costs. As such, Generators face a disincentive to engage in such behaviour.

In any case, Generators face obligations under clause S5.2.4(d)(1) of the current Rules to notify AEMO and update the information, including the RUG and the model source code, as soon as they become aware of its inaccuracy. Furthermore, clause 5.3.9 of the Rules requires notification of AEMO and the NSP where the performance standards underlying a connection agreement are amended. The combined action of these two

clauses should ensure that the information held by AEMO is updated as soon as it is subject to any changes.

While it is acknowledged that this alteration of the information after it has been initially released by AEMO may create some costs to users, the Commission considers that this is outweighed by the consequences of improved information availability for most participants.

Execution of connection agreement occurs less than three months prior to commissioning

The Commission has considered the circumstance where a connection agreement is executed less than three months prior to the proposed start of the commissioning process. The Commission understands that this is a relatively uncommon occurrence.

The Commission is of the view that at three months before the proposed start of commissioning, the information is likely to be reliable enough to justify its release by AEMO. At this late stage in the process, a Generator proponent is likely to be in a situation where the type of plant equipment has been decided upon and is already constructed (or at least nearing completion of construction). This increased certainty as to the final equipment that will be used in the plant means that the model information related to the physical aspects of that plant is also likely to be relatively accurate and reliable.

Additionally, the Commission notes clause 5.8.3 of the Rules, which requires a Generator to provide to the relevant NSP and AEMO "sufficient design information including proposed parameter settings to allow critical assessment including analytical modelling of the new or replacement equipment on the performance of the power system". This information must be provided not less than three months prior to the proposed commencement of commissioning. The Commission understands that this "design information" includes information that would be represented in the dynamic component of the model information. This clause therefore indicates that at three months prior to commissioning, these aspects of the information are nearing a stage where they are expected to be accurate enough for the purposes of power system modelling. As such, they can be considered reliable enough for release to Registered Participants.

Commercial sensitivity of the information

Commercial value of the information

Another factor impacting the benefits of the earlier release of the information is its relative commercial sensitivity at different points in time. The information describes characteristics of the plant, such as exact location, capacity, reactive power and other aspects of performance, which may be considered commercially valuable to the provider of the information.

Given this potential commercial value, a Generator providing the information may be incentivised to control the release, or otherwise amend the information, if it believed the information would be released by AEMO to potential competitors at a point in time earlier than desired by the Generator. Any such action could reduce the accuracy and usefulness of the information to the market. Alternatively, a provider of the information may seek to alter its generation connection or upgrade process, in an attempt to control release of the information. The Commission considers that this would be likely to have negative impacts in terms of reducing investment and operational efficiencies in the NEM.

The Commission therefore considers it important to balance the benefits to the market of early release of the information against any potential commercial detriment faced by the providers of the information.

Date of release of the information

Generally, stakeholders indicated that, in terms of commercial sensitivity, the date of execution of connection agreement was a reasonable point in time for the release of the information. For example, the Proponent suggested that execution of a connection agreement will generally occur at financial close of the project, which will normally be associated with media releases from the developer and the turbine manufacturer, regarding the generation turbine supply arrangements. This would indicate that the degree of commercial sensitivity related to release of the information decreases to an acceptable level at the time of execution of the connection agreement, as much of this information (or closely related information) would already be public at this time.

The Commission notes Union Fenosa's view that earlier release of the information would not cause any problems in this regard, as this information will generally be available from other sources.[31]

The Proponent suggested that at three months before the commissioning date of a plant, the physical characteristics of the plant, including the make of turbines and other plant equipment, would necessarily be defined and most likely to be in the public domain. Furthermore, planning and environmental approvals would also have been finalised, and would have resulted in the information entering the public domain. Accordingly, the commercial sensitivity related to release of the information would also be likely to be at an acceptable level by this time.

The Commission notes Hydro Tasmania's proposal to release the information significantly earlier in the connection process, potentially as early as the time of connection application. However, the Commission considers that the commercial value of the information is likely to be significant at this point in time, as there is unlikely to be any other detailed information publicly available about the proposed generator connection.

31 Union Fenosa, 1st Round Submission, p.1.

Commission's consideration of the appropriate timing of release

Having considered these points, the Commission has determined that release of the information at the earlier of the date of the execution of connection agreement, or three months prior to the start of commissioning, represents a reasonable balance between protection of commercially sensitive information and provision of benefits to the market.

The Commission considers that at the earlier of these dates, the commercially sensitive components of the information will already be in the public domain and, as such, the providers will not face strong incentives to alter their connection processes to control the release of the information. The Commission considers that releasing the information earlier than either of these two dates may create such incentives on providers to alter their connection processes, as much of the commercially sensitive components of the information would not yet be in the public domain.

5.3.4 Conclusion

Taking into account the matters above, the Commission considers that the appropriate timing for AEMO's release of the information is the earlier of either the date of execution of connection agreement of the relevant plant, or three months before the proposed start of commissioning of the relevant plant.

The Commission considers that changing the date of release of the information to the earlier of these dates is likely to materially advance the release of the information.

Additionally, the Commission is satisfied that in bringing forward the release of the information, significant uncertainties will be removed, and that this will facilitate improved generator connection and upgrade processes. This will be particularly relevant given the likely increase in the number and frequency of new generation connections under climate change policies and other developments in the market.

While issues relating to reliability and commercial sensitivity of the information must be considered appropriately when releasing the information, the Commission is satisfied that the earlier of either of these dates represents a point in time where these factors are effectively balanced against the beneficial market outcomes that are likely to follow the earlier release of the information.

6 Responsibilities of various parties in providing and utilising the information

In considering the responsibilities of various parties in providing and utilising the information, the Commission has sought to develop mechanisms to provide users with sufficient indicators of the information's reliability to help realise the benefits of its earlier release, while clarifying that users of the information do so at their own risk.

In considering this issue, the Commission has had regard to the various responsibilities of AEMO, providers of the information and users of the information.

6.1 Rule change proponent's view

In its Rule change proposal, the Proponent suggested that AEMO would not face any increased responsibilities, above and beyond its current role, if the Rule was changed as proposed. The Proponent stated that "AEMO is limited in its obligations to provide information to registered participants to the information in its possession."[32]

6.2 Stakeholder views

AEMO's first round submission raised the issue of the potential liabilities it would face if it was required to release the information by the earlier of the two dates.

AEMO suggested that while the NEL provides AEMO with some protections, it was not clear the extent to which any liabilities it faces might increase if it was required to "provide information that is, to some degree, speculative."[33]

AEMO also suggested that the AEMC should consider the potential reluctance of a project proponent to provide information for release that they also considered to be speculative.

Other stakeholders, including the CEC[34], NGF[35], Pacific Hydro[36] and Hydro Tasmania[37] indicated that the appropriate party to bear the risk related to any unreliability of information was the user of the information. However, most of these stakeholders also qualified that this was dependent on the presence of clear advice that the information reflects preliminary design data, and that it is likely to be subject to change.

32 Senergy, Rule change request, p.5.

33 AEMO, 1st Round Submission, p.6.

34 Clean Energy Council, 1st Round Submission, p.2.

35 NGF, 1st Round Submission, p.3.

36 Pacific Hydro, 1st Round Submission, p.2.

37 Hydro Tasmania, 1st Round Submission, p.2.

The NGF highlighted in its submission that it considered there may be some liability faced by providers of the information, if "design" data was utilised by others for the purposes of conducting power system studies.[38]

6.3 Commission's analysis

In considering the various responsibilities of different parties in providing and utilising the information, the Commission has addressed the following issues:

- the appropriate allocation of responsibilities and liabilities for provision and use of the information; and
- measures to provide an indication of the relative reliability of the information.

6.3.1 Allocation of responsibilities and liabilities for provision and use of the information

Users are responsible for the use of the information

The Commission considers that the allocation of responsibility for use of the information resides with the user. The Commission acknowledges that information relating to connecting plant is subject to an iterative process of development, up to and after the point when the relevant plant actually begins exporting power to the network; such information should always be considered to be indicative and as "design" information only.

The Commission therefore considers that users of the information should exercise the appropriate degree of caution and conservatism when making use of data which is not final. Users of the information would also be solely responsible for any consequences resulting from their use of the information, including any commercial detriment.

Liability of AEMO

The Commission acknowledges AEMO's comments regarding potential liability it may face if it provides information that is "speculative". As highlighted above, the Commission considers that the responsibility for any consequences of the use of the information rests solely with the user. Therefore, the Commission recommends the development of measures to clearly describe this allocation of responsibility, and to help inform participants of the "design" only nature of the information they are utilising.

Such measures are likely to be best developed through AEMO's own procedures. For example, the Commission recommends that AEMO should consider the development of a liability disclaimer and information cover sheet, which would provide some advice that the information is developmental and may be subject to change.

38 NGF, 1st Round Submission, p.2.

In terms of any liability faced by the providers of the information, the Commission considers that a liability disclaimer and information sheet, as described above, would provide equivalent certainty to providers. That is, these documents would clearly state that the user of the information accepts all responsibility for all consequences of the use of the information, and would ensure that the developmental nature of the information is made clear to users of the information.

AEMO and Generators' powers and responsibilities

The Commission considers that the existing Rules provide for certain powers and responsibilities to AEMO and Generators relating to the provision of the information. The Commission has assessed the Rules and made a number of amendments which it considers will provide further clarity.

The Commission notes that under the current Rules, AEMO is provided with information or is otherwise notified as connecting plant reaches specific "milestone" events in the connection process, including connection application,[39] connection agreement execution,[40] any amendments to performance standards,[41] and commencement of commissioning.[42].

The Commission considers that the Rule clauses listed above provide AEMO with an indication as to the ongoing status of plant currently connecting to the network. In order to enhance the scope of these provisions, the Commission has introduced some amendments to clause 5.3.7(g) in the Draft Rule. These will clarify when AEMO should be informed of the execution of a connection agreement, require Generators to develop arrangements to inform AEMO if a connection agreement is terminated or expires, and require Generators to develop arrangements to update the information it has provided under S5.2.4, including the RUG.

The Commission considers that these amendments will help to ensure that AEMO is fully aware of the ongoing status of connecting plant. This is important for several reasons.

Firstly, AEMO must be aware of the changing status of a connecting plant to ensure that it is acting in accordance with the requirements of clause 3.13.3(l4). For example, AEMO should be made aware of the execution of a connection agreement, so that it knows when it is required to release the information.

The Commission considers that AEMO should be made aware of the termination or expiry of a connection agreement. Where a connection agreement has terminated or expired, the Commission considers that the information relating to that connection agreement would again be subject to clause 3.13.3(l4). That is, where AEMO holds information that relates to specific plant, it must not release this information if

39 NER, S5.2.4.

40 NER, 5.3.7(g).

41 NER, 5.3.9.

42 NER, 5.8.4.

requested by a registered participant, if there is no longer a valid connection agreement in place for that plant.

The Commission notes that under existing clause S5.2.4(d)(3), AEMO has the power to request that Generators update the information, where AEMO considers that the information may be incomplete, inaccurate or out of date. Enhancing AEMO's awareness of the ongoing status of connecting plant will help it in determining when it may be appropriate to utilise this power.

Existing clause S5.2.4(d)(2) places an obligation on providers of the information to update AEMO when they become aware that the information is out of date, incomplete or otherwise inaccurate. The Commission considers that, irrespective of the allocation of liability for use of the information, this clause places a clear responsibility on Generators to ensure that the information in AEMO's possession is up to date.

Lastly, the Commission has amended the wording of clause 3.13.3(l4)(1) in the Draft Rule. This has been done to clarify that in the instance where a Generator negotiates connection agreements with multiple NSPs, AEMO is required to release the information from the date of the execution of the first connection agreement.

6.3.2 Measures to provide an indication of the relative reliability of the information

Given that the use of the information is at the user's own risk, the Commission considers it important to ensure there are measures in place which provide an indication to users of the relative reliability of the information.

As highlighted above, the reliability of the information is subject to change, and is likely to improve as the relevant plant approaches the final commissioning process and connection to the network. The Commission therefore considers that users of the information would benefit if the information itself provided some indication of the status of the connection and development of the relevant plant.

Accordingly, the Draft Rule expands the contents of the RUG to include the actual or forecast dates relating to the connection status of the relevant plant. The Commission considers that this will provide users of the information with a clearer indication of the level of reliability that can be attached to the information.

6.3.3 Conclusion

The Commission considers that the matters addressed above provide certainty to providers and users of the information as to their respective responsibilities.

Furthermore, the amendments made to the RUG will provide a clearer indication to users as to the level of reliability they should attach to the information.

Lastly, the changes made to clause 5.3.7(g) of the Rules should ensure that AEMO is kept aware of the changing status of the information. This should assist AEMO is meeting its obligations under the Rules.

7 Application of clause 3.13.3(l4) to generation plant

In its first round submission, a stakeholder proposed that clause 3.13.3(l4) should be amended so that it applies only to generating plant currently in the process of connecting.[43] At present, the Rule refers to "plant", which as defined in the Rules, can be taken to include load connected to the network, or connection between a transmission network and a distribution network or a market network service provider.

7.1 Rule change proponent's view

The Proponent did not discuss this issue in its Rule change proposal.

7.2 Stakeholder views

In its first round submission, AEMO suggested that the original intention of clause 3.13.3(l4) was to protect the commercial interests of Generators, and that other types of market connections do not require these protections.

AEMO therefore proposed that the restriction in clause 3.13.3(l4) should be amended to refer specifically to generation plant rather than to plant in general. This would have the effect of allowing for the release by AEMO of information relating to a particular load at any time, including prior to the execution of a connection agreement for that load.

AEMO suggested that clarifying that the restrictions in the clause do not refer to network connections or load would enhance AEMO's ability to provide future network models to registered participants, for load flow planning purposes.

No other stakeholders raised this issue in their submissions. However, stakeholders may wish to make submissions on this issue following its identification by AEMO.

7.3 Commission's analysis

The Commission notes AEMO's suggestion that removing the restriction on the release of information relating to network and loads in the process of connecting would allow AEMO to provide more accurate future network models to registered participants.

Currently, AEMO receives load forecasts from NSPs which provide an indication of likely medium-term load patterns. AEMO advises that such load forecasts are the best source of information it can use in developing its future power system modelling, which it may make available to registered participants.

43 AEMO, 1st Round Submission, p.5.

However, AEMO advises that this information is currently provided to AEMO by NSPs in a form which does not differentiate between loads which have executed connection agreements, and loads which have not.

As it cannot differentiate between the two types of load, AEMO will not utilise this information. If it were to do so, it would risk being in breach of clause 3.13.3(l4), which does not allow it to release information relating to plant (including load) which has not yet executed a connection agreement. Instead, AEMO advises that it makes use of less useful historical data to inform its future power system modelling.

AEMO suggest that, by removing the restrictions on the release of load data in clause 3.13.3(l4), it would no longer face this risk. This would mean that AEMO would be able to make use of NSP load forecasts and therefore provide more accurate future power system models to registered participants.

While the Commission acknowledges the issue raised by AEMO, it considers that by changing the Rules as suggested, there is a possibility that commercially sensitive information relating to large load customers could be made available to the market, and competitors, earlier than is currently the case. This may arise because, under AEMO's proposed change, the restriction on the release of information in clause 3.13.3(l4) would be narrowed so that it no longer applied to load. Allowing for release of the information in this way, potentially earlier than the date of execution of a load customer's connection agreement, may have material consequences for such customers, and may affect the efficiency of their investment decisions.

7.4 Conclusion

While the Commission acknowledges the significance of the issues raised by AEMO, it considers that there may be a range of alternative approaches to addressing them. For example, it may be appropriate to reconsider the existing communication processes and data flows between AEMO and NSPs. The Commission considers that consideration of such alternative approaches might deliver a solution that will increase market benefits for all participants.

Given the potential impacts on certain market participants, the Commission considers that a separate process to this Rule change may be the most appropriate vehicle to address the issues discussed in this chapter. As such, the Commission considers that this issue falls outside of the scope of the existing Rule change proposal.

Abbreviations

AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
CEC	Clean Energy Council
Commission	See AEMC
MCE	Ministerial Council on Energy
NEL	National Electricity Law
NEM	National Electricity Market
NEMMCO	National Electricity Market Management Company
NEO	National Electricity Objective
NER	See the Rules
NGF	National Generators Forum
NSP	Network Service Providers
RET	Renewable Energy Target
RUG	Releasable User Guide
Senergy	See the Proponent
the Proponent	Senergy Econnect Australia Pty Ltd
the Rules	National Electricity Rule

Appendix A

Table A.1 Summary of 1st Round submissions

Stakeholder	Issue	AEMC Response
AEMO	While earlier release of the information in the connection process may provide market benefits, some of the information may be unreliable.	The Commission considers that release of the information at the date of execution of connection agreement, or 3 months before the proposed start of commissioning, represents a point in time when the information is sufficiently reliable for release.
AEMO	Proposed an alternative model for the release of the information - load flow data released at the earlier of either date, load flow and dynamic data released at the later of either date.	The Commission considers that not releasing the dynamic data would significantly reduce the benefits of earlier release. Also, the Commission considers that the earlier of the date of execution of connection agreement, or 3 months before the proposed start of commissioning, represents a point in time when the information is sufficiently reliable for release.
AEMO	Proposed that clause 3.13.3(l4) should apply to generation plant only.	The Commission considers that the issue that AEMO seeks to address via this proposed change lies out of scope of this Rule change process.
AEMO	Noted that it was not clear whether liabilities of parties including AEMO and providers of the information would change under the Proposed Rule.	The Commission considers that the liabilities faced by parties would not change under the proposed Rule. However the Commission notes that it may be appropriate for AEMO to develop liability disclaimers and information cover sheets as discussed in Section 6.
AEMO	Noted that AEMO may not be advised promptly upon completion of a connection agreement.	The Commission considers that the amendments to clause 5.3.7(g), as discussed in Section 6, will address this issue.
Clean Energy Council	Supported access to information earlier than 3 months before commissioning.	The Commission agrees that there is likely to be benefits to the market if registered participants are allowed access to the information earlier than

Stakeholder	Issue	AEMC Response
		3 months before commencement of commissioning.
Clean Energy Council	Information should be noted and treated as preliminary.	The Commission agrees that all information should be considered preliminary and as "design only", until after the process of commissioning has been completed.
Hydro Tasmania	Supports the Proposed Rule.	Considered and noted.
Hydro Tasmania	Information should be made available with appropriate caveats.	The Commission considers that following the passing of certain milestones in the connection process, the information should be made available to registered participants. The measures described in Sections 5 and 6 will provide advice to users that will allow for appropriate and cautious use of the information.
Hydro Tasmania	Called for publication of the information by AEMO.	The Commission considers that this is out of the scope of the current Rule change, which relates to the release of the information, upon request, to registered participants.
Hydro Tasmania	Suggested earlier release of the information - potentially as early as connection application, or enquiry.	The Commission considers that this would represent too early a point in time for release of the information, due to concerns of commercial sensitivity and reliability.
National Generators Forum	Executing a connection agreement is a significant milestone for commissioning a generation project. The agreement sets out how the new generation plant is to connect to the grid.	The Commission agrees that the execution of a connection agreement represents a significant milestone in the connection process, as reflected in the Draft Rule.
National Generators Forum	NGF proposed that a "draft" guide be released, in the instance where a connection agreement is executed less than 3 months before the date of commissioning.	Noted in Section 5, however the Commission considers that the amendments to the definition of the RUG in the Draft Rule address this issue.
National Generators Forum	As long as the data is made available with appropriate caveats, any subsequent usage is at	The Commission agrees, as discussed in Section 5.

Stakeholder	Issue	AEMC Response
	the user's risk.	
Pacific Hydro	Inability to access all relevant information may place a generator proponent at a technical disadvantage when negotiating performance standards.	The Commission considers that earlier release of relevant information would provide benefits for proponents when negotiating technical performance standards.
Pacific Hydro	The risks faced by Generators who are unable to access all relevant information are material.	The Commission agrees that such risks are material.
Pacific Hydro	Post connection agreement is likely to be the best set of design data available.	The Commission agrees that the information available after the execution of a connection agreement is likely to be of sufficient reliability to allow its release to registered participants.
Pacific Hydro	The information is "design" only and should be used conservatively.	The Commission acknowledges that information should be considered "design" only and that users should treat it accordingly.
Pacific Hydro	AEMO should develop a mechanism to label the information as design.	The Draft Rule includes amendments to the definition of a RUG which will provide such a mechanism. Additionally, the Commission considers that it may be appropriate for AEMO to develop liability waivers and information cover sheets which may describe the design nature of the information.
Pacific Hydro	Information may change between connection agreement and commissioning, potentially following change in turbine supply agreements.	The Commission considers that the likelihood of this occurrence is countered by generator incentives to minimise the extent of any such alterations to already negotiated connection agreements. In any case, the likely costs to participants of managing such alterations is manageable, and worth the benefits of earlier release.
Pacific Hydro	As economics of a project change, a project may progress to connection agreement stage and then "drop away" if no longer viable.	Noted, however the Commission considers that this is a relatively low order probability, and that Generators face incentives to not allow this to occur.
Union Fenosa	In order to develop projects effectively, it is essential to have access to information necessary	The Commission agrees, as reflected in the Draft Rule.

Stakeholder	Issue	AEMC Response
	to develop performance standards.	
Windlab Systems	Current Rule restricts access to information necessary for connection studies.	The Commission agrees, as reflected in the Draft Rule.