Level 22
530 Collins Street
Melbourne VIC 3000

Postal Address:
GPO Box 2008
Melbourne VIC 3001

T 1300 858724
F 03 9609 8080

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Mr John Pierce
Chairman
Australian Energy Market Commission
PO Box A2449
SYDNEY SOUTH NSW 1235

Reference: ERC0112

Dear John

Release of Generator Information by AEMO

Thank you for the opportunity to comment on the proposed Rule change regarding the Release of Generator Information by AEMO.

Under the current National Electricity Rules (**Rules**) arrangements, AEMO must provide information for modelling purposes on request to Registered Participants. The information must be of sufficient quality for load flow and dynamic simulation studies to be carried out. Clause 3.13.3(l4) requires that the information, which is the subject of an application to connect or a connection agreement, not be made available until the later of either the execution of a connection agreement, or three months before commencement of commissioning. AEMO understands that the proposed Rule would have this information released at the earlier of these two dates.

AEMO agrees that the earlier release of this information may provide benefits to the market since it would make available useful information to Registered Participants for planning purposes sooner. However, AEMO has several concerns with the proposed Rule change. These primarily relate to:

- the quality of the information available at the time of the execution of connection agreements; and
- the potential misuse of this information due to the possible inaccuracy of this information.

AEMO requests that the AEMC consider an alternative arrangement which we believe addresses these concerns whilst still providing value to participants through the earlier release of information. AEMO recommends that the Rule allow for the release of information in two stages:

- information for load flow simulation purposes as well as information on the expected technology to be used, at the earlier of execution of a connection agreement or three months before commissioning; and
- information for both load flow and dynamic simulation purposes, at the later of execution of a connection agreement or three months before commissioning.

AEMO also requests an amendment to the proposed clause 3.13.3(l4) to qualify that the restriction to the release of information provision relates to generation, rather than to network or load-related connections. AEMO considers this will add benefit to the market and re-align the clause with its original intent.

Please find attached AEMO's submission to the Rule change proposal which outlines our concerns with the current Rule change proposal and the supporting arguments for the above and other recommendations. We have noted the relevant sections in our submission where specific questions raised by the AEMC in the AEMC Staff Consultation Paper have been addressed.

For further discussion, please contact Paul Ravalli on (03) 9609 8742.

Yours sincerely

Murray Chapman
Acting Executive General Manager, Corporate Development
Australian Energy Market Operator Pty Ltd

Attachment:

AEMO's submission to Release of Generation information by AEMO Rule change proposal

AEMO's Submission to the Release of Generator information by AEMO Rule change proposal

Under the current National Electricity Rules (**Rules**) arrangements, AEMO must provide information under clause 3.13.3(l) to Registered Participants. Some of this information is released to enable participants to carry out power system studies (including load flow and dynamic simulations) for planning and operational purposes. Current arrangements prohibit the release of that information if it relates to plant that is the subject of an application to connect or a connection agreement until the latter of the execution of a connection agreement or three months before the proposed commencement of commissioning.

The proposed Rule change would have this information released at the earlier of these two dates. Potentially, this would have detailed information released well in advance of connection, which may be typically one to two years before commissioning of plant, and in some cases longer.

AEMO supports the early release of information, but considers such information needs to be relatively robust to provide benefits. AEMO's concerns with the current Rule change proposal relate to the quality of the information available at the time that the Rule change proposes it is to be released, and the potential misuse of that information. AEMO considers the information required for load flow simulation purposes, and information such as the technology type is sufficiently accurate at the early design stages of a proposed connection and that early release of this information would provide benefit to Registered Participants. However, we would recommend that dynamic model information for stability studies be provided closer to the time of connection, when that information is more reliable.

Therefore, AEMO recommends that information be provided in two stages:

- the release of information for load flow simulation purposes as well as information on the expected technology to be used, at the earlier of execution of a connection agreement or three months before commissioning.
- the release of all information for both load flow and dynamic simulation purposes, at the later of execution of a connection agreement or three months before commissioning.

Background

The proposed Rule change involves two types of information: model information relating to a new plant connection which is used for load flow purposes and dynamic model information which is used to assess transient stability impacts and potential interactions with other plant connected to the network.

The load flow model information consists of information that describes the impact of that connection on network flows. This could be used, for example, to assess potential restrictions due to thermal and voltage control limitations and an indication, at least, of potential fault level limitations. This type of model information is likely to be available to a reasonable level of accuracy at the early design stages of a new connection application and, where design data may not be available for specific plant items, typical plant parameter values can still provide significant useful information.

Dynamic model information, which consists of control system and primary plant models with associated parameters, on the other hand, is normally not sufficiently reliable until:

- a plant supplier has been confirmed. Such a confirmation may not have occurred prior to the signing of a connection agreement. In some cases, a supplier proposed by the

connection applicant changes between the execution of a connection agreement and registration; and

- the design of control system settings has been completed. The current rules do not require this to be completed until close to the time of connection. For example, rule 5.8.3 allows for the provision of control system settings for approval by the Network Service Provider (**NSP**) not less than 3 months prior to the proposed commencement of commissioning.

AEMO notes that although useful information, which may be of assistance to Registered Participants intending to carry out power system studies, is provided in the Electricity Statement of Opportunities (ESOO), not all information required to conduct power system studies is currently published. The ESOO is required to contain information on proposed new connections, including expected capacity, project commitment status, and timing. At this stage, the ESOO does not provide information such as the expected connection details, voltage level, and some of the parameters necessary for load flow studies (such as transformer impedances and expected voltage and reactive support plant requirements).

Quality of model information[1]

AEMO generally supports the early release of information. However, we consider that a balance must be struck between the availability of information and provisions taken to ensure that such information is relatively robust. As such, AEMO concurs with the AEMC's assessment that the earlier information is made available in the design stages of a project, the less reliable that information becomes[2].

A proposed connection can change significantly from proposal to commissioning and, in some cases, projects that have signed connection agreements do not proceed. In spite of this, we consider that the availability of additional information regarding these proposed connections would support more efficient investment, particularly where there is a potential for other developers to compete for the same network capacity. For example, although the NSP and AEMO may be aware that several projects may compete for network capacity at, or near, a connection point and must take those projects into account as "relevant projects" when assessing a proposed new connection, information about those projects cannot be provided to any of those other parties due to the Rules' confidentiality arrangements. The availability of basic technical information to those other parties:

- would provide some additional transparency around an NSP's assessments;
- might avoid unnecessary design studies; and
- allows a project proponent to prepare a more robust connection application by avoiding areas of potential congestion or at least get a better understanding of the risk of congestion.

However, our preference is that information relating to plant which is the subject of an application to connect or a connection agreement be made available to other parties according to the reliability of that information.

AEMO considers that information for load flow simulation studies provides useful information to Registered Participants for planning and operational purposes. This information could be released to Registered Participants since, in the early design stages of a proposed connection it is the sufficiently robust and can be provided to a reasonable level of accuracy. Similarly, provision of information about the proposed technology to be used in the proposed development provides other useful information which is not likely to change significantly.

[1] This section addresses questions 4 and 5 on page 6 of the AEMC's Staff Consultation Paper.
[2] AEMC 2010, *Release of Generator information by AEMO: Consultation Paper*, 15 Jul 2010, p 5.

However, we would recommend that dynamic model information for stability studies be provided closer to the time of connection, when that information becomes more reliable.

AEMO considers that releasing the information in a two staged approach would achieve the intention of the Rule change by providing useful information to Registered Participants at an earlier stage, whilst ensuring that speculative or highly uncertain data, which may be misleading, is properly managed.

Managing the release of model information

In terms of managing the release of model information, it is important to recognise that the Rules have specific requirements in clause 3.13.3 relating to information received by AEMO from Generators (and Generator connection applicants) under Rule clause S5.2.4. Amongst other information, clause 3.13.3 deals specifically with the "releasable user guide".

As such, AEMO would like the AEMC to consider the following proposal to manage the release of information from Generator connection applicants. AEMO recommends that at the time when a connection application is made, such a connection applicant would provide:

- A "preliminary releasable user guide" 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 Rule 3.13.3(l) at the ***earlier of*** the execution of a connection agreement or three months before commencement of commissioning
- A full releasable user guide 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 would be made available from AEMO under Rule 3.13.3(l) at the ***later of*** the execution of a connection agreement or three months before commencement of commissioning.

A releasable user guide is required at the time when a connection application is made for a generating system or generating unit, and is also required to be kept up to date. AEMO does not believe the provision of a "preliminary releasable user guide", as a separate document, would be a significant imposition on the proponent as it would simply contain a subset of the information already required to be provided in the full releasable user guide. The requirement for an additional document is also necessary, as Rule clause 3.13.3(l)(1) requires AEMO to provide a releasable user guide "in an unaltered form".

Restricting information release for generating plant connections only

Clause 3.13.3(l4), which limits the release of information for new connections, was intended to protect the commercial interests of prospective Generators. Other types of connections, with possible exception of Market Network Services (**MNS**), typically don't require these types of protections: Customer information is generally published in demand forecasts, and connections between a Transmission Network Service Provider (**TNSP**) and a Distribution Network Service Providers (**DNSP**) are generally not commercially sensitive in the same way, since they are regulated monopolies.

AEMO proposes, that clause 3.13.3(l4) be modified to clarify that the restrictions on release of information relate to generating plant connections, as follows:

> "Despite clause 3.13.3(l), *AEMO* must not provide information relating to *generating plant* that is the subject of an *application to connect* or a *connection agreement*, until the later of: ..."

The AEMC might consider whether MNS plant should also be included in this restriction.

AEMO is generally unaware of when two NSPs have signed a connection agreement, as AEMO is normally not involved in these types of connection agreements[3], so in practice it is difficult for AEMO to apply a restriction on information provision relating to network connections or loads.

Clarifying that the information provision restrictions in this clause do not apply to network (with possible exception of MNS facilities) and loads would make it easier for AEMO to provide future network models (particularly load flow models) to Registered Participants for planning purposes.

Liability[4]

At present, the National Electricity Law offers some protection to AEMO in exercising its obligations under the Rules, although it is unclear the extent to which AEMO's liability would increase if it was required to provide information that is, to some degree, speculative. While the responsibility for updating a releasable user guide would be with the project proponent, AEMO must still manage the additional information and there would be some additional effort in terms of AEMO's administration and checking of information. In spite of this, we consider that there are still benefits to the industry, as a whole, for early release of this information.

On the matter of liability, an issue that the AEMC ought to consider is the potential reluctance of a project proponent to provide information that they may also consider as speculative. The proposal to release only information for load flow simulation purposes may reduce this concern but, in many ways, some of this information (even that for load flow simulation purposes) might be likely to change.

Execution of connection agreements

While Rule 5.3.7(g) requires both the NSP and connection applicant to notify AEMO that a connection agreement has been entered into, there is no specific timeframe required and so these notifications rarely occur.

We understand that some NSPs and connection applicants enter into connection agreements that are "subject to AEMO approval" in relation to those access standards that must be negotiated with AEMO. We also understand that in some of these cases such a connection agreement assists the connection applicant in gaining bank approvals or a generating licence. For some projects, therefore, AEMO may not receive any detailed technical information of a proposed connection until well after the original connection agreement has been entered into.

If the AEMC is proposing that information for these projects would also be provided under the proposed Rule change, then we recommend that Rule 5.3.7(g) be changed to require notification of the connection agreement being entered into within a specified timeframe (20 business days, for example).

Transitional arrangements

From an administrative perspective, AEMO is able to provide information relatively soon after commencement of the new Rule, provided it has the relevant information.

At present, where we have model information, we have full releasable user guides and associated models, including those models for load flow and dynamic simulation purposes. If the AEMC were to adopt our recommendation of staged delivery of information, then AEMO

[3] excepting in Victoria

[4] This section addresses question 6 on page 6 of the AEMC's Staff Consultation Paper.

would be unable to alter the releasable user guide information to include load flow model information only. Transitional arrangements might need to be defined to address this.

Additional information for investment

AEMO considers that the availability of technical information provides useful information to a prospective developer. Another source of information regarding the status of potentially competitive projects is through the ESOO, where AEMO publishes information about known proposed generation projects.

In particular, for each proposed project, the ESOO identifies whether:

- the project proponent has leased or acquired, or commenced legal proceedings to lease or acquire, land for the construction of the project;
- contracts for the supply and construction of major plant or equipment (generators, turbines, boilers, transmission towers and conductors), including contract provisions for project cancellation payments, have been executed;
- the project proponent has obtained all required planning and construction approvals and licences, including completed and approved environmental impact statements (which include planning and environmental approvals from duly authorised planning bodies at both State and Federal Government levels);
- financing arrangements for the proposal, including debt plans, have been finalised and contracts executed; and
- construction has either commenced or a firm date has been set for it to commence.

This information about a proposed generation project would be useful to a person wanting to connect plant in the same area, and complements the technical data recommended to be made available under this Rule change proposal. AEMO considers that the availability of additional information, as proposed in this submission, would enhance the ability for a project developer to carry out their own feasibility studies and would support more efficient investment.