

DRAFT GENERATION INFORMATION GUIDELINES

DISCUSSION PAPER

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Invitation to Make Submissions

AEMO invites written submissions on the matter under consultation, including any alternative or additional proposals you consider may better meet the objectives of this consultation and the national electricity objective in section 7 of the National Electricity Law.

Please identify any parts of your submission that you wish to remain confidential, and explain why. AEMO may still publish that information if it does not consider it to be confidential, but will consult with you before doing so.

Please note that material identified as confidential may be given less weight in the decision-making process than material that is published.

Closing Date and Time

Submissions in response to Draft Generation Information Guidelines and this Discussion Paper should be sent by email to oliver.derum@aemo.com.au, to reach AEMO by 5.00pm (Melbourne time) on 10 June, 2020. Please indicate that the subject of the email is "Submission to Draft Generation Information Guideline".

All submissions must be forwarded in electronic format (either PDF or Word). Please send any queries about this consultation to the same email address.

AEMO is not obliged to consider any submissions received after the closing date and time. Any late submissions should explain the reason for lateness and the detriment to you if AEMO does not consider your submission.

Publication

All submissions will be published on AEMO's website, other than confidential content.



EXECUTIVE SUMMARY

This Discussion Paper has been released to accompany the publication of Draft Generation Information Guidelines. The Australian Energy Market Operator (AEMO) to develop Generation Information Guidelines (the Guidelines) under clause 3.7F the National Electricity Rules (NER).

As required under NER clause 11.117.3(b), AEMO published Interim Generation Information Guidelines (the Interim Guidelines) on 5 December 2019. The Interim Guidelines were developed without formal consultation, and the publication of this Consultation Paper commences the development of new Guidelines, via a full Rules consultation procedure process. The requirements for the contents of both Guidelines is the same, covering three areas:

1. Particulars of AEMO’s Generation Information page, including the contents, data sources and the intervals for updating the page.
2. The provision of Key Connection Information (KCI) to AEMO by Transmission Network Service Providers (TNSPs), including the manner, timing and format of the KCI submission.
3. Guidance on the information necessary to be classified by AEMO as a Project Developer.

The Draft Guidelines largely adopt the same provisions as were contained in the Interim Guidelines. AEMO intends to develop an internet-facing solution for the submission of KCI, but this solution may not be in place by the time the Guidelines are published. The Guidelines, therefore, allow for the continuation of email submission of KCI until the new method is developed.

AEMO invites stakeholders to provide feedback on whether the provisions contained in Draft Guidelines are appropriate and meet industry expectations.

Stakeholders are invited to submit written responses on the issues and questions identified in this paper by 5.00 pm (Melbourne time) on 10 June, 2020, in accordance with the Notice of First Stage of Consultation published with this paper.

Question for consultation

- Question 1** Are the provisions contained in the Draft Generation Information Guidelines appropriate? Do stakeholders propose any amendments to the Draft Guidelines (that have not been previously raised and addressed in this Discussion Paper)?



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1. STAKEHOLDER CONSULTATION PROCESS

AEMO is consulting on the development of the development of Generation Information Guidelines (the Guidelines) in accordance with the Rules Consultation Procedure under clause 8.9 of the National Electricity Rules (NER). This consultation process follows the publication of the Interim Guidelines on 5 December 2019. AEMO was not required to undertake any public consultation on the development of the Interim Guidelines (under NER 11.117.3(c)) but did engage directly with TNSPs to seek comment.

AEMO’s indicative timeline for this consultation is outlined below. Dates may be adjusted depending on the number and complexity of issues raised in submissions and any meetings with stakeholders.

Deliverable	Indicative date
Consultation Paper published	27 February, 2020
Submissions due on Consultation Paper	3 April, 2020
Draft Guidelines published	5 May, 2020
Submissions due on Draft Guidelines	10 June, 2020
Final Guidelines published	23 July, 2020

Prior to each of the submission due dates (above), stakeholders can request a meeting with AEMO to discuss any issues and proposed changes raised.

This consultation process aims to ensure that:

- the Generation Information page¹ continues to be a valuable resource to the market,
- new requirements regarding Key Connection Information (KCI) are implemented as effectively as possible, and
- appropriate guidance is provided for the process of being deemed a project developer.

Note that Appendix A includes a glossary of terms used in this Discussion Paper.

1.1. Draft Generation Information Guidelines and this Discussion Paper

This Discussion Paper accompanies the publication of the Draft Generation Information Guidelines (the Draft Guideline). This Discussion Paper explains the nature or, and reasons for, the substantive change made between the Interim Guidelines and the Draft Guidelines. It also provides AEMO’s responses to those material issues that were raised in submissions, but which have not resulted in a change to the Draft Guidelines.

¹ See <https://www.aemo.com.au/energy-systems/electricity/national-electricity-market-nem/nem-forecasting-and-planning/forecasting-and-planning-data/generation-information>.



2. BACKGROUND

2.1 NER requirements

Under NER 3.7F(e), AEMO is required to develop, publish on its website and maintain guidelines in relation to the Generation Information page (the Guidelines). NER 3.7F(e) clauses (1-4) outline four issues that the Guidelines must include, being:

- the type of information to be included in the Generation Information page and the source of the information;
- the intervals for updating the Generation Information page;
- the manner, timing and format in which Transmission Network Service providers (TNSPs) will provide KCI to AEMO;
- guidance as to the evidence that is required to be submitted to AEMO to apply to be a project developer for the purpose of accessing standing data under NER 3.13.3 clauses (k), (k1), (l), (11) and (p1) only.

2.2 Context for this consultation

On 24 October, 2019, the Australian Energy Market Commission (AEMC) made a final rule (*National Electricity Amendment (Transparency of new projects) Rule 2019 (No. 8)*) to improve publicly available information about new grid-scale generation projects. The rule also allows a broader set of generation developers direct access to important system information required to build grid-scale assets.

As part of the transitional arrangements, AEMO was required to develop Interim Guidelines² by 5 December, 2019, which will remain in place until the publication of the final Guidelines developed through this consultation.

The existence of the Interim Guidelines significantly impacted the consultation process. Stakeholders had the opportunity to comment on both the Final Interim Guidelines and an accompanying Consultation Paper, which highlighted the areas in which AEMO intended to adopt (or not) the provisions of the Interim Guidelines in the Draft Guidelines.

² See https://www.aemo.com.au/-/media/Files/Electricity/NEM/Planning_and_Forecasting/Generation_Information/Interim-Generation-Information-Guideline.pdf.



3. SUBMISSIONS RECEIVED

AEMO received four submissions in response to the Consultation Paper. Two of these were from TNSPs (Energy Queensland (EQ) and TasNetworks), who must submit KCI to AEMO under the Guidelines. A third submission came from the Energy Networks Australia (ENA), the peak body for energy networks. The fourth submission was from ERM Power (ERM), an energy retailer to commercial and industrial customers and wholesale electricity supplier (with gas-fired peaking plant in Queensland and Western Australia). All submissions received have been published on AEMO's website.³ AEMO thanks all organisations for their considered and constructive contributions.

AEMO carefully considered all issues raised in submissions, with a view to developing and implementing Guidelines that will give full effect to the AEMC's final rule change determination and the National Electricity Objective (NEO). Section 4 of this paper outlines how the Draft Guidelines are different to the Interim Guidelines, including a summary of the submissions received on the relevant issue. Section 5 of this outlines all other material issues contained in submissions, including AEMO's response to each issue.

³ See: <https://www.aemo.com.au/consultations/current-and-closed-consultations/generation-information-guidelines>



4. CHANGES BETWEEN INTERIM GUIDELINES AND DRAFT GUIDELINES

4.1 Method of submission of KCI

Background and stakeholder views

Under the Interim Guidelines, KCI is submitted to AEMO via email, in the form of an Excel template provided by AEMO.⁴ The Interim Guidelines also state that the Generator Survey must be completed via AEMO's web portal (for those respondents who have access) and via email for those who do not have access to the portal.⁵

The Consultation Paper for this review indicated that AEMO intended to develop a specific application program interface (API) for the submission of KCI, as this would “provide an industry standard, secure and consistent way to connect to and interact with the required IT systems”.⁶ The Consultation Paper further stated that:

“AEMO acknowledge that the use of the API channel may take some development and implementation time before TNSPs are ready to consume this method. As such AEMO will, in the first instance, implement a web portal that utilises web forms for the secure and convenient entering of the KCI data. This webform capability will be provided initially to replace the existing email and spreadsheet method to obtain KCI data”.⁷

ENA and TasNetworks both submitted that they did not support the development of a specific API. ENA argued that for TNSPs with low volumes of KCI, a move to an API and associated testing “may not be cost effective under normal business governance processes” and development “will be further hampered by Covid-19 social distancing”.⁸ ENA proposed that submission via web portal “should remain as an option for TNSPs for some time”.⁹

Similarly, TasNetworks submitted that it supports the use of a web portal, and “has concerns about the proposal to replace it with an API”.¹⁰ TasNetworks suggested that some TNSPs were unlikely to see the volume of connection enquiries that would justify a bespoke API. Accordingly, “to avoid any uneconomic impact on customers”, TasNetworks suggested that “the web portal option remain the primary submission mechanism for these entities”.¹¹

Content of the Draft Guideline

API would be consistent with AEMO's broader digital strategy and offers the most advanced solution. As part of the execution of AEMO's digital strategy, the development of a new web portal or specific KCI API will be considered, noting the feedback to this consultation summarised above. The Draft Guidelines therefore state that email will remain the method of KCI submission until the new solution is developed. If possible, the Final Guidelines will include a detailed description of this solution. The Draft Guidelines further state that AEMO will provide TNSPs with a least 20 business days' notice, before the subsequent KCI submission deadline, that the submission methodology will change from email to the new solution. See clause 5.1.2.

⁴ Section 5.2

⁵ Section 3.1(d)

⁶ AEMO, *Generation Information Guidelines - Consultation paper*, 27/02/20, 11.

⁷ Ibid.

⁸ ENA, *Submission to Generation Information Guidelines*, 3 April 2020, 1.

⁹ Ibid.

¹⁰ TasNetworks, *Submission to Generation Information Guidelines*, 31 March 2020, 2.

¹¹ Ibid.



4.2 Submission of early KCI

Section 5.1 of the Interim Guidelines contain covers the submission of early KCI, as defined in rule 11.117.1. Because early KCI is only that submitted to TNSPs between 7 November and 18 December 2019, and TNSPs would have already submitted any such information to AEMO under the Interim Guidelines, there is no need to include this clause in the Draft Guideline.



5. OTHER ISSUES RAISED IN SUBMISSIONS AND AEMO RESPONSES

This section provides a summary of the additional material issues raised in submissions and AEMO's responses to those submissions.

5.1 Purpose of the Gen Info Page

The Interim Guidelines state that the requirement for AEMO to publish and maintain the Generation Information page is now contained in rule 3.7F. The Interim Guidelines also state that the Generation Information page has the additional purpose of being the means by which AEMO meets its obligation to publish updates of new information that materially changes the latest published Electricity Statement of Opportunities (ESOO).¹²

ERM submitted that the stated purpose of the Gen Info Page is 'insufficient' and proposed an alternative purpose, being to provide information "to allow existing and intending participants to better co-ordinate project developments or retirements and provide improved locational signals for new developments".¹³

The Draft Guidelines retain the relevant text from the Interim Guidelines. This provision is included to make clear that AEMO meets its statutory obligation to update the ESOO through the publication of the Generation Information page (in addition to AEMO's obligation to publish the Generation Information page itself). AEMO notes that while the purpose of the Generation Information page reflects relevant obligations on AEMO under the NER, this does not prevent existing and intending participants from using the information provided for the purpose proposed by ERM.

5.2 Contents of the Generation Information page

Both TasNetworks and EQ submitted that the current format of the Generation Information page, as outlined in the Interim Guidelines, is appropriate.¹⁴ ERM submitted that the Interim Guidelines failed to set out the critical information categories contained in the Generation Information page. Further, ERM submitted that "the generation information and data to be included in the Generator Information page should be consulted on and set out as an appendix to the Guidelines".¹⁵

Consistent with rule 3.7F(b), the Interim Guidelines state that the Generation Information page summarises existing and proposed generating units, or generating systems, by NEM Dispatch Type (i.e. scheduled (S), semi-scheduled (SS) and non-scheduled (NS)), according to six broad "Summary Status" categories (Existing, Announced Withdrawal, Upgrade, Committed, Proposed and Withdrawn) for generating systems. AEMO does not intend to include the specific categories of data to be provided (such as the location, capacity and technology type of each generating unit or system) in the Guidelines because doing so would severely hamper AEMO's ability to alter these categories in a timely manner. Instead, any change would require a full consultation process, in accordance with section 8.9 of the NER, a process that takes many months. In the context of the energy system transformation, AEMO does not believe that such rigidity is appropriate and is, in fact, likely to hamper the usefulness of the Generation Information page to market participants and other stakeholders.

5.3 Project commitment classification process

ERM submitted that various changes should be made to the project commitment classification process. In particular, ERM called for a project which is only awaiting final approval of its Generator Performance

¹² AEMO, *Interim Generation Information Guidelines*, 5 December 2019, 5.

¹³ ERM, *Submission to Generation Information Guidelines*, 3 April 2020, 2.

¹⁴ EQ, 2; TasNetworks, 1

¹⁵ ERM, 2



Standards to be considered as ‘committed’ as opposed to ‘advanced’ or ‘committed*’.¹⁶ Further, in ERM’s view it is “unclear that sufficient clarity exists regarding the selection of project status outcomes between ‘committed*’ and ‘advanced’”. ERM submitted that changes to the red amber and green traffic light classification system, related to contracts for major components and dates for progress, would also be desirable. Finally, and most significantly, ERM recommended that “the six proposed project commitment criteria and accompanying description and classification criteria be set out as an appendix to the Guidelines, as opposed to simply being embedded in a spreadsheet”.¹⁷

AEMO intends to keep the full details of the project commitment classification process internal, for two reasons. Firstly, at a time of rapid transformation in the generation technology mix, AEMO is keen to have the ability to quickly modify the project commitment status classification process to capture new trends in market behaviour, such as novel forms of market finance that are not strictly ‘finance’.

Secondly, there is a risk that by publishing the project commitment questions in full, or data that we receive from generator surveys, would allow commercially sensitive information to be inferred by others. Such inferences risk leading to commercial disadvantage for that project if, for example, land options have not yet been acquired, equipment supply contracts have not been signed or finance for the project has not been secured. Intending Participants, as many generation developers are, are under no obligation to respond to AEMO’s Generation Survey. Accordingly, AEMO takes care to design and conduct the survey in a manner that yields the most and most accurate responses. If there is an increase in the risk of commercial disadvantage associated with the provision of information via the Generator Survey process, it is likely that the deleterious effect to market transparency will be observed where it matters most.

EQ submitted that the approach for reporting the summary status categories and the presentation of status commitment criteria to be largely appropriate.¹⁸ However, EQ also submitted that a potential additional indication of commitment is AEMO’s receipt of notification of a connection agreement under rule 5.3.7(g). EQ notes that to receive such an agreement, a generator must have “agreement of any negotiated access standard under clause 5.3.4A and any system strength remediation scheme under clause 5.3.4B”.¹⁹

From a technical perspective, AEMO recognises the merit of this suggestion. However, an impediment to its adoption exists in the form confidentiality. While it is not uncommon for project developers to publicly announce that a connection agreement has been made, this is far from universal. While AEMO is notified that a connection agreement has been made, that cannot always be publicly disclosed by AEMO. A commitment criteria based purely on the existence of a connection agreement would, therefore, risk disclosing confidential information.

5.4 Additional Generation Information data for AEMO to consider reporting

EQ submitted that minimum generation capacity would be useful data to report, and especially relevant for existing coal-fired thermal generators that may choose to reduce output at times of high output from solar PV generation. EQ submitted that “this information will also be important to avoid triggering the Retailer Reliability Obligation, in case thermal units need to be mothballed due to high levels of solar PV generation”.²⁰

¹⁶ ERM, 2

¹⁷ ERM, 2

¹⁸ EQ, 2-3

¹⁹ EQ, 3

²⁰ EQ, 3

While AEMO agrees that minimum generating capacity would be useful information to stakeholders, as it informs how the system responds to low demand conditions, such information is highly commercially sensitive, given how it could be used in the bidding process of competitors. Accordingly, AEMO believes generators would be reluctant to include it in their generator Survey responses.

AEMO also notes that minimum capacity would not be likely to impact the RRO as the modelling undertaken for the RRO takes into account only announced retirements. All capacity that is still operating would be assumed to be available, unless on a forced outage, to meet peak demands.

5.5 Reporting 10-year seasonal capacity for all new developments

EQ submitted that listing summer and winter designated scheduled generator capacities was not sufficient to inform forecasting, especially for plant that is de-rated according to ambient temperature and considered that “more granular information would be useful”.²¹ EQ also submitted that the timing of maximum generator capacity is not aligned with the timing of maximum peak demand (which occurs in the early to mid-evening). EQ submitted that information about “available capacity at this time would also be useful”.²²

AEMO recognises that more granular information, such as temperature derating curves, would be useful to stakeholders. However, in previous informal consultation with industry, it has been raised that this would be challenging to provide, as for many generating units available capacity is a function of more than just the ambient temperature, but also humidity and lagged temperature impacts. AEMO considers that the recently-adopted approach of requesting a “regular summer capacity” and a “10% probability of exceedance (POE) summer capacity” strikes an appropriate balance between complexity and accuracy.

ERM submitted that it was supportive of a 10-year seasonal capacity for all new developments being reported, “noting that some uncertainty exists with regards to the forecast vs actual annual degradation rates for solar PV output capacity and battery energy storage systems storage capability and asynchronously connected generator inverter capability under summer generator reference temperatures, so some level of inaccuracy may occur”.²³ ERM further submitted that AEMO must ensure that any temperature derating based on the summer generator reference temperature is “only applied in modelling to those days where temperature derating is likely to occur”.²⁴ Finally, ERM recommended that AEMO “develop a framework to more closely engage with the industry to develop methods to further improve the accuracy of these semi-scheduled generator output profiles used in AEMO’s modelling”.²⁵

AEMO has acknowledged that the approach used previously, of applying the summer rating across all summer months, resulted in underestimating the capacity available in more moderate demand conditions. At the November, 2019, meeting of AEMO’s Forecasting Reference Group²⁶, AEMO presented a new approach that would only apply the summer rating associated with POE10 conditions to a small number of summer days. AEMO will continue to explore opportunities to improve the accuracy of the semi-scheduled generation profiles used in modelling.

5.6 Generator Survey SharePoint portal

ERM submitted that the new input portal for the Generator Survey is “difficult to use”, with some questions “more aligned with scheduled thermal generation types as opposed to the new types of generator seeking

²¹ EQ, 2

²² EQ, 3.

²³ ERM, 3

²⁴ ERM, 3

²⁵ ERM, 3

²⁶ See *Presentation 2 – Standing Data Request* available at <https://aemo.com.au/en/consultations/industry-forums-and-working-groups/list-of-industry-forums-and-working-groups/forecasting-reference-group-frg>



to connect to the system”.²⁷ ERM recommended that AEMO convene an industry workshop to receive feedback on the portal.²⁸

AEMO is currently scoping the development of an alternative generator survey solution. At the appropriate time, AEMO will engage with industry to receive feedback that can be incorporated into the development process, as appropriate.

5.7 Timing of submission of KCI

Both ERM²⁹ and ENA³⁰ supported the proposed timing of submission of KCI (that is, quarterly updates or when a material change occurs).

The relevant provisions in the Draft Guidelines are the same as in the Interim Guidelines.

5.8 Information required to be a project developer

Both ERM³¹ and TasNetworks³² supported the adoption of the relevant section of the Interim Guidelines regarding guidance on information required to be a project developer.

The relevant provisions in the Draft Guidelines are the same as in the Interim Guidelines.

²⁷ ERM, 3

²⁸ ERM, 3

²⁹ ERM, 2

³⁰ ENA, 1

³¹ ERM, 2

³² TasNetworks, 1



APPENDIX A - GLOSSARY

Term or acronym	Meaning
AEMO	Australian Energy Market Operator
Draft Guidelines	The Draft Generation Information Guidelines, published with this Discussion Paper for stakeholder feedback.
ESOO	Electricity Statement of Opportunities
Generation Information page	The resource published by AEMO, on its website, in accordance with NER 3.7F
Generator Survey	A process for the collection of information about existing generating systems and proposed generation projects from Generators and generation proponents for the purposes of the ESOO and associated reliability forecasts
Guidelines	The Generation Information Guidelines being developed by AEMO, through this consultation, in accordance with NER 3.7F(e)
Interim Guidelines	The Interim Generation Information Guidelines, published by AEMO on 5 December 2019, in accordance with NER 11.117.3(b)
KCI	Key Connection Information
NER	National Electricity Rules
TNSP	Transmission Network Service Provider
NSP	Network Service Provider