AEMC

INFORMATION

Enhancing investment certainty in the R1 process

Consultation starts on a proposal to reform the way generator registration applications are assessed

The AEMC has published a consultation paper seeking stakeholder feedback on the Clean Energy Council's (CEC) proposal to address issues associated with the registration and connection processes for new generators. The CEC, alongside the Australian Energy Market Operator (AEMO), network service providers (NSP), and renewable energy developers have collaborated through the connections reform initiative (CRI) to develop a proposal to address concerns over the increasing size of the connection queue, driven in part by the increasing complexity of the connections process and delays in finalising new connections.

How the connections assessment and registration process works now

New inverter based technologies are attempting to connect to the network at an unprecedented rate and the Clean Energy Council's rule change request outlines that there are significant risks for applicants connecting, and for the efficiency of the energy transition. This has led to the rule change request proposing reforms to improve clarity and how applicants can expedite registration approval.

Managing connection queues is a significant challenge in electricity grids across the world. In Australia, this is evidenced by a 35 per cent growth in the number of connection applications currently being reviewed by AEMO and NSPs in the last 12 months.

The CEC's proposed changes focus specifically on the period between the execution of a connecting generator's connection agreement and its market registration. This period is referred to as the R1 stage and involves the generation project proponent preparing a detailed design, a suite of models, a commissioning plan, and other technical documentation to demonstrate that the plant they are constructing meets the generator's performance standards agreed as part of the connection agreement.

The R1 package is typically submitted when the project is at a fairly advanced stage of development and construction, when proponents are under commercial pressure for the project to get revenue. However, amendments made to the project after the connection agreement and changes in external conditions often lead to discrepancies between the technical performance of the as-built plant and that agreed earlier. The attribution of these discrepancies and their materiality for power system stability outcomes can lead to disagreements between generators and NSPs and AEMO regarding the scope of remedial activities (if any) and the allocation of associated costs (including project delivery delays).

We are interested in your views on the materiality of the issues identified in the R1 process

The CEC's rule change proposal asserts that uncertainty regarding the R1 process manifests in the following ways, which lead to upward pressure on project completion costs and ultimately the wholesale prices that consumers bear.

1. Uncertainty regarding how long the R1 stage can take - the CEC notes that this leads to generators having to absorb the commercial risks of project delivery delays, which leads to delays in the project getting to revenue, and creates disruptions for engineering, procurement and construction contractors who in turn seek to recover those costs on

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subsequent projects. In combination, the CEC notes that these issues lead to projects becoming more expensive over time and the energy transition becoming more expensive.

2. Lack of clarity on how the R1 package is evaluated - the CEC notes that there is a lack of clarity on how AEMO and NSPs evaluate what types of discrepancies are material and how they determine whether these discrepancies are attributed to external factors that are outside of generator's control or those that can be attributed to changes to generator plant design.
3. Lack of flexibility on the best way to remediate issues identified at the R1 stage - the CEC notes that NSPs and AEMO require all issues to be remediated before the plant's registration is approved even if they are 'minor' or have an inconsequential impact on power system security or stability outcomes.
4. Lack of certainty on the most effective allocation of costs for remediating issues identified at the R1 stage - the CEC notes that the current default is for individual generators to take actions to remediate power system stability or security issues identified by NSPs at the R1 stage, irrespective of whether they are within or outside the generator's control. However, the proposal suggests that in some circumstances it may be more efficient to incentivise NSPs to remediate issues as they have better information to design, procure and implement more scale and scope-efficient solutions than individual generator actions.

We are interested in your feedback on whether the CEC's solution will be effective and deliver efficient outcomes

The Commission is interested in stakeholders' views on the CEC's proposed framework, including whether the framework would be likely to work in practice and whether there are alternative approaches that may be more efficient or more effective.

Under the CEC's proposed approach, the generator is required to outline:

1. whether there is a material difference between its R1 modelled performance, and the generation performance standard under the 5.3.4A connection agreement
2. whether the material difference is attributable to project design or due to changes in external network circumstances and
3. what the system security impact of the material difference in plant performance is likely to be and who should be responsible for remediating this (this should be set out in a plan with defined timeframes for completion).

The CEC proposes that generation project proponents should be allowed to receive conditional approval without the resolution of all issues, where they are minor or likely to have an inconsequential impact on power system security and stability. This would be subject to the generation proponent satisfying both AEMO and NSPs that they have a clear plan for satisfactory resolution of issues identified in the conditional approval.

A key part of the CEC's proposal lies with the NSP validating its agreement with the generator's assessment that the connection falls within a relevant 'Type' category at the R1 stage. The introduction of these new 'Type' categories would provide applicants with different pathways to registration. The CEC proposes that the generator's self-assessment of its 'Type' be proposed upon submission of its R1 package, and subsequently agreed or rejected by the NSP in consultation with AEMO. NSPs would be required to provide clear and justified reasons to disagree with the applicant's proposed Type self-classification, following consultation with AEMO.

The Type categories that a connecting generator would be required to self-assess under, and that NSPs would need to approve, are:

- Type 0: *R1 modelling identifies no issues*
- Type 1: *Applicant has non-material differences from the requirements of the negotiated access standard*
- Type 2: *Applicant has material differences which are due to changes in the external network conditions*

- Type 3: *Applicant to resolve minor issues as part of a conditional registration that specifies issues need to be remediated within a defined timeframe (e.g. commissioning or operation)*
- Type 4: *Applicant commits to resolve major issues with the plant design before registration is approved.*

The CEC proposes that a formal NSP assessment of materiality would be determined individually for each connection in accordance with a new guideline developed by AEMO and through negotiations between connecting parties as the R1 package is developed.

If the NSP determines that the applicant's R1 package should proceed under the Type 0 or 1 action plan, the generator would proceed to registration with the parameters proposed in the R1 package.

If the NSP determines that the applicant's R1 package should proceed under the Type 2 action plan, then it would inform AEMO to approve the generator's registration and take actions to remediate issues and recover costs from consumers. These actions may involve retuning the generator to local electrical conditions or addressing a network infrastructure gap through a RIT-T like process. The costs TNSPs face in undertaking this work would be recovered through transmission use of system charges.

If the NSP determines that the applicant's R1 package falls under the Type 3 action plan, then the generator would be required to resolve minor issues as part of commissioning or in some instances when they enter operation. This would require a mechanism to govern the conditional approval. The CEC proposes that an element to enforce the commitments within this new mechanism may include constraints or civil penalties.

If the NSP determines that the applicant's R1 package is deficient under the Type 4 action plan, it would need to undertake major additional remedial work before an application to register the plant can be assessed.

The CEC also proposes to establish requirements for AEMO, NSPs, and connecting generators to be brought together in facilitated discussions with a third-party to focus on how issues identified at the R1 stage can be resolved pragmatically. The CEC proposes that AEMO and NSPs be required to engage in this facilitated review process within 10 business days of the request from the applicant. The CEC also proposes that if there is a dispute that cannot be resolved, this should be taken through the independent engineer process with appropriate controls to ensure clearly deficient applications and frivolous matters do not inappropriately utilise AEMO's and other parties' limited resources.

Next steps and key dates

The key dates for this process are outlined in Table 6.1 below.

Table 1: Key project dates

MILESTONE	KEY DATE
The AEMC received the rule change request	17 May 2023
Consultation paper published	17 August 2023
Close of submissions to the consultation paper	28 September 2023
Publication of draft determination (and draft rule)	7 December 2023
Close of submissions to the draft determination	8 February 2024
Publication of final determination (and final rule)	21 March 2024

Note: The Commission will consider the timing for the publication of the draft and final determinations based on stakeholder feedback to this consultation paper.

Information on how to provide your submission and other opportunities for engagement is set out at the front of this document at the end of the Summary section.

You can find more information on the rule change process in *The Rule change process – a guide for stakeholders.*[1]

[1] *The rule change process: a guide for stakeholders, June 2017, available here: https://www.aemc.gov.au/sites/default/files/2018-09/A-guide-to-the-rule-change-process-200617.PDF*

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