

# R1 Capability Assessment Guideline (including conditions on registration)

Draft Report – Expedited consultation  
for the National Electricity Market

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New South Wales | Queensland | South Australia | Victoria | Australian Capital Territory | Tasmania | Western Australia

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## Explanatory statement and consultation notice

The publication of this draft report commences AEMO's expedited consultation on an addition to the materials that comprise the registration information resource and guidelines (RIRG) under the National Electricity Rules (NER) (the proposal). AEMO publishes the RIRG to assist applicants for registration who are engaging with AEMO in relation to registration, exemption and classification processes under Chapter 2 of the NER.

As a result of a recent rule change (the *National Electricity Amendment (Enhancing investment certainty in the R1 process) Rule 2024* (R1 process rule)) AEMO is required to expand the RIRG to cover the new requirements for the capability assessment set out in NER 5.3.7A. At the same time, AEMO is consulting on updates to the RIRG to include circumstances in which AEMO will consider agreeing to terms and conditions in relation to registration.

This consultation is undertaken as required by NER 2.1.3(d) and NER 11.171.2, following the expedited rules consultation procedure in NER 8.9.3. AEMO considers that the expedited rules consultation procedure is appropriate because the proposal is non-material for the following reasons:

- The new capability assessment process in NER 5.3.7A (capability assessment) is a partial codification of the process currently undertaken by AEMO to determine whether AEMO is satisfied that the proposed plant<sup>1</sup> will meet or exceed its relevant performance standards. This process is a core element of the registration process. While the NER now includes more details on the conduct of this process now known as the capability assessment and formalises a requirement for AEMO to notify the commencement and conclusion of the capability assessment, it has not altered the fundamental need or basis for the assessment.
- Despite the inclusion in the RIRG of guidance on circumstances under which AEMO may agree to impose terms and conditions on registration, any terms and conditions to be applied to a registration approval must still be agreed between AEMO and the Connection Applicant. AEMO will not be able to unilaterally impose terms and conditions on a Connection Applicant.

In June 2024, the Australian Energy Market Commission (AEMC) made the R1 process rule under which the required contents of the RIRG were extended to include additional material related to the capability assessment process now set out in the NER. The capability assessment process applies to Generators and Integrated Resource Providers<sup>2</sup> and successful completion of that process is required in order to be eligible for registration. Additionally, following changes made by this rule, the NER now clearly provides for AEMO to agree terms and conditions on the registration of Generators and Integrated Resource Providers (conditions on registration)<sup>3</sup>.

The RIRG is not a single document but is a suite of materials that AEMO has developed and maintains to assist parties in relation to registration in the National Electricity Market (NEM). Through this consultation AEMO is consulting on a new R1 Capability Assessment Guideline (Guideline) to describe the process for the capability assessment. The draft Guideline describes:

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<sup>1</sup> A generating system or an integrated resource system.

<sup>2</sup> NER 5.3.7A.

<sup>3</sup> For example, AEMO may require a Generator classified as a non-scheduled generator to comply with some of the obligations of a scheduled generator or a semi-scheduled generator, such as the provision of projected assessment of system adequacy (PASA) information or to be subject to dispatch of reactive power.

- The data and information that must be provided to AEMO and the relevant NSP to allow them to commence the capability assessment.
- Examples of the circumstances in which additional data and information may be requested, and examples of the data and information to satisfy such a request.
- How AEMO and the NSP may assess the data and information and assess whether there will be any adverse power system impacts.

The draft Guideline also addresses the circumstances under which AEMO will agree to terms and conditions on registration and the nature of those terms and conditions.

AEMO is also consulting on an associated draft R1 Capability Assessment Request Form (Request Form) to be used by Connection Applicants seeking registration as a Generator or Integrated Resource Provider when they request AEMO to conduct the capability assessment. The form is intended as a prompt to support these Connection Applicants to provide initial data and information as identified in the R1 Capability Assessment Guideline.

AEMO considered whether it was practicable to include the required material relating to the capability assessment and conditions on registration in existing RIRG materials, such as the Application Guide – NEM – Generator or Integrated Resource Provider<sup>4</sup> and the Guide to Registration Exemptions and Production Unit Classifications<sup>5</sup> respectively. AEMO considers it preferable that this guidance material is consolidated into a single new guideline and supporting form and not distributed across existing guidelines and forms. Minor or administrative changes may need to be made to other documents in the RIRG to cross-reference this new guideline and form and these changes may be made without additional consultation.

As part of the Connections Reform Initiative (CRI)<sup>6</sup> AEMO has convened a focus group on Streamlined Connection Processes (SCP) (Focus Group). The Focus Group includes representatives from project developers, Network Service Providers (NSPs) and industry associations. Issues raised through the Focus Group that are relevant to the R1 process rule have informed the development of the draft Guideline.

AEMO's draft proposal is to make the Guideline and the Request Form, in the form published with this draft report, with a proposed effective date of 27 June 2025.

## Consultation notice

If any person considers that AEMO should follow the standard (rather than expedited) consultative procedure for this proposal, they can submit a request for AEMO to do so (a procedure change request) within 10 business days after publication of this draft report. Any procedure change request must be sent to [contact.connections@aemo.com.au](mailto:contact.connections@aemo.com.au) by 5:00pm (Melbourne time) on 01 May 2025. In accordance with NER 8.9.3(b), a request must include reasons why the person considers the proposal is not a 'Non-material Proposal' as defined in NER 8.9.1 – that is, why it would have a significant effect on the NEM or on the activities of a relevant group of registered participants.

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<sup>4</sup> AEMO | Application Guide – NEM – Generator or Integrated Resource Provider.

<sup>5</sup> AEMO | Guide to Registration Exemptions and Production Unit Classifications.

<sup>6</sup> AEMO | Connections Reform Initiative.

AEMO invites written submissions from interested persons on this draft report and the draft proposal to [contact.connections@aemo.com.au](mailto:contact.connections@aemo.com.au) by 5:00pm (Melbourne time) on 16 May 2025.

Submissions may include alternative or additional proposals you consider may better meet the objectives of this consultation and the national electricity objective (NEO) in section 7 of the National Electricity Law. Please include supporting reasons.

Before making a submission (including a procedure change request), please read and take note of AEMO's consultation submission guidelines, which can be found at <https://aemo.com.au/consultations>. Subject to those guidelines, submissions will be published on AEMO's website.

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

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

Interested persons can request a meeting with AEMO to discuss any particularly complex, sensitive or confidential matters relating to the proposal. Please refer to NER 8.9.1(k). Meeting requests must be received by the end of the submission period and include reasons for the request. AEMO will try to accommodate reasonable meeting requests but, where appropriate, we may hold joint meetings with other stakeholders or convene a meeting with a broader industry group. Subject to confidentiality restrictions, AEMO will publish a summary of matters discussed at stakeholder meetings.

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# 1. Stakeholder consultation process

As required by NER 2.1.3(d) and 11.171.2, AEMO is consulting on the proposal in accordance with the expedited rules consultation procedure in NER 8.9.3.

Note that this document uses terms defined in the NER, which are intended to have the same meanings.

AEMO's process and expected timeline for this consultation are outlined below. As the consultation progresses, future dates may be adjusted, and additional steps may be included as needed.

**Table 1 Consultation process and timeline**

Consultation steps	Dates
SCP R1 Focus Group Workshops	01 August – 12 November 2024
Draft report published	16 April 2025
Submissions due on draft report	16 May 2025
Final report published	27 June 2025

AEMO considers that the expedited rules consultation procedure is appropriate for the proposal because it is a Non-material Proposal within the meaning of NER 8.9.1. The proposal is not expected to have a significant impact on the NEM wholesale market or power system or activities of any group[s] of registered participants that the proposal relates because:

- To the extent the proposal relates to the capability assessment, it represents a partial codification of existing technical assessment processes undertaken prior to registration and connection to the power system and will not adversely affect power system security.
- Any terms and conditions on registration must be agreed between AEMO and a Connection Applicant and cannot be unilaterally imposed by AEMO.

At any time before the final report is published and based on information received through submissions to this draft report, any procedure change requests under NER 8.9.3(b) or otherwise, AEMO may decide that the proposal can no longer be considered a Non-material Proposal. If so, AEMO will switch to the standard consultation procedure by publishing a notice under NER 8.9.3(f).

In developing the proposal, AEMO undertook consultation with the Focus Group convened under the SCP stream of the CRI. The Focus Group specifically contributed to AEMO's development of the draft information requirements to support the capability assessment and the circumstances to apply to conditions on registration.

AEMO thanks all stakeholders involved to date for their feedback, which has been considered in preparing this draft report, and looks forward to further constructive engagement on the proposal.

## 2. Background

### 2.1. Context for this consultation

The decarbonisation of the NEM requires a significant amount of new renewable generation and energy storage to connect to the power system. The capacity of new renewable generation required is around three times the capacity of the existing fleet of thermal generation that it will replace, while the capacity of new energy storage is around half that again. AEMO's 2024 Integrated System Plan (ISP)<sup>7</sup> forecasts that around 10 GW of coal-fired capacity will retire in the period to 2030 and will be replaced by around 30 GW of utility-scale wind and solar capacity. This new variable renewable energy capacity will need to be firmed by around a further 15 GW of utility-scale energy storage – primarily batteries and pumped hydro. By 2040 these forecasts for new capacity increase to a total of 70 GW and 18 GW respectively.

Consistent with these forecasts AEMO has observed a significant increase in the number of connection applications in recent years. At the end of December 2024, AEMO's Connections Scorecard showed 611 projects across the entire connections process from connection enquiry to fully commissioned. This is a nearly 60% increase from two years earlier, with material increases observed over that time in the number of projects at each stage of the connections process. To be able to assess the technical capability and register this increasing number of connections it is essential that the processes to support these activities remain fit for purpose and efficient.

Prior to being registered with AEMO, Generators and integrated resource providers (IRPs) need to demonstrate to AEMO and their relevant Network Service Provider (NSP) that their plant to be connected to the network will meet or exceed the agreed performance standards<sup>8</sup>. This involves the connecting party preparing and submitting details and performance of their plant post-detailed engineering design, a suite of technical models, a commissioning plan and other documentation. This process is referred to as the R1 process and the information required to be submitted under the NER is referred to as the 'Registered Data (R1 pre-connection)' (R1 data).

In June 2024 the AEMC amended the NER to improve the R1 process, remove barriers to registration and clarify the roles and responsibilities of Connection Applicants, AEMO and NSPs. The R1 process rule:

- Adds an explicit process for AEMO's assessment of the capability of a generation system or integrated resource system to meet or exceed its performance standards, referred to as the 'capability assessment'.
- Provides timeframes and other process requirements for steps in that capability assessment, including formalisation of AEMO notifications of the commencement and conclusion of the capability assessment.
- Requires that AEMO provide guidance on the process for the capability assessment within the registration information resource and guidelines (RIRG).
- Allows the RIRG to include additional data and information, in addition to the R1 data, that must be submitted to AEMO and the NSP, provided those changes are consulted on under the NER.

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<sup>7</sup> AEMO | 2024 Integrated System Plan (ISP).

<sup>8</sup> NER 2.1B.1(c) and 2.1B.2(b)(4).



- Allows AEMO to agree with a Generator or IRP terms and conditions that may apply to registration.

## 2.2. NER requirements

AEMO must develop, maintain and publish the RIRG materials.<sup>9</sup>

The R1 process rule has introduced a requirement that a description of the process for the capability assessment be included in the RIRG.<sup>10</sup>

When making certain amendments to the materials in the RIRG AEMO must consult in accordance with the Rules consultation procedures.<sup>11</sup>

The R1 process rule requires that AEMO develop and publish the RIRG that relate to the capability assessment by no later than 1 March 2025.<sup>12</sup> AEMO acknowledges that it will not complete this rules consultation by the required date and has advised the AER of this fact. A contributing factor to the delay in commencing this consultation has been AEMO's ongoing engagement on aspects of the capability assessment process with the Focus Group convened under the SCP stream of the CRI. AEMO considers the feedback received from the Focus Group has led to a proposal that is better able to accommodate stakeholders' views and concerns regarding the capability assessment process.

### 2.2.1. Capability assessment

AEMO must include a description of the process for the capability assessment in the RIRG. NER 2.1.3(b)(6) requires that this description include:

- The data and information a Connection Applicant must provide to AEMO and the NSP when making a request that AEMO conduct a capability assessment<sup>13</sup>.
- Examples of when AEMO or the NSP may request additional data and information from the Connection Applicant and examples of the data and information that may be provided to satisfy the request.
- How AEMO and the NSP may assess the data and information provided and whether the plant has an adverse effect on power system security or quality of supply. This includes the matters AEMO may take into account in undertaking that assessment.
- Any other matters AEMO considers relevant to describe the capability assessment process.

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<sup>9</sup> NER 2.1.3(a).

<sup>10</sup> NER 2.1.3(b)(6) and NER 11.172.2.

<sup>11</sup> NER 2.1.3(d).

<sup>12</sup> NER 11.171.2.

<sup>13</sup> When describing the data and information to be provided, AEMO is limited to the data and information that is required under the NER, is in connection with the performance standards, or which AEMO otherwise requires to assess whether the plant has an adverse effect on power system security or quality of supply.

### 2.2.2. Consultation requirements

In addition to the NER requirement to include a description of the capability assessment process in the RIRG the NER requires AEMO to consult on amendments to materials in the RIRG that relate to a range of matters<sup>14</sup>.

AEMO intends to amend the RIRG to not only include the process for the capability assessment but also a description of the circumstances under which it will agree to terms and conditions on registration and the nature of those terms and conditions. AEMO must consult on these amendments in accordance with the Rules consultation procedures<sup>15</sup>.

## 2.3. The national electricity objective

Within the specific requirements of the NER applicable to this proposal, AEMO will seek to make a determination that is consistent with the NEO and, where considering options, to select the one best aligned with the NEO.

The NEO is expressed in section 7 of the National Electricity Law as:

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; and
- (c) the achievement of targets set by a participating jurisdiction—
  - (i) for reducing Australia’s greenhouse gas emissions; or
  - (ii) that are likely to contribute to reducing Australia’s greenhouse gas emissions.

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<sup>14</sup> NER 2.1.3(d).

<sup>15</sup> NER 2.1.3(d)(2A) and (4).

### 3. Proposed capability assessment process

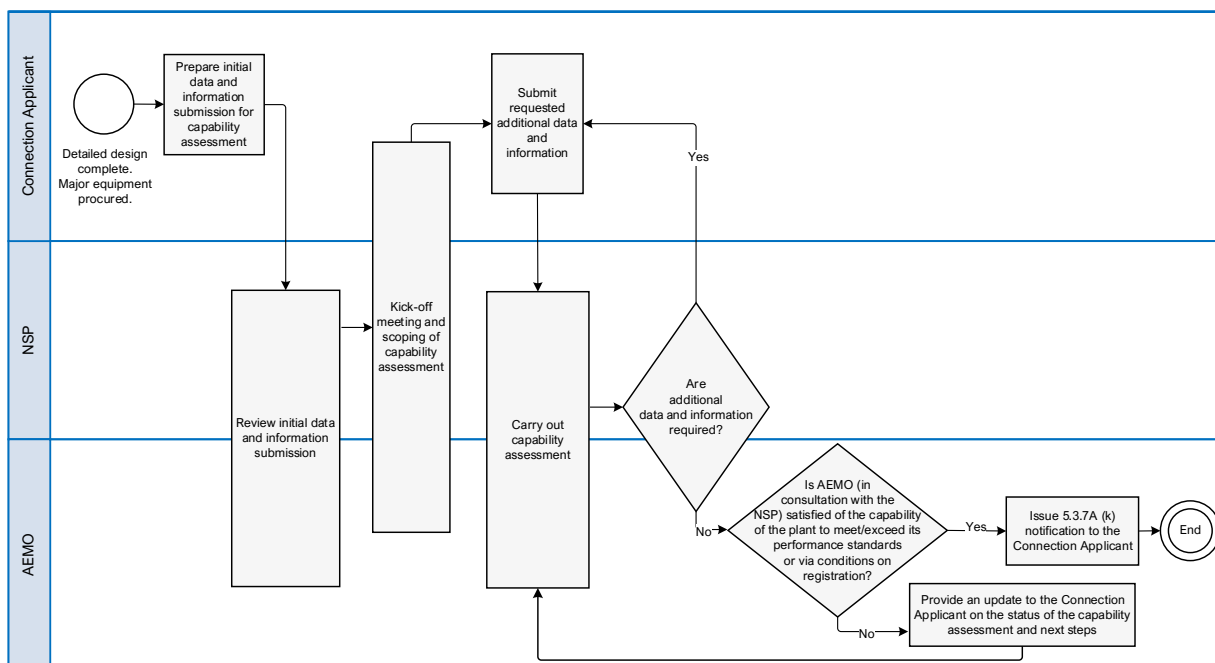
#### 3.1. Description of proposal

##### 3.1.1. Capability assessment process and information requirements

The R1 process rule has introduced additional requirements for the contents of the RIRG to describe the process for the capability assessment under NER 5.3.7A. To meet this requirement AEMO proposes to introduce a new stand-alone R1 Capability Assessment Guideline (Guideline) and associated R1 Capability Assessment Request Form (Request Form)

An overview of the proposed process for capability assessment is shown in Figure 1.

Figure 1 Capability assessment process



The data and information requirement in the draft Guideline are divided into two main parts. The initial data and information is required to commence the *capability assessment* and is used to scope the additional data and information request and identify any required assessments.

Appendix A of the draft Guideline sets out the initial data and information to be provided. The draft Request Form is intended as a prompt to support the provision of this initial data and information.

After a review of the initial data and information submitted by the Connection Applicant, AEMO and the NSP will work with the Connection Applicant to scope the capability assessment and identify additional data and information requirements. The scope of the capability assessment will be informed by considerations including:

- The plant capacity.
- The complexity of the plant (e.g. plant that includes multiple generation technologies or load).
- Its potential impact on the power system, considering its location in the power system.

- Conditions in relation to technical capabilities in the 5.3.4A letter<sup>16</sup>.
- The nature and extent of changes from the design considered prior to execution of the connection agreement.
- Relevant external changes not considered prior to the execution of the connection agreement.

AEMO or the NSP will then make an additional data and information request to the Connection Applicant to allow AEMO to complete the capability assessment in consultation with the NSP. Appendix B of the draft Guideline sets out the types of additional data and information that may be requested to complete the capability assessment and the purpose of that information. The additional data and information requested will depend on the project and may not include all information listed in Appendix B.

Appendix B consists of:

- Additional information that may be required to be submitted and broadly describes the purpose of that information.
- Additional information on detailed design, control and protection elements that may be required.
- Additional supporting documentation that may be required.

The proposed capability assessment process allows the scope of the assessment and level of detail of studies to be tailored to suit the site-specific attributes of the plant and the extent of change to either the design of the plant or the external power system since the execution of the connection agreement. The intent is that the detailed assessment is scoped to avoid unnecessary repetition of studies previously undertaken. As the capability assessment is carried out AEMO or the NSP may identify additional issues that were not considered when the scope of the capability assessment was developed. In these circumstances AEMO or the NSP may request further clarifications and/or data and information, depending on the findings of the assessment.

For capability assessments where design changes since the execution of the connection agreement are relatively minor<sup>17</sup>, the assessment requirements will be less extensive compared to cases where the extent of changes is more substantial. Plant alterations that trigger the application of NER 5.3.9, will generally be assessed as part of the capability assessment.

#### Questions

- **Is the proposed capability assessment process where the data and information requirements are divided into two main parts appropriate? If not, why not?**
- **Would a more prescriptive capability assessment process better meet the requirements of the NER and be more consistent with the NEO? If so, why and what would a more prescriptive process entail?**
- **Is it sufficient that the data and information submission focus on changes since the connection agreement was executed? Should other matters inform the contents of the initial data and information submission?**

<sup>16</sup> A letter issued by AEMO to the NSP formalising AEMO's agreement to access standards as a result of NER 5.3.4A negotiations.

<sup>17</sup> For example, small variations in underground cable lengths to accommodate site ground conditions.

#### Questions

- **Are the proposed initial information and data requirements in Appendix A, that will apply for all submissions, appropriate?**
- **Is the proposed Request Form suitable to support the submission of the initial information and data?**
- **Appendix B identifies a range of additional information and data requirements that may be required to support the capability assessment, and the reason(s) they may be required. Are there additional information and data items that should be included in Appendix B, or that should be removed from Appendix B? Why?**

### 3.1.2. Materiality of non-compliance with performance standards

Where non-compliance with any performance standards is identified through the capability assessment process it will be necessary for the Connection Applicant, AEMO and the NSP to collaboratively agree how best to achieve compliance. This will depend on a number of factors, including:

- Whether an alteration to the plant is such that NER 5.3.9 applies.
- Whether the performance standard meets the requirements for amendment under NER 4.14(p).

Where AEMO (in consultation with the NSP) assesses the non-compliance to have no adverse impact on power system security or the quality of supply to other Network Users<sup>18</sup>, AEMO and the NSP may agree with the Connection Applicant to amend the performance standard to achieve compliance, provided also that the assessed performance is not less than the minimum access standard<sup>19</sup>.

A plant's performance has an adverse impact on power system security if it impedes AEMO's ability to maintain a satisfactory operating state and the secure operation of the power system. AEMO considers materiality when determining whether a plant has an adverse impact. Materiality is a term used to indicate the significance of a change. In this context it is considered in terms of the effect a plant's performance has on the operation of the *power system* for the various elements of *power system security*.

An adverse impact on quality of supply is indicated if the plant's quality of supply performance (including harmonic emissions, voltage disturbances or unbalance level) has changed to the extent that it is no longer suitable to connect (without changes) considering its impact to other Network Users.

The assessment of adverse impacts on power system security and quality of supply is discussed in section 4.3 of the draft Guideline.

Where AEMO (in consultation with the NSP) assesses the non-compliance to have an adverse impact on power system security or quality of supply, a range of options may be considered to address the non-compliance. This is discussed in section 4.4 of the draft Guideline.

Appendix C of the draft Guideline sets out power system security and quality of supply requirements and examples of conditions where AEMO considers that an individual non-compliance would be likely to have an adverse impact. Where non-compliance(s) have impacts across more than one of these

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<sup>18</sup> Clause 5.3.7A makes it AEMO's responsibility to conduct the capability assessment and consult with the NSP when doing so. The NSP will advise AEMO if it considers a non-compliance to have an adverse impact on the quality of supply of other Network Users.

<sup>19</sup> NER 5.3.4A(b), (b1) and (b2).

elements AEMO will need to consider whether the cumulative impact constitutes an adverse impact on power system security or quality of supply.

#### Questions

- **Is the proposed list of example conditions to guide the approach to address non-compliance with performance standards in Appendix C appropriate? What alternatives do you suggest?**
- **Is it appropriate that AEMO's interpretation of what constitutes an adverse impact includes an assessment of materiality? What alternatives do you suggest?**

### 3.1.3. Conditions on registration

The R1 process rule has introduced a requirement that AEMO must notify the Connection Applicant in writing that the capability assessment has been completed and must do so within five business days of completing the assessment. If AEMO would be satisfied of the capability of the plant to meet or exceed its performance standards subject to terms and conditions AEMO must include these terms and conditions in the notice to the Connection Applicant. Any terms and conditions relating to when and how AEMO will be satisfied that a plant will be able to meet or exceed its performance standards are to be agreed between AEMO and the Connection Applicant in accordance with the RIRG<sup>20</sup>.

To meet these requirements AEMO proposes to include in the Guideline examples of the circumstances under which AEMO may agree terms and conditions and guidance as to the nature of those terms and conditions. This is set out in section 5 of the draft Guideline.

The proposed circumstances where conditions on registration may be appropriate include:

- The terms or conditions are directly related to a technical capability to meet a performance standard.
- The application of terms and conditions would advance the principles of the Guideline.
- There is a clearly identified, credible pathway for the Connection Applicant to be able to demonstrate its plant will meet or exceed its performance standards.
- An inability to meet or exceed performance standards at this time will not have an adverse impact on power system security (including through reduction in the technical envelope for operation).
- An inability to meet or exceed performance standards at this time will not have an adverse impact on the quality of supply to any other Network User.
- The use of the terms and conditions on registration is consistent with the NEO.
- The terms and conditions incentivise the resolution of the relevant issue, in a reasonable timeframe considering the nature of the issue.

The nature of the terms and conditions to be applied to registration may include:

- A maximum timeframe within which the Generator or IRP must demonstrate the capability of its plant to meet or exceed its performance standards.
- A milestone by which the Generator or IRP must satisfy AEMO as to the capability of its plant to meet or exceed its performance standards.

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<sup>20</sup> NER 5.3.7A(k).

- A limit on the maximum capacity of the plant to generate or consume electricity.
- A limit on the generation or absorption of reactive power.
- A limit on the maximum number of production units that may be connected at any one time.
- A limit on the modes of operation of the plant and/or plant operational configurations.
- A limit on the types of market services that the plant is permitted to provide.
- That, if the technical envelope for secure power system operation is reduced by the plant's inability to meet its performance standard, the plant will be constrained ahead of other Network Users to limit the impact on power transfer capability and other Network Users' operation.
- That, if the plant's inability to meet a performance standard causes an adverse impact on the quality of supply to another Network User, the plant may be constrained, or the number of units permitted to operate reduced to a level where there is no adverse impact.
- That, if the plant's performance causes a harmonics or flicker emissions planning level to be exceeded at the connection point (as determined through measurement), the Generator or IRP is required to either rectify its non-compliance directly or arrange for the NSP to rectify the non-compliance.
- That, if the plant's allocations for harmonics or flicker have been adjusted to address a non-compliance, and the emissions at the connection point exceed a planning level (assessed through measurement), the Generator or IRP is required to remediate their emissions directly or arrange for the NSP to rectify the exceedance in proportion to its contribution.
- The assessment process that will satisfy AEMO as to the conditions having been met, and the party(s) responsible.
- Payment of a fee to cover the cost anticipated to be incurred by AEMO and the NSP (where relevant) to confirm satisfaction of a condition, where not otherwise addressed in the NER.

The terms and conditions may be applied in combination and may be tiered or linked to one another. This is to provide AEMO assurance that conditions on registration are being complied with and that AEMO remains satisfied of the capability of the plant to meet or exceed its performance standards.

#### Questions

- **Are the proposed circumstances when conditions on registration could apply appropriate? If not, what alternatives do you suggest?**
- **Is the list of terms and conditions that could be applied on registration appropriate? Are there terms and conditions that should be removed, or that should be included? Why?**

#### 3.1.4. Effective date

The Rules require that AEMO develop and publish the RIRG materials related to the capability assessment process by no later than 1 March 2025 (NER 11.171.2). AEMO acknowledges that it will not complete this rules consultation by the required date and has advised the AER of this fact. AEMO proposes the determination on the Guideline and the Request Form to have an effective date of 27 June 2025.

### 3.2. How the proposal meets the objectives

The NER requires that the RIRG include a description of the capability assessment process required under NER 5.3.7A. The proposed Guideline is structured to meet the specific requirements of NER 2.1.3(b)(6) as follows:

NER requirement – 2.1.3(b)(6)	Draft Guideline
<p>(i) the data and information that the Connection Applicant must provide to AEMO and the Network Service Provider under clause 5.3.7A(c), being data and information:</p> <p>(A) required under the Rules (including schedule 5.2, 5.3 or 5.3a);</p> <p>(B) in connection with the performance standards; or</p> <p>(C) otherwise required for AEMO to assess whether the generating system, integrated resource system or performance standards has an adverse effect on power system security or the quality of supply for other Network Users.</p>	<p>Section 2 describes the process for the capability assessment, which includes two stages of data and information requests.</p> <p>The need for an initial data and information submission is set out in section 3.1. Appendix A describes the initial data and information requirements in more detail. This information is required in all circumstances.</p>
<p>(ii) examples of the circumstances in which AEMO or the Network Service Provider may request additional data and information from the Connection Applicant under clause 5.3.7A(f), and if that request is made, examples of data and information the Connection Applicant may provide in response under clause 5.3.7A(h)(2) to satisfy AEMO and the Network Service Provider;</p>	<p>After receiving the completed initial submission, AEMO will discuss the information with the relevant NSP and the Connection Applicant to inform its view on the scope of work for the capability assessment, and the additional information that will be needed to complete the capability assessment.</p> <p>Section 2.2.2 discusses the factors which AEMO or the NSP may take into account when determining any additional data and information request.</p> <p>Appendix B describes the more detailed information that may be part of the additional data and information request once the scope of the capability assessment has been determined. It sets out the detail of the data and information requirement as well as its purpose.</p>
<p>(iii) how AEMO may assess, and the matters AEMO may take into account in assessing:</p>	<p>Section 4 sets out the approach AEMO will adopt to undertake the capability assessment. This includes:</p>



<p>(A) the data and information provided by the Connection Applicant under clause 5.3.7A(c) or 5.3.7A(h)(2); and</p> <p>(B) whether the generating system, integrated resource system or performance standards has an adverse effect on power system security or the quality of supply for other Network Users, with reference to the relevant access standards;</p>	<ul style="list-style-type: none"> <li>• Data to be used for the capability assessment (section 4.1);</li> <li>• Assessing if alterations from initial designs affect performance standards (sections 4.2 and 4.3). This includes;             <ul style="list-style-type: none"> <li>○ Assessing adverse impacts on power system security; and</li> <li>○ Consulting with the NSP to assess adverse impacts on quality of supply to other Network Users.</li> </ul> </li> <li>• How identified non-compliance with performance standards may be addressed (section 4.4).</li> </ul>
<p>(iv) any other matters AEMO considers relevant in describing the process for the capability assessment</p>	<p>When assessing how best to address any identified non-compliance with performance standards AEMO (in consultation with the NSP) will consider whether the non-compliance is material (section 4.4 and Appendix C).</p>

As noted in section 2.1 the decarbonisation of the NEM requires a significant amount of new renewable generation and energy storage to connect to the power system. At the end of December 2024 AEMO’s Connections Scorecard showed 611 projects across the entire connections process from connection enquiry to fully commissioned. This is a nearly 60% increase from two years earlier, with material increases observed over that time in the number of projects at each stage of the connections process. To be able to assess the technical capability and register this increasing number of connections it is essential that the processes to support these activities remain fit for purpose and efficient.

In its Final Determination on the R1 process rule change the AEMC identified that “flexibility and collaboration is critical to the success of the R1 assessment process”. Having a capability assessment process that can be adapted to suit the specific circumstances of a Connection Applicant (i.e. is fit-for-purpose) is a key enabler of the required flexibility. Collaboration between the Connection Applicant, AEMO and the NSP will ensure the bounds of the capability assessment are properly scoped up-front and the data and information requirements are clarified.

Consistent with the need for flexibility the draft Guideline identifies the factors that will influence the extent of evidence and level of detail of studies and supporting documentation required to complete the capability assessment. The factors are set out in section 2.2.2 of the draft Guideline and in section 3.1 above. Adopting this fit-for-purpose approach provides flexibility to adapt to new situations and new understandings as the power system rapidly changes.

The draft Guideline also includes guidance for AEMO and Connection Applicants as to the circumstances when conditions on registration may be appropriate, and the nature of terms and conditions that may apply. Adopting this approach provides flexibility to adapt to new situations and new understandings as the power system rapidly changes.

AEMO considers this approach ensures the ongoing reliability and security of the power system while removing barriers to the ongoing decarbonisation of electricity supplies, consistent with the NEO.

### 3.3. Alternative options

#### 3.3.1. Capability assessment process

As the R1 process rule requires that AEMO include in the RIRG a description of the process for the capability assessment but does not otherwise change the purpose of or nature of the assessment, the alternatives are limited to the process steps within that framework.

An alternative to the proposed assessment process that divides the data and information requirements into two main parts is a more prescriptive, one-size-fits-all process where all Connection Applicants are required to make the same data and information submission, and AEMO in consultation with the NSP conduct the same detailed analysis, regardless of complexity and assessed risk to power system security.

While a more prescriptive approach may provide greater certainty for Connection Applicants, in many circumstances it would require a Connection Applicant to prepare and submit more detailed data and information compared to the proposed process. AEMO and the NSP would then be required to assess this more extensive data and information submission. This would impose additional costs on Connection Applicants, AEMO and NSPs. It could also result in delays to the registration, commissioning and operation of new renewable generation and energy storage systems, without compensating improvements in the reliability and security of the power system. AEMO considers these outcomes would be contrary to the NEO.

Even if the process was designed to have several pre-defined tiers of requirements (i.e. each application gets assigned to one of the pre-defined tiers), instead of a single predefined set of requirements, it could still overly constrain the specification of data and information requirements and the detailed studies to be conducted.

For these reasons AEMO considers the proposed assessment process is preferable.

#### 3.3.2. Conditions on registration

AEMO has included in the draft Guideline examples of the circumstances under which AEMO may agree terms and conditions and guidance as to the nature of those terms and conditions. This approach provides a degree of flexibility as to the exact circumstances under which conditions on registration may be supported and the specific terms and conditions which may be agreed.

AEMO does not consider a more prescriptive approach to be preferable because:

- It is not possible to identify, in advance, all the possible circumstances in which conditions on registration might be appropriate. If new circumstances were to arise in the future in which AEMO and the Connection Applicant agreed that conditions on registration would be appropriate, but that was not covered by the specific circumstances included in the Guideline, then conditions on registration would not be available.
- Specifying in advance the terms and conditions that are to apply in specific circumstances does not allow AEMO and the Connection Applicant to agree alternative terms and conditions that may be better suited to the Connection Applicants particular circumstances.

While a more prescriptive approach may provide greater certainty for Connection Applicants the inflexible nature of it is likely to prevent the application of conditions on registration in circumstances where it may be the preferable outcome. This would result in delays to the registration, commissioning and operation of new renewable generation and energy storage systems, without compensating improvements in the reliability and security of the power system. AEMO considers this would be contrary to the NEO.

Another alternative option would be for AEMO to determine terms and conditions for the Connection Applicant to accept. This alternative is not preferred because:

- Applying conditions on registration is untested and could result in unintended consequences if terms and conditions are not subject to negotiation and agreement.
- The technical complexities inherent in the capability assessment process will benefit from open exchange of information and ideas and collaborative problem solving, which could be inhibited if terms and conditions could be imposed by AEMO.
- It could introduce additional risk for a Connection Applicant if they were uncertain what terms and conditions could be imposed by AEMO.

For these reasons AEMO considers the proposed approach is preferable.

### 3.4. Issues for consultation

The following table sets out the questions for consultation contained in sections 3.1.1 to 3.1.3 above and collated together here for convenience.

Questions
<p><b>Capability assessment process</b></p> <ul style="list-style-type: none"> <li>• <b>Is the proposed capability assessment process where the data and information requirements are divided into two main parts appropriate? If not, why not?</b></li> <li>• <b>Would a more prescriptive capability assessment process better meet the requirements of the NER and be more consistent with the NEO? If so, why and what would a more prescriptive process entail?</b></li> <li>• <b>Is it sufficient that the data and information submission focuses on changes since the connection agreement was executed? Should other matters inform the contents of the initial data and information submission?</b></li> <li>• <b>Are the proposed initial information and data requirements in Appendix A appropriate?</b></li> <li>• <b>Is the proposed Request Form suitable to support the submission of the initial information and data?</b></li> <li>• <b>Appendix B identifies a range of additional information and data requirements that may be required to support the capability assessment, and the reason(s) they may be required. Are there additional information and data items that should be included in Appendix B, or that should be removed from Appendix B? Why?</b></li> </ul> <p><b>Materiality of non-compliance</b></p> <ul style="list-style-type: none"> <li>• <b>Is the proposed list of example conditions to guide the approach to address non-compliance with performance standards in Appendix C appropriate? What alternatives do you suggest?</b></li> </ul>

### Questions

- **Is it appropriate that AEMO’s interpretation of what constitutes an adverse impact includes an assessment of materiality? What alternatives do you suggest?**

#### Conditions on registration

- **Are the proposed circumstances when conditions on registration could apply appropriate? If not, what alternatives do you suggest?**
- **Is the list of terms and conditions that could be applied on registration appropriate? Are there terms and conditions that should be removed, or that should be included? Why?**

## 4. Draft determination

### 4.1. Draft determination

AEMO has prepared a draft Guideline and Request Form reflecting the proposal, as published with this draft report. AEMO’s draft determination is to make the draft Guideline and Request Form in that form.

### 4.2. Effective date

AEMO’s proposed effective date for the determination is 27 June 2025.

## Appendix A. Glossary

Term or acronym	Meaning
AEMC	Australian Energy Market Commission
capability assessment	AEMO’s assessment of the capability of a generating system or integrated resource system to meet or exceed its performance standards
conditions on registration	The terms and conditions AEMO may agree with a Generator or IRP in relation to registration
Connection Applicant	A Connection Applicant seeking to register as a Generator or Integrated Resource Provider
CRI	Connections Reform Initiative
Focus Group	SCP – R1 focus group convened under the CRI
Guideline	R1 Capability Assessment Guideline
IRP	Integrated Resource Provider
ISP	Integrated System Plan
NER	National Electricity Rules
NEO	National electricity objective
NSP	Network Service Provider
R1 data	Registered data (R1 pre-connection)
R1 process rule	National Electricity Amendment (Enhancing investment certainty in the R1 process)
Request Form	R1 Capability Assessment Request Form
RIRG	Registration information resource and guidelines
SCP	Streamlined Connection Process