



Consultation on Guide to Registration Exemption and Production Unit Classifications

Final Information paper

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

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Executive Summary

The publication of this Final Information Paper (Paper) is a further step in the consultation process (Consultation) conducted by AEMO to consider the proposed changes (Changes) to the Draft Guide to Registration Exemptions and Production Unit Classifications (Guide) in accordance with the National Electricity Rules (NER), under the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 (IESS Rule).

The Guide:

- is published to assist potential applicants for registration in the National Electricity Market (NEM); and
- forms part of the *registration information resource and guidelines* which AEMO maintains consistent with clause 2.1.3(a) of the National Electricity Rules (NER).

AEMO has prepared this Paper to initiate further feedback by industry in respect of the Changes, in light of the submissions on the Initial Information Paper and the Initial Draft Guide.

In summary, the Changes:

- amend the Guide to be consistent with the IESS Rule; and
- set out the circumstances under which AEMO will impose terms and conditions of classification or exemption and the nature of those terms and conditions.

AEMO invites stakeholders to:

- provide feedback and comments on this Paper, as well as the accompanying Further Draft Guide; and
- identify any unintended adverse consequences of the Changes.

Stakeholders are invited to submit written responses on this Paper, including the questions, by 5pm Tuesday 14 March 2023.

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1. Stakeholder Consultation Process

AEMO has established a comprehensive stakeholder engagement program to ensure the effectiveness of the Consultation. This program comprises:

- This Consultation.
- IESS Working Group (IESS-WG) for affected participants and other related bodies.
- Information sessions on policy matters undertaken by the IESS-WG, as required.
- Dedicated webpage¹ and IESS mailbox (IESS@aemo.com.au) for stakeholder enquiries.
- Additional forums to be established in the second half of 2022 for the broader implementation of the NEM2025 Implementation Roadmap.²

AEMO is consulting on the Changes in accordance with the rule consultation procedure in NER 8.9. The Changes will align the Guide with the NER, as amended by the IESS Rule. The Guide forms part of the registration information resource and guidelines that AEMO maintains under NER 2.1.3(a).

AEMO's indicative timeline for the Consultation is as follows.

Deliverable	Indicative date	Status
Initial Information Paper and Initial Draft Guide published	2 November 2022	Completed
Submissions due on Initial Information Paper and Initial Draft Guide	21 December 2022	Completed
Further Draft Guide and Final Information Paper published	14 February 2023	Completed with this publication
Submissions due on Further Draft Guide and Final Information Paper	14 March 2023	
Final Guide published	14 April 2023	

Prior to the due date for submissions on the Further Draft Guide and the Final Information Paper, stakeholders can request a meeting with AEMO to discuss any issues in respect of the Changes, or more generally, via email IESS@aemo.com.au.

A list of abbreviations used in this Paper is at Appendix A.

¹ At <https://aemo.com.au/initiatives/major-programs/integrating-energy-storage-systems-project>.

² For current version of the Roadmap, see <https://aemo.com.au/consultations/industry-forums-and-working-groups/list-of-industry-forums-and-working-groups/reform-delivery-committee>.

2. Summary

On 2 November 2022, AEMO published the Initial Information Paper and the Initial Draft Guide,³ to implement the Changes from the IESS High Level Design⁴ and resolve issues that have been raised through the IESS Final Strawperson⁵.

The Changes focused on:

- The classification of hybrid systems and coupled production units under the IESS Rule.
- AEMO's terms and conditions for classifying IRS under the updated framework, particularly DC-coupled systems.
- Determining nameplate rating for Production Units when specified by the manufacture in MVA and not in MW.
- Other key policy or design issues which are related to classification under the IESS Rule.

AEMO received two submissions from stakeholders. These submissions are published on AEMO's Consultation Page. AEMO responds to these submissions in Appendix B.

3. Final changes

The Changes in the Further Draft Guide improve clarity and readability, as well as address obligations under the IESS Rule. The Changes are set out in more detail in the following section.

3.1. Change of Guide title

AEMO has named the Guide, "Guide to Registration Exemptions and Production Unit Classifications", for consistency with the IESS Rule, as well as to shorten the title.

3.2. Determining nameplate rating section

The updated section on determining *nameplate rating* now applies to the entire Guide (both exemptions and classifications), rather than just applying to registration exemptions. The section clarifies how the *nameplate rating* should be determined, when the rating of an item of *plant* is specified by the manufacturer in MVA and not MW, for both *asynchronous production units* and *synchronous production units*. The updated section also outlines AEMO's approach to determining *nameplate ratings* for *BDUs*, *coupled production units*, *GS* and *IRS*.

Questions

- **How suitable is this section?**
- **What issues may arise for determining nameplate rating using this section and why?**

³ AEMO consultation page <https://www.aemo.com.au/consultations/current-and-closed-consultations/guide-to-generator-exemption-and-classification-of-generating-units-consultation>

⁴ AEMO website <https://www.aemo.com.au/-/media/files/initiatives/submissions/2021/iess/integrating-energy-storage-systems---high-level-design---final.pdf?la=en>

⁵ AEMO website <https://www.aemo.com.au/-/media/files/initiatives/submissions/2022/iessi-strawperson-final.pdf?la=en>

3.3. Classification of coupled production units

AEMO has re-written section 5.8 to provide a more consistent structure for the Guide, as well as to clarify the classification of *coupled production units*.

AEMO will consider an application to classify a *BDU* that is a *coupled production unit* as a *semi-scheduled generating unit* under the following circumstances:

- the total non-intermittent capacity is less than 5 MWdc;
- the total non-intermittent MWdc capacity is less than 2.5% of the total intermittent MWdc capacity, except in the case where the participant commits to providing a self-forecast⁶ for dispatch purposes; and
- MWdc SCADA feeds are provided for the intermittent capacity and the non-intermittent capacity (in addition to MWac output feed).

Questions

- **Are there any issues with the capacity value now being with respect to MWdc, instead of MW as per the Initial Draft Guide?**

3.4. Conditional classifications

In the *registration information resource and guidelines*, AEMO must describe the circumstances under which AEMO will impose terms and conditions of classification or exemption, as well as the nature of those terms and conditions. The Guide includes AEMO's proposed terms and conditions for classifying DC-coupled units in the Initial Draft Guide, as AEMO did not receive any feedback on these matters.

As noted above, AEMO will consider an application to classify a *coupled production unit* as a *semi-scheduled generating unit* under these terms and conditions, to avoid any need for significant changes to operational forecasting systems and long-term forecasting systems.

AEMO's proposed conditions provide consistent treatment between *coupled production units* and other aggregated systems, where classified as scheduled if at a capacity of less than 5 MW. AEMO's operations rely on intermittent generation forecasts for *semi-scheduled generating units*, which do not consider the forecast behaviour of a battery within a *coupled production unit*.

3.5. Additional minor changes

3.5.1. Removal of Auxiliary Load section

Auxiliary load is now a defined term in the NER which means this section is now obsolete.

3.5.2. No Exemption for BDU 5MW or more

AEMO has included the wording to clarify that all persons who own, operate and control *BDUs* with a *nameplate rating* of 5MW or greater must register as *IRPs*. This applies to persons with standalone *BDUs* as well as those that are proposed to be installed as part of a larger *IRS* with non-*BDUs*.

⁶ <https://www.aemo.com.au/energy-systems/electricity/national-electricity-market-nem/nem-forecasting-and-planning/operational-forecasting/solar-and-wind-energy-forecasting/participant-forecasting>

3.5.3. Updated Examples of classifications

AEMO has updated the terminology in the table with examples of classifications , as well as to provide specific examples.

4. Drafting for proposed changes

To help stakeholders respond to this Paper, AEMO has published the change-marked version of the Guide, which is available on the [Consultation Page](#).

AEMO seeks comment and feedback on the key Changes which are proposed to the Guide.

Submissions on the Guide as discussed in this Paper are invited by 5pm, Tuesday 14 March 2023.

Appendix A. Abbreviations

Term or acronym	Meaning
AC	Alternating Current
ADC	Aggregate Dispatch Conformance
BDU	Bidirectional Unit
DC	Direct Current
ECM	Electrical Construction and Maintenance
EMMS	Electricity Market Management System
EPC	Engineering, procurement, and construction
GS	Generating System
GU	Generating Unit
IRP	Integrated Resource Provider
IRS	Integrated Resource System
MVA	Megavolt ampere
MW	Megawatt
NEL	National Electricity Law
NEM	National Electricity Market
NER	National Electricity Rules
NSP	Network Service Provider
PASA	Projected Assessment of System Adequacy
PU	Production Unit
RLC	Resource Level Compliance
SCADA	Supervisory Control And Data Acquisition
ST PASA	Short term PASA

Appendix B. Responses to consultation

Questions	Stakeholder Response	AEMO's Response
<p>What changes, if any, are missing from the HLD (High Level Design) or Final Strawperson that have not been addressed in the Guide?</p> <p>What other changes should be reflected?</p>	<p>FIRMUS: Changes that would better facilitate the use of systems that inject electricity into the grid (such as the Firmus Powercube) if they do so for the purpose of provision of FCAS only.</p> <p>FIRMUS: Owners, operators and controllers of such systems should not need to be registered Generators or Integrated Resource Providers. They are not providing generation in the typical sense because they only ever inject electricity over a very short time periods in response to FCAS events (significantly less than the 5 minute minimum) – at all other times they are either recharging or standing idle. Firmus' view is that it would be more appropriate for such system to either:</p> <ul style="list-style-type: none"> • be exempted from the requirements to be registered as Generators or Integrated Resource Providers regardless of the nameplate capacity (i.e. create a new class of exemption specifically for systems that inject electricity into the grid for the purpose of providing FCAS only); or • revise the exemptions to the requirements to be registered as Generators or Integrated Resource Providers to apply on an alternative basis to the nameplate capacity if they relate to systems that inject electricity into the grid for the purpose of providing FCAS only <p>rather than require such providers to be registered in an unsuitable category.</p> <p>If this is not possible within the confines of this consultation the Firmus is of the view that AEMO should consider the creation of a new category of market participant for owners, operators or controllers of systems that inject electricity into the grid for provision of FCAS only which has registration requirements and other obligations that better reflect the nature of such systems rather than require such providers to be registered in an unsuitable category.</p>	<p>AEMO is excited about the service that Firmus is providing to FCAS in Tasmania. This consultation addresses the implementation of the IESS Rule Change.</p> <p>At this stage there is no change to the existing exemption framework for battery systems, rather the Guide has been updated to implement the IESS Rule Change.</p> <p>The National Electricity Rule changes to facilitating systems, such as Firmus Powercubes, can be raised as a Rule Change to the AEMC.</p> <p>Alternatively, there is an AER Energy Innovation Toolkit - please refer to the AER website for more information to assess if Powercubes satisfy the criteria for this.</p>
<p>How suitable are the proposed terms and conditions and why?</p> <p>What other terms and conditions should be considered and why?</p> <p>What are your views on AEMO periodically reviewing and updating the</p>	<p>FIRMUS: Firmus is of the view that they are suitable for the specific scenarios that have been identified but not the scenario described above.</p> <p>FIRMUS: See responses above.</p> <p>FIRMUS: Firmus has no specific view on the periodic review and update of the average dispatch error threshold.</p>	<p>See above response</p>

Questions	Stakeholder Response	AEMO's Response
average dispatch error threshold (currently 2.5%)?		
What other scenarios can be identified that currently fall outside of this framework?	FIRMUS: See responses above.	See above response
What other clarifications could be identified that would be appropriate to consider include in the Guide?	<p>FIRMUS: See responses above.</p> <p>ERGON ENERGY AND ENERGEX: However, to ensure consistency within the National Electricity Market, Ergon Energy and Energex suggest that clarification of the requirement to register should also be made in respect of uninterruptible generating plant, for example diesel uninterrupted power systems. In our view, this plant could be added to the list in Appendix A.</p>	<p>This consultation addresses the implementation of the IESS Rule Change and does not change the existing exemption framework.</p> <p>An example of a 20 MW diesel rotary uninterruptible power supply system within a data centre, has been included in Appendix A.</p>