# Classifying a Coupled Production Unit in the NEM

Fact Sheet

This fact sheet provides a simplified explanation of potential approaches to classifying coupled production units within an integrated resource system in the National Electricity Market (NEM) as of 3 June 2024 (implementation date of IESS Rule[1]). It looks at how the different classification types can be managed for coupled production units.

While AEMO has taken all reasonable care in the preparation of this document, the information should not be construed as advice, and you should seek your own advice and if necessary, consult with AEMO regarding individual proposals.

If you intend to operate an integrated resource system within the NEM, you will need to read and understand the National Electricity Rules (NER) and associated procedures, guidelines and standards relevant to your connection, registration and ongoing operational requirements.

This fact sheet will not give you all the information you need to register and classify coupled production units successfully. You can get more information on registration from the AEMO website and registration fact sheets.

Legend for pictorials in this fact sheet are:

Connection Point | Meter | Meter (NMI) | Inverter

## Production Unit Classification

Unless an exemption applies, anyone who owns, operates or controls a system connected to the NEM grid must register as an integrated resource provider or a generator and 'classify' each production unit in that system. Classification is required for both dispatch (scheduling) and energy market settlement.

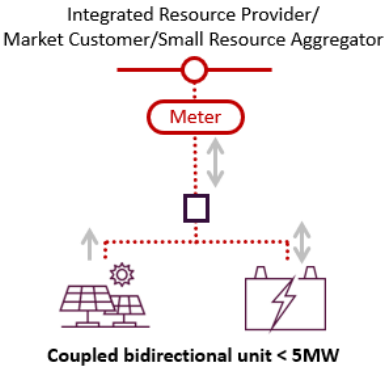
Each NEM production unit must be classified as either bidirectional or generating and scheduled, semi-scheduled or non-scheduled based on its size and technical characteristics.

Each production unit must also be classified as market or non-market, depending on whether the participant registering the system is classifying the connection point as one of its market connection points or a third party participant is doing so. The third party, e.g., a Market Customer, will become the Financially Responsible Market Participant (FRMP) for the energy at the connection point.

## Classification of Coupled Production Units

A coupled production unit has more than one technology behind the inverter, for example, battery and solar PV. These are typically bidirectional units (BDUs). Depending on the absolute and relative size of the technology components, and any other production units connected at the common connection point there are multiple ways in which these types of production units can be classified. The scenarios below illustrate a 2-technology coupled production unit aggregated under NER 3.8.3 for the purpose of dispatch. The approach is extensible to more than two technologies should this be required.

### a) Scenario: Coupled Production Unit < 5MW




A standalone coupled production unit with a nameplate rating < 5MW would typically be exempt from registration.

The connection point can be classified as a market connection point by an integrated resource provider or market customer or as a small resource connection point by an integrated resource provider, small resource aggregator without AEMO's approval. Compliance with NSP technical requirements in the connection agreement is required.

[1] https://www.aemc.gov.au/rule-changes/integrating-energy-storage-systems-nem

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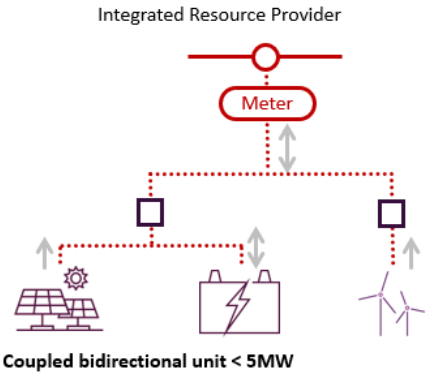
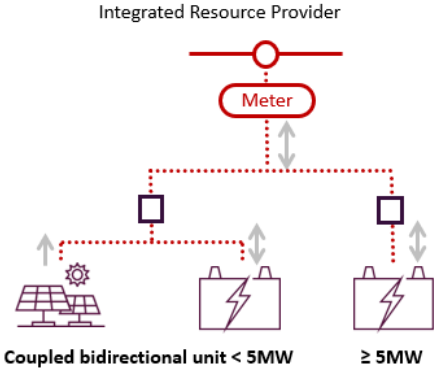
### b) Scenario: Coupled Production Unit <5MW in an integrated resource system ≥5 MW

Only an integrated resource provider can register an integrated resource system.

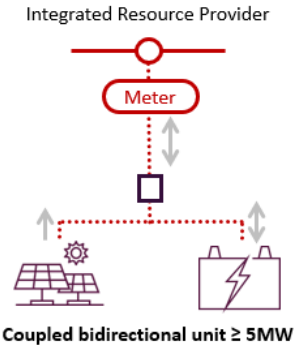



An integrated resource system with a nameplate rating ≥5 MW will most likely require registration[2]. A coupled production unit with a nameplate rating <5MW in an integrated resource system will typically be classified as a non-scheduled BDU if there are no other BDU connected.




If there are other BDUs connected so that in aggregate the nameplate rating of BDUs at the connection point is ≥5 MW then the coupled BDU will be classified as scheduled.

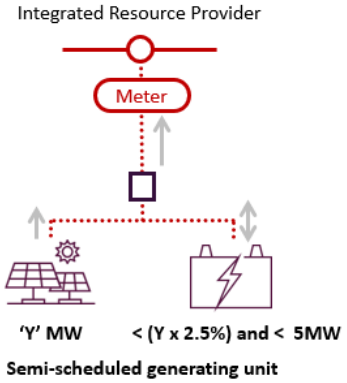
### c) Scenario: Coupled Production Unit ≥5MW classified as scheduled BDU




A standalone coupled BDU with a nameplate rating ≥5 MW is not eligible for exemption and will be registered by an integrated resource provider and classified as a scheduled BDU unless AEMO approves its classification based on separate technologies (see scenario e)).

### d) Scenario: Coupled Production Unit ≥5MW classified as semi-scheduled generating unit

Under certain circumstances AEMO will approve classification of the BDU as a semi-scheduled generating unit.




- Non-intermittent capacity <5 MW
- Non-intermittent capacity <2.5% intermittent capacity
- No consumption at the connection point except auxiliary load (battery charging is not auxiliary load)
- Maximum generation capacity = intermittent capacity

[2] Under certain circumstances a person may apply for exemption from registration where an integrated resource system is ≥5 MW with bidirectional units <5 MW.

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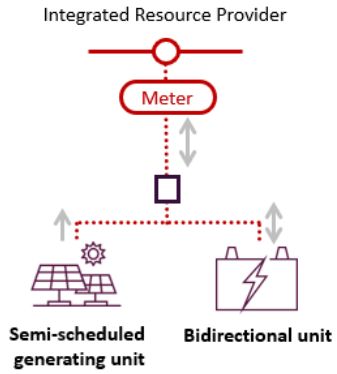
- Various technical requirements including ECM, dispatch self-forecast and SCADA for intermittent and non-intermittent plant

Although not operationally bidirectional this system is still considered an integrated resource system and may only be registered by an integrated resource provider

**e) Scenario: Coupled Production Unit ≥5MW classified as semi-scheduled generating unit and scheduled BDU**

Under certain circumstances AEMO will approve classification of the BDU as two separately classified plant, i.e., as a semi-scheduled generating unit and a scheduled BDU.



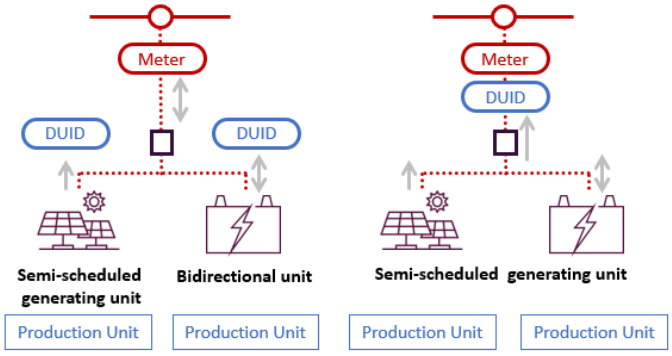

In this case, the separate technologies will be dispatched as if they were independent production units. This may require constraints to be applied to apportion availability between units that share equipment to avoid unachievable dispatch instructions. A conformance cap would be applicable to the solar PV and target to the battery unless aggregate conformance applies[3].

Requirements for classification will mirror those of the non-coupled units, for example, an ECM will be required for the intermittent plant,

## Coupled Production Units in Dispatch

The treatment of each production unit in AEMO's systems and dispatch align with its classification(s). Information for each technology is requested separately in AEMO's registration application forms.

More than one classification e.g., a semi-scheduled generating unit and a scheduled (or non-scheduled) bidirectional unit will require two DUIDs. A production unit set e.g., one solar and one battery, will be assigned to each DUID. Non-scheduled DUIDs are assigned for system set up purposes only and are not dispatched.




A single classification will have a single dispatchable unit (DUID). A production unit set e.g., solar and battery, will be identified for each technology, and assigned to the single DUID.

Applicants are advised to contact AEMO early in the design phase of their project to confirm the latest registration and technical requirements.

### Where can I find more information?

See AEMO's website for further fact sheets, classification guides and other related information.

The NER are published on the AEMC's website.

### For any further enquiries, please contact AEMO's Information and Support Hub via

- supporthub@aemo.com.au or
- call 1300 236 600

[3] https://aemo.com.au/-/media/files/initiatives/integrating-energy-storage-systems-project/aemo-factsheet-aggregate-dispatch-conformance.pdf