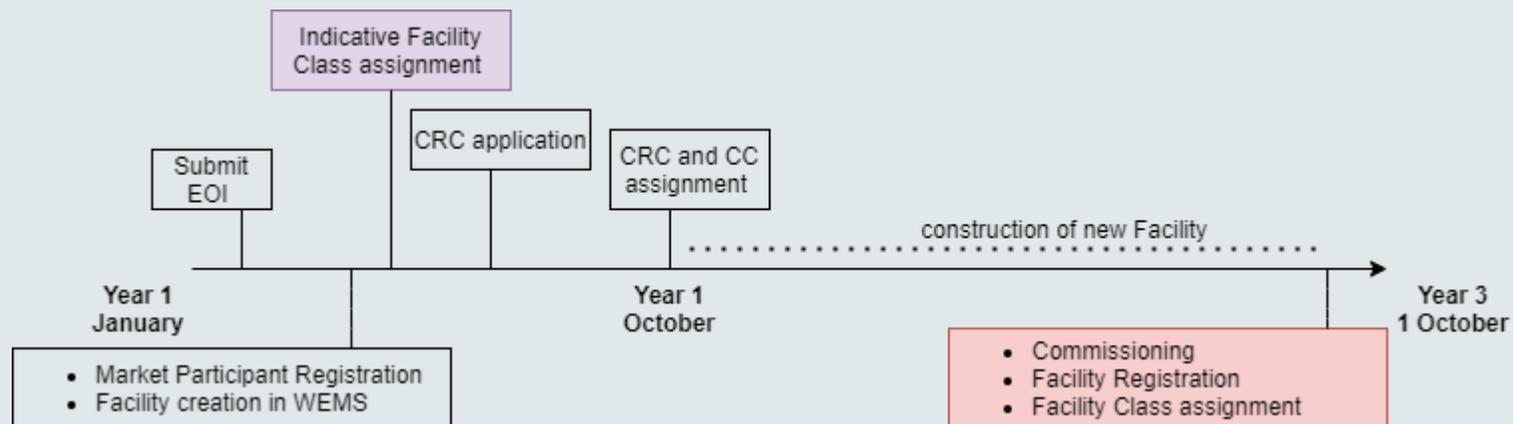


Indicative Facility Class and RCM Facility Class assessment

WRIG – 27 May 2021

Context

- Under the existing Registration framework a Market Participant would nominate a Facility Class for their new Facility when submitting a Facility creation form in WEMS.
- There was no requirement or obligation for AEMO to complete a Facility Class assessment
- With the introduction of the new Registration framework and the participation of more complex Facility configurations the concept of an indicative Facility Class has been introduced.
- **Indicative Facility Class:** A Facility Class assigned to an unregistered Facility or Planned Facility Upgrade is to be used in all activities that occur in Year 1 of a Reserve Capacity Cycle until the Facility is a Registered Facility or the Facility Upgrade has commenced operation.
- The combination of indicative Facility Class and indicative Facility Technology Type will determine which certification methodology AEMO will use to assign Certified Reserve Capacity (CRC) and therefore what information the Market Participant must provide.



Context

A Facility Class guides the obligations and treatment of a Facility under the WEM Rules:

Facility Class	Obligation
Scheduled Facility	Must be able to respond to a Dispatch Target such that it can maintain its Injection or Withdrawal within a Tolerance Range for a specified period.
Semi-Scheduled Facility	Must be able to reduce the absolute value of its Injection or Withdrawal to comply with a Dispatch Cap.
Non-Scheduled Facility	A Facility that can be self-scheduled by its operator (with the exception that AEMO can direct it to decrease its output subject to its physical capabilities).
Demand Side Programme	A Facility comprised of Non-Dispatchable Loads that can curtail on request.

A Facility Technology Type represents the types of technologies that comprise a Facility:

Facility Technology Type	Characteristics
Intermittent Generating System	A generating system whose output is not reasonably controllable by AEMO, and whose output is dependent on a fuel resource that cannot be directly stored or stockpiled and whose availability is difficult to predict.
Non-Intermittent Generating System	A generating system which is not an Intermittent Generating System, including, without limitation, thermal generators fuelled by coal, natural gas, or distillate.
Electric Storage Resource (ESR)	A system or resource capable of receiving electric energy from a Network and storing it for later injection of electric energy back to a Network.
Non-Dispatchable Load	An unregistered facility, that is not a Scheduled Load, that may be associated with a Demand Side Programme or an Interruptible Load.

Context

RCM Facility Class:

- Concept which transitions Registered Facilities from the existing Facility Class to new Facility Class framework for the 2021 and 2022 Reserve Capacity Cycles.
- Registered Facilities have been automatically transitioned to the new framework under clause 1.45.3 of the WEM Rules.
- Clause **4.8A.7** of the WEM Rules requires AEMO to document the process:
 - AEMO must follow in determining and assigning an indicative Facility Class and indicative Facility Technology Type to a new Facility, Facility upgrade or unregistered Facility.
 - AEMO must follow in determining and assigning an RCM Facility Class and Facility Technology Type to a Registered Facility.
 - An applicant must follow when submitting an application for an RCM Facility Class or indicative Facility Class assessment.
 - An applicant intending to submit an application for Early Certified Reserve Capacity must follow when seeking an indicative Facility Class assessment.

Existing Facility requirements

Registered Facilities

Registered Facility

- A Market Participant with an existing Registered Facility **must** apply for a RCM Facility Class reassessment if:
 - System Size is anticipated to change
 - Market Participant intends to install or remove equipment which may impact the controllability of the Facility
 - Market Participant considers the Facility should be registered in a different Facility Class than the one deemed under clause 1.45.3 of the WEM Rules.
- The Market Participant must use the template provided by AEMO and must apply at least 25 Business Days prior to the opening of the CRC window (26 October for 2021 cycle).
- Registered Facilities will automatically be assigned one or more Facility Technology Types based on their existing configuration prior to the opening of the CRC window.

Existing Facility requirements

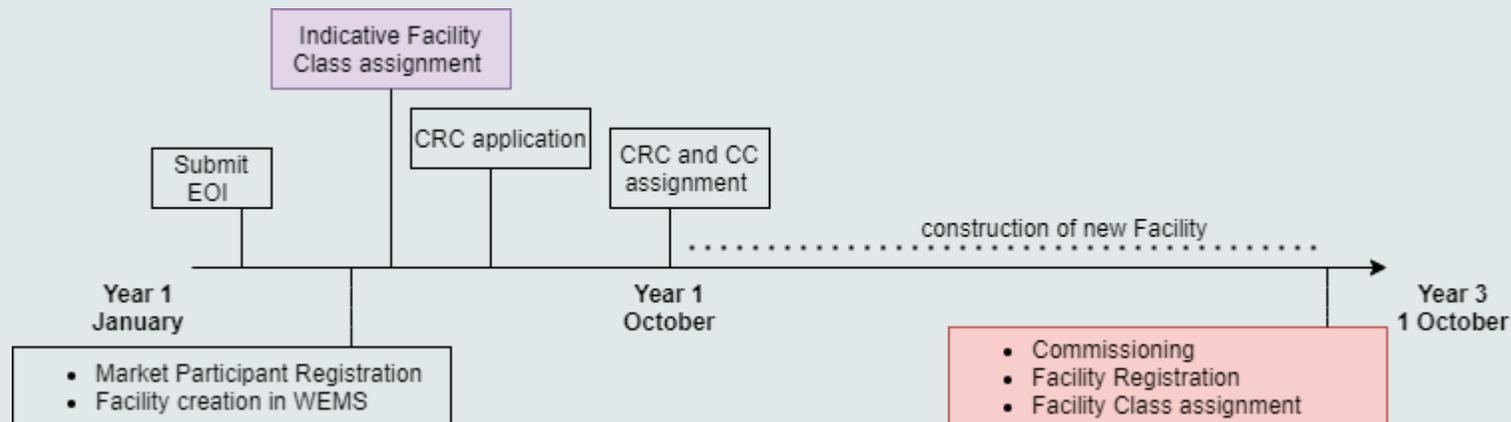
Unregistered Facilities

Unregistered Facility

- An existing unregistered Facility, is a Facility which has been assigned Capacity Credits in a previous cycle, but has not yet completed the Registration process.
- An Market Participant with an existing unregistered Facility (unregistered as at 1 March 2021) that intends to participate in the 2021 or 2022 Reserve Capacity Cycle **must** apply for an indicative Facility Class assessment.
- The Market Participant must use the template provided by AEMO and must apply at least 25 Business Days prior to the opening of the CRC window (26 October for 2021 cycle).

New Facility or Facility Upgrade requirements

- A new Facility or Facility Upgrade **must** submit an Expression of Interest (EOI) to be eligible to submit an application for CRC.
- The applicant must use the EOI template on the AEMO website (to be updated by 1 July).
- For the 2021 cycle the EOI window is open between 1 July and 16 August 2021.
- Once an EOI has been submitted AEMO must determine and assign an indicative Facility Class and indicative Facility Technology Type prior to the opening of the CRC window.



Information provisions

- The applicant must provide the following information in either their RCM/Indicative Facility Class application or EOI submission (where applicable):
 - Requested Facility Class
 - Requested Facility Technology Type
 - Description and configuration of the Facility
 - Expected maximum MW output of each Facility Technology Type
 - Information to support whether the Facility can respond to a Dispatch Target
 - Expected maximum MW output of the Energy Producing System
 - Expected DSOC
 - If the Facility contains an ESR, the expected maximum MW offtake quantity
 - If the Facility contains an ESR, the expected Contracted Maximum Demand

* used to calculate System Size

System Size calculation

If the Facility does not contain an ESR, the minimum of:

- the Declared Sent Out Capacity of the facility; and
- maximum MW output of the Energy Producing System.

If the Facility contains an ESR, the sum of:

(a) the minimum of:

- the Declared Sent Out Capacity of the facility; and
- maximum MW output of the Energy Producing System.

(b) the minimum of:

- Contracted Maximum Demand (MW); and
- maximum MW consumption (offtake quantity)



Assessment of a Facility Technology Type

AEMO will consider the configuration and description of the Facility to assign a Facility Technology Type in line with the relevant definitions

A table of examples is included in the Procedure:

Facility Technology Type	Example of technology/fuel
Non-Intermittent Generating System	<ul style="list-style-type: none">• coal powered generation• gas powered generation• distillate powered generation• dual fuelled thermal generation• other forms of thermal generation
Intermittent Generating System	<ul style="list-style-type: none">• solar photovoltaics• wind turbines
Electric Storage Resource	<ul style="list-style-type: none">• electrical storage systems• pumped hydroelectric
Non-Dispatchable Load	<ul style="list-style-type: none">• load

Assessment of a Facility Class

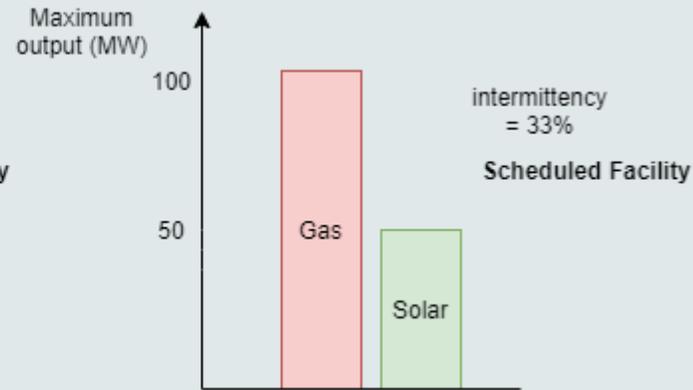
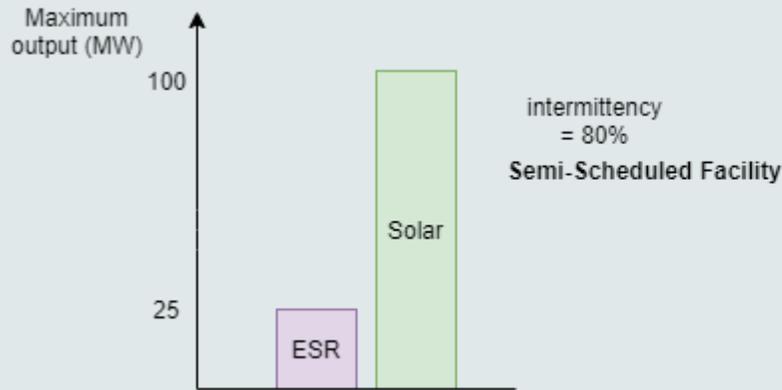
(RCM FC and Indicative FC)

- Where the applicant has requested a Facility Class of Demand Side Programme AEMO will automatically assign the Facility Class requested.
- Where an Energy Producing System has a System Size <10 MW and has requested a Facility Class of Non-Scheduled AEMO will automatically assign the Facility Class requested.
- Where the Energy Producing System has a System Size ≥ 10 MW or has requested a Facility Class of Semi-Scheduled Facility or Scheduled Facility then AEMO must determine the Facility Class in accordance with the following criteria:
 - Scheduled Facility – if the EPS only comprises a Non-Intermittent Generating System and/or Electric Storage Resource.
 - Semi-Scheduled Facility – if the EPS only comprises an Intermittent Generating System.

Assessment of a Facility Class

(RCM FC and Indicative FC)

Where the Facility comprises a combination of Intermittent Generating Systems and Non-Intermittent Generating System and/or Electric Storage Resource, AEMO will calculate the proportion of the Facility which is intermittent



Where the proportion of the Facility which is intermittent $\geq 50\%$ AEMO will assign a Facility Class of Semi-Scheduled, unless:

- the requested Facility Class is Scheduled; and
- the applicant has provided sufficient evidence that the Facility can respond to a Dispatch Target

In which case AEMO will assign a Facility Class of Scheduled.

Where the proportion of the Facility which is intermittent $< 50\%$ AEMO will assign a Facility Class of Scheduled, unless:

- the requested Facility Class is Semi-Scheduled; and
- the applicant has provided sufficient evidence that the Facility cannot respond to a Dispatch Target

In which case AEMO will assign a Facility Class of Semi-Scheduled.

Future of this WEMP

- This WEMP will be reassessed once the Registration Rules are finalised and Registration Procedure under clause 2.29.9A has been drafted to ensure alignment wherever possible.
- In accordance with clause 2.29.6A of the WEM Rules, AEMO may assess a Facility's controllability via Constraint Equations to ensure the Facility does not have a negative impact on Power System Security or Reliability (PSSR). This assessment may impact the assignment of a Facility Class.
- At this stage, AEMO does not intend to include details of a PSSR assessment for the purposes of assigning an indicative Facility Class in the WEM Procedure (WEMP).
- Once AEMO receives Limit Advice for new facilities as part of the NAQ framework, and the Registration WEMP has been developed this WEMP will be reviewed.

Questions and consultation information

Consultation

- Procedure to be published for consultation within the next two weeks
- Four week consultation period
- Specifically seeking feedback on the 50% intermittency threshold

Additional comments or questions can be directed to AEMO by email to katelyn.rigden@aemo.com.au (cc WA.ETS@aemo.com.au).