

CERTIFICATION OF RESERVE CAPACITY (CRC) STAKEHOLDER WORKSHOP

19 April 2017

Presented by

NEETIKA KAPANI, TEAM LEADER, SYSTEM CAPACITY (WA)
REBECCA PETCHEY, SENIOR ANALYST, SYSTEM CAPACITY (WA)



AGENDA

1. Background and Scope
2. Certified Reserve Capacity (CRC) overview
3. Responsibilities
4. Key dates for 2016 and 2017 CRC process
5. CRC application submission process
6. Trade declaration process
7. Committed status application
8. Reserve Capacity Security requirements
9. CRC application assessment process
10. Questions and feedback

- At the request of the Public Utilities Office last year, AEMO deferred the 2016 Reserve Capacity Cycle for a period of 12 months to 1 May 2017
- This year, AEMO will run the 2016 and 2017 Reserve Capacity Cycles concurrently
 - Communication channels to inform relevant stakeholders:
 - Market Participants notified by email on 24 March 2017
 - Website updated
 - Information shared at the March and April WA ECF and WA RCM forums
- The 2016 and 2017 Reserve Capacity Cycles are for the 2018-19 and 2019-20 Capacity Years, respectively
- CRC applications for both cycles will open at 9:00 am on 1 May 2017 and close at 5:00 pm on 30 June 2017

Scope

Purely technical and will cover:

- Submitting a Certified Reserve Capacity (CRC) application in WEMS.
- Required supporting documentation.
- AEMO's assessment process.

Note: This presentation has been developed in line with the current WEM Rules available on the ERA's [website](#).

The CRC process is a key aspect of the RCM

Associated WEM Rules and Procedures:

- Sections 4.9, 4.10 and 4.11 of the WEM Rules
- [Guideline for Certification of Facilities](#)

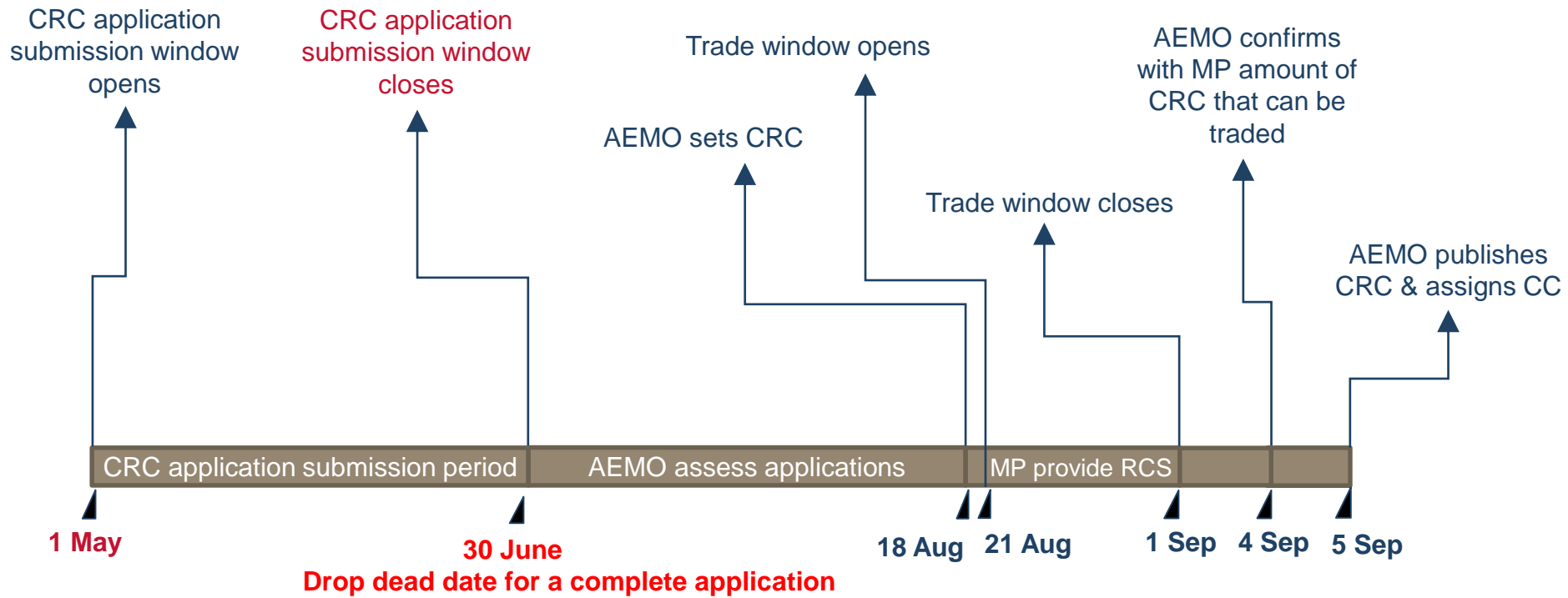
Market Participants provide information required under MR 4.10.

AEMO assesses and sets CRC defined in MR 4.11.

KEY DATES FOR 2016 AND 2017 CRC PROCESS



- The dates in the figure apply to both the 2016 and 2017 cycles



- Applications must be submitted via WEMS only
- In the interest of making the submission process easier, the current WEMS has been enhanced to allow for Participants to upload supporting documentation for the 2018-19 Capacity Year, with the ability to re-use all or some documents for the 2019-20 Capacity Year
- The new feature can be tested in the Market Trial environment. Release notes are available on AEMO's [website](#)

- Formal CRC applications can only be lodged during the CRC application window (1 May to 30 June) **[MR 4.9.1]**
- Must include supporting information required under **MR 4.10.1**. If any information required under **MR 4.10.1** is not provided, the application will be deemed invalid and will not be assessed
- If a resubmission for a Facility is made during the CRC application window, WEMS has been enhanced to allow for Participants to only upload the revised documents

Three submission requirements for a Facility CRC application:

- CSV submission (separate upload for each Capacity Year)
- Excel application (same as above)
- Supporting documentation (ability to re-use from previous submission or can upload separately)

Note: The fields in the CSV submission will be validated in WEMS against the MR requirements

Pre-requisites for WEMS submission:

- WEMS access
- Placeholder in WEMS as a Candidate for Registration (Proposed status)

- A Facility upgrade must be created in WEMS before CRC submission
- AEMO will not assign CRC to a Facility that is not expected to be a Registered Facility by the time its Reserve Capacity Obligations commence for the relevant Reserve Capacity Cycle (usually 1 October of the relevant Capacity Year)

CRC NAVIGATION PAGE



Home Notifications Energy Market **Reserve Capacity** Balancing LFAS Registration

Home > Reserve Capacity > File Exchange > Rese

File Exchange ▸
Reports ▸
RC Testing
Relevant Demand ▸

Credits Allocation
Credits Confirm Allocation
Certification
Bilateral Trade Declaration
Auction Offers
Long Term SPA
Capacity Credits & Obligations

RC Certification Upload

Facility Type

Certified RC application template Download

Scheduled Generator CSV template Download

— Files —

Select or deselect all files from previous submission

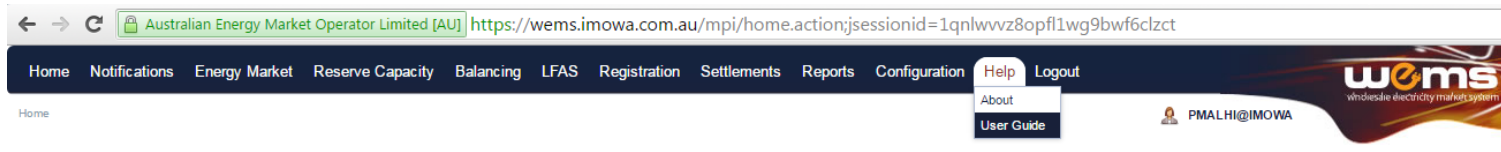
Scheduled Generator CSV *	<input type="text"/>	BROWSE...		
Certified RC application *	<input type="text"/>	BROWSE...		
Network access *	<input type="text"/>	BROWSE...	<input type="checkbox"/>	<input type="checkbox"/>
Network constraints activated in the past 24 months *	<input type="text"/>	BROWSE...	<input type="checkbox"/>	<input type="checkbox"/>
Environmental approvals	<input type="text"/>	BROWSE...	<input type="checkbox"/>	<input type="checkbox"/>
Description of Facility *	<input type="text"/>	BROWSE...	<input type="checkbox"/>	<input type="checkbox"/>
Temperature Dependence Curve *	<input type="text"/>	BROWSE...	<input type="checkbox"/>	<input type="checkbox"/>
Fuel supply *	<input type="text"/>	BROWSE...	<input type="checkbox"/>	<input type="checkbox"/>
Fuel transport *	<input type="text"/>	BROWSE...	<input type="checkbox"/>	<input type="checkbox"/>
Fuel availability *	<input type="text"/>	BROWSE...	<input type="checkbox"/>	<input type="checkbox"/>
Network Control Services contract	<input type="text"/>	BROWSE...	<input type="checkbox"/>	<input type="checkbox"/>
Expected forced and unforced outage rates *	<input type="text"/>	BROWSE...	<input type="checkbox"/>	<input type="checkbox"/>
Project plan	<input type="text"/>	BROWSE...	<input type="checkbox"/>	<input type="checkbox"/>
Land leases	<input type="text"/>	BROWSE...	<input type="checkbox"/>	<input type="checkbox"/>
Financial commitment and funding arrangements	<input type="text"/>	BROWSE...	<input type="checkbox"/>	<input type="checkbox"/>
Local government approvals	<input type="text"/>	BROWSE...	<input type="checkbox"/>	<input type="checkbox"/>
Offtake agreement or Power Purchase	<input type="text"/>	BROWSE...	<input type="checkbox"/>	<input type="checkbox"/>

WEMS INTERFACE – CSV AND EXCEL FILE



CSV application – feeds into AEMO database

- WEMS MPI “User Guide” available in WEMS



- CRC application (Excel)

Application details required under 4.10			
Rule requirement	Market Rule 4.10.1	Market Participant response	Explanatory notes
All F facilities	F facility name Level of Certified Reserve Capacity sought Relevant Reserve Capacity Cycle	(a) (b)	Enter name of F facility as it appears in WEMS You should specify the amount of Certified Reserve Capacity being applied for. Enter the Capacity Type to which the Certification of Reserve Capacity refers to.
Scheduled and Non-Scheduled Generators	Network Access	(BA)	Please provide evidence of an access arrangement or an accepted Access Proposal with the application.
Scheduled and Non-Scheduled Generators that are set to enter service	Environmental Approvals	(c) H	Please provide a copy of supporting documentation with this application, which may be in the form of: - a letter from the relevant environmental authority indicating status of environmental approvals; or - a report from the Market Participant's environmental contractor indicating that all environmental approvals will be granted in time for the Facility to meet its Reserve Capacity Obligations specified in clause 4.10.1(2).
All F facilities that are set to enter service	All approvals finalised date F Planning finalised date Site preparation start date Construction start date	(c) III 1 (c) III 2 (c) III 3 (c) III 4	The date by which all approvals will be finalised or, in the case of Intermittent Loads and Demand Side Programmes, all required contracts will be in place. The date by which financing will be in place. The date when site preparation will begin. The date when construction will commence.
	Generating equipment or DSM control equipment installation complete Commissioning trials start	(c) III 5 (c) III 6	The date when generating equipment or Dispatchable Load equipment will be installed or, in the case of Intermittent Loads and Demand Side Programmes all required control equipment will be in place. The date when the Facility, or part of the Facility, will be ready to undertake Commissioning Trials.
	Sufficient date facility will be capable of meeting Reserve Capacity Obligations	(c) III 7	The date when the Facility, or part of the Facility, will have completed all Commissioning Trials and be capable of meeting Reserve Capacity Obligations in full. This has to be between 1 June to 31 October of Year 1 of the relevant Reserve Capacity Cycle.
All F facilities that are due to decommission	Planned decommissioning date	(d)	F facilities will be decommissioning prior to 31 October of Year 1 of the Reserve Capacity Cycle unless the decommissioning date otherwise applies.
All F facilities	Description and a configuration of the main components of the Facility	(6A)	Provide a description of the main components of the Facility.
Scheduled Generators	Nameplate capacity of F facility Temperature dependence of Facility Guaranteed available capacity at 41°C of intermittent, embedded and parasitic loads that can be made available, including limitation in duration Additional maximum net capacity at 41°C that intermittent, embedded and parasitic loads that can be made available, including limitation in duration Method of measurement of ambient temperature Primary fuel (details of firm and non-firm fuel supplies) Secondary fuel (must prove that there is an on-site storage Facility or an interconnectable supply of the fuel to maintain 12 hours of operation at the level of capacity specified in clause 4.10.1(2)) Any other factors that may affect fuel supply arrangements The requested forecast outage rate based on manufacturer data The requested forecast outage rate based on manufacturer data and F forecast outage rate (if facility has operated for longer than 12 months). Note: subject to clause 4.10.1(i) and (j), AEMO may decide to not certify a F facility if	(c) I (c) I (c) II (c) III (c) IV (c) V (c) V (c) VI (c) VI (c) VII	Provide the nameplate capacity of the Facility at 41°C. Specify Temperature Dependence Curve of the Facility in accordance with the Mark Procedure for Certification of Reserve Capacity. The curve should be in 5 degree intervals. Enter the maximum net capacity, net of Intermittent Loads, embedded and Parasitic Loads, that can be guaranteed to be available for supply to the relevant Network from the Facility, when it is operated normally at an ambient temperature of 41°C. The maximum net capacity, net of Intermittent Loads, embedded and Parasitic Loads, beyond the capacity described in (c) I, that can be made available for supply to the relevant Network from the Facility at an ambient temperature of 41°C and any restrictions on the availability of that capacity including limitations on duration. Indicate which temperature measurement method the participant wishes to have used in the calculation of the FFCO in accordance with 4.10.1.4. Primary fuel type which the Facility will operate on and any restrictions on fuel availability. Please also verify that the Market Participant has sufficient fuel arrangements for 14 hours of operation at full capacity, including well arrangements for liquid-fuel facilities. If applicable, secondary fuel type which the Facility will operate on (or the best specified in 4.10.1(2)). Secondary fuel must prove there is sufficient on-site storage, or interconnectable supply of fuel to maintain 12 hours of operation as per 4.10.1(2). Please indicate if there are any restrictions on either fuel type which would prevent the Facility operating at full capacity. For F facilities that have been operating for less than 12 months. For F facilities that have been operating for less than 12 months.

NEW FEATURE

Home > Reserve Capacity > File Exchange > Reserve Capacity Certification

RC Certification Upload

Facility Type: Scheduled Generator

Certified RC application template: Download

Scheduled Generator CSV template: Download

— Files —

Select or deselect all files from previous submission

Scheduled Generator CSV *	<input type="text"/>	<input type="button" value="BROWSE..."/>	<input type="checkbox"/>
Certified RC application *	<input type="text"/>	<input type="button" value="BROWSE..."/>	<input type="checkbox"/>
Network access *	<input type="text"/>	<input type="button" value="BROWSE..."/>	<input checked="" type="checkbox"/>
Network constraints activated in the past 24 months *	<input type="text"/>	<input type="button" value="BROWSE..."/>	<input checked="" type="checkbox"/>
Environmental approvals	<input type="text"/>	<input type="button" value="BROWSE..."/>	<input type="checkbox"/>
Description of Facility *	<input type="text"/>	<input type="button" value="BROWSE..."/>	<input type="checkbox"/>
Temperature Dependence Curve *	<input type="text"/>	<input type="button" value="BROWSE..."/>	<input type="checkbox"/>
Fuel supply *	<input type="text"/>	<input type="button" value="BROWSE..."/>	<input type="checkbox"/>
Fuel transport *	<input type="text"/>	<input type="button" value="BROWSE..."/>	<input type="checkbox"/>
Fuel availability *	<input type="text"/>	<input type="button" value="BROWSE..."/>	<input type="checkbox"/>

Select or deselect all option

New feature:

- Tick the checkbox to re-use the previously uploaded file(s).
- The "Browse" button will be disabled
- When submitted, WEMS will copy previously uploaded files (from same or previous Capacity Year)

NEW FEATURE- CONT



Home Notifications Energy Market Reserve Capacity Balancing LFAS Registration

Home > Reserve Capacity > File Exchange > Reserve Capacity Certification

RC Certification Upload

Facility Type: Scheduled Generator

Certified RC application template: Download

Scheduled Generator CSV template: Download

— Files —

Select or deselect all files from previous submission

Scheduled Generator CSV *	rc_cert_sched_gen.csv	BROWSE...	
Certified RC application *	D02 Certified RC Applicatio	BROWSE...	
Network access *		BROWSE...	+ <input checked="" type="checkbox"/>
Network constraints activated in the past 24 months *		BROWSE...	+ <input checked="" type="checkbox"/>
Environmental approvals		BROWSE...	+ <input checked="" type="checkbox"/>
Description of Facility *		BROWSE...	+ <input checked="" type="checkbox"/>
Temperature Dependence Curve *		BROWSE...	+ <input checked="" type="checkbox"/>
Fuel supply *		BROWSE...	+ <input checked="" type="checkbox"/>
Fuel transport *		BROWSE...	+ <input checked="" type="checkbox"/>
Fuel availability *		BROWSE...	+ <input checked="" type="checkbox"/>
Network Control Services contract		BROWSE...	+ <input checked="" type="checkbox"/>
Expected forced and unforced outage rates *		BROWSE...	+ <input checked="" type="checkbox"/>
Project plan		BROWSE...	+ <input checked="" type="checkbox"/>
Land leases		BROWSE...	+ <input checked="" type="checkbox"/>
Financial commitment and funding arrangements		BROWSE...	+ <input checked="" type="checkbox"/>
Local government approvals		BROWSE...	+ <input checked="" type="checkbox"/>
Offtake agreement or Power Purchase Agreement		BROWSE...	+ <input checked="" type="checkbox"/>
Accredited expert report		BROWSE...	+ <input checked="" type="checkbox"/>
Commercial arrangements if Facility owner and operator differ		BROWSE...	+ <input checked="" type="checkbox"/>
Other		BROWSE...	+ <input checked="" type="checkbox"/>

* Files are limited to 50MB in size and 250MB in total

CLEAR Go

WEMS INTERFACE – SG



RC Certification Upload

Facility Type: Scheduled Generator

Certified RC application template [Download](#)

Scheduled Generator CSV template [Download](#)

— Files —

Select or deselect all files from previous submission

- Scheduled Generator CSV * [Browse...](#)
- Certified RC application * [Browse...](#)
- Network access * [Browse...](#) [+](#)
- Network constraints activated in the past 24 months * [Browse...](#) [+](#)
- Environmental approvals [Browse...](#) [+](#)
- Description of Facility * [Browse...](#) [+](#)
- Temperature Dependence Curve * [Browse...](#) [+](#)
- Fuel supply * [Browse...](#) [+](#)
- Fuel transport * [Browse...](#) [+](#)
- Fuel availability * [Browse...](#) [+](#)
- Network Control Services contract [Browse...](#) [+](#)
- Expected forced and unforced outage rates * [Browse...](#) [+](#)
- Project plan [Browse...](#) [+](#)
- Land leases [Browse...](#) [+](#)
- Financial commitment and funding arrangements [Browse...](#) [+](#)
- Local government approvals [Browse...](#) [+](#)
- Offtake agreement or Power Purchase Agreement [Browse...](#) [+](#)
- Accredited expert report [Browse...](#) [+](#)
- Commercial arrangements if Facility owner and operator differ [Browse...](#) [+](#)

Upload History

Submitted in: 2017

Date & Time	Uploaded By	Upload Type	File Name	Results File	Upload Format	Status

Detail History

Date & Time	Message Code	Message Type	Message

RC Certification Upload

Facility Type

Certified RC application template [Download](#)

Non Scheduled Generator CSV template [Download](#)

Files

Select or deselect all files from previous submission

Non Scheduled Generator CSV * [Browse...](#)

Certified RC application * [Browse...](#)

Network access * [Browse...](#)

Network constraints activated in the past 24 months * [Browse...](#)

Environmental approvals [Browse...](#)

Description of Facility * [Browse...](#)

Network Control Services contract [Browse...](#)

Project plan [Browse...](#)

Land leases [Browse...](#)

Financial commitment and funding arrangements [Browse...](#)

Local government approvals [Browse...](#)

Offtake agreement or Power Purchase Agreement [Browse...](#)

Accredited expert report [Browse...](#)

Commercial arrangements if Facility owner and operator differ [Browse...](#)

Other [Browse...](#)

* Files are limited to 50MB in size and 250MB in total

Upload History

Submitted in

Date & Time	Uploaded By	Upload Type	File Name	Results File	Upload Format	Status

Detail History

Date & Time	Message Code	Message Type	Message

WEMS INTERFACE – DSP



RC Certification Upload

Facility Type:

Certified RC application template [Download](#)

DSP and Load CSV template [Download](#)

— Files —

Select or deselect all files from previous submission

DSP and Load CSV *

Certified RC application *

Description of Facility *

Network Control Services contract

Project plan

Loads associated with the DSP *

Contracts for curtailment *

Commercial arrangements if Facility owner and operator differ

Other

* Files are limited to 50MB in size and 250MB in total

Upload History

Submitted in:

Date & Time	Uploaded By	Upload Type	File Name	Results File	Upload Format	Status
-------------	-------------	-------------	-----------	--------------	---------------	--------

Detail History

Date & Time	Message Code	Message Type	Message
-------------	--------------	--------------	---------

FILE UPLOAD SUBMISSION HISTORY



Home | Notifications | Energy Market | Reserve Capacity | Balancing | LFAS | Registration | Settlements | Reports | Configuration | Help | Logout

Home > Reserve Capacity > File Exchange > Reserve Capacity Certification

Participant name

RC Certification Upload

Facility Type: DSP and Load

Certified RC application template: [Download](#)

BSP and Load CSV template: [Download](#)

Files

Select or deselect all files from previous submission

BSP and Load CSV rc_certification_dsp_load.c

Certified RC application D00-Certified RC Application

Description of facility

Network Control Services contract

Project plan

Loads associated with the BSP DSP Load.docx

Contracts for curtailment

Commercial arrangements if facility owner and operator differ

Other

* Files are limited to 50MB in size and 250MB in total

Upload History

Submitted in: 2017

Date & Time	Uploaded By	Upload Type	File Name	Results File	Upload Format	Status
12 Apr 2017 09:12	Username	Certification	D06 Description of Facility - DSP.docx			Successful
12 Apr 2017 09:12	Username	Certification	D11 Network Control Services contract - DSP.docx			Successful
12 Apr 2017 09:12	Username	Certification	Loads associated with DSP.docx			Successful
12 Apr 2017 09:12	Username	Certification	Contracts for curtailment - DSP.docx			Successful
12 Apr 2017 09:12	Username	Certification	D13 Project plan - DSP.docx			Successful
11 Apr 2017 15:26	Username	Certification	rc_certification_dsp_load_2019.csv	Result_rc_certification_dsp_load_2019.xml	CSV	Successful
11 Apr 2017 15:26	Username	Certification	2019 Certified RC Application - DSP.docx			Successful
11 Apr 2017 15:26	Username	Certification	D06 Description of Facility - DSP.docx			Successful
11 Apr 2017 15:26	Username	Certification	Loads associated with DSP.docx			Successful
11 Apr 2017 15:26	Username	Certification	Contracts for curtailment - DSP.docx			Successful

Detail History

Date & Time	Message Code	Message Type	Message
11/04/2017 15:27:59	10001	Info	File Uploaded to AEMO Server - Starting File Processing
11/04/2017 15:27:59	10002	Info	File Processing Completed Successfully

WEMS INTERFACE - REPORTS



Search

Output View CSV XML

Participant

Facility/Portfolio

Capacity Year commencing

Market Type RC Certification
 RC Bilateral Trade Declaration
 RC Auction Offers
 Long Term SPA
 Capacity Credits and Obligations

RC Certification

Participant	Facility Name	Capacity Block	Availability Class	Available Capacity (MW)	Available Capacity Hot (MW)	Full Capacity Obligation Date
XYZ	FACILITY 1	BLOCK1	CLASS1			01 Oct 2017

Certification Details

Participant

Certification Mode

Capacity Year

Facility Name

Facility Type

Facility Status

Capacity Block

Availability Class

Available Capacity (MW)

Available Capacity Hot (MW)

Full Capacity Obligation Date

Project Approval Date

Project Financing Date

Project Site Preparation Date

Project Construction Start Date

Equipment Installation Date

Commissioning Trials Date

Decommission Date

Forced Outage Rate

Unforced Outage Rate

Actual Forced Outage Rate

Actual Unforced Outage Rate

Conditional Confirmation

Certification Methodology

NCS Contract

Primary Fuel

Alternative Fuel

Certified Fuel Type

Certified RC application

Description of Facility

Fuel supply

Fuel transport

Upload File

Document Type

File

- **New Facilities** wishing to be assured Capacity Credits need to **apply for Committed Status in WEMS**
- **AEMO approval decision made prior to trade declaration**
- **Made as a separate application to CRC**
- Submission must present a case as to how the project has progressed further than a “Proposed” Facility and what irrevocable commitments have been made
- Guidelines for assessing Reserve Capacity Facility status are in Appendix A of [Market Procedure: Declaration of Bilateral Trade and the Reserve Capacity Auction](#)

Market Participant nominates through a CSV submission in WEMS the amount of CRC that will:

- be made available for the Reserve Capacity Auction;
- is covered by a pre-existing Special Price Arrangement;
- is intended to be traded bilaterally; and
- not be made available (withdrawn).

Note: DSPs may only nominate to trade capacity through AEMO or not make their capacity available

CSV template is available for download on the [website](#)

Additional reference material can be found in:

- MR 4.14
- [Market Procedure: Declaration of Bilateral Trades and the Reserve Capacity Auction](#)

To validate a trade declaration for a new Facility or upgrade:

- the Market Participant must provide Reserve Capacity Security
- the Facility must be in “Committed” status

Reserve Capacity Security (RCS) is required for all new capacity, including:

- New Facilities
- Existing Facilities applying for an upgrade
- Facilities re-entering service after significant maintenance

Equals $\frac{1}{4}$ of the BRCP per MW of CRC

Associated reference material can be found in

- MR 4.13
- [Market Procedure: Reserve Capacity Security](#)

Reference documents

- [WEM Rules](https://www.erawa.com.au/rule-change-panel/rules) -https://www.erawa.com.au/rule-change-panel/rules
- [Market Procedure: Declaration of Bilateral Trades and the Reserve Capacity Auction](http://aemo.com.au/-/media/Files/PDF/declaration-of-bilateral-trades-and-the-reserve-capacity-auction.pdf) - http://aemo.com.au/-/media/Files/PDF/declaration-of-bilateral-trades-and-the-reserve-capacity-auction.pdf
- [Market Procedure: Reserve Capacity Security](http://aemo.com.au/-/media/Files/PDF/reserve-capacity-security.pdf) - http://aemo.com.au/-/media/Files/PDF/reserve-capacity-security.pdf
- [Guideline: Certification of Reserve Capacity](http://aemo.com.au/-/media/Files/Electricity/WEM/Reserve_Capacity_Mechanism/Certification/2016/guideline-for-certification-of-reserve-capacity---1-june-2016-rev0.pdf) - http://aemo.com.au/-/media/Files/Electricity/WEM/Reserve_Capacity_Mechanism/Certification/2016/guideline-for-certification-of-reserve-capacity---1-june-2016-rev0.pdf

Market trial

- [Test environment](https://wems-mkt.aemo.com.au/mpi) - https://wems-mkt.aemo.com.au/mpi
- [Release notes](http://wa.aemo.com.au/-/media/Files/Electricity/WEM/Dispatch_and_Market_Notices/WEMS-3_19-Release-notes.pdf) - http://wa.aemo.com.au/-/media/Files/Electricity/WEM/Dispatch_and_Market_Notices/WEMS-3_19-Release-notes.pdf

Pre-requisites for WEMS submission:

- [WEMS access](#)

<https://www.aemo.com.au/Electricity/Wholesale-Electricity-Market-WEM/Participant-information/New-participants/Accessing-WEMS>

- [Placeholder in WEMS as a Candidate for Registration \(Proposed status\)](#)

<https://www.aemo.com.au/Electricity/Wholesale-Electricity-Market-WEM/Participant-information/Registration-forms>

[CSV templates and submission information](#) =

<http://aemo.com.au/Electricity/Wholesale-Electricity-Market-WEM/Participant-information/Guides-and-useful-information>

SUBMISSION QUESTIONS?



AEMO ASSESSMENT PROCESS – SG



Supporting information	What AEMO requires	Requirement
Certified Reserve Capacity application	<p>Market Rule reference: 4.10</p> <p>An application spreadsheet for Certification of Reserve Capacity that lists all the necessary information to be filled by the Market Participant for an application to be assessed by AEMO.</p>	Mandatory
Network access	<p>Market Rule reference: 4.10.1(bA)</p> <p>Evidence that the Facility has a <i>firm</i> network access arrangement with Western Power that <i>states the level of unconstrained capacity the Facility can offer into the network</i>. The contract must be attached in full and may be in the form of an Electricity Transfer Access Contract (ETAC) or Network Access Agreement (NAA). All documents must clearly show the expiry date, the Declared Sent Out Capacity (DSOC), details of any network access constraints such as runback schemes, and include all amendments and other changes. All documents must be executed by both Western Power and the entity responsible for the Facility.</p>	Mandatory
Network constraints activated in the past 24 months	<p>Market Rule reference: 4.10.1(bA)</p> <p>Details of any activation of runback schemes or other binding network constraints over the previous 24 months, including frequency of occurrence, curtailment amount, time and date of occurrence, and duration of occurrence.</p>	Mandatory
Description of Facility	<p>Market Rule reference: 4.10.1(dA)</p> <p>Description and configuration of the main components of the Facility. This must include generator nameplate rating and age along with any major upgrades that have been performed.</p>	Mandatory

AEMO ASSESSMENT PROCESS – SG



Supporting information	What AEMO requires	Requirement
Temperature Dependence Curve	<p>Market Rule reference: 4.10.1(e)(i)</p> <p>Manufacturer’s technical specifications or as determined by an independent engineering firm.</p>	Mandatory
Fuel supply	<p>Market Rule reference: 4.10.1(e)(v)</p> <p>Evidence that the Market Participant has secured sufficient fuel supplies (diesel, coal or gas) to operate the Facility and, if applicable, its fleet of Facilities. This may include demonstrated ability to procure additional fuel through the spot market. Full contracts must be provided which include full details of the fuel quantity to be delivered, signatory pages, expiry dates as well as any restrictions on quantities (for example, take or pay clauses, maximum contract quantities). Price information may be redacted.</p>	Mandatory
Fuel transport	<p>Market Rule reference: 4.10.1(e)(v)</p> <p>Evidence that the fuel being procured by the Market Participant is able to be delivered to the Facility. Full contracts must be provided and include contract expiry dates and delivery lead times. A Market Participant may demonstrate its ability to source transport through the spot market. Price information may be redacted.</p>	Mandatory
Fuel availability (minimum 14 hours with one day resupply)	<p>Market Rule reference: 4.10.1(e)(v)</p> <p>Evidence that the Facility has sufficient fuel supplies, either through an on or off-site storage facility or delivered through a gas pipeline, to operate continuously for 14 hours at maximum output, with one day resupply. This may include evidence of fuel storage tanks along with volumetric quantities, minimum stockpile levels and data on fuel used per hour of operation (for example, GJ/MWh). Where the Facility has primary and alternative fuels, outline the process for changing from one fuel to another and the fuel(s) which the Facility is to use in respect to an application for CRC.</p>	Mandatory

AEMO ASSESSMENT PROCESS – SG



Supporting information	What AEMO requires	Requirement
Expected forced and unforced outage rates	<p>Market Rule reference: 4.10.1(e)(vi), 4.10.1(e)(vii) and 4.11.1(h)</p> <p>For new Facilities that have not operated in the last 12 months, the forced and unforced outage rate of the Facility based on manufacturer data. For existing Facilities that have operated for at least 12 months, the forced and unforced outage rates in the past 36 months.</p>	Mandatory
Network Control Services contract	<p>Market Rule reference: 4.10.1(j)</p> <p>If applicable, a full copy of any Network Control Services contract, specifying the terms and conditions. Price information may be redacted.</p>	Optional
Environmental approvals	<p>FOR NEW FACILITY ONLY.</p> <p>Market Rule reference: 4.10.1(c)(ii)</p> <p>Evidence that any necessary environmental approvals have been granted or evidence supporting the Market Participant’s expectation that any necessary environmental approvals will be granted in time to have the Facility meet its Reserve Capacity Obligations by the date specified in clause 4.10.1(c)(iii)(7) of the Market Rules.</p>	Optional
Project plan	<p>FOR NEW FACILITY ONLY.</p> <p>Market Rule reference: 4.10.1(c)(iii)</p> <p>Key project dates as outlined in clause 4.10.1.(c)(iii) of the Market Rules.</p>	Optional

AEMO ASSESSMENT PROCESS – SG



Supporting information	What AEMO requires	Requirement
Land leases	<p>FOR NEW FACILITY ONLY.</p> <p>Market Rule reference: 4.10.1(c)(iii)</p> <p>Details of access rights to land, either through ownership or an appropriate leasing agreement. Leasing arrangements to include duration of tenure, renewal options and signatory pages.</p>	Optional
Commercial arrangements if Facility owner and operator differ	<p>A description of the commercial arrangement between entities.</p>	Optional
Other	<p>Any other documentation to support the application.</p>	Optional

AEMO ASSESSMENT PROCESS – NSG



Supporting information	What AEMO requires	Requirement
Certified Reserve Capacity application	<p>Market Rule reference: 4.10</p> <p>An application spreadsheet for Certification of Reserve Capacity that lists all the necessary information to be filled by the Market Participant for an application to be assessed by AEMO.</p>	Mandatory
Network access	<p>Market Rule reference: 4.10.1(bA)</p> <p>Evidence that the Facility has a network access arrangement with Western Power. The contract must be attached in full and may be in the form of an Electricity Transfer Access Contract (ETAC) or Network Access Agreement (NAA). All documents must clearly show the expiry date, the Declared Sent Out Capacity (DSOC), details of any network access constraints such as runback schemes, and include all amendments and other changes. All documents must be executed by both Western Power and the entity responsible for the Facility.</p>	Mandatory
Network constraints activated in the past 24 months	<p>Market Rule reference: 4.10.1(bA)</p> <p>Details of any activation of runback schemes or other binding network constraints over the previous 24 months, including frequency of occurrence, curtailment amount, time and date of occurrence, and duration of occurrence.</p>	Mandatory
Description of Facility	<p>Market Rule reference: 4.10.1(dA)</p> <p>Description and configuration of the main components of the Facility. This must include generator nameplate rating and age along with any major upgrades that have been performed.</p>	Mandatory

AEMO ASSESSMENT PROCESS – NSG



Supporting information	What AEMO requires	Requirement
Environmental approvals	<p>FOR NEW FACILITY ONLY.</p> <p>Market Rule reference: 4.10.1(c)(ii)</p> <p>Evidence that any necessary environmental approvals have been granted or evidence supporting the Market Participant’s expectation that any necessary environmental approvals will be granted in time to have the Facility meet its Reserve Capacity Obligations by the date specified in clause 4.10.1(c)(iii)(7) of the Market Rules.</p>	Optional
Network Control Services contract	<p>Market Rule reference: 4.10.1(j)</p> <p>If applicable, a full copy of any Network Control Services contract, specifying the terms and conditions. Price information may be redacted.</p>	Optional
Project plan	<p>FOR NEW FACILITY ONLY.</p> <p>Market Rule reference: 4.10.1(c)(iii)</p> <p>Key project dates as outlined in clause 4.10.1.(c)(iii) of the Market Rules.</p>	Optional
Land leases	<p>FOR NEW FACILITY ONLY.</p> <p>Market Rule reference: 4.10.1(c)(iii)</p> <p>Details of access rights to land, either through ownership or an appropriate leasing agreement. Leasing arrangements to include duration of tenure, renewal options and signatory pages.</p>	Optional

AEMO ASSESSMENT PROCESS – NSG



Supporting information	What AEMO requires	Requirement
Financial commitment and funding arrangements	<p>FOR NEW FACILITY ONLY.</p> <p>Market Rule reference: 4.10.1(c)(iii)</p> <p>Evidence of funding arrangements for the Facility, financial commitment by the Market Participant to a primary equipment supplier (this would usually take the form of a signed contract indicating purchase of the main plant equipment, including penalty clauses associated with non-compliance of the purchase agreement), and formal commitment, including financial approval, on behalf of the company in respect to the project (for example, Board approval).</p>	Optional
Local government approvals	<p>FOR NEW FACILITY ONLY.</p> <p>Market Rule reference: 4.10.1(c)(iii)</p> <p>Details of relevant shire approvals to operate a power station.</p>	Optional
Offtake agreement or Power Purchase Agreement	<p>FOR NEW FACILITY ONLY.</p> <p>Market Procedure reference: Appendix A of Declaration of Bilateral Trades and the Reserve Capacity Auction</p> <p>Where a Facility is being built primarily to supply energy to one or more foundation customers, evidence that relevant power supply contracts are in place.</p>	Optional
Accredited expert report	<p>FOR FACILITIES LESS THAN 5 YEARS OF OPERATION.</p> <p>Market Rule reference: 4.10.3</p> <p>Accredited consultant report required under clause 4.10.3 of the Market Rules. The data submission template is available on the website.</p>	Optional

AEMO ASSESSMENT PROCESS – NSG



Supporting information	What AEMO requires	Requirement
Commercial arrangements if Facility owner and operator differ	A description of the commercial arrangement between entities.	Optional
Other	Any other documentation to support the application.	Optional

AEMO ASSESSMENT PROCESS – DSP



Supporting information	What AEMO requires	Requirement
Certified Reserve Capacity application	<p>Market Rule reference: 4.10</p> <p>An application spreadsheet for Certification of Reserve Capacity that lists all the necessary information to be filled by the Market Participant for an application to be assessed by AEMO.</p>	Mandatory
Description of Facility	<p>Market Rule reference: 4.10.1(dA)</p> <p>Description and configuration of the main components of the Facility. For DSPs, details of the operational process or procedure of the Facility's ability in reducing demand in the event of a request from System Management.</p>	Mandatory
Loads associated with the DSP	<p>Market Procedure reference: step 6.2.2(b) and (c) of Certification of Reserve Capacity</p> <p>A list of all loads, including the National Meter Identifier (NMI), associated to the DSP. Where contracts are not in place, a list of loads (with NMIs) that are intended to be included.</p>	Mandatory
Contracts for curtailment	<p>Market Procedure reference: step 6.2.2(b) and (c) of Certification of Reserve Capacity</p> <p>Evidence of capacity already procured (for example, contracts for load curtailment) or evidence of capacity procurement activity (on a per load basis). Full contracts must be provided and include commencement and end dates, terms outlining curtailment and signatory pages. Price information may be redacted.</p>	Mandatory
Network Control Services contract	<p>Market Rule reference: 4.10.1(j)</p> <p>If applicable, a full copy of any Network Control Services contract, specifying the terms and conditions. Price information may be redacted.</p>	Optional

AEMO ASSESSMENT PROCESS – DSP



Supporting information	What AEMO requires	Requirement
Project plan	FOR NEW FACILITY ONLY.	Optional
	Market Rule reference: 4.10.1(c)(iii) Key project dates as outlined in clause 4.10.1.(c)(iii) of the Market Rules.	
Commercial arrangements if Facility owner and operator differ	A description of the commercial arrangement between entities.	Optional
Other	Any other documentation to support the application.	Optional

LIST OF ABBREVIATIONS



Abbreviation	Meaning
SG	Scheduled Generator
NSG	Non-Scheduled Generator
MPI	Market Participant Interface
MOI	Market Operator Interface
NFLSG	New Facility Load for Scheduled Generation
CRC	Certified Reserve Capacity
RCOQ	Reserve Capacity Obligation Quantity
RCS	Reserve Capacity Security
RD	Relevant Demand
RL	Relevant Level

LIST OF ABBREVIATIONS

Abbreviation	Meaning
RCM	Reserve capacity mechanism
SWIS	South West interconnected system
WA	Western Australia
WEM	Wholesale Electricity Market
WEMS	Wholesale Electricity Market System
MR	Market Rules
CC	Capacity Credit
LSG	Load for Scheduled Generation
NAA	Network Access Agreement
DSP	Demand Side Program
ECF	Electricity Consultative Forum
ERA	Economic Regulatory Authority

QUESTIONS & FEEDBACK

System Capacity (WA)
wa.capacity@aemo.com.au
(08) 9254 4300

A decorative graphic at the bottom of the slide consisting of multiple overlapping, wavy lines in shades of orange and red, creating a sense of motion and depth.