

2018 Certification of Reserve Capacity (CRC) stakeholder workshop

20 April 2018

Presented by

Neetika Kapani, Manager Reserve Capacity (WA)

Katelyn Rigden, Analyst, Reserve Capacity (WA)

Agenda

1. Background and Certified Reserve Capacity (CRC) overview
2. Key dates for 2018 CRC process
3. CRC application requirements
4. Committed status application
5. Reserve Capacity Security requirements
6. Specific requirements by Facility Type
7. RCM portal demonstration
8. Questions and feedback

Disclaimer

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

AEMO has taken all due care in preparing this material, but accepts no liability for any errors it may contain.

The information may be subject to specific exceptions or may not apply to particular factual circumstances.

To fully understand their obligations, participants should refer to the WEM Rules.

Background and CRC overview

- The 2018 Reserve Capacity Cycle relates to the 2020-21 Capacity Year
- The CRC process is a key aspect of the RCM.
- Relevant CRC application window is 9:00am 1 May 2018 to 5:00pm 29 June 2018.

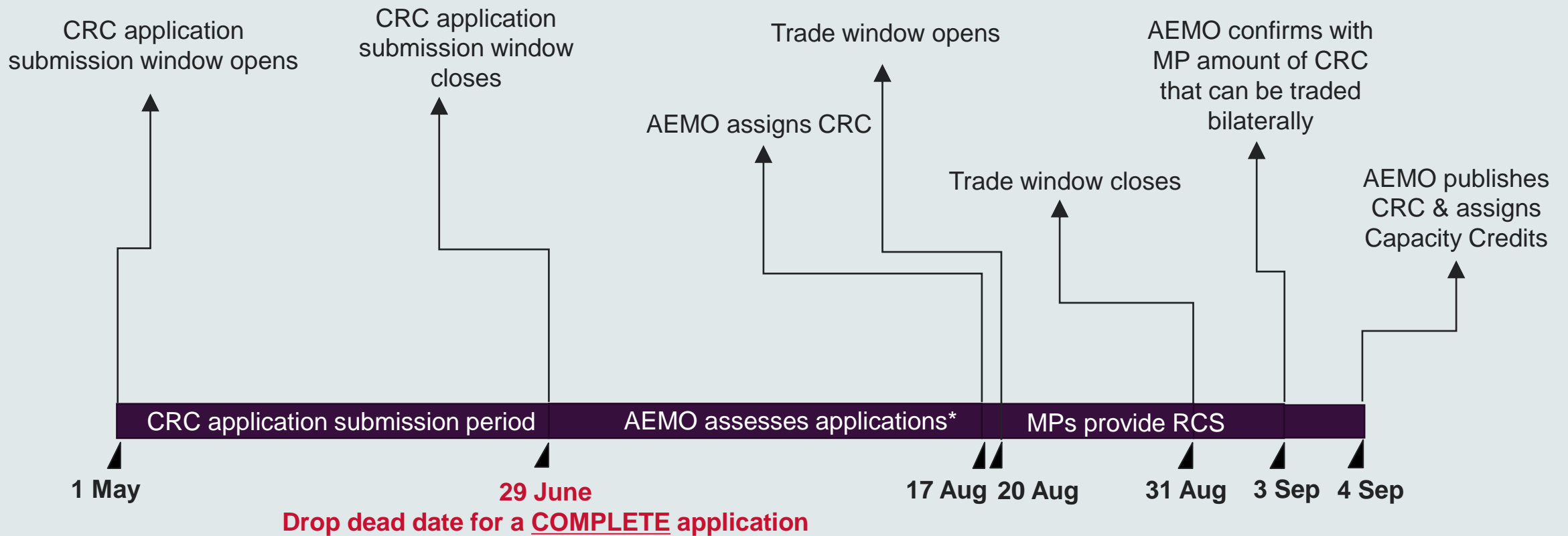
Associated WEM Rules and Procedures:

- Sections 4.9, 4.10 and 4.11 of the WEM Rules
- [Market Procedure: Certification of Reserve Capacity](#)

Specifically, **Market Participants must provide information** required under **MR 4.10**.

AEMO assesses and sets CRC as defined in **MR 4.11**.

Key dates for the 2018 CRC process



* Note AEMO's internal approval process takes two weeks.

CRC application requirements

- Applications must be submitted via WEMS MPI only.
 - Formal applications for CRC can only be lodged during the CRC application submission window (1 May to 29 June 2018) **[MR 4.9.1]**.
 - Must include supporting information required under **MR 4.10.1**
- If all information required under **MR 4.10.1** is not provided by 29 June, the application will be deemed invalid *and will not be assessed.*

Prerequisite

- Market Participants must have WEMS access (contact wa.operations@aemo.com.au for registration queries) noting that Market Participant registration can take up to 20 BD.
- Facility placeholder in WEMS as a Candidate for Registration (Proposed status)

Note: 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 2018 Reserve Capacity Cycle (usually 1 October 2020)

Committed Status

- New Facilities and Upgrades wishing to be assured Capacity Credits need to apply for Committed Status.
- Made as a separate application to CRC.
- The submission must present a case as to how the project has progressed further than a “Proposed” Facility and what irrevocable financial commitments have been made.
- AEMO’s approval decision is made prior to the trade window close.
- An Network Control Service (NCS) Facility is exempt from applying for Committed Status (and submitting a trade declaration)
- Guidelines for assessing Reserve Capacity Facility status are in Appendix A of [Market Procedure: Declaration of Bilateral Trade and the Reserve Capacity Auction](#)

Reserve Capacity Security

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

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

Equals $\frac{1}{4}$ of the Benchmark Reserve Capacity Price per MW of CRC

- \$38,400 for the 2020-21 Capacity Year

Associated WEM Rules and Procedures:

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

Trade declaration

Via the RCM portal, Market Participants nominate the amount of assigned CRC that:

- is intended to be traded bilaterally (or through AEMO if a DSP);
- will be made available in the Reserve Capacity Auction (does not apply to DSPs); or
- will be made unavailable (withdrawn).

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.

Associated WEM Rules and Procedures:

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

SG requirements

Supporting information	What AEMO requires	Requirement
Certified Reserve Capacity application	<p>Market Rule reference: 4.9.4</p> <p>An application for Certification of Reserve Capacity that lists all the necessary information to be completed 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 from a specified date</i>. The contract must be attached in full and may be in the form of an Electricity Transfer Access Contract (ETAC+IWC) 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> <p>If the Facility is a <i>Constrained Access Facility</i> the Market Participant must inform AEMO.</p>	Mandatory
Network constraints	<p>Market Rule reference: 4.10.1(bA)v</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

SG requirements

Supporting information	What AEMO requires	Requirement
Temperature Dependence Curve	<p>Market Rule reference: 4.10.1(e)(i)</p> <p>Provided on a <i>Sent Out</i> basis, please note that curves in standing data must be <i>As Generated</i>. Must be supported by the 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 (min 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

SG requirements

Supporting information	What AEMO requires	Requirement
Expected and Actual 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>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 (or maximum available if the Facility has operated less than 36 months).</p> <p>Power System Operations Procedure reference: Facility Outages</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>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>	For New Facility or Upgrade only
Project plan	<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>	For New Facility or Upgrade only
Land leases	<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>	For New Facility or Upgrade only

SG requirements

Supporting information	What AEMO requires	Requirement
Financial commitment and funding arrangements	Market Rule reference: 4.10.1(c)(iii) 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).	For New Facility or Upgrade only
Local government approvals	Market Rule reference: 4.10.1(c)(iii) Details of relevant local government approvals to operate a power station.	For New Facility or Upgrade only
Offtake agreement or Power Purchase Agreement	<u>Market Procedure reference: Appendix A of Declaration of Bilateral Trades and the Reserve Capacity Auction</u> 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.	For New Facility or Upgrade only
Commercial arrangements if Facility owner and operator differ	A description of the commercial arrangement between entities.	Optional
Balancing Facility status	If the Facility is Balancing Active, evidence to what extent the Facility meets the Balancing Facility Requirements	Optional
Other	Any other documentation to support the application.	Optional

INSG requirements

Supporting information	What AEMO requires	Requirement
Certified Reserve Capacity application	<p>Market Rule reference: 4.10</p> <p>An application for Certification of Reserve Capacity that lists all the necessary information to be completed 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 from a specified date</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> <p>If the Facility is a <i>Constrained Access Facility</i> the Market Participant must inform AEMO.</p>	Mandatory
Network constraints activated	<p>Market Rule reference: 4.10.1(bA)v.</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

INSG requirements

Supporting information	What AEMO requires	Requirement
Accredited expert report	<p>Market Rule reference: 4.10.3 and 4.10.3A</p> <p>Accredited consultant report and supporting data required under clause 4.10.3 of the Market Rules (the data submission template is available in the RCM portal). The Accredited expert report must include the expected output of the Facility from 1 April 2013 to 1 April 2018.</p> <p>List of accredited independent experts located here.</p>	For a Facility that has been in operation for less than five years or an Upgrade
Environmental approvals	<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>	For New Facility or Upgrade only
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>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>	For New Facility or Upgrade only

INSG requirements

Supporting information	What AEMO requires	Requirement
Financial commitment and funding arrangements	<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>	For New Facility or Upgrade only
Local government approvals	<p>Market Rule reference: 4.10.1(c)(iii)</p> <p>Details of relevant local government approvals to operate a power station.</p>	For New Facility or Upgrade only
Offtake agreement or Power Purchase Agreement	<p><u>Market Procedure reference: Appendix A of Declaration of Bilateral Trades and the Reserve Capacity Auction</u></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>	For New Facility or Upgrade only
Land leases	<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>	For New Facility or Upgrade only

INSG requirements

Supporting information	What AEMO requires	Requirement
Commercial arrangements if Facility owner and operator differ	A description of the commercial arrangement between entities.	Optional
Balancing Facility status	If the Facility is Balancing Active, evidence to what extent the Facility meets the Balancing Facility Requirements	Optional
Other	Any other documentation to support the application.	Optional

DSP requirements

Supporting information	What AEMO requires	Requirement
Certified Reserve Capacity application	<p>Market Rule reference: 4.10</p> <p>An application for Certification of Reserve Capacity that lists all the necessary information to be completed 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><u>Market Procedure reference: step 6.2.2(b) and (c) of Certification of Reserve Capacity</u></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><u>Market Procedure reference: step 6.2.2(b) and (c) of Certification of Reserve Capacity</u></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

DSP requirements

Supporting information	What AEMO requires	Requirement
Project plan	Market Rule reference: 4.10.1(c)(iii) Key project dates as outlined in clause 4.10.1.(c)(iii) of the Market Rules.	For New Facility only
Other	Any other documentation to support the application.	Optional

RCM portal demonstration

- Submitting an application for CRC
- Submitting a trade declaration
- RC Security
- Facility management

Home	CRC Application	Security	Trade Declaration	CDA	NTDL	Capacity Allocation	IRCR
2015 - 2016	2016 - 2017	2017 - 2018	2018 - 2019	2019 - 2020	2020 - 2021		

Applications for Certification

Certification Submission Window
Closes in Xmonths

Application ⇅	Facility Type ⇅	Facility Status ⇅	Application Status ⇅	Submitted On ⇅	
Facility Name	SG	O	OPEN	-	Upgrade
Facility Name	NSG	O	PENDING	-	Upgrade
Facility Name	NSG	O	SUBMITTED	07/03/2018 15:11:44	Upgrade

Application for Certification

Edit

Participant:	Participant Name	Capacity Year:	2020 - 2021
Facility Name:	Facility Name	Certification Window:	
Facility Type:	SG		
Facility Status:	Commercial Operation		
Application Status:	OPEN		
Application Type:	Existing		

Requested CRC *

(MW)

Network Access Confirmation *

No documents uploaded

Applications for Certification

Certification Submission Window
Closes in X months

Application ▾	Facility Type ▾	Facility Status ▾	Application Status ▾	Submitted On ▾	
Facility Name	SG	O	OPEN	-	Upgrade
Facility Name	NSG	O	OPEN	-	Upgrade

Home	CRC Application	Security	Trade Declaration	CDA	NTDL	Capacity Allocation	IRCR
2015 - 2016	2016 - 2017	2017 - 2018	2018 - 2019	2019 - 2020			

Trade Declarations

Trade Declaration Dates:
Closes in X hours

Assigned CRC 35	Traded CRC 0	Bilaterally Traded 0	Auction 0	DSM 0	Unavailable 0	Remaining 35
--------------------	-----------------	-------------------------	--------------	----------	------------------	-----------------

Trade Declaration Status: OPEN

Facility Name	Assigned	Traded	Auction	Unavailable	Remaining	TradedCRC	
SG	20	<input type="text"/>	<input type="text"/>	<input type="text"/>	20	-	Edit

Home	CRC Application	Security	Trade Declaration	CDA	NTDL	Capacity Allocation	IRCR
2015 - 2016	2016 - 2017	2017 - 2018	2018 - 2019	2019 - 2020	2020 - 2021		

Security

Facility / Upgrade	Last Transaction	Current Balance
Facility Name	-	-
Facility Name_UPG_1	-	-

Home	CRC Application	Security	Trade Declaration	CDA	NTDL	Capacity Allocation	IRCR
2015 - 2016	2016 - 2017	2017 - 2018	2018 - 2019	2019 - 2020	2020 - 2021		

Security Transactions

Participant:	Participant Name	Capacity Year:	2018 - 2019
Upgrade Name:	Facility Name_UPG_1	Security Category:	Upgrade
Upgrade Status:	Committed (21/02/2018)		
Security Lodged:	\$1,997,500.00	Assigned Credits:	50MW
Security Returned:	\$0.00	Security Required:	\$1,997,500.00
Security Retained:	\$0.00		

Effective From	Action	Amount	Balance	Security Details	Supporting Documents
07/03/2018	LODGE	\$1,997,500.00	\$1,997,500.00	Bank Undertaking	

[Home](#) [Security](#) [CDA](#) [NTDL](#) [IRCR](#)

2017 - 2018

Capacity Credits Reserve Capacity Pricing (\$/Year) Individual Reserve Capacity Requirement
 Total Generation Credits Total DSP Credits RC Price DSM Price October 2017

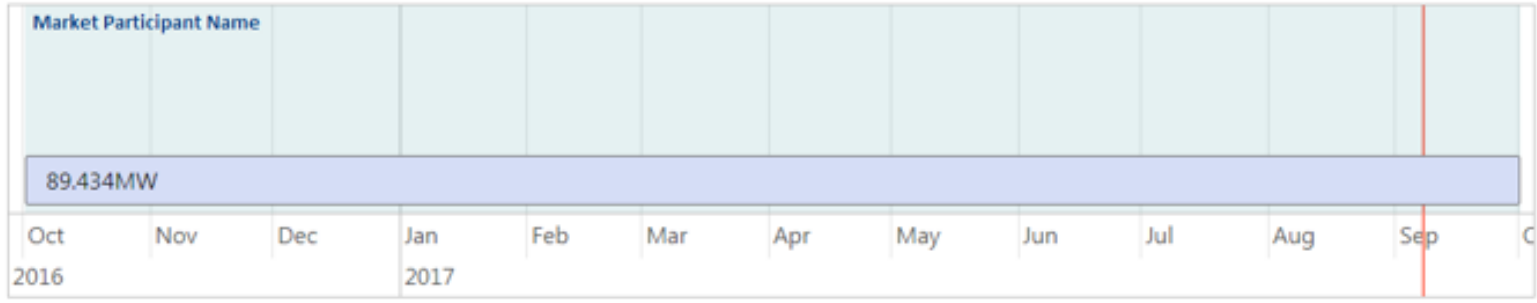
Search

Facility ↕ Facility Type ▲ Facility Status ⇅ Capacity Credits ⇅

...
Facility Management
Relevant Demand

SG Commercial Operation (12/12/2007) Effective 07/09/2017

Participant: Market Participant Name EPOH: 320 hours (calculated: Sep 2017)
Capacity Credits: 89,434



Capacity Credit Timeline

CC ⇅	Effective From ⇅	Effective To ⇅	Note ⇅	Participant Reduction ⇅
89,434	01/10/2016 08:00	01/10/2017 08:00		

Links

- WEMS Market Trial (<https://wems-mkt.aemo.com.au>)
- WEMS Production (<https://wems.aemo.com.au>)

The documents below will assist with submitting an application:

- WEMS MPI User Guide (<http://www.aemo.com.au/Electricity/Wholesale-Electricity-Market-WEM/Participant-information/Guides-and-useful-information>)
- WEMS Submission Specifications (<http://www.aemo.com.au/Electricity/Wholesale-Electricity-Market-WEM/Participant-information/Guides-and-useful-information>)
- WEMS Submission Validation (<http://www.aemo.com.au/Electricity/Wholesale-Electricity-Market-WEM/Participant-information/Guides-and-useful-information>)

Questions and feedback

Reserve Capacity (WA)

wa.capacity@aemo.com.au

(08) 9469 9930