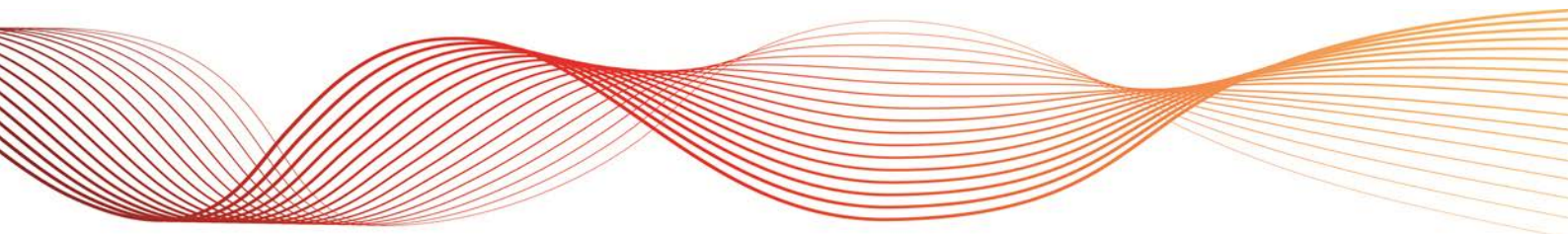




WEMS 3.22 AND RCM 1.2 RELEASE NOTES

Published: **September 2017**





IMPORTANT NOTICE

Purpose

The Australian Energy Market Operator has prepared this document to provide information about the Wholesale Electricity Market System (WEMS) 3.22 (Build 3.22-1297) and RCM 1.2 (Build 1.1-2146) releases, as at the date of publication.

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VERSION RELEASE HISTORY

Version	Effective Date	Summary of Changes
1.0	14/09/2017	Document Creation

DOCUMENT APPROVAL

Name and Position	Date
Martin Maticka Group Manager, WA Markets	14/09/2017



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1. INTRODUCTION

These are the release notes for Wholesale Electricity Market System (WEMS) 3.22 (Build 1297) and RCM Release 1.2 (Build 2146).

This WEMS Release includes a significant portion of the system changes required to support the changes to the Reserve Capacity Mechanism (**RCM**) required for 1 October 2017 introduced through the Wholesale Electricity Market Amending Rules 2016 made by the Minister under regulation 7(4) of the Electricity Industry (Wholesale Electricity Market) Regulations 2004 (**2016 WEM Amending Rules**) as published in the Government Gazette on 31 May 2016.

This release includes a number of significant changes and resolved issues which are described in sections below.

Supporting Documentation

The following documents have been updated for this release and should be read in conjunction with these release notes.

- 1) WEMS MPI User Guide
- 2) WEMS Submission Specification
- 3) WEMS Submission Validation
- 4) WEMS Report and Web Service Specification

These four documents are available on AEMO's website at <http://www.aemo.com.au/Electricity/Wholesale-Electricity-Market-WEM/Participant-information/Guides-and-useful-information>.

Web services will be available for selected submission types and reports. For more information, please refer to the swagger documentation available from:

<https://wems.aemo.com.au/rcm/api/docs/>

WEMS and RCM Version Summary

The table below summarises the changes in the version after this release has been deployed.

Application	Current Version	New Version
WEMS	3.21 (Build 1236-22)	3.22 (Build 1297)*
RCM	1.1 (Build 1848)	1.2 (Build 2146)*

To view the current version of both applications, please navigate to Help > About in the MPI.

*Please note the production build versions for WEMS and RCM may differ from this document. Release notes will be updated to reflect the latest build being deployed.



2. NEW FUNCTIONALITY

This section details the new functionality which will be delivered in this WEMS Release.

2.1 Reserve Capacity Mechanism Dashboard

The Reserve Capacity Mechanism Dashboard has been updated in this release.

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	N/A				
	0	N/A	N/A					
Search								
<input type="text"/>								
Facility :	Facility Type :	Facility Status :	Capacity Credits :					
	SG	○	134.208					

In addition to displaying the Reserve Capacity and DSM Capacity Prices applicable for each Capacity Year, by clicking on the dots next to each facility, up to two options are presented to Market Participants.

Facility Management: This replaces the Capacity Credits screen in WEMS 3.21. For each facility, this screen displays (as per screenshot below):

- Commercial Operation date
- Equivalent Planned Outage Hours
- Current number of Capacity Credits assigned
- Graphical representation of the number of Capacity Credits held throughout the relevant Capacity Year.

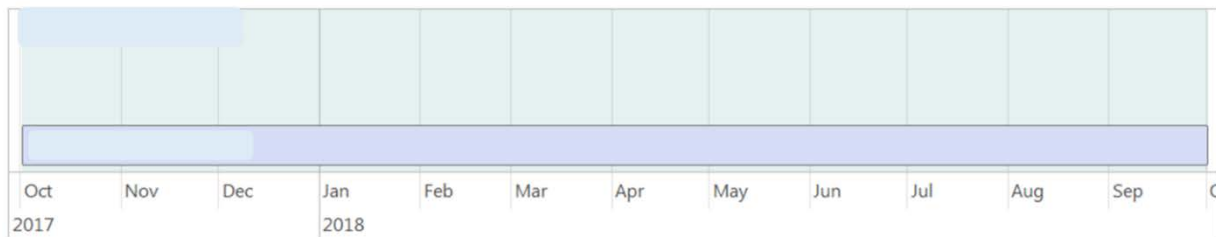


Home Security CDA NTDL IRCR

2017 - 2018

SG Commercial Operation (01/07/2003) Effective 01/10/2017

Capacity Credits: 134.208 EPOH: -



Relevant Demand: This new display includes all relevant information relating to a Demand Side Programme's (DSP) Relevant Demand as illustrated by the screenshot below.

Home Security CDA NTDL IRCR

2016 - 2017 2017 - 2018

Relevant Demand

Facility Name: - - Capacity Year: 2016 - 2017

Current Relevant Demand: 4.493
 Current Two Hundred Peak Hours: TwoHundredPeakHours2016.csv

Relevant Demand	Effective From	Effective To	Source	NMI Count	Constituent NMIs
4.493	12/09/2017 08:00	14/09/2017 08:00	Meter Data		

2.2 Non-Balancing Dispatch Merit Order (NBDMO)

The methodology for determining the NBDMO has been changed under clause 6.12.1 of the 2016 WEM Amending Rules. This release will deliver the necessary system changes to ensure AEMO remains compliant with the new methodology.

The NBDMO calculation will use the new standing data provided by Market Participants following the WEMS 3.21 release on 3 August 2017. This includes the:

- Extra Consumption Decrease Price for Peak Trading Intervals (Appendix 1(h)(vi)3).
- Extra Consumption Decrease Price for Off-Peak Trading Intervals (Appendix 1(h)(vi)(4)).

Two existing standing data fields will also be used in the NBDMO. This includes:

- Consumption Decrease Price for Peak Trading Intervals (Appendix 1.(h).vi.1)



- Consumption Decrease Price for Off-Peak Trading Intervals (Appendix 1.(h).vi.2)

Market Participants responsible for the management of DSPs in the WEM must ensure that their standing data is up to date and has been accepted by AEMO no later than 29 September 2017 (the date when the certification window for the 2016 Reserve Capacity Cycle closes).

The NBDMO will be made available to Market Participants via the Market Data Website (<http://data.wa.aemo.com.au/>) and through web services (<https://wems.aemo.com.au/rcm/api/docs/>) in accordance with clause 10.5.1(zE) of the 2016 WEM Amending Rules.

2.3 Reserve Capacity Obligation Quantity (RCOQ)

The RCOQ calculation has been changed under clause 4.12.4 of the 2016 WEM Amending Rules to reflect the changes to dispatch criteria in relation to DSPs as well as the changes to the parameters submitted for the purposes of certification of Reserve Capacity.

The RCOQ will be made available for DSPs via web services (<https://wems.aemo.com.au/rcm/api/docs/>) and may be recalculated as required by clause 4.12.4 of the 2016 WEM Amending Rules.

2.4 Relevant Demand

The Relevant Demand calculation has been updated in this release to reflect the new methodology described in clause 4.26.2CA and Appendix 10 of the 2016 WEM Amending Rules. This calculation will utilise the maintenance data submitted through Consumption Deviation Application functionality that was released in WEMS 3.21.

Participants who operate DSPs will be able to view their facility's Relevant Demand from the Reserve Capacity Mechanism Dashboard as described in Section 2.1 above.

The Relevant Demand will also be made available to Market Participants via web services (<https://wems.aemo.com.au/rcm/api/docs/>).

2.5 Refund Exempt Planned Outage Count (REPO)

Under clause 4.26.1C of the 2016 WEM Amending Rules, AEMO is required to determine whether a Scheduled Generator's Planned Outage is a REPO or a Refund Payable Planned Outage (RPPO). Where a Planned Outage is classified as a RPPO, the facility will be subject to Capacity Refunds calculated in accordance with clause 4.26 of the WEM Rules.

AEMO will determine whether Approved Planned Outages from Trading Day 1 June 2016 onwards are to be classified as a REPO or a RPPO as required by the WEM Rules.

The REPO count will be published as a daily value on the Public Data Site (<http://data.wa.aemo.com.au/>) under clause 10.5.1(zI) of the WEM Rules.

2.6 Reserve Capacity Security

This release provides Market Participants a summary of any Reserve Capacity Security AEMO currently holds including its status as per the screenshot below. This information is accessible by selecting the Security tab from the Reserve Capacity Mechanism Dashboard.



Home	Security	CDA	NTDL	IRCR
2017 - 2018				

Security

Name ▾ Last Transaction ▾ Current Balance ▾

2.7 Reserve Capacity Performance Monitoring

AEMO will be calculating the Equivalent Planned Outage Hours (**EPOH**) for each Scheduled Generator and Non-Scheduled Generator monthly in accordance with clause 4.27 of the 2016 WEM Amending Rules. This calculation will enable AEMO to actively monitor each Scheduled generator or Non-Scheduled Generator’s availability over the preceding 12 Trading Months.

A facility’s EPOH is displayed within the Facility Management screen accessible by clicking on the dots next to each facility in the Reserve Capacity Mechanism Dashboard as described in section 2.1 above.

2.8 Commercial Operation and Full Operation Dates

In light of the data management features in the RCM application, the Reserve Capacity tab within the facility registration screens in the MPI has been amended to display each facility’s Commercial Operation Date (all facilities) and Full Operation Date (generation facilities only) where applicable. This can be seen in the screenshot below.

Facility Status	General Information	Standing Data	Reserve Capacity
Reserve Capacity Status			
Reserve Capacity Facility Status	Commercial Operation		
Facility Dates			
Commercial Operation Date	15/07/2007		
Full Operation Date			

For Market Participants who operate facilities with a Reserve Capacity Status of either Proposed or Committed, they are still able to submit a Reserve Capacity Status change request. **However, Market Participants will no longer be able submit a change request to change their Reserve Capacity Status to Commercial Operation.**

If Market Participants believe that either of these dates are incorrect for any of their facilities or wish to request for their facility’s status to be changed to Commercial Operation, please contact System Capacity (WA) via email at wa.capacity@aemo.com.au.



3. DISABLED FUNCTIONALITY

The changes to the RCM processes introduced by the 2016 WEM Amending Rules has resulted in existing functionality in WEMS being disabled and replaced.

The following tables describes the existing WEMS submissions and reports which have been disabled in this release. Please note that the screens supporting the functionality listed below will still be visible, however users will not be able to perform any of the related functions.

Submissions

Description	WEMS Link	Comments
Certified Reserve Capacity Submissions	<a href="https://wems.aemo.com.au/mpi/mpi-
ui/reserveCapacity/certificationFileExchange.action">https://wems.aemo.com.au/mpi/mpi- ui/reserveCapacity/certificationFileExchange.action	Submissions will only be accepted for the 2016 and 2017 Reserve Capacity Cycles, relevant for the 2018 and 2019 Capacity Years respectively. Will be replaced by a new user interface in RCM Release 3.
Bilateral Trade Declaration Submissions	<a href="https://wems.aemo.com.au/mpi/mpi-
ui/reserveCapacity/fileExchange_Bilateral.action">https://wems.aemo.com.au/mpi/mpi- ui/reserveCapacity/fileExchange_Bilateral.action	Submissions will only be accepted for the 2016 and 2017 Reserve Capacity Cycles, relevant for the 2018 and 2019 Capacity Years respectively. Will be replaced by a new user interface in RCM Release 3.
Monthly Capacity Allocation Submissions	<a href="https://wems.aemo.com.au/mpi/mpi-
ui/reserveCapacity/fileExchange_Allocation.action">https://wems.aemo.com.au/mpi/mpi- ui/reserveCapacity/fileExchange_Allocation.action	Submissions will only be accepted for Trading Months up to and including September 2017. Will be replaced by a new user interface and web service in this release.
Monthly Capacity Allocation Confirm Submissions	<a href="https://wems.aemo.com.au/mpi/mpi-
ui/reserveCapacity/fileExchange_ConfirmAllocation.action">https://wems.aemo.com.au/mpi/mpi- ui/reserveCapacity/fileExchange_ConfirmAllocation.action	Submissions will only be accepted for Trading Months up to and including September 2017. Will be replaced by a new user interface and web service in this release.
Relevant Demand – Maintenance Interval Submission	<a href="https://wems.aemo.com.au/mpi/mpi-
ui/reserveCapacity/rdparticipantview.action">https://wems.aemo.com.au/mpi/mpi- ui/reserveCapacity/rdparticipantview.action	Has been replaced by a new user interface in RCM Release 1.

Reports

Description	WEMS Link	Comments
RC Certification Report	<a href="https://wems.aemo.com.au/mpi/mpi-
ui/reserveCapacity/annual_certification.action">https://wems.aemo.com.au/mpi/mpi- ui/reserveCapacity/annual_certification.action	Although populated for Capacity Years up to and including the 2019 Capacity Year, Market Participants are encouraged to view this information in the new RCM system. For the 2020 Capacity Year onwards, a new user interface and web service will be available.
RC Allocation Report	<a href="https://wems.aemo.com.au/mpi/mpi-
ui/reserveCapacity/allocation_allocation.action">https://wems.aemo.com.au/mpi/mpi- ui/reserveCapacity/allocation_allocation.action	Populated for Trading Months up to and including September 2017. For Trading Months October 2017 onwards, a new user interface and web service will be available.
RC Allocation Confirm Report	<a href="https://wems.aemo.com.au/mpi/mpi-
ui/reserveCapacity/allocation_confirm.action">https://wems.aemo.com.au/mpi/mpi- ui/reserveCapacity/allocation_confirm.action	Populated for Trading Months up to and including the September 2017. For Trading Months October 2017 onwards, a new user interface and web service will be available.



Description	WEMS Link	Comments
Non-Balancing Dispatch Merit Order	https://wems.aemo.com.au/mpi/dailyReports.action?reportName=EM_NonBalDispMeritOrder MPI report name: EM_NonBalDispMeritOrder Web Service Report: getNonBalDispMeritOrderReportRequest	<p>Populated for Trading Days up to and including 30 September 2017.</p> <p>For Trading Days from 1 October 2017 onwards, this information will be available via web services.</p>
Approved Bilateral Trade Declarations	https://wems.aemo.com.au/mpi/yearlyReports.action?reportName=RCM_ApprvBltdDeclarations MPI report name: RCM_ApprvBltdDeclarations Web Service Report: getApprResvBltdDeclarationsReportRequest	<p>Although populated for Capacity Years up to and including the 2019 Capacity Year, Market Participants are encouraged to view this information in the new RCM system.</p> <p>For the 2020 Capacity onwards, a new user interface and web service will be available.</p>
Certified Reserve Capacity Information	https://wems.aemo.com.au/mpi/yearlyReports.action?reportName=RCM_CertResCapInfo MPI report name: RCM_CertResCapInfo Web Service Report: getRcmCertResCapInfoReportRequest	<p>Although populated for Capacity Years up to and including the 2019 Capacity Year, Market Participants are encouraged to view this information in the new RCM system.</p> <p>For the 2020 Capacity Year onwards, a new user interface will be available.</p>
Facility Capacity Credit MW Assigned	https://wems.aemo.com.au/mpi/yearlyReports.action?reportName=PUB_CapCreditInfo MPI report name: PUB_CapCreditInfo Web Service Report: getPubCapCreditInfoReportRequest	<p>Although populated for Capacity Years up to and including the 2019 Capacity Year, Market Participants are encouraged to view this information in the new RCM system. For the 2017 Capacity Year onwards, a new user interface and web service will be available.</p>
Public Certified Reserve Capacity Information	https://wems.aemo.com.au/mpi/yearlyReports.action?reportName=PUB_CertResCapInfo MPI report name: PUB_CertResCapInfo Web Service Report: getPubCertResCapInfoReportRequest	<p>Although populated for Capacity Years up to and including the 2019 Capacity Year, Market Participants are encouraged to view this information in the new RCM system. For the 2020 Capacity Year onwards, a new user interface will be available.</p>
Capacity Credit Final Allocation	https://wems.aemo.com.au/mpi/monthlyReports.action?reportName=RCM_CCFinalAllocation MPI report name: RCM_CCFinalAllocation Web Service Report: getFinalCapCreditAllocReportRequest	<p>Populated for Trading Months up to and including September 2017.</p> <p>For Trading Months October 2017 onwards, a new user interface and web service will be available.</p>
Capacity Credit Supplier Allocation	https://wems.aemo.com.au/mpi/monthlyReports.action?reportName=RCM_CCFinalAllocationSup MPI report name: RCM_CCFinalAllocationSup Web Service Report: getFinalCapCreditAllocSupReportRequest	<p>Populated for Trading Months up to and including September 2017.</p> <p>For Trading Months October 2017 onwards, a new user interface and web service will be available.</p>
Capacity Credit Initial Allocation	https://wems.aemo.com.au/mpi/monthlyReports.action?reportName=RCM_CCInitialAllocation MPI report name: RCM_CCInitialAllocation Web Service Report: getInitCapCreditAllocReportRequest	<p>Populated for Trading Months up to and including September 2017.</p> <p>For Trading Months October 2017 onwards, a new user interface and web service will be available.</p>
Capacity Credit Initial Supplier Allocation	https://wems.aemo.com.au/mpi/monthlyReports.action?reportName=RCM_CCInitialAllocationSup MPI report name: RCM_CCInitialAllocationSup Web Service Report: getInitCapCreditAllocSupReportRequest	<p>Populated for Trading Months up to and including September 2017.</p> <p>For Trading Months October 2017 onwards, a new user interface and web service will be available.</p>



Description	WEMS Link	Comments
Monthly Capacity Credits	https://wems.aemo.com.au/mpi/monthlyReports.action?reportName=RCM_MonthlyCC MPI report name: RCM_MonthlyCC Web Service Report: getMPMonthlyCCReportRequest	Populated for Trading Months up to and including the September 2017. For Trading Months October 2017 onwards, a new user interface and web service will be available.
Relevant Demand	https://wems.aemo.com.au/mpi/mpi-ui/reserveCapacity/rdreport.action	Populated for Trading Days up to and including 30 September 2017. For Trading Days from 1 October 2017 onwards, a new user interface and web service will be available.



4. RESOLVED ISSUES

	Reference	Summary	Resolution
●	WEMS-6621	WEMS allowed Market Participants to withdraw change requests after the data has already been used.	Additional validations to the change request workflow ensures that Market Participants are unable to withdraw any accepted change requests which have already been used in the operation of the WEM.
●	WEMS-6511 WEMS-6216 WEMS-6484	DSP Verification Test tool incorrectly allows requested test intervals that fall outside the facility's availability hours.	Additional validations to the DSP Verification Test tool has been included to ensure requested test intervals that fall outside the availability hours are excluded.
●	WEMS-6220	RC Testing incorrectly included expired NMI channels in the DSP's Actual MW value.	Additional validations have been included to ensure that expired NMI channels are not included in the calculation of the Actual MW value used in RC Testing.
●	WEMS-6650	RC Observation test being incorrectly performed when a facility has undergone a scheduled test which has led to confusing test results.	Verification by observation will be performed using the meter data available to AEMO up until the time that the formal Reserve Capacity test commences.
●	WEMS-6489	RC Observation test for DSPs incorrectly displays a result where meter data is missing.	Additional checks performed to ensure that an RC observation result is only displayed where all meter data is available.

Status

●	Internal changes
●	Minimal or no impact to Market Participants
●	Needs Market Participants' attention. Potentially requires system or operational procedure changes



ABBREVIATIONS

Abbreviations

Abbreviation	Expanded name
2016 WEM Amending Rules	Wholesale Electricity Market Amending Rules 2016 made by the Minister under regulation 7(4) of the Electricity Industry (Wholesale Electricity Market) Regulations 2004 as published in the Government Gazette on 31 May 2016
AEMO	Australian Energy Market Operator
DSP	Demand Side Programme
EPOH	Equivalent Planned Outage Count
IRCR	Individual Reserve Capacity Requirement
MPI	Market Participant Interface
NBDMO	Non-Balancing Dispatch Merit Order
NMI	National Meter Identifier
Public Data Site	The data repository website for the WEM - http://data.wa.aemo.com.au/
RC Testing	Reserve Capacity Testing
RCM	Reserve Capacity Mechanism
RCM Release 1	The first release of RCM changes deployed on 3 August 2017.
RCM Release 3	The third release of RCM changes scheduled for Early December 2017.
RCOQ	Reserve Capacity Obligation Quantity
REPO	Refund Exempt Planned Outage
RPPO	Refund Payable Planned Outage
WEM Rules	Wholesale Electricity Market Rules
WEMS Release	WEMS 3.22 (Build 1297) and RCM 1.2 (Build 2146)
WEMS	Wholesale Electricity Market System