

# WEM PaSS 3.1 Release Notes

18 December 2023





# Important notice

## Purpose

AEMO publishes this document to provide information about **WEM PaSS 3.1** as at the date of publication.

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## Version control

Version	Release date	Changes
1.0	18/12/2023	Initial publication in the Production environment

## Document approval

Name	Position	Date
Nicholas Nielsen	Manager, WA Prudentials & Settlements	18/12/2023



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# 1 Introduction

## 1.1 Overview

These are the release notes for the WEM Prudential and Settlement Service 3.1 (WEM PaSS 3.1) deployed to the Production environment on 18 December 2023.

This release includes the following changes to the settlements functionality as required by the [WEM Amendment \(Reserve Capacity Reform\) Rules 2023 Schedule 1](#):

- Participant Capacity Rebate and Facility Capacity Rebate payments removed
- Shared Reserve Capacity Cost charges updated
- Capacity Provider Payment updated

The purpose of these release notes is to outline the changes to the external functionality for Rule Participants.

## 1.2 Supporting documentation

The following documents should be read in conjunction with these release notes.

User guides:

- [Prudential and Settlement Service User Guide](#)

Formulations:

- [WEM Metering, Settlement and Prudential Calculations Version 6.0](#)

Procedures:

- [WEM Procedure: Settlements](#)
- [WEM Procedure: Prudential Requirements](#)

APIs:

- [Swagger documentation](#)

## 1.3 Version summary

The changes in versions post deployment of this release are summarised in Table 1.

To view the current application versions, navigate to Help > About in [WEMS MPI](#).

**Table 1** Version summary

Application	Old version	New version
WEM PaSS	3.0 (Build 3.0-820-2)	3.1 (Build 3.1-827-1)

## 1.4 Terms and abbreviations

The terms and abbreviations used in this document are outlined in Table 2.

**Table 2** Terms and abbreviations

Term or abbreviation	Definition or expanded name
AEMO	Australian Energy Market Operator
API	Application Programming Interface
APIM	Azure API Management
MPI	Market Participant Interface
PaSS	Prudential and Settlement Service
RCM	Reserve Capacity Mechanism
REST	Representational State Transfer API (AEMO uses JSON format)
Non-STEM	Non-Short Term Electricity Market
WEMS	Wholesale Electricity Market System

## 1.5 Further information

Please contact WA Prudentials and Settlements on [wa.settlements@aemo.com.au](mailto:wa.settlements@aemo.com.au) for further information regarding the materials contained in this document.

# 2 Calculations

## 2.1 Rule change

The amending rules set out in [WEM Amendment \(Reserve Capacity Reform\) Rules 2023 Schedule 1](#) come into operation at 8:00 AM (WST) on 13 December 2023 as per the notice in the [Government Gazette 165 of 2023](#).

Schedule 1 makes the following changes to the settlement calculations:

- Participant Capacity Rebate and Facility Capacity Rebate are removed (clauses 4.26.4, 4.26.5 and 4.26.6).
- Shared Reserve Capacity Cost charges (clause 4.28.4) now include Capacity Cost Refund rebates.
- Capacity Provider Payment (clause 9.8.3) is updated to remove the Participant Capacity Rebate.

The rule change effective date is Trading Day 13/12/2023.

These changes implement part of Review Outcome 7 from the [Reserve Capacity Mechanism Review: Information Paper \(Stage 2\)](#) where capacity refunds will be rebated to Market Participants responsible for loads (consumers), rather than other capacity providers.

Refer to the Energy Policy WA [RCM Review](#) website for more information.

## 2.2 Formulation

The [WEM Metering, Settlement and Prudential Calculations Version 6.0](#) formulation incorporates the following changes required to implement the rule changes outlined in Section 2.1 of these Release Notes:

- Updated SRCC\_G\_D formula to include new variable CCR\_G\_D, and to replace/rename variable DSMRCSD\_G\_D with DSPRCSD\_G\_D.
- New CCR\_G\_D formula based on existing variables and sets.
- Updated CPP\_P\_D formula to remove CAPREBSA\_P\_D.
- Removed Section 4.8.7 Capacity Rebate which includes: CAPREBSA\_P\_D, CAPREBSA\_P\_I, CAPREBSA\_F\_I, CAPREBS\_F\_I, CAPREBCQ\_F\_I, CAPREBCQ\_G\_I, CShare\_F\_I, E\_F\_I, DISP1440Flag\_F\_I, MAXFRFlag\_F\_I and MAXPGRFlag\_P\_I.
- Moved CCR\_G\_I formula to Section 4.8.4 SRCC Charges.

The Version 6.0 formulation may be effective at the same time as the preceding Version 5.2 formulation because they apply to different Trading Days as outlined in Table 3. AEMO will use the Version 5.2 formulation (or any subsequent 5.X versions) when performing the Adjustment Process for the Trading Weeks that include the Trading Days prior to the rule change effective date.

**Table 3 Formulation version effective dates**

Formulation	Effective from Trading Day	Effective to Trading Day
Version 6.0	13 December 2023	Not applicable
Version 5.2 (Replaced V5.1 and V5.0)	1 October 2023	12 December 2023

## 3 User Interface

### 3.1 Settlements dashboard

This release makes no changes to the Settlements dashboard.

### 3.2 Prudentials dashboard

This release makes no changes to the Prudentials dashboard.

### 3.3 Forms dashboard

This release makes no changes to the Forms dashboard.

# 4 Artefacts

## 4.1 Invoices

Invoices have been updated to implement the rule changes outlined in Section 2.1 of these Release Notes:

- The line item “Payment for Participant Capacity Rebate” will appear on Invoices for Trading Weeks that include any Trading Days prior to the rule change effective date, including Adjustment Invoices. The corresponding dollar amount will only include Trading Days for which the formula CAPREBSA\_P\_D was required to be calculated by the WEM Rules.
- The line item “Payment for Participant Capacity Rebate” will not appear on Invoices for Trading Weeks that do not include any Trading Days prior to the rule change effective date (i.e. TW 17 DEC 2023 onwards).

## 4.2 Statement Summary and Detail

This release makes no changes to the format of the Settlement Statement Summary or Settlement Statement Detail however the datasets will only contain variables that are applicable for each Trading Day. For example, if the variables CAPREBSA\_P\_D and CShare\_F\_I are only applicable from Trading Day 01/10/2023 to Trading Day 12/12/2023 inclusive, then they will not be present in the response from Trading Day 13/12/2023 onwards.

# 5 APIs

## 5.1 Hostnames

The hostnames in Table 4 relate to the APIs in this section.

Rule Participants must have an appropriate web certificate from AEMO to be able to call the APIs.

**Table 4** Hostnames for REST APIs

Function	REST hostname	APIM
<b>Prudentials</b>	https://wems.aemo.com.au/mpi/ws/prudential	No
	https://wems-mkt.aemo.com.au/mpi/ws/prudential	No
<b>Settlements</b>	https://wems.aemo.com.au/mpi/ws/prudential	No
	https://wems-mkt.aemo.com.au/mpi/ws/prudential	No

## 5.2 Prudential APIs

This release makes no changes to the Prudential APIs in Table 5 however a response will only contain variables that are applicable for each Trading Day. For example, if the variables CAPREBSA\_P\_D and CShare\_F\_I are only applicable from Trading Day 01/10/2023 to Trading Day 12/12/2023 inclusive, then they will not be present in the response from Trading Day 13/12/2023 onwards.

**Table 5 Prudential REST APIs**

Function	Type	Endpoint	Effective from (inclusive)
Prudentials	GET	/api/v2/prudential	Invoices issued on or after 01/08/2021
Prudentials	GET	/api/v2/prudential/summary/latest	Invoices issued on or after 01/08/2021
Prudentials	GET	/api/v2/prudential/detail/{tradingDay}	Invoices issued on or after 01/08/2021
Prudentials	GET	/api/v2/prudential/estimation/{tradingDay}	Invoices issued on or after 01/08/2021

### 5.3 Settlements APIs

This release makes no changes to the Settlements APIs in Table 6 however a response will only contain variables that are applicable for each Trading Day. For example, if the variables CAPREBSA\_P\_D and CShare\_F\_I are only applicable from Trading Day 01/10/2023 to Trading Day 12/12/2023 inclusive, then they will not be present in the response from Trading Day 13/12/2023 onwards.

**Table 6 Settlement REST APIs**

Function	Type	Endpoint	Effective from (inclusive)
Settlements	GET	/api/v2/settlements/{marketService}/summary/{periodFrom}/{designation}	Invoices issued on or after 01/08/2021
Settlements	GET	/api/v2/settlements/{marketService}/detail/{tradingDay}/{designation}	Invoices issued on or after 01/08/2021
Settlements	GET	/api/v2/settlements/{marketService}/estimation/{periodFrom}/{designation}/{tradingDay}	Invoices issued on or after 01/08/2021
Settlements	GET	/api/v2/settlements/{marketService}/invoiceFile/{periodFrom}/{designation}	Invoices issued on or after 01/08/2021
Settlements	GET	/api/v2/settlements/{marketService}/invoice/{periodFrom}/{designation}	Invoices issued on or after 01/08/2021
Settlements	GET	/api/v2/settlements/timeline	Invoices issued on or after 01/08/2021

## 6 Resolved Issues

The issues in Table 7 have been resolved in patches deployed between WEM PaSS 3.0 and this WEM PaSS 3.1.

**Table 7 Resolved issues summary**

Reference	Summary	Resolution
● GOLIVE-253	The scheduled check for “Participant does not have Credit Support to meet their Credit Limit” was calling a deprecated internal API.	Updated the internal API to call the correct endpoint for Trading Days on or after the New WEM Commencement Day.
● GOLIVE-254	The RCOQ global-level null flags were not working as expected for prudential estimation logic.	Updated the implementation to use facility-level rather than global-level null flags for RCOQ estimation.



Reference	Summary	Resolution
		Formulation changes published in the <a href="#">WEM Metering, Settlement and Prudential Calculations Version 5.2</a> formulation.
● GOLIVE-312	The DSPSF_F_I formula had been updated in the WEM Metering, Settlement and Prudential Calculations Version 5.2 formulation to use estRCOQ_F_I for prudential estimation but the corresponding code change had been missed.	Updated implementation of DSPSF_F_I formula to use estRCOQ_F_I instead of RCOQ_F_I. No formulation changes.
● GOLIVE-319	Changes made by AEMO users in the internal Parameters user interface were not persisted to the database.	Updated the internal Parameters user interface to correctly persist the PeriodFrom and PeriodTo time periods during create, edit or delete actions.
● GOLIVE-443	Performance profiling identified that the implementation of the set PI4320a within the DISP_F_I formula is inefficient.	Optimised the implementation of set PI4320a. No formulation changes.
● GOLIVE-444	Performance profiling identified that the implementation of the DISP1440Flag_F_I formula is inefficient and recreates the set PI1440 each time the formula is invoked.	Optimised the implementation to pre-calculate the superset of PI1440 intervals for all the intervals in the calculation day and access the relevant subset when required. No formulation changes.
● GOLIVE-470	For some prudential calculation input variables, multiple days' worth of data is required for a single calculation day in the exposure period. Subsequent loading of the data from the database is currently performed independently for each calculation day in the exposure period, which is inefficient.	Optimised the implementation to use single-day caching for the following input variables to improve the data-loading performance: REPOC_SCC_D, CC_F_D, SOMS_F_I, and CAFO_F_I. No formulation changes.
● GOLIVE-513	Performance profiling identified that the calculation of the OfftakeShare_P_I formula is impacted by the very large number of interval meters.	Optimised the implementation to use two new interfaces that enable the set OfftakeC_I to be interrogated in once pass and the data retrieved via a lookup. No formulation changes.
● GOLIVE-544	Performance profiling identified that the calculation of the OutageCount_SA_DI formula has the potential to have performance issues when SESSM Awards are created.	Optimised the implementation by change SESSMDI to a sorted set, improve the summation iteration logic, and improve the efficiency of the Dispatch Interval comparison. No formulation changes.
● GOLIVE-549	The blue "Download NSTEM Estimation Details" link at the bottom of the Prudential user interface returned an error 404 because there are no longer any Non-STEM exposed days included in the daily prudential calculations.	Removed the link from the Prudential user interface effective from the deployment date. Any estimation data determined as part of the WEM prudential calculations is available in the blue "Download Details" link. Estimation logic is outlined in Section 4.14 of the <a href="#">WEM Metering, Settlement and Prudential Calculations Version 6.0</a> formulation.

**Table 8 Resolved issues status legend**

Status
● Internal changes
● Minimal or no impact to Rule Participants
● Needs Rule Participant attention. Potentially requires system or operational procedure changes.