
WEM PaSS 1.9, WEMS 3.43 and RCM 1.23: Settlement Enhancements Release Notes

September 2021

Important notice

PURPOSE

The Australian Energy Market Operator (AEMO) has prepared this document to provide information about the WEM PaSS 1.9 (Build 1.9-806-2), WEMS 3.43 (Build 3.43-1548-1) and RCM 1.23 (Build RCM 1.23-3012-1) releases as at the date of publication.

DISCLAIMER

This document or the information in it may be subsequently updated or amended. This document does not constitute legal or business advice and should not be relied on as a substitute for obtaining detailed advice about the Wholesale Electricity Market Rules, or any other applicable laws, procedures or policies. AEMO has made every effort to ensure the quality of the information in this document but cannot guarantee its accuracy or completeness.

Accordingly, to the maximum extent permitted by law, AEMO and its officers, employees and consultants involved in the preparation of this document:

- make no representation or warranty, express or implied, as to the currency, accuracy, reliability or completeness of the information in this document; and
- are not liable (whether by reason of negligence or otherwise) for any statements or representations in this document, or any omissions from it, or for any use or reliance on the information in it.

VERSION CONTROL

Version	Release date	Changes
1.0	15/09/2021	Initial Publication for WEM PaSS 1.9, WEMS 3.43 and RCM 1.23 Market Trial release.
2.0	20/09/2021	Update build number for WEM PaSS 1.9 Market Trial patch release.

DOCUMENT APPROVAL

Name	Position	Date
Tom Butler	Acting Group Manager, WA Markets	V1.0 15/09/2021

Contents

1.	Introduction	4
1.1	Overview	4
1.2	Supporting documentation	4
1.3	Version summary	4
1.4	Terms and abbreviations	4
2.	Background	5
3.	Forms User Interface	6
3.1	Prepayments	6
3.2	Standing Prepayments	7
3.3	Notice of Disagreement	7
4.	Formulation Changes	9
4.1	Short Payment	9
4.2	Civil Penalty Distribution	9
4.3	Default Levy Adjustment	9
5.	Bugs and Improvements	10
5.1	Incorrect values used for SOMS_F_I in MAX2_F_M calculation for some Trading Months	10
5.2	Rounding difference between Settlements tab and Invoice totals	10
6.	Internal AEMO Changes	11

1. Introduction

1.1 Overview

These are the release notes for the WEM PaSS 1.9 (Build 1.9-806-2), WEMS 3.43 (Build 3.43-1548-1) and RCM 1.23 (Build 1.23-3012-1) releases.

This is the second release under the Settlements Enhancements project and introduces the following functionality:

- Prepayment management via the Prudential-Settlements user interface.
- Notice of Disagreement management via the Prudential-Settlements user interface.
- Internal functions for AEMO to perform Short Payment calculations for a Payment Default event and to distribute Civil Penalty amounts, if and when these situations arise.
- Inclusion of the Default Levy adjustment in Non-STEM Settlement Statements for the re-allocation of any Default Levies raised during the most recently ended Financial Year.

The system changes are described in the sections below.

1.2 Supporting documentation

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

- [WEMS MPI User Guide](#)
- [WEM Metering, Settlement and Prudential Calculations Version 4.1](#)

1.3 Version summary

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

To view the current application versions, please navigate to **Help > About** in the MPI.

Table 1 Version summary

Application	Current version	New version
WEM PaSS	1.8 (Build 1.8-804-2)	1.9 (Build 1.9-806-2)
WEMS	3.42 (Build 3.42-1547-1)	3.43 (Build 3.43-1548-1)
RCM	1.22 (Build 1.22-3001-11)	1.23 (Build 1.23-3012-1)

1.4 Terms and abbreviations

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

Table 2 Terms and abbreviations

Abbreviation	Expanded name
AEMO	Australian Energy Market Operator
API	Application Programming Interface

Abbreviation	Expanded name
Formulation	WEM Metering, Settlement and Prudential Calculations formulation document
MOSMI	Market Operator System Monitoring Interface
MPI	Market Participant Interface
PCS	Product Configuration Specification
PDS	Public Data Site
RC	Reserve Capacity
RCM	Reserve Capacity Mechanism
RoPE	Reduction of Prudential Exposure
SPARTA	Settlements Processing, Account Reporting and Transaction Administration
WEMS	Wholesale Electricity Market System
WEM PaSS	Wholesale Electricity Market Prudential and Settlement Service

2. Background

Release one of the Settlement Enhancements project introduced the required changes to enable AEMO to cease using the POMAX Settlements and RCM Settlements systems, and to extend the Prudential Service system to provide a single, certified, in-house prudential and settlements calculation engine known as WEM PaSS. The primary deliverables of release one were:

- Monthly/Weekly Settlement calculations using the new Prudential-Settlement engine.
- New User Interface screens for accessing Settlement Statements and Invoices.
- New APIs for accessing Settlement data.
- New system Notifications and Alerts to support business processes.
- Coordinator Fee rule change.
- Certification of new and modified settlement calculations.

This release builds on the WEM PaSS platform to deliver the following features:

- Prepayment management via the Prudential-Settlements user interface.
- Notice of Disagreement management via the Prudential-Settlements user interface.
- Internal functions for AEMO to perform Short Payment calculations for a Payment Default event and to distribute Civil Penalty amounts, if and when these situations arise.
- Inclusion of the Default Levy adjustment in Non-STEM Settlement Statements for the re-allocation of any Default Levies raised during the most recently ended Financial Year.

Information on the changes and new functionality in this release was presented at the following stakeholder engagement forums:

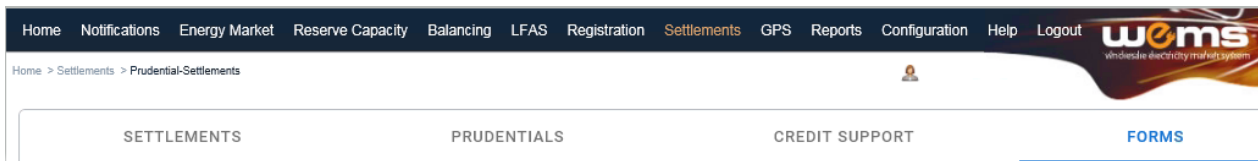
- WA ECF 18 August 2021
- WRIG IT 23 September 2021

3. Forms User Interface

The Prudential-Settlements user interface in WEMS MPI has been updated with an additional Forms tab (see Figure 1) which provides access to the following functionality:

- Prepayments: to submit notification to AEMO of a voluntary prepayment funds transfer.
- Standing Prepayments: to activate or deactivate the standing prepayment agreement with AEMO.
- Notice of Disagreements: to submit any disagreement information in accordance with the disagreement deadline published in the [Settlement Cycle Timeline](#).

Figure 1 Forms tab in WEM PaSS UI



3.1 Prepayments

The voluntary Prepayment direction form has been integrated into the Forms tab of the Prudential-Settlements user interface (see Figure 2). This form allows a Market Participant to submit a voluntary Prepayment direction to AEMO via WEMS MPI, replacing the old method of submitting the document by email or post.

A voluntary Prepayment direction may be submitted by any Participant User with settlements permissions enabled in WEMS MPI.

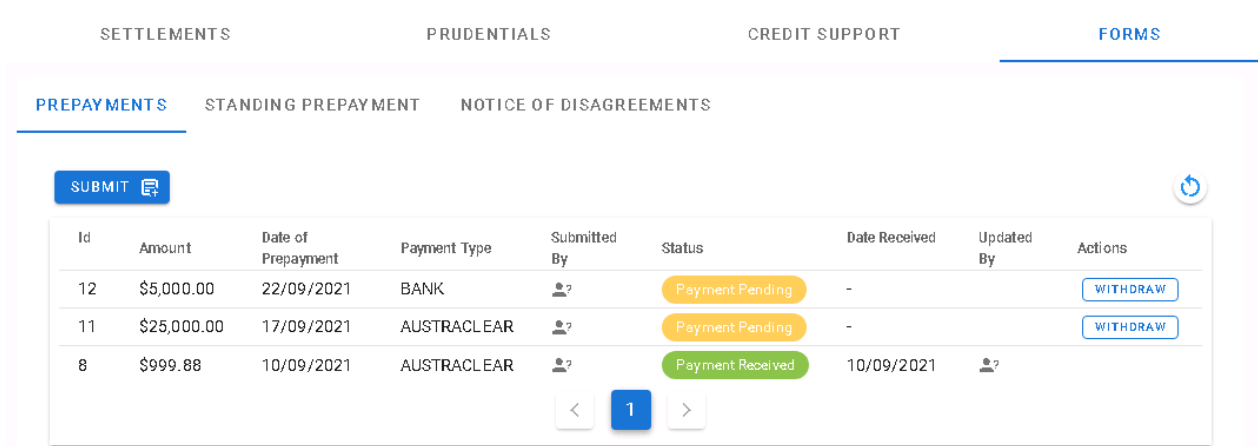
This feature allows Market Participants to:

- Submit notification to AEMO of a voluntary Prepayment amount and date of payment; and,
- Track the status of a submission through the dashboard.

Once cleared funds are received by AEMO, the Market Participant's prepayment balance will be updated by the prescribed amount. Refer to Section 5.3 of the [Market Procedure: Prudential Requirements](#) for more information on voluntary prepayments.

The steps to manage voluntary Prepayments are outlined in the [WEMS MPI User Guide](#).

Figure 2 Prepayments dashboard



3.2 Standing Prepayments

The Standing Prepayment direction and letter have been integrated into the Forms tab of the Prudential-Settlements user interface (see Figure 3). This form allows a Market Participant to submit a Standing Prepayment agreement with AEMO via WEMS MPI, replacing the old method of submitting the document by email or post.

A Standing Prepayment agreement may be submitted by any Participant User with settlements permissions enabled in WEMS MPI.

This feature allows Market Participants to:

- Activate a new Standing Prepayment agreement with AEMO.
- View the status of their Standing Prepayment agreement through the dashboard.
- Deactivate an active Standing Prepayment agreement or activate an inactive Standing Prepayment agreement.
- View the terms of the Standing Prepayment agreement.

A Standing Prepayment agreement is effective immediately when the status is changed to Active and ceases immediately when the status is changed to Inactive.

The steps to manage a Standing Prepayment agreement are outlined in the [WEMS MPI User Guide](#).

Figure 3 Standing Prepayments dashboard

The screenshot displays the 'FORMS' tab in the Prudential-Settlements user interface. Under the 'PREPAYMENTS' section, the 'STANDING PREPAYMENT' sub-tab is selected. The dashboard includes buttons for 'ACTIVATE' and 'VIEW TERMS'. A table lists the prepayment agreements with the following columns: Id, Date Submitted, Submitted By, Status, Updated By, and Actions. One agreement is listed with Id 8, Date Submitted 10/09/2021 17:22, Submitted By (user icon), Status Active (green pill), and an Actions button labeled 'DEACTIVATE'.

Id	Date Submitted ↓	Submitted By	Status	Updated By	Actions
8	10/09/2021 17:22		Active		<button>DEACTIVATE</button>

3.3 Notice of Disagreement

The Notice of Disagreement form has been integrated into the Forms tab of the Prudential-Settlements user interface (see Figure 4). This form allows Rule Participants to submit Notices of Disagreement via WEMS MPI, replacing the old method of submitting the documents and supporting information by email or post.

A Notice of Disagreement may be submitted by any Participant User with settlements permissions enabled in WEMS MPI.

This feature allows Participants to:

- Submit a new Notice of Disagreement in accordance with the [Market Procedure: Settlement](#).
- Track the progress of a submission through the dashboard (see Figure 5).
- Respond to AEMO when it requests more information in accordance with WEM Rule 9.20.4A.
- View the revised due date when AEMO extends the deadline to respond to a Notice of Disagreement in accordance with WEM Rule 9.20.7A.
- Download the decision document when AEMO completes its assessment and provides a response in accordance with WEM Rule 9.20.7.
- Receive automated email notifications in relation to a submission.

The steps to submit a Notice of Disagreement are outlined in the [WEMS MPI User Guide](#).

Figure 4 Notice of Disagreements tab

The screenshot shows the 'NOTICE OF DISAGREEMENTS' tab selected in a navigation bar. The tab is highlighted with a red box. Below the navigation bar, there is a 'SUBMIT' button with a document icon. A table with the following columns is displayed: Id, Submitted (with a dropdown arrow), Market, Period, Amount, Status, AEMO Documents, Due Date, and Actions. The table is currently empty, with the text 'No data available' centered below the headers. There are navigation arrows at the bottom of the table.

Figure 5 Notice of Disagreement dashboard

The screenshot shows the 'Notice of Disagreement dashboard'. It features a 'SUBMIT' button with a document icon. Below the button is a table with the following columns: Id, Submitted, Market, Period, Amount, Status, AEMO Documents, Due Date, and Actions. The table contains one row with the following data: Id 1, Submitted 08/09/2021 20:05, Market NSTEM, Period Nov 2020, Amount \$0.00, Status AEMO Assessment (in a pink pill), Due Date 07/10/2021, and Actions (with an upward arrow). Below the table, there is a form for the 'Reason for disagreement' with a placeholder text '<insert sufficient detail here as per 9.20.4>'. To the right of the form is a 'Supporting Documents' section with a button labeled 'Evidence.xlsx' and a download icon. Below this is a 'Submitted By' field with a text input area labeled 'User' and a dotted line for a signature. At the bottom of the dashboard, there are navigation arrows and a page number '1' in a blue box.

4. Formulation Changes

AEMO has produced a WEM Stand-alone Calculations formulation document to complement the existing WEM Metering, Settlements and Prudential Calculations formulation. The stand-alone calculations are required for AEMO to be compliant with the WEM Rules but are not required to be performed as part of the usual settlement processes.

This release has made changes to both formulations as described below.

AEMO will publish the WEM Stand-alone Calculations formulation on the [Market Website](#) once certification is complete.

4.1 Short Payment

A Payment Default occurs when a Market Participant fails to make a payment before it is due. In this situation AEMO may draw upon Credit Support to meet the payment [MR 9.24.1]. In the event that there is insufficient Credit Support to meet the payment, AEMO's liability is limited to the Total Amount of funds received [MR 9.24.3], and therefore some participants must be short-paid.

AEMO has formulated and implemented stand-alone calculations to determine the amount each participant is short-paid in relation to a Payment Default on an NSTEM Invoice for a specific Trading Month, or on a STEM Invoice for a specific Trading Week.

Refer to the WEM Stand-alone Calculations formulation for details.

The Short Payment variables are not available to participants through the WEM PaSS UI or APIs.

4.2 Civil Penalty Distribution

The Electricity Review Board (ERB) may provide AEMO with a notice of Civil Penalty amount to collect from a participant. Once collected, the Civil Penalty amount must be distributed amongst all Market Customers (for MR 6.6.3A) or all Market Participants (for MR 7A.2.19 and MR 7B.2.17) in proportion to their Market Fees calculated over the previous full 12 months.

AEMO has formulated and implemented stand-alone calculations to determine the amount each participant receives from the distributed Civil Penalty amount.

Refer to the WEM Stand-alone Calculations formulation for details.

The Civil Penalty distribution variables are not available to participants through the WEM PaSS UI or APIs.

4.3 Default Levy Adjustment

In accordance with clause 9.24.9(e) of the WEM Rules, AEMO must include a Default Levy adjustment in Non-STEM Settlement Statements for the re-allocation of any Default Levies raised during the most recently ended Financial Year.

AEMO has updated the WEM PaSS system to:

- Accept an input value for the Default Levy adjustment for each Rule Participant (DLA_P_M); and
- Include that input as a payment or charge on the relevant Non-STEM Settlement Statements and Invoices.

Refer to Sections 4.12 and 4.3.1 of the WEM Metering, Settlements and Prudential Calculations formulation for changes.

The Default Levy Adjustment variables are available to participants through their Statements and Invoices provided in the WEM PaSS UI and APIs.

5. Bugs and Improvements

AEMO has implemented the following minor improvements and bugs fixes that were identified in Production.

5.1 Incorrect values used for SOMS_F_I in MAX2_F_M calculation for some Trading Months

A bug was identified during the processing of a Non-STEM settlement run which presented SOMS_F_I values as zero for some Trading Intervals in the required calculation range for the MAX2_F_M calculations in Section 4.1.2 of the Formulation:

- The calculation engine imported all available SOMS_F_I values for each Non-Scheduled Generator, but then incorrectly truncated that set of SOMS_F_I values using the wrong Capacity Year.
- If the MAXStartYear_G_M and MAXStartMonth_G_M values entered into the system were in a different Capacity Year to the Trading Month being calculated, then this resulted in zeros being used for SOMS_F_I in the previous Capacity Year(s).

This bug was identified internally prior to publication of any Non-STEM settlement run in Production, and a manual workaround was established to ensure no incorrect values were used for settlement.

The fix ensures that SOMS_F_I values are correctly imported for the entire required calculation range for the MAX2_F_M calculation. e.g. If MAXStartYear_G_M = 2019 and MAXStartMonth_G_M = 9 (i.e. CY 2018/19), and the NSTEM settlement run is for May 2020 (i.e. CY 2019/20), then SOMS_F_I is present for all Trading Intervals from 1 October 2019 to 30 May 2020.

5.2 Rounding difference between Settlements tab and Invoice totals

A bug was identified that resulted in the dollar value displayed on the Settlements tab in the WEM PaSS UI being slightly different to the Total Amount on the respective Invoice.

This bug displayed incorrect data in the user interface only. The actual variables and data provided in the Settlement Statement Summary, Settlement Statement Detail, and Invoices was correct.

At the point when the dollar value was generated to display on the Settlement tab, the respective Invoices were not yet published, so the WEM PaSS system was required to aggregate and sum the variables from the settlement run to determine the total amount payable. This logic was performed again when the settlement data was requested by the SPARTA system to publish the Invoices.

AEMO identified that the rounding logic used for these two processes was slightly different, leading to the display differing from the correct data.

The fix ensures that the logic used to display the total amount payable on the Settlements tab is the same as the logic used to generate the Total Amount for the Invoices (i.e. aggregate, round, delta).

Participants are reminded to ensure that trades are entered in Austraclear in line with the amounts shown on their Invoices.

6. Internal AEMO Changes

To support the changes introduced by this WEM PaSS release, the following applications have also been updated but will not be visible to Participants:

- RCM Operations improvements to support future decommissioning of the RCM Settlements functionality.
- Hangfire changes to scheduled jobs that perform specified data imports and calculations.
- SPARTA changes to allow AEMO to import updated Invoice data from WEM PaSS, manage prepayment workflow, manage uncollected payables, and publish the associated Settlement Invoices.
- MOSMI improvements to provide alerts and notifications for monitoring.