MRI-Settlements User Guide

Market Results Interface - Settlements User Guide

Version 1.4
2 March 2023
**Disclaimer**

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**Version**

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>09/18/2012</td>
<td>Initial Version</td>
</tr>
<tr>
<td>1.1</td>
<td>05/05/2018</td>
<td>New Functionality, Statement and Invoice Publication Status</td>
</tr>
<tr>
<td>1.2</td>
<td>06/01/2018</td>
<td>Settlement Performance Project, Splitting of CAISO bd files by EIM/BAA.</td>
</tr>
<tr>
<td>1.3</td>
<td>10/21/2019</td>
<td>RC Functionality</td>
</tr>
<tr>
<td>1.4</td>
<td>03/02/2023</td>
<td>Updated browser info</td>
</tr>
</tbody>
</table>
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Overview

The purpose of this user guide is to provide the Scheduling Coordinators (SC) of the California Independent System Operator (CAISO) an overview of the new application called Market Results Interface (MRI) – Settlements. This application will replace the existing Business Associate Portal Interface (BAPI) which is used by SCs to search, select and download Settlement files.

Who Should Read This Guide

The intended audience for this user guide is the Schedule Coordinators registered with the CAISO.

Why This Guide is Important

This Guide is important to prepare the SCs to use the MRI-Settlements application for the market simulation of Fall Release 2012. This will also help the SCs when the application is deployed in production in November 2012.

Objectives

User will be able to:

- Access and view standard Settlement files
- Navigate, search, and download desired Settlement files

Prerequisites

- General understanding of Settlements concepts
References

- BPM for Settlements and Billing
- Settlements Interface Specification
- Portal User Guide

Version

This version 1.0 of the document is based on Fall Release 2012 Market Simulation.
Section 1

Portal
Portal

Objectives
This section includes information on how to access the Market Results Interface (MRI) – Settlements via the CAISO Portal. By the end of this section you should know how to:

• Log-in to the CAISO Portal
• Open MRI-Settlements via the Portal

Overview
The portal allows access to Market Applications along with CAISO reports. Additionally, industry related news and links will be available through the portal. For detailed information on the Portal see the Portal User Guide.

Benefits
The implementation of the Portal provides:

• A single location to access CAISO Market Applications
• A common look and feel across the CAISO Market Applications
• A single digital certificated (per user) for all CAISO Market Applications

Accessing the Portal
All Market Participants will be given access to the Portal. Individual users will be issued a digital certificate, which can be used to access the Portal as well as all market applications. The URL (web address) for the Portal will be distributed with your digital certificate.

For more information on requesting a digital certificate email certrequest@caiso.com or go to http://www.caiso.com/pubinfo/info-security/certs/index.html

For Market Simulation, Participants should have requested and received their digital certificates for Market Simulation testing. For more information, refer to the Market Simulation Guidebook.
The following step-action table and screen shots will demonstrate how to access the Portal:

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>RESULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In the Chrome or Edge Address field, type <a href="https://portalmap.caiso.com/">https://portalmap.caiso.com/</a> and press enter</td>
<td>Client Authentication window will appear</td>
</tr>
<tr>
<td>2</td>
<td>Select the proper Digital Certificate (The Digital Certificate will be the first and last name of the person that requested it.)</td>
<td>Certificate will be highlighted</td>
</tr>
<tr>
<td>3</td>
<td>Click OK button</td>
<td>The Portal home page is displayed</td>
</tr>
</tbody>
</table>

![Windows Security Dialog](image)
The figure below is an example of the Portal home page:

Accessing MRI-Settlements via Portal – CAISO Market Participants

Once logged into the Portal, the next step is to access the MRI-Settlements page of the Portal.
### MRI-Settlements User Guide

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>RESULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Click on “Market Results Interface-Settlements” on the Portal</td>
<td>Market Results Interface – Settlements page will open in new window</td>
</tr>
</tbody>
</table>

Following is an example of the Portal home page:
An example of the MRI-Settlements page is shown in the following figure:
MRI-Settlements User Guide

Accessing MRI-Settlements via RC West Portal – RC Customers

Once logged into the Portal, the next step is to access the MRI-Settlements page of the Portal.

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>RESULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Click on “Apps” tab on the Portal</td>
<td>Drop down options will appear for different environments</td>
</tr>
<tr>
<td>2</td>
<td>Click on “MAP Stage”</td>
<td>Drop down options will appear to the right of the arrow</td>
</tr>
<tr>
<td>3</td>
<td>Click on “Market Results Interface – Settlements (MRI-S)”</td>
<td>Market Results Interface – Settlements page will open in new window</td>
</tr>
</tbody>
</table>

Following is an example of the Portal home page:
An example of the MRI-Settlements page is shown in the following figure:
Submitting Net Energy Load/Net Generation Volumes in MRI-S

RC Entities are responsible for NEL/NG* yearly volume data during MAP-Stage Data Validation and Production.

- Direct bill TOPs with no NEL/NG are required to enter zero(s) for their volume submission.

- Value should be in Total MWh (granularity can be up to 8 decimal places; Single value for the entire year, using the previous year volume data. (i.e. For the billing period 2020, please use 2018 data submitted by September 30th, 2019.)

*Net Energy for Load (NEL) – Net Balancing Authority Area generation, plus energy received from other Balancing Authority Areas, less energy delivered to Balancing Authority Areas through interchange. It includes Balancing Authority Areas losses but excludes energy required for storage at energy storage facilities. Net Energy for Load equals NERC/WECC Metered Demand for the CAISO Balancing Authority Area.

*Net Generation (NG) – Net power available from a Generating Facility to be fed into the power system at the high side of the Generating Facility transformer(s). Net generation is equal to gross generation minus the generator’s internal power usage (station service).
### 1. Upload Annual NEL/NG* volumes in MWh (in MRI-S, using XML File)

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>RESULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Log into Portal: <a href="https://portal.caiso.com/settlements/logon.do">https://portal.caiso.com/settlements/logon.do</a></td>
<td>MRI-S Portal Home Page</td>
</tr>
<tr>
<td>2</td>
<td>Click on “Net Energy Data” tab</td>
<td>Net Energy Data page</td>
</tr>
<tr>
<td>3</td>
<td>Click on “Upload File”</td>
<td>New “Upload Net Energy Data File” window will open.</td>
</tr>
<tr>
<td>4</td>
<td>Click “Browse”</td>
<td>New Windows Browser screen will appear.</td>
</tr>
<tr>
<td>5</td>
<td>Navigate to the file you wish to upload. Click “Open.”</td>
<td>The “Upload Net Energy Data File” window will reappear containing the XML File to upload.</td>
</tr>
<tr>
<td>6</td>
<td>Click “Upload”</td>
<td>XML File will be uploaded to the Net Energy Data tab.</td>
</tr>
<tr>
<td>7</td>
<td>Confirm NEL data submission successful</td>
<td>Confirmation of submission successful. If error occurs, contact Service Desk.</td>
</tr>
</tbody>
</table>
**Step 1:** Navigate MRI-Settlements Portal Home Page (If you are Market and RC customer, you will see Settlements tab for market invoices and Reliability Coordination tab for RC invoices)

**Step 2:** Click on "Net Energy Data" tab
Step 3: Click on “Upload File”

*Net Energy Data*

<table>
<thead>
<tr>
<th>ENTITY</th>
<th>Entity Name</th>
<th>Net Energy Zone</th>
<th>Start Date</th>
<th>End Date</th>
<th>MW Value Submission Id</th>
<th>MW Value Submission Id</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

No Data found

Step 4: Click on “Browse”

Upload Net Energy Data File

Please select Net Energy Data file and click Upload:

[Browse]

Upload File

Net Energy Data

<table>
<thead>
<tr>
<th>ENTITY</th>
<th>Entity Name</th>
<th>Net Energy Zone</th>
<th>Start Date</th>
<th>End Date</th>
<th>MW Value Submission Id</th>
<th>MW Value Submission Id</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

No Data found
Step 5: Navigate to file to upload. Click “Open”

Step 6: Click on “Upload”
Step 7: Confirm successful submission. (If error occurs and it cannot be fixed and resubmitted, contact Service Desk.)
Submit Annual NEL/NG* volumes in MWh (in MRI-S, using UI)

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>RESULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Log into Portal: <a href="https://portal.caiso.com/settlements/logon.do">https://portal.caiso.com/settlements/logon.do</a></td>
<td>MRI-S Portal Home Page</td>
</tr>
<tr>
<td>2</td>
<td>Click on “Net Energy Data” tab</td>
<td>Net Energy Data page</td>
</tr>
<tr>
<td>3</td>
<td>Select Net Energy Zone</td>
<td>Selected Net Energy zone will be displayed</td>
</tr>
<tr>
<td>4</td>
<td>Select Trade Period (Defaulted to current billing period)</td>
<td>Trade date will be displayed</td>
</tr>
<tr>
<td>5</td>
<td>Enter the billing volume</td>
<td>Billing Volume will be displayed</td>
</tr>
<tr>
<td>6</td>
<td>Review the information and Click “Submit”</td>
<td>Volume data will be submitted</td>
</tr>
<tr>
<td>7</td>
<td>Confirm NEL data submission successful</td>
<td>Confirmation of submission successful. If error occurs, contact Service Desk.</td>
</tr>
</tbody>
</table>
2. Download RC Informational Statement, Settlement Statements and Invoices

<table>
<thead>
<tr>
<th>STEP</th>
<th>ACTION</th>
<th>RESULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Click on “RC/HANA Statements” tab</td>
<td>RC/HANA Statements page</td>
</tr>
</tbody>
</table>
| 3    | Navigate to “File Type” field: Select one of the following options from the drop down menu:  
  - Business Associate (BA) Bill Determinants  
  - Configuration Output Files  
  - Invoices  
  - Settlement Statements  
  - CAISO Bill Determinants | Leave field as default (“ALL”) to display all available files.  
For more narrowed search, select File Type and further drop down options in other fields will become available. |
| 4    | Navigate to “Entity” field (optional) | Leave field as default (“ALL”) to display all available files. |
| 5    | Navigate to “Run Type” field: (if applicable) Select one of the following options from the drop down menu:  
  **BA Bill Determinants/Settlement Statements options:**  
  - RC Services Informational  
  - RC Services Initial  
  - RC Services Recalc  
  - HANA Initial  
  **Invoice options:**  
  - RC Services Invoices  
  - HANA Invoices | Leave field as default (“ALL”) to display all available files or make a selection from the drop down for a more narrowed search. |
<p>| 6    | Navigate to “Trade Date” field (optional) (optional) – clear out default dates | Clear out default dates. |
| 7    | Navigate to “Post Date From:” and “Post Date To:” fields (optional) | Clear out default dates |</p>
<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
<th>Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Navigate to “Version” field (optional) select “ALL” to display all available.</td>
<td>Leave as default (“ALL”) to display all available versions.</td>
</tr>
<tr>
<td>9</td>
<td>Click “Apply”</td>
<td>Display of available files based on your selections will appear.</td>
</tr>
<tr>
<td>10</td>
<td>Select the entity to generate downloadable files</td>
<td>File formats available for download vary based on entity selected.</td>
</tr>
<tr>
<td>11</td>
<td>Click on the “Download” buttons to open file(s)</td>
<td>File will be downloadable in Zip format. Files need to unzip before viewed.</td>
</tr>
</tbody>
</table>

**Step 1:** Login to MRI-Settlements home page

Step 2: Click on “RC/HANA Statements” tab

---

**Net Energy Data**

- ENTITY (All)
- Current
- Previous
- Net Energy Zone (All)
- Start Date
- End Date
- MW Value Submission Id
- MW Value Submission Id

**RC/HANA Statements**

<table>
<thead>
<tr>
<th>Trade Date</th>
<th>Post Date From</th>
<th>Post Date To</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>01/01/2019</td>
<td>07/01/2019</td>
<td>07/01/2019</td>
<td>3</td>
</tr>
<tr>
<td>01/01/2019</td>
<td>07/01/2019</td>
<td>07/01/2019</td>
<td>3</td>
</tr>
<tr>
<td>01/01/2019</td>
<td>07/01/2019</td>
<td>07/01/2019</td>
<td>3</td>
</tr>
<tr>
<td>01/01/2019</td>
<td>07/01/2019</td>
<td>07/01/2019</td>
<td>3</td>
</tr>
<tr>
<td>01/01/2019</td>
<td>07/01/2019</td>
<td>07/01/2019</td>
<td>3</td>
</tr>
</tbody>
</table>
Step 3: Navigate to “File Type” field – leave as default or select desired File Type

Step 4: Navigate to “Entity” field (optional) – leave as default or select desired Entity

Step 5: Navigate to “Run Type” field (if applicable) – leave as default or select desired Run Type.

Step 6: Navigate to “Trade Date” field (optional)

Step 7: Navigate to “Post Date From:” and “Post Date To:” fields – clear out default values if you need to filter for different dates.
Step 8: Navigate to “Version” field (optional)

Step 9: Click “Apply”

Step 10: Select the entity to generate downloadable files

Step 11: Click on the “Download” buttons to open file(s)
Section 2
Market Results Interface - Settlements
Market Results Interface (MRI) - Settlements

Objectives

This section includes information on how to access and download Settlements files using the Market Results Interface (MRI) – Settlements. After reading this section, you should be able to:

- Locate Settlements files
- Search for Settlements files
- Download the files in the following formats, as applicable: XML, CSV, PDF

Overview

Scheduling Coordinators will be able to access their Settlements files using the MRISettlements. This interface includes all Settlements related files, including Statements, Bill Determinants (BD), Invoices, Configuration Output file etc. The files that are accessible are results of running the Settlements calculations. This Interface allows Scheduling Coordinators to retrieve read only files containing Settlements data related to market transactions specific to their resources.

Important to Note

As the information contained within the reports is proprietary, SCs will only be authorized to access their own files.
The various Settlements files that **CAN** be found in the MRI-Settlements include:

- Daily Settlement Statement files for all Settlement Run Types
- Monthly Settlement Statement files for all Settlement Run Types
- Daily SC specific Bill Determinants (BD) files for all Settlement Run Types
- Monthly SC specific Bill Determinants (BD) files for all Settlement Run Types
- Daily CAISO Bill Determinants (BD) files for all Settlement Run Types
- Monthly CAISO Bill Determinants (BD) files for all Settlement Run Types
- Invoice files
- Configuration Output files

The various Settlements files and their descriptions can be found in the Settlements Interface Specification document at [http://www.caiso.com/market/Pages/Settlements/Default.aspx](http://www.caiso.com/market/Pages/Settlements/Default.aspx)
Interface Features

The following illustration shows an example of a screen that an end-user will see online, and further discusses the major parts of the interface.
Search Parameters

This section contains a set of parameters available for user interaction, to provide an opportunity to limit the output of a report. For example, if a user would like to see the files specific to a trade date, then the specific trade date can be entered in the Trade Date field.

File Type

This parameter is used to narrow down the search based on the file types. The file types available are:

- Business Associate Bill Determinants
- CAISO Bill Determinants
- Configuration Output Files
- Invoices
- Settlements Statements

SCID

All the SCIDs that are provisioned in the digital certificate of a user are available in the drop down list for the user to narrow the search based on SC ID.

Run Type
This input parameter allows the user to search for specific run types. The full list of run types and their details are available in the Settlements Interface Specification document.

Trade Date
The user is able to search for files specific to a Settlement trade date. The user is able to type in the trade date or select from a calendar.

The format for typing in the trade date is mm/dd/yyyy. Clicking on the Calendar icon to the right of the field will cause a calendar to open in a different window from which the user can select the date.

Post Date
The user is able to search for files specific to a Settlement files Posting Date. The posting date for Settlement files are aligned with the CAISO payment calendar posted on the CAISO website. The Configuration Output files are posted when a change in configuration rules are made during the deployment of Settlements releases. The posting of the configuration output file is communicated with the SCs during the new release process. The user is able to type in the post date or select from a calendar.
The format for typing in the post date is mm/dd/yyyy. Clicking on the Calendar icon to the right of the field will cause a calendar to open in a different window from which the user can select the date.

Version
The user can select a specific version of the Settlement file to download. The various versions of the Settlements files are described in the Settlements Interface Specification document. The icon to the right of this field allows for multiple versions to be selected.

Apply & Reset
The Apply button will cause the interface to accept all the filter conditions selected by the user and process the output. The Reset button will clear the user selections thereby allowing the user to input a new set of filter conditions or clear the filter conditions to see all available files.

Toolbar

The toolbar contains a set of controls available.
Download Buttons
These buttons enable the user to download the Settlement files in any of the three formats: XML, CSV or PDF. The three buttons are disabled till the user selects the files to be downloaded.

![Download Buttons](image)

MRI provides the user with three columns specifying the format in which the files are available. These formats are made available based on the requests submitted by the SCs. Depending on the format that is available, the CSV, PDF and/or XML columns are checked.

When the user selects files in multiple formats, all buttons for those formats become active. For example, if a user selects a file in XML and another in CSV
format, both the "Download XML" and "Download CSV" buttons become active as seen below.

---

Other Controls

The Hide button allows the user to hide the output panel.

Restore Sort button allows the user to remove any column sorts that have been previously set by the user by clicking on specific column headers.

Inline Filter button allows the user to have a way to filter the results even further based on the results of the main filtering.

Paging Controls

Enables the user to page through the output sequentially, go to the first or last page, or go to a specific page.
### Search Results

This section contains details on results generated by running the search parameters.

The following is a screen shot of the header column of the results set.

<table>
<thead>
<tr>
<th>Select</th>
<th>File Type</th>
<th>Run Type</th>
<th>XML</th>
<th>CSV</th>
<th>PDF</th>
<th>SCID</th>
<th>Name</th>
<th>Trade Date</th>
<th>Post Date</th>
<th>Version</th>
<th>Run Number</th>
</tr>
</thead>
</table>

The following are the column headers available:

- Select
- File Type
- Run Type
- XML
- CSV
- PDF
- SCID
- Name
- Trade Date
- Post Date
- Version
- Run Number

Any of these columns can be collapsed or expanded using the ▼ ▶ buttons.

Clicking on any of the column headers will result in the results to be sorted based on that column. The first click will result in the column to be sorted in ascending order and the second click will result in the column to be sorted in descending order.
Download Features

When the user selects a file or multiple files and selects the appropriate Download button for the format that is desired, a ZIP file is created as seen below.

The file name will always have the naming convention as <CertificateID>- CAISO_DATA-YYYYMMDDHH24MISSFFF.zip
The timestamp at the end of the file name represents the timestamp to the millisecond level when the request for the file was made.

The user can either Save or Open the ZIP file. Upon opening the ZIP file, the user can extract the individual file(s) requested.
The CAISO bill determinants file is split into multiple files for file size manageability. There will be a separate bill determinants file for each BAA. The CAISO BAA file retains the original name format (“CISO-DETERMINANTS-RunNumber-SettlementType-Version-Status-TradeDate”), while the EIM BAA files reflect the corresponding EIM IDs in the file name (“CISO_EIMIDDETERMINANTS-RunNumber-SettlementType-Version-Status-TradeDate”).
New Menu Item “Publication Status” is added in the Market Results Interface – Settlements. The filtering of the data is through File Type, SCID, Run Type, Version, Trade date and posting date from/to.

The “Publication Status” Interface.

Trade date
Run Type
Run Number
Status: Published, Delayed or Withdrawn

Version
Planned Post Date: Planned post date based on CAISO payment calendar Actual Post Date: Will differ from Planned Post Date if delayed.
Published Dispute Timeline. Dispute timeline based on the CAISO payment calendar. Updated Dispute Timeline. Will differ from Published Dispute Timeline if delayed.
Comments.