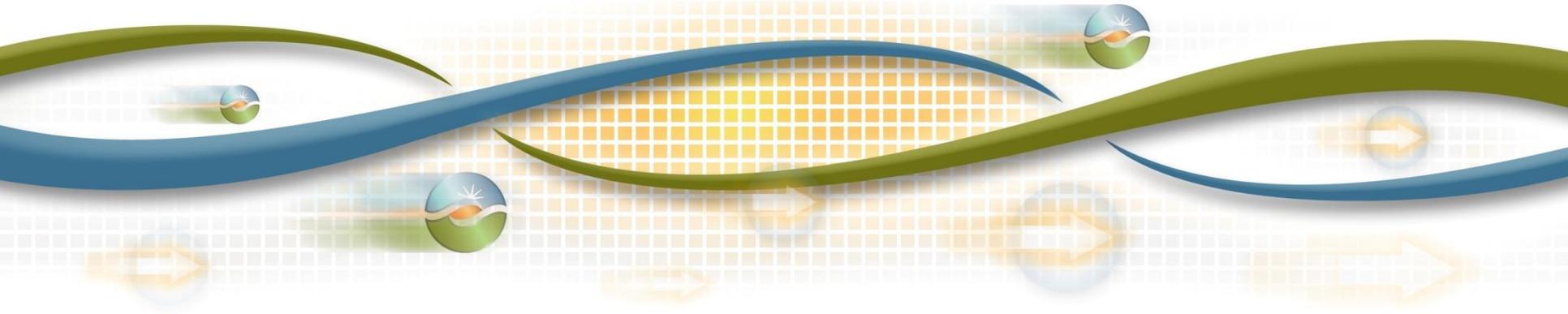




# Market Results Interface – Settlements User Interface 2017 Metering Enhancements

Heidi Carder  
Client Trainer



# Agenda

- Objective
- Terms and acronyms
- Market Results Interface – Settlements (MRI-S)
  - User access/roles
  - Enhanced Functionality
- Review of settlements timelines

# Objective

Given an overview of the Market Results Interface – Settlements User Interface (MRI-S UI) metering enhancements, be able to:

- Describe user roles and how to provision for them
- Submit, view and export Settlement Quality Meter Data (SQMD)
- Identify MRI-S UI enhancements
- Adhere to settlements timelines

# Terms and Acronyms

# Terms & Acronyms

Acronym	Description
<b>AIM</b>	<b>Access and Identity Management</b>
<b>API</b>	<b>Application Programming Interface</b>
Authorized ACL Group	The Authorized ACL Group section displays a list of the Access Control List/Level (ACL) groups that isolate and grant access to a single asset (or group of assets). <i>This group only has read only access.</i>
<b>CIM</b>	<b>Common Information Model</b>
<b>CMA</b>	<b>Common Multiple Application</b>
<b>CSV</b>	<b>Comma Separated Value</b>
<b>ECN</b>	<b>Electronic Communication Network</b>
<b>Flowgate</b>	<b>Any schedule flow between two substations. In the metering space, an intertie and/or citigate is referred to as a flow gate. Physical path between BA(s) (i.e. Intertie)</b>
<b>FTP</b>	<b>File Transfer Protocol</b>
<b>GMT</b>	<b>Greenwich Mean Time</b>
<b>ISOME</b>	<b>ISO Metered Entity</b>

In the MRI-S application, flowgate is synonymous with intertie

# Terms & Acronyms

Acronym	Description
LDAP	Lightweight Directory Access Protocol
MDEF	Meter Data Exchange Format
<b>MPP</b>	<b>Market Participant Portal</b>
mRID	<b>Market Resource. Resource ID as defined in the CAISO Master File.</b>
<b>MRI-S</b>	<b>Market Results Interface - Settlements</b>
NMS	New Metering Solution
OMAR	Operational Meter Analysis and Reporting
<b>PDT</b>	<b>Pacific Daylight Time</b>
<b>PPT</b>	<b>Pacific Prevailing Time</b>
<b>PST</b>	<b>Pacific Standard Time</b>
RQMD	Revenue Quality Meter Data
<b>SC</b>	<b>Scheduling Coordinator</b>
<b>SCID</b>	<b>Scheduling Coordinator ID</b>

# Terms & Acronyms

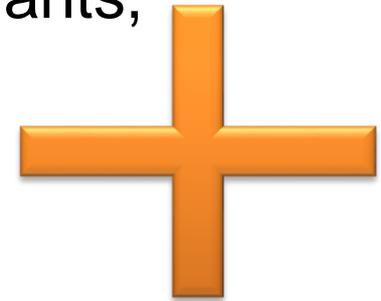
Acronym	Description
SCME	Scheduling Coordinator Metered Entity
SQMD	<b>Settlement Quality Meter Data</b>
UAA	<b>User Access Administrator. This terminology replaces the term Point of Contact (POC) to better reflect the role of the person responsible for administering the user access for their organization. The UAA will have to sign the UAA agreement through DocuSign. The agreement is sent to the signer and to the UAA Requests mailbox at UAARequests@caiso.com.</b>
UI	<b>User Interface</b>
XML	<b>Extensible Markup Language</b>
XSD	XML Schema Definition

# Market Results Interface – Settlements User Interface (MRI-S UI) ... what is it?

# MRI-S purpose

## MRI-S for Settlements

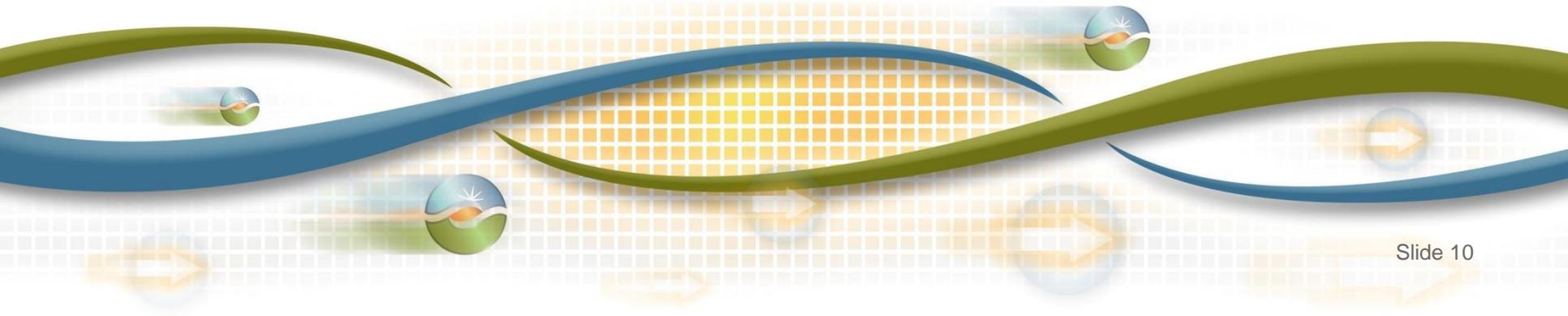
- Web-based application that allows users to locate and export settlement files, such as bill determinants, invoices and configuration output



## MRI-S for Metering

- Enhancement to this web-based application that allows users to upload, filter, view and export settlement quality meter data (SQMD)
  - Meter data screens in MRI-S used for settlements purposes according to the settlements timeline

# What has changed?



# Change reminder - 2016 Fall Release

- ✓ Two user roles
- ✓ Utilize CMA certificate – separate certificate is not required
- ✓ Two screens – Meter Data and Batch Status
- ✓ Versioning
- ✓ Timeline: no longer submitting late meter data forms
- ✓ Error codes
- ✓ Submission methodologies
  - ✓ API vs UI
  - ✓ FTP – no longer being used (replaced by API)
- ✓ Submission formats
  - ✓ GMT instead of PPT (PPT = PDT/PST)
  - ✓ CSV or XML
  - ✓ mRID vs. MSID

# Current enhancements - 2017 Independent Release

- Updated Acceptable Use Policy
  - Max meter data submission 10MB → 15MB uncompressed
  - Max meter data retrieval from 100,000 records to 200,000
- Two new columns to specify Interval End Time
  - GMT & PPT times
- Additional filtering capability:
  - Interval Length, Unit of Measurement, etc.
- Settlement Data displayed on separate grid
- SCID/ACL group specified for the 'receive request' ensured to be provisioned to the user
- Batch status sequence updates
  - Pending, Warning, Error, Success

# Manage User Authentication and Authorization & Application Configuration

# Application Access

- Users must be provisioned for access to Market Participant Portal page in order to participate in market simulation



Market Applications

[Market Participant Portal  
CAISO.com](https://portal.aiso.com)

## Application Access

 **AIM** Access and Identity Management

## Inquiries & Disputes

 **CIDI** Customer Inquiry Dispute and Information

## Market & Operations

 **CMRI** Customer Market Results Interface

 **CRR** Congestion Revenue Rights

 **SIBR** Scheduling Infrastructure & Business Rules

 **SIBR Reports** Scheduling Infrastructure & Business Rules Reports

## Metering

 **OMAR** Operational Meter Analysis & Reporting

## OASIS

 **OASIS** Open Access Same-Time Information System

## Outage Coordination

 **OMS** Outage Management System

 **SLIC** Scheduling & Logging for ISO of California

## Reliability Requirements

 **CIRA** Customer Interface for Resource Adequacy

 **RAAM** Resource Adequacy Availability Management

## Renewables & Demand Response

 **DRS** Demand Response System

 **DRRS** Demand Response Registration System

 **PIRP** Participating Intermittent Resource Program

## Settlements

 **MRI-S** Market Results Interface - Settlements

## Systems & Resource Modeling

 **TR** Transmission Registry

 **Master File**

 **RIMS** Resource Interconnection Management System

 **RIMSG** Resource Interconnection Management System - Generation

<https://portal.aiso.com>

 Information available

 Limited availability

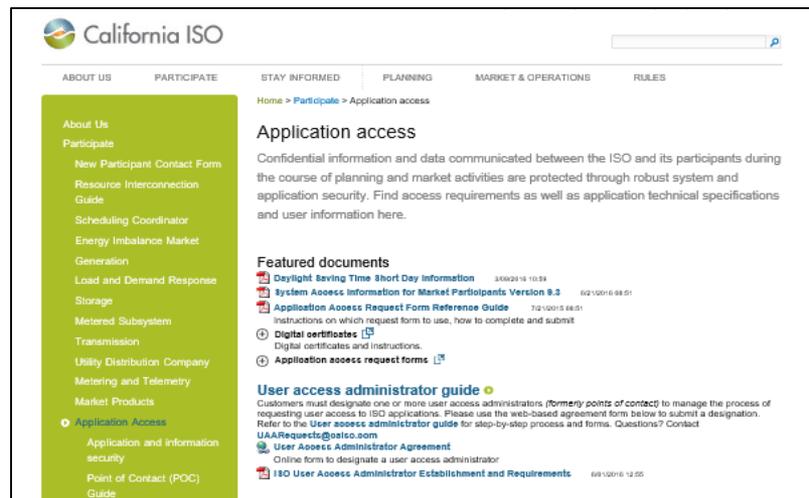
 Scheduled maintenance or outage

 Unscheduled Outage

# Request authorization for access

- Request application access from designated User Access Administrator (UAA)

<http://www.caiso.com/participate/Pages/ApplicationAccess/Default.aspx>



California ISO

ABOUT US PARTICIPATE STAY INFORMED PLANNING MARKET & OPERATIONS RULES

Home > Participate > Application access

## Application access

Confidential information and data communicated between the ISO and its participants during the course of planning and market activities are protected through robust system and application security. Find access requirements as well as application technical specifications and user information here.

### Featured documents

- [Daylight Saving Time Short Day Information](#) 3/30/2016 10:58
- [System Access Information for Market Participants Version 8.3](#) 6/21/2016 8:51
- [Application Access Request Form Reference Guide](#) 7/21/2015 8:51
- [Digital certificates](#)
- [Application access request forms](#)

### User access administrator guide

Customers must designate one or more user access administrators (formerly points of contact) to manage the process of requesting user access to ISO applications. Please use the web-based agreement form below to submit a designation. Refer to the [User access administrator guide](#) for step-by-step process and forms. Questions? Contact [UAARequests@caiso.com](mailto:UAARequests@caiso.com)

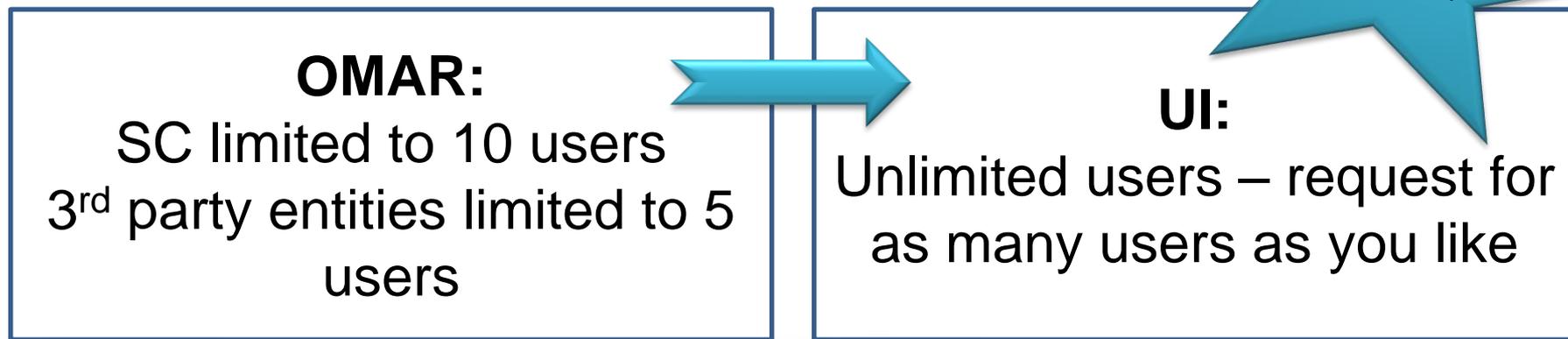
- [User Access Administrator Agreement](#)
- [ISO User Access Administrator Establishment and Requirements](#) 6/9/2016 12:25

- Access to MRI-S is managed using the Access and Identity Management (AIM) application*

# Digital Certificates – Common Multiple Application (CMA)

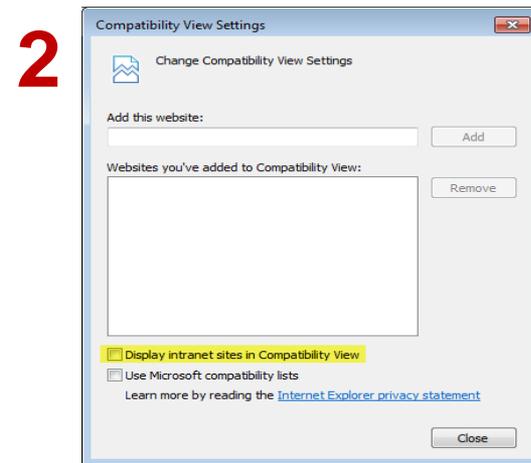
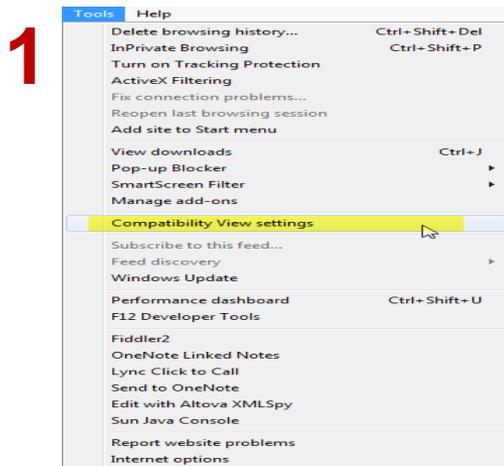
- Before the MRI-S UI application can be displayed, user is required to select the respective CMA digital certificate for authentication.
- Does the user already have a CMA certificate?
  - **Yes** – user does not need to request access to MPP
  - **No** – UAA requests access for MPP & MRI-S  
(refer to AIM User Guide & AIM training on ISO website)

OMAR certificates are not transferable to MRI-S

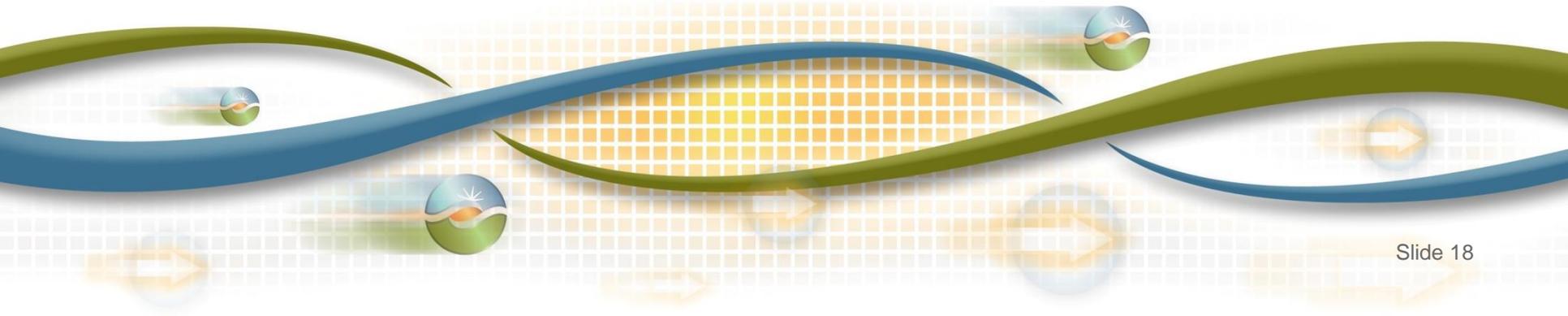


# Manage application configuration

- Internet Explorer 11 (IE11) is recommended for support purposes
- Check compatibility to ensure successful uploads:
  - Tools → Compatibility View settings → Uncheck Display internet sites in Compatibility View box → Close → Re-open application



# User Roles



## Manage user roles

- Two user roles:
  - Meter Write
  - Meter Read
- Two screens:
  - Meter Data
  - Batch Status



# User Roles in MRI-S

View is dependent upon user role

California ISO | Market Results Interface - Settlements

---

Settlements    Meter Data

Statements

← Settlements +  
Meter Data  
access

California ISO | Market Results Interface - Settlements

---

Meter Data    Batch Status

← Meter\_Write  
access

California ISO | Market Results Interface - Settlements

---

Meter Data

← Meter\_Read  
access

# Manage user roles

## Meter Data

- View, filter and export page contents from grid views\*
  - Meter Data & Settlement Data
- Use Manage User Filters functionality

## Batch Status

- Upload file, view sort and filter Batch IDs
- Export content from Batch ID(s) & Batch Error from grid views
- Upload batch files via API or UI

Meter\_Read users **cannot** see this screen

\*Meter Read users will not be able to export meter data from the grid view & will not be able to see batch status information screen

# Two screens

California ISO Market Results Interface - Settlements

Meter Data Batch Status

Date From: 03/14/2017 To: 03/14/2017 SCID/ACL Group: [ALL] Resource: [ALL] UOM: MWH Interval Length: [ALL] Apply Reset

Measurement Type: [ALL] Resource Type: [ALL] User Filter: [ALL] User Filter Resource: [ALL] Update Since DateTime: [ ]

Manage User Filters

Meter Data Settlement Data

Rows 25

Trade Date	Interval End Time GMT	Interval End Time PPT	Interval Length	Interval ID	Resource ID	SCID	Measurement Type	Resource type	Value	Quality	Batch Id	Value	Quality	Batch Id
No Data found														

Note: Settlement data is populated only when meter interval length is specified as 5 minutes.

## Select the tab to access screens

- Defaults to Meter Data screen if you only have Meter Data and Batch Status screens

# Managing Meter Data

Meter Data Screen

# Two screens – Meter Data

Refer to MRI-S Metering User's Guide for more information on functionality

## Meter Data

- Filter data
- Retrieve SQMD (includes versioning)
  - Export page contents
  - Manage User Filters

# Versioning

Meter Data Batch Status

Date From: 03/14/2017 To: 03/14/2017 SCID/ACL Group: [ALL] Resource: [ALL] UOM: MWH Interval Length: [ALL] Apply Reset

Measurement Type: [ALL] Resource Type: [ALL] User Filter: [ALL] User Filter Resource: [ALL] Update Since DateTime: [ ]

Manage User Filters

Meter Data Settlement Data

Meter Data										Settlement Data		
Trade Date	Interval End Time GMT	Interval End Time PPT	Interval Length	Interval ID	Resource ID	SCID	Measurement Type	Resource type	Value Quality	Batch Id	Value Quality	Batch Id
No Data found												

Note: Settlement data is populated only when meter interval length is specified as 5 minutes.

Enhancement: MRI-S will maintain 2 versions for a given data set:

- Current (default if no version is specified)
- Previous
- **MRI-S WILL NOT maintain all versions**

Users can submit as many versions as they like until T+172B, however SC are subject to Rules of Conduct if data is submitted after T+48B

# Settlement Data grid

Meter Data Batch Status

Date From: 03/14/2017 To: 03/14/2017 SCID/ACL Group: [ALL] Resource: [ALL] UOM: MWH Interval Length: [ALL] Apply Reset  
Measurement Type: [ALL] Resource Type: [ALL] User Filter: [ALL] User Filter Resource: [ALL] UpdateSinceDateTime: [ ]

Manage User Filters

## Meter Data

Rows 25

Trade Date	Interval End Time GMT	Interval End Time PPT	Interval Length	Interval ID	Resource ID	SCID	Measurement Type	Resource type	Value	Quality	Batch Id	Value	Quality	Batch Id
No Data found														

**Settlement Data**

Trade Date Version Value Quality

Note: Settlement data is populated only when meter interval length is specified as 5 minutes.

## Enhancement:

This grid shall display the settlement values that were published according to the settlement timelines for the respective resource

# Settlement Data grid

Meter Data Batch Status

Date From: 03/14/2017 To: 03/14/2017 SCID/ACL Group: [ALL] Resource: [ALL] UOM: MWH Interval Length: [ALL] Apply Reset

Measurement Type: [ALL] Resource Type: [ALL] User Filter: [ALL] User Filter Resource: [ALL] Update Since DateTime: [ ]

Manage User Filters

Meter Data

Rows 25

Trade Date	Interval End Time GMT	Interval End Time PPT	Interval Length	Interval ID	Resource ID	SCID	Measurement Type	Resource type	Value	Quality	Batch Id	Value	Quality	Batch Id
No Data found														

Note: Settlement data is populated only when meter interval length is specified as 5 minutes.

Settlement Data

Trade Date Version Value Quality

Data will only be displayed if the following conditions are met:

- SQMD has already been published according to settlement timelines
- 5-minute Interval Length option is selected

# Settlement Data grid

Meter Data Batch Status

Date From: 03/14/2017 To: 03/14/2017 SCID/ACL Group: [ALL] Resource: [ALL] UOM: MWH Interval Length: [ALL] Apply Reset

Measurement Type: [ALL] Resource Type: [ALL] User Filter: [ALL] User Filter Resource: [ALL] Update Since DateTime: [ ]

Manage User Filters

### Meter Data

Rows 25

Trade Date	Interval End Time GMT	Interval End Time PPT	Interval Length	Interval ID	Resource ID	SCID	Measurement Type	Resource type	Value	Quality	Batch Id	Value	Quality	Batch Id
No Data found														

Note: Settlement data is populated only when meter interval length is specified as 5 minutes.

### Settlement Data

Trade	Version	Value	Quality
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

OK Cancel

## Settlement Data fields

- Trade Date – date of applicable settlement
- Version – file that was actually used for settlement
- Value – used for interval on the given trade date
- Quality – “A” for actual SQMD, “E” for estimated SQMD

# Meter data – manage user filters

Meter Data Batch Status

Date From: 03/14/2017 To: 03/14/2017 SCID/ACL Group: [ALL] Resource: [ALL] UOM: MWH Interval Length: [ALL] Apply Reset  
Measurement Type: [ALL] Resource Type: [ALL] User Filter: [ALL] User Filter Resource: [ALL] Update Since DateTime: [ ]

**Manage User Filters**

**Meter Data** Rows 25

Trade Date	Interval End Time GMT	Interval End Time PPT	Interval Length	Interval ID	Resource ID	SCID	Measurement Type	Resource type	Value	Quality	Batch Id	Value	Quality	Batch Id
No Data found														

**Settlement Data**  
Trade Date Version Value Quality

Note: Settlement data is populated only when meter interval length is specified as 5 minutes.

## Manage User Filters

- Click **Manage User Filters** button to create/edit
- Acts as a “favorites” for filtering meter data:
  - Accessible by creator only
  - Cannot delete a filter
  - Can edit an existing filter

# Meter data – manage user filters

Meter Data Batch Status

Date From: 03/14/2017 To: 03/14/2017 SCID/ACL Group: [ALL] Resource: [ALL] UOM: MWH Interval Length: [ALL] Apply Reset  
 Measurement Type: [ALL] Resource Type: [ALL] User Filter: [ALL] User Filter Resource: [ALL] Update Since DateTime:

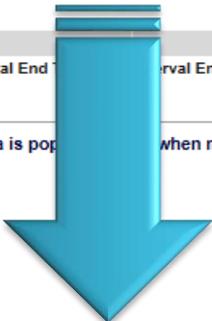
Manage User Filters

## Meter Data

Rows 25

Trade Date	Interval End	Interval End Time	PPT	Interval Length	Interval ID	Resource ID	SCID	Measurement Type	Resource type	Value	Quality	Batch Id	Value	Quality	Batch Id
No Data found															

Note: Settlement data is populated when meter interval length is specified as 5 minutes.



## Settlement Data

Trade Date	Version	Value	Quality
------------	---------	-------	---------

Meter Data Batch Status Administration

## User Filters

User Filter Name	Updated Date	Created By	Action
TST1	03/08/2017 18:59	HCARDER	Edit

## Selected Resources

Entity	Resource
TST1	ABC123_1_GEN

# Meter data – create and edit user filters

Click the Close button to save your updates

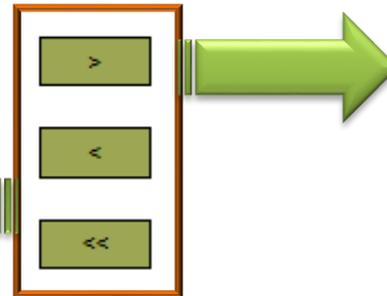
Close

## Available Resources

Entity	Resource	Resource Type
TST1		
TST1	ABC123_7_SY4	GEN

## Selected Resources

Entity	Resource
TST1	ABC123_1_GEN



Add or remove resources using the arrow buttons

Remember, you can only edit the User Filters you create, you cannot delete

# Managing Meter Data

Batch Status – **for those with Meter Write access only**

# Two screens – Batch Status

Refer to MRI-S Metering User's Guide for more information on functionality

Meter Data **Batch Status**

Batch ID  Batch Status [ALL] User ID  File Type [ALL] Apply Reset

Upload File

### Batch Status

1 25 of 6958

Batch ID	Status	User ID	File Type	File Name	Download	File Size	Created Date	Updated Date	Current Total	Marker	Time Elapsed (sec)
15571	SUCCESS	hcarder	CSV	Meter_Data_GEN 030817.csv		.296 KB	03/13/2017 09:47	03/13/2017 09:50	136	<	5MIN

## Batch Status

Batch ID: 15571

Rows 25

Error Code	Resource ID	Type	Measurement Type	Interval	End Date	Error Message	Created Date
No Data found							

- Filter batch data
  - Upload files
  - Export Batch IDs
  - View Batch ID errors

# Batch Status – upload SQMD

Meter Data Batch Status Administration

Batch ID  Batch Status [ALL] User ID TST1 File Type [ALL] Apply Reset

Upload File

## Batch Status

Rows 25

Time Elapsed (sec)

Batch ID	Status	User ID	File Type	File Name	Download	File Size	Created Date	Updated Date	Current Total	Marker
X No Data found										

## Batch Errors::

Rows 25

Error Code	Resource ID	Type	Measurement Type	Interval	End Date	Error Message	Created Date
X No Data found							

From the Batch Status screen, participants can upload meter data for a given trade date

# Submission methodology: API vs UI

- **API**
  - SQMD must be in an XML format
  - SQMD must be in GMT
  - Must contain the required header attributes
- **UI**
  - SQMD must be in XML or CSV\*
  - SQMD must be in GMT
  - Must contain the required header attributes
  - Can have the meter submitted in either MWh or kWh

Maximum acceptable attachment size **15MB** (uncompressed)  
Enhancement: increased from 10MB → 15MB

# Batch Status – upload meter data screen

Close

**Upload Meter Data File**

Select File  Browse...

File Name:

File Size:

User Id:

Batch Id:

Submit Cancel

# Batch Status – upload meter data screen

Close

**Upload Meter Data File**

Select File: \\myfiles\home\hcarder\profile\Desktop\Meter\_Data\_GEN 030817.csv Browse...

File Name: Meter\_Data\_GEN 030817.csv

File Size: 303

User Id: HCARDER

Batch Id: 15572

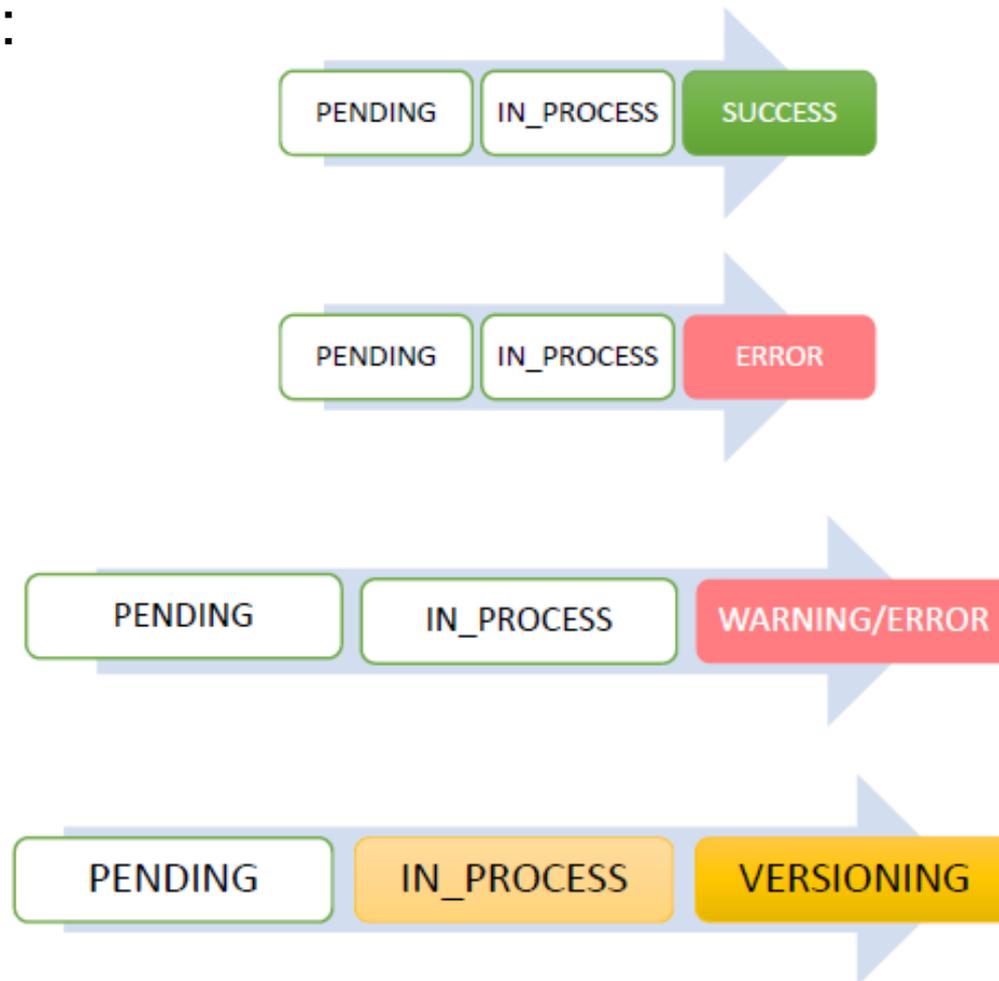
Submit Cancel

Once file is selected, fields auto populate

- Files can be uploaded using one of the following formats:
  - XML
  - CSV
- If the fields **do not** auto populate, check your file to resolve issues and resubmit
- Click the 'Close' button to complete the submission

# Batch submission status

Potential batch status sequences once you have uploaded your data:



# Upload status

Meter Data Batch Status

Batch ID  Batch Status [ALL] User ID  File Type [ALL] Apply Reset

Upload File

## Batch Status

1 - 25 of 6961

Batch ID	Status	User ID	File Type	File Name	Download	File Size	Created Date	Updated Date
15575	PENDING	hcarder	CSV	Meter_Data_GEN 030817.csv		.297 KB	03/14/2017 20:30	03/14/2017 20:30
15513	WARNING	hcarder	CSV	Meter_Data_15479.CSV		.301 KB	03/08/2017 15:21	03/08/2017 17:11
15530	ERROR	hcarder	CSV	030917 MeterData.csv		.272 KB	03/09/2017 16:03	03/09/2017 16:05
15571	SUCCESS	hcarder	CSV	Meter_Data_GEN 030817.csv		.296 KB	03/13/2017 09:47	03/13/2017 09:50

### PENDING

Status displayed while upload is processing

### WARNING

Alert that the Pmax value has been exceeded

### ERROR

Notice that there is a discrepancy in the data submitted

### SUCCESS

File has been submitted successfully

# Upload status

Meter Data **Batch Status**

Batch ID 
 Batch Status [ALL] ▼
 User ID 
 File Type [ALL] ▼
Apply
Reset

**Upload File**

## Batch Status



1 - 25 of 6961




Batch ID	Status	User ID	File Type	File Name	Download	File Size	Created Date	Updated Date
15575	PENDING	hcarder	CSV	Meter_Data_GEN 030817.csv		.297 KB	03/14/2017 20:30	03/14/2017 20:30
15513	WARNING	hcarder	CSV	Meter_Data_15479.CSV		.301 KB	03/08/2017 15:21	03/08/2017 17:11
15530	ERROR	hcarder	CSV	030917 MeterData.csv		.272 KB	03/09/2017 16:03	03/09/2017 16:05
15571	SUCCESS	hcarder	CSV	Meter_Data_GEN 030817.csv		.296 KB	03/13/2017 09:47	03/13/2017 09:50

**PENDING**  
 Status displayed while upload is processing

**WARNING**  
 Alert that the Pmax value has been exceeded

**ERROR**  
 Notice that there is a discrepancy in the data submitted

**SUCCESS**  
 File has been submitted successfully

It is highly recommended that once you have uploaded a file that you check back for status results. Dependent upon file size, this may take a few seconds or minutes. Ensuring that your data has been successfully uploaded can help alleviate risk of Rules of Conduct penalties due to inaccurate or missing data.

# Error Codes



California ISO

Market Results Interface - Settlements



Meter Data Batch Status

Batch ID  Batch Status  User ID  File Type

## Batch Status

1 - 25 of 6981

Batch ID	Status	User ID	File Type	File Name	Download	File Size	Created Date	Updated Date
15575	WARNING	hcarder	CSV	Meter_Data_GEN 030817.csv		.297 KB	03/14/2017 20:30	03/14/2017 20:35



## Batch ID: 15575

Error Code	Resource ID	Type	Measurement Type	Interval	End Date	Error Message	Created Date
1028	ABC123_1_GEN	GEN	GEN	03/04/2017	02:00	Meter value of X* MWh exceeds the PMAX of Y* MWh	03/14/2017 20:35

All error codes that are associated with the selected Batch ID will be displayed on the right

# Error Codes

The screenshot shows a table with columns: Error Code, Resource ID, Time, Measurement, Interval End Date, Error Message, Error Code Description, and Created Date. A dropdown menu is open over the table, listing various columns with checkboxes. The 'Error Code', 'Error Message', and 'Error Code Description' columns are highlighted with orange boxes. The table contains one row with the following data:

Error Code	Resource ID	Time	Measurement	Interval End Date	Error Message	Error Code Description	Created Date
1028	ABC			03/04/2017 02:00	Meter value of X* MWh exceeds the PMAX of Y* MWh	Meter value submitted for a resource is more than the registered PMAX in the master file. Note: This is a warning, and data will still be accepted	03/14/2017 20:35

The dropdown menu includes the following options:

- ID
- Batch ID
- Error Code
- Resource ID
- Resource Name
- Type
- Measurement Type
- Interval End Date
- Error Message
- Error Code Description
- System Error Description
- Created Date

Buttons: OK, Cancel

Select columns to view information about your error

**Error codes, messages** and **descriptions** can offer more detailed information to help you identify your file error so you can make necessary edits and then resubmit your file

# Exporting Data

Meter Data & Batch Status Screens

# Exporting meter data



California ISO

Market Results Interface

Meter Data Batch Status

Date From: 03/01/2017 To: 03/14/2017  
Measurement Type: [ALL] Resource Type: [ALL]

Manage User Filters

## Meter Data

Trade Date	Time GMT	Interval End Time	PPT	Interval Length	Int
03/04/2017	03/04/2017 02:00	03/04/2017 02:00	5	24	
03/04/2017	03/04/2017 02:05	03/04/2017 02:05	5		
03/04/2017	03/04/2017 02:10	03/04/2017 02:10	5		
03/04/2017	03/04/2017 02:15	03/04/2017 02:15	5		

EXPORT ALL  
Exports all data associated with the selected resource/batch ID

EXPORT PAGE  
Exports all data associated with the selected resource/batch ID

EXPORT WIZARD  
Export either grid or all associated data based on filter options

# Export data– Export Wizard

The screenshot shows the California ISO Market Results Interface - Settlements. At the top, there are tabs for "Meter Data" and "Batch Status". Below the tabs, there are input fields for "Batch ID", "Batch Status" (set to [ALL]), "User ID", and "File Type" (set to [ALL]), along with "Apply" and "Reset" buttons. An "Upload File" button is also present. The main area displays a "Batch Status" table with columns: Batch ID, Status, User ID, File Type, File Name, Download File Size, Created Date, and Updated Date. An "Export Wizard" dialog box is overlaid on the table, showing a list of fields to export with checkboxes. The "Export Excel" option is selected, and the "Export" button is highlighted. The dialog also shows "Grid 1: Batch Status" and "Detail 1: Batch ID: 15473" selected. At the bottom of the dialog, there are two options: "Original Page" and "All Rows".

Batch ID	Status	User ID	File Type	File Name	Download File Size	Created Date	Updated Date
CSV						03/13/2017 09:50	03/13/2017 09:50
CSV						03/11/2017 06:16	03/11/2017 06:16
CSV						03/09/2017 16:15	03/09/2017 16:15
CSV						03/09/2017 16:10	03/09/2017 16:10
CSV						03/09/2017 16:05	03/09/2017 16:05
CSV						03/08/2017 17:11	03/08/2017 17:11
CSV						03/08/2017 14:00	03/08/2017 14:00
CSV						03/08/2017 13:45	03/08/2017 13:45
CSV						03/08/2017 09:35	03/08/2017 09:35
XML						03/07/2017 06:15	03/07/2017 06:15
CSV						03/06/2017 17:15	03/06/2017 17:15
CSV						03/06/2017 17:10	03/06/2017 17:10

Export data from either Meter Data or Batch Status screens

Select data to export:

- Filter options
- Exports applicable file type:
  - XML, CSV, Word

Select Original Page (grid view) or All Rows (data associated with selected resource/batch ID)

# Exporting meter data – control methods

Meter Data Batch Status Administration

Date From: 03/01/2017 To: 2017 SCID/ACL  
Measurement Type: [ALL] Resource Type: [ALL] User Filter:

Manage User Filters

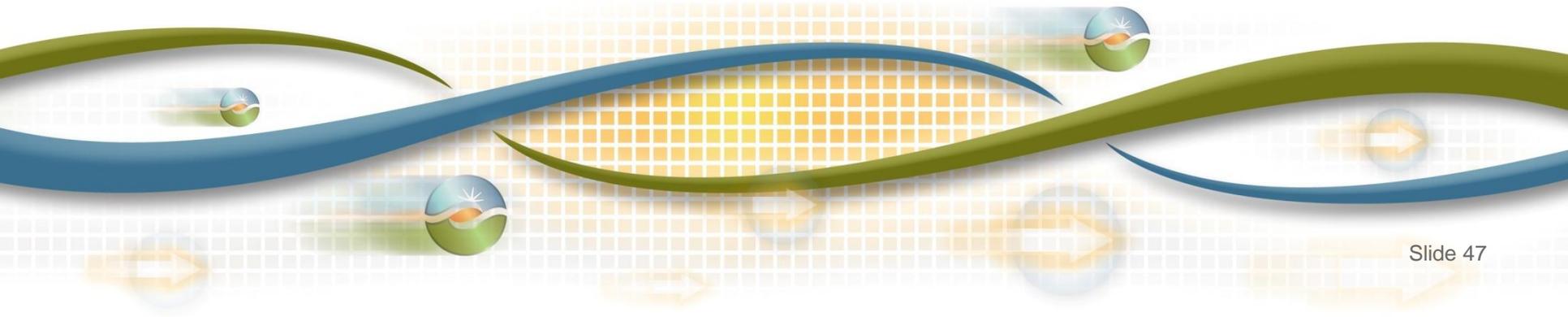
## Meter Data

Trade Date	Start Time GMT	Interval End Time PPT	Interval
03/04/2017	03/04/2017 10:05	03/04/2017 02:05	5
03/04/2017	03/04/2017 10:10	03/04/2017 02:10	5
03/04/2017	03/04/2017 10:15	03/04/2017 02:15	5

It is highly recommended that you put internal controls in place for exporting and storing file data you have submitted since MRI-S only maintains 2 versions of your data – CURRENT and PREVIOUS. You will want to be sure to keep previously uploaded data to refer back to in the event that you have questions arise

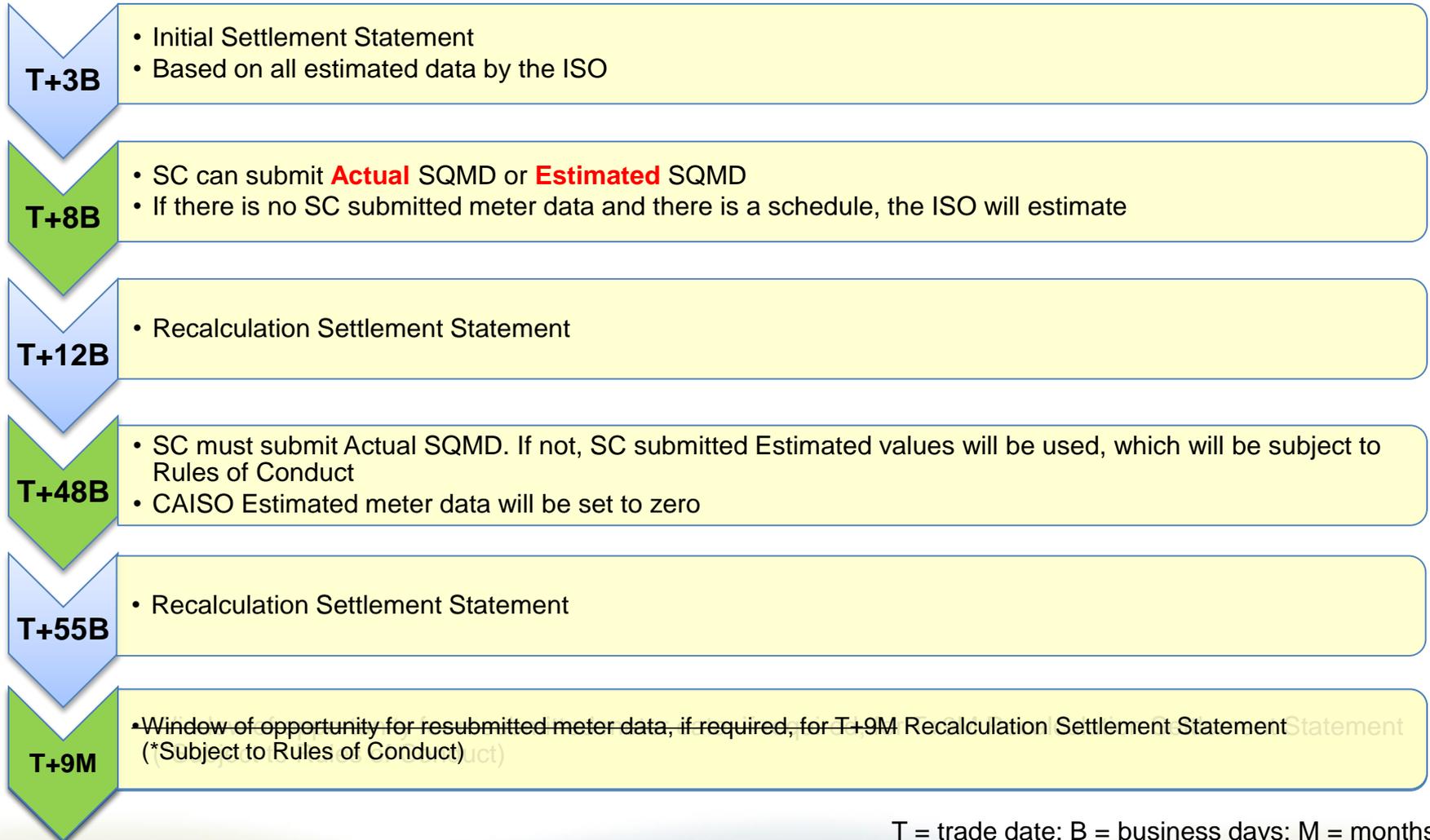
# Settlement Timelines

For submission and resubmission



# Meter data submission: Settlement timelines

\* Subject to rules of conduct

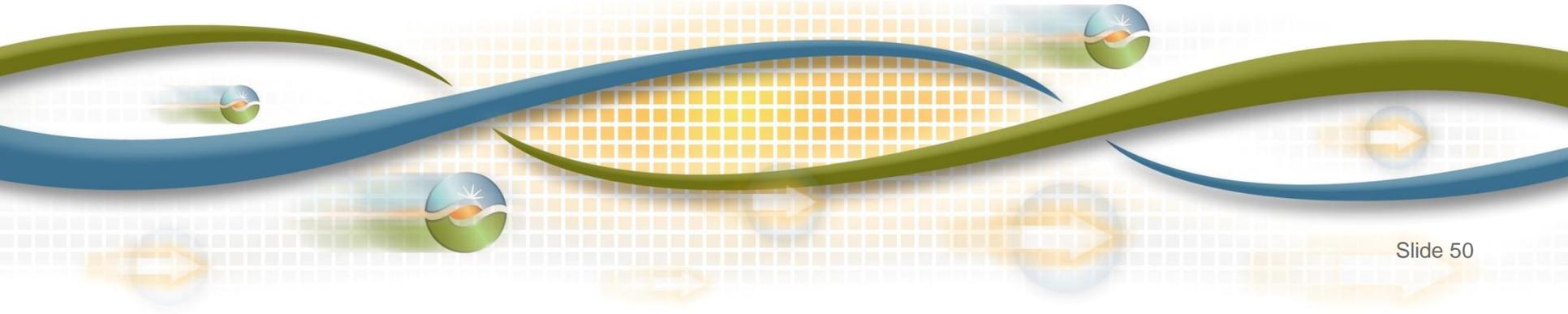


T = trade date; B = business days; M = months

# Meter data submission: Settlement timelines

- No longer applicable:
  - Window of opportunity for resubmitted meter data from T+168B to 172B
    - Can resubmit meter data at any time, but after T+48B will be subject to Rules of Conduct
  - Late/Change Status meter data resubmission form used for OMAR no longer required

# Recap Changes



## What has been enhanced...

- Updated Acceptable Use Policy
  - Max meter data submission 10MB → 15MB uncompressed
  - Max meter data retrieval from 100,000 records to 200,000
- Two new columns to specify Interval End Time
  - GMT & PPT times
- Additional filtering capability:
  - Interval Length, Unit of Measurement, etc.
- Settlement Data displayed on separate grid
- SCID/ACL group specified for the 'receive request' ensured to be provisioned to the user
- Batch status sequence updates
  - Pending, Warning, Error, Success



# Contacts



- **Scheduling coordinator's User Access Administrator (UAA)**
  - SC's central point of contact, responsible for submitting new requests or modifying user's ISO application access

*Who is your UAA?*

- Contact your Client Representative or call ISO Customer Services at 916-608-7320

# Questions?

- Support during market simulation:
  - Contact the ISO Service Desk at (888) 889-0450 or [servicedesk@caiso.com](mailto:servicedesk@caiso.com)
  - Submit a CIDI ticket
    - *select the market sim environment*

# Reference Material

Helpful Links

Features of User Interface

# Helpful links



## 2017 Independent Release Docs (Tech Specs, User Guide, BRS)

- <http://www.caiso.com/Documents/MRI-SMeterDataEnhancementUserGuide.pdf>
- <http://www.caiso.com/informed/Pages/ReleasePlanning/Default.aspx>

## Application Access Page

- <http://www.caiso.com/participate/Pages/ApplicationAccess/Default.aspx>

## Access and Identity Management (AIM) user guide & training

- [http://www.caiso.com/Documents/AccessandIdentityManagement\\_AIM\\_UserGuide.pdf](http://www.caiso.com/Documents/AccessandIdentityManagement_AIM_UserGuide.pdf)
- [http://www.caiso.com/Documents/Access\\_Identity\\_Management\\_Training.pdf](http://www.caiso.com/Documents/Access_Identity_Management_Training.pdf)

## Business Practice Manuals

- <http://www.caiso.com/rules/Pages/BusinessPracticeManuals/Default.aspx>

## Metering and Telemetry general information

- <http://www.caiso.com/participate/Pages/MeteringTelemetry/Default.aspx>

# Features of User Interface: Results Window

- The results window provides inline filtering and export functionality

	
	Restore sort to default setting (removes user-created multiple column sorting)
	The Inline Filter works as a toggle. Click the icon to filter data based on the content of a particular column. Press <b>Enter</b> after inputting the filter criteria. (Note: Wildcard symbols can be used in this column, but they are not necessary. For example, searching for *lake* or lake will provide the same results.)
	Exporting (to Excel, Word, CSV)

# Features of User Interface: Export Menu

- The export menu allows the user to customize the data export

Export All  
Export Page  
Export Wizard

Export All	All data points will be exported to Excel
Export Page	The current page will be exported to Excel
Export Wizard	The user can customize the data export

# Features of User Interface: Application Toolbar

- The application toolbar contains the application or browser-based functions

	
	Goes to the previous display in browsing history
	Goes to the next display in browsing history
	Stops loading the current display
	Refreshes the display in the current window
	Zoom out
	Zoom in
	Log out

# Features of User Interface: Results Window

- The results window provides data in multiple pages

	
	Navigate to the first page of data
	Navigate to the previous page of data
	Navigate to the next page of data
	Navigate to the last page of data
	Go to specific line item entered in search box

# What's next?

Course  
evaluation  
emailed from  
Market Training

Presentation will  
be posted in  
Training page

MRI-S Metering  
CPG call  
3/17/17  
11:00am PPT

# Thank you!!!

This concludes today's Market Results Interface – Settlements User Interface Metering Enhancements 2017 Independent Release training session.