



# Energy Data Acquisition Systems

## May 2024

### **Welcome**

Our presentation will begin shortly.

*Today's Presenter: Priyanka Namburi, Senior Advisor*

# Housekeeping



Keep yourself muted to minimize background noise



Unmute to ask verbal questions or write questions in the chat pod



Raise your hand using WebEx interactivity tools

# Objectives

Metering and Telemetry Documentation

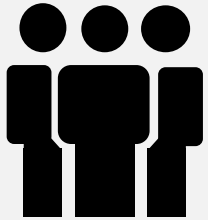
Telemetry Data Validation

Telemetry Non-Compliance/Exemptions

WREGIS

Webpage Walkthrough

# Who is EDAS?



Energy Data Acquisition Specialist Team (**EDAS**) is responsible for engineering requirements and standards for:

- Revenue Metering via:
  - Approved CAISO Meters
  - CAISO Inspected and Certified
  - CAISO Meter data processing
  - Settlement Quality meter data (SQMD) plans
- Direct Telemetry via:
  - Distributed Network Protocol (DNP) devices

# Required Documents

## Bucket 1

- Single and Three line drawings
  - Device IDs generated after acceptance of these documents.
  - A Few Helpful Hints:
    - CAISO Meters clearly labeled
    - Drawings have Professional Engineer stamp
    - [Checklist](#)
- Communications Block Diagram
  - A Few Helpful Hints:
    - No Word document format submittals
    - [Checklist](#)
- Remote Intelligent Gateway (RIG) Details Form
  - [Checklist](#)

## Required Documents (Cont.)

### Buckets 2 & 3

- Bucket 2 – Meter Configuration Worksheet
  - Provides Meter configuration details to the CAISO
- Bucket 3
  - 24/7 Contact Form
  - Certification Practice Statement for Basic Assurance Certification Authority (CPS) Agreement
  - Energy Communications Network (ECN) Agreement

Once Buckets 1 thru 3 are Complete

- Site Schedules Point to Point testing

## Required Documents (Cont.)

- Bucket 5
  - Meter and Site Verification Sheet (MSVS)
  - Point of Receipt (POR) Calculation (If applicable)
- Meter Exemption and Metering Scheme Overview
- EDAS Commercial Operation Date(COD)
  - Metering (CAISO Polled Meters)
    - Certificate of Compliance(COC)
      - Issued after Bucket 5
      - Meter must have valid actual recorded data
  - Telemetry
    - 72 hour communications check

# Common Issues

## General

- Address mismatch
- Missing project numbers on SLD/3LD
- Incorrect seals numbers
- Meter Identification
- Incorrect emails address on MSVS/Meter Maintenance forms
- Load/Standby provider information incorrect



# Common Issues

## Point-to-Point Tests

- Incomplete pretesting
- Incorrect meter configuration worksheets
- Unable to test from the source device
- Frequency Response points not ready

# Common Issues

## 72 Hour Test


- Resource not generating
- SOC/MXENERGY Oscillations
- Frequency response point scaling
- Mirrored values
- UCON Issue

# Telemetry Non-Compliance

- Telemetry BPM Section 8.4
  - Applies to commercial units
- Loss of Telemetry emails
  - Resource Owner is responsible to expeditiously investigate and resolve the issue
  - Or request a Telemetry exemption from the ISO for providing the telemetry data
- Deadlines:
  - (5) Business days after notification of the telemetry issue for resources  $\geq$  45 MW's
  - (14) Business days after notification of the telemetry issue for resources  $<$  45 MW's
- Critical points are listed in Telemetry BPM

# Telemetry Exemptions

- (72) consecutive hours of good quality to be considered resolved
- Submit Telemetry Exemption requests to EDAS
  - Must include a detailed resolution plan with concrete deadlines
  - Additional documentation may be required
- Scheduling Coordinator must contact the CAISO Real Time Generation Dispatcher to update the plant output
- Exemptions are not provided before COD

		Version No. 1.7
Telemetry Exemption Request Form		Effective Date 10/5/2020
		Distribution Restriction: None

<b>V1.7 Telemetry Exemption Request Form</b> Please fill out one form per Resource or Exemption type and send the request to <a href="mailto:edas@caiso.com">edas@caiso.com</a> in a word document format (.docx). A PDF document will not be accepted.		
Site Name: [ ]	Date: 2/23/2021	
RIG ID: [ ] <small>Example: RIG123 or IDG012</small>	Resource ID (*List a single Resource ID): [ ] <small>Example: GENERA_2_UNIT</small>	
Requested Exemption Start Date: [ ]	Requested Exemption End Date: [ ]	
<b>Resource Owner's Information</b>		
Name: [ ]	Title: [ ]	Company: [ ]
Address: [ ] City: [ ] State: [ ] Zip: [ ]		
Email: [ ]		Phone #: [ ]
<b>Exemption Requestor Information</b>		
Name: [ ]	Email: [ ]	Organization: [ ]
<b>Exemption Request Information</b>		
In the space below, provide a detailed description of the exemption being requested, why it is needed, and provide supporting information for the requested Exemption End Date. The exemption request must adhere to the California ISO Telemetry Requirements Exemption Policy found as Attachment 1 to this Request Form and Telemetry BPM section 8.4.		
<i>Please note: If a resolution plan with a dated timeline is not provided in the details below, the Telemetry Exemption Request will be rejected. A new telemetry exemption request addressing the unacceptable aspect of the previous submission must be submitted to the ISO within (5) business days of the deficiency notification from the ISO.</i>		
Exemption Request Reason: [Choose an item...]		<input type="checkbox"/> Renewal <small>Leave unchecked if "new submission"</small>
[Enter Description]		
<i>Leave the below sections blank – they will be filled out by EDAS personnel</i>		
<b>CAISO Conditions/Comments</b>		
[ ]		
Note: Failure to meet these conditions will result in revocation of the exemption. Please read attachment 1 of this form and Telemetry BPM section 8.4 for further information on the Telemetry Exemption process.		
<b>Scheduling Coordinator's Information</b>		
SC Contact Name: [ ]	SC Email: [ ]	SC Organization: [ ]

Exemption Start Date: [ ] <small>Determined by date of original submission</small>		Exemption End Date: [ ]
ISO Manager's Signature: [ ]	Status: [ ]	Date: [ ]

*Exemption requests must be submitted using the proper naming convention: Resource ID followed by the type of request (New or Renewal) and Requested Exemption End Date. Both the email subject line and the attachment shall follow the naming convention.*

# WREGIS (Western Renewable Energy Generation Information System)

## WREGIS

an independent, web-based tracking system for renewable energy certificates (REC) that covers the Western Interconnection territory; WREGIS is a division of WECC

## Qualified Reporting Entity (QRE)

the role of the QRE is to submit the meter data associated with the renewable energy on behalf of the Generator Owner using the WREGIS application

## Qualified Reporting Entity Service Request Application (QRESA)

must be executed for CAISO to perform the QRE services

# WREGIS FAQs

## Questions

Can the request form be submitted before COD?

Where do I sign in the request form?

## Answers

Yes, It is required to be submitted before COD to include test energy.

Once the form is filled out, EDAS will then route it through DocuSign.

## WREGIS FAQs (Cont.)

### Questions

### Answers

Are there any other documents required to be completed prior to acceptance of the QRE request form?



No

How long does CAISO acceptance of the application typically take (assuming there are no issues with it)?



Depending on the workload of the EDAS team, it can take a few business days to a couple of weeks.

# Metering and Telemetry Webpage Walkthrough

**California ISO** Search...

ABOUT US PARTICIPATE STAY INFORMED PLANNING MARKET & OPERATIONS RULES ISO EN ESPAÑOL

- About Us
- Participate
  - Resource Interconnection Guide
  - Become a Scheduling Coordinator
  - Scheduling Coordinator Ongoing Obligations
  - Energy Imbalance Market
  - Generation
  - Demand Response and Load
  - Distributed Energy Resource Provider
  - Dynamic Transfers
  - Storage
  - Metered Subsystem
  - Transmission
  - Utility Distribution Company
  - Metering and Telemetry**
  - Market Products
  - Application Access
  - Learning Center
- Stay Informed
- Planning
- Market & Operations
- Rules

## Metering and telemetry ensure accurate revenue accounting

Metering and telemetry are mandatory tools for ensuring accurate revenue accounting and ISO operational visibility.

### Process and requirements

**ISO Tariff**  
**Business Practice Manual for Metering**  
**Business Practice Manual for Direct Telemetry**

**Operating procedures - 5700 metering process**  
Meter data represents the energy generated or consumed during a settlement interval. The ISO, ISO metered entities, and scheduling coordinator metered entities follow prescribed processes and procedures to ensure the data is settlement quality. These procedures complement, but do not replace, section 10 of the ISO Tariff and Business Practice Manual for Metering.

- 5710 Certification of Metering Facilities** 2/01/2023 09:18
- 5720 CAISO Authorized Inspector Application and Renewal Procedure** 2/01/2023 09:18
- 5730 Metering Exemptions from Compliance** 1/18/2024 11:07
- 5740 Meter Data Acquisition and Processing Procedure** 1/18/2024 11:07
- 5750 Settlement Quality Meter Data (SQMD) Plan - Submission & Approval Process (External)** 2/16/2023 07:46

**Meter installation, inspection and certification**  
Additional information, required forms and lists for metered entities.

- Fieldwork support requests** Market participants can submit a request through the fieldwork support user interface to schedule appointment(s).
  - EDAS Request Form**  
All fieldwork support requests related to Real Time Devices and Revenue Metering must be submitted through the EDAS Request Form.
- Approved meters, installation and inspection companies**   
Information related to ISO meters and inspectors.
  - Approved ISO Meters** 9/29/2023 08:11
  - ISO Authorized Inspectors** 2/29/2024 09:41
- Meter installation, inspection and certification**   
Technical information and requirements for ISO Metered Entities
  - Metering Contact Form** 2/07/2023 09:28
  - Meter Configuration Worksheet** 7/03/2023 10:06
  - Field Site Visit** 7/03/2023 10:06

[California ISO - Metering and telemetry \(caiso.com\)](https://www.caiso.com)



## Upcoming changes

- New EDAS Fieldwork phone service
- New EDAS Customer service phone line
- SC Telemetry data validation

# Helpful Links

Certification of Metering Facilities

<http://www.caiso.com/Documents/5710.pdf>

Meter Data Acquisition and Processing Procedure

<http://www.caiso.com/Documents/5740.pdf>

Appointment Scheduling for EDAS Fieldwork

<http://www.caiso.com/fieldworksupport/Pages/default.aspx>

Direct Telemetry BPM

<https://bpmcm.caiso.com/Pages/BPMDetails.aspx?BPM=Direct%20Telemetry>



## Helpful Links (Cont.)

EDAS request tool

<http://www.caiso.com/fieldworksupport/Pages/default.aspx>

Fieldwork Guide

<http://www.caiso.com/Documents/FieldworkGuide.pdf>

RIG Acceptance Test (RAT) Procedures

[http://www.caiso.com/Documents/RIGAcceptanceTest\\_RAT\\_Procedures.pdf](http://www.caiso.com/Documents/RIGAcceptanceTest_RAT_Procedures.pdf)

RIG/DPG Validation Procedure

[http://www.caiso.com/Documents/RIG\\_DPGValidationProcedure.pdf](http://www.caiso.com/Documents/RIG_DPGValidationProcedure.pdf)

Metering Exemptions from Compliance

<http://www.caiso.com/Documents/5730.pdf>



## Helpful Links (Cont.)

BPM for Metering

<http://bpmcm.caiso.com/Pages/BPMDetails.aspx?BPM=Metering>

SQMD Template

<http://www.caiso.com/Documents/SQMDPlanTemplate.docx>

SQMD Template Tutorial

<http://www.caiso.com/Documents/SQMDResourceTemplateTutorial.pdf>

Operating Procedure 5750 – Submission and Approval Process

<http://www.caiso.com/Documents/5750.pdf>

EDAS Document Checklists

<http://www.caiso.com/Documents/Checklist-CommunicationBlockDrawing.pdf>

<http://www.caiso.com/Documents/Checklist-MeteringAndRIGDrawingRequirements.pdf>





# Wrap Up

Summary, Q&A



# Thank you for your participation!

For more detailed information on anything presented, please visit our website at:  
[www.caiso.com](http://www.caiso.com) or submit a CIDI ticket RE: EDAS.