California ISO

Metering and Telemetry

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Topics

- What is EDAS?
- Fieldwork Projects
- EDAS Request Tool
- Telemetry Non-Compliance
- New Telemetry Requirements
Interconnection Process Map

You are here

Transmission-level resource interconnection
(using ISO procedures)

ISO interconnection request
ISO interconnection study
ISO interconnection agreement

ISO new resource implementation

Sync date

Trial operations

COD date

Distribution-level resource interconnection
(using utility procedures)

Utility interconnection request
Utility interconnection study
Utility interconnection agreement

In parallel
(outside of ISO/utility procedures)

Permitting, engineering, procurement, construction
What 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
Fieldwork Projects

- Opening an NRI Project for Fieldwork
- Meters
  - Maintenance
  - Replacements
  - Reprogram
  - Communication change
- Real Time Devices
  - Replacements
  - Reconfiguration to Points List
  - Communication change or adding backup IP address*
- Point-to-Point (P2P) Test
Fieldwork Projects (Cont.)

- Meter and Site Verification Sheet (MSVS) and Meter Maintenance forms should be submitted within **5 Business days** of meter inspection
  - Meter seals are validated on meter documentation

- Meter Documents will be sent using DocuSign for signatures

- Meter documents should be signed in DocuSign within 5 Business days
EDAS Request Tool

- Single RIMS project per Device ID
  (*Exception: new onboarding projects)
  - If two meters require annual meter maintenance; two RIMS projects must be created and two fieldwork appointment requests will be needed.

- Used to schedule Fieldwork Appointments and request pre-populated metering documents

- Shows available dates based on work type

- Upon approval, associates Device IDs to RIMS projects
  (Refer to Fieldwork Guide for more detailed instructions)
Fieldwork Appointments

The below information may be required:

- NRI Project Code (Example: 17GEN1234)
- Device ID
  - ISO Meter (Ex: 5914123)
    - Required for Meter Fieldwork
  - RTU Name (Ex: IRG123)
    - Required for RIG Fieldwork
- Resource ID
  (Ex: INVSBL_3_TESTG1)
  - Always required
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 \( \geq 45 \text{ MW's} \).
  - (14) Business days after notification of the telemetry issue for resources \(< 45 \text{ MW's} \).

- Critical points:
  - UPMW, UCON, and additionally for renewables: irradiance, back-panel temperature, wind speed, wind direction
Telemetry Exemptions (Cont.)

- (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
- Scheduling Coordinator must contact the CAISO Real Time Generation Dispatcher to update the plant output
- Refer to Telemetry BPM Section 8.4 for guidelines on providing Telemetry value updates.
Telemetry Reports

- EDAS team has created automated reports and reminders to help customers remain compliant
  - Weekly SC Telemetry Report
  - “Exemption is Due” reminders
    - [Notification] Telemetry Issues for EXAMPLE_2_UNIT1 (IRG000) - Exemption is Due TODAY, 3/3/2021
  - “Exemption is Expiring” reminders
New Telemetry Requirements

- Hybrid Resources: VER UPMW data is required for reliability and forecasting purposes.

- TLS requirements:
  - Internet connected RTUs: TLS 1.0 and 1.1 are not supported after 6/30/21
  - ECN connected RTUs: TLS 1.0 and 1.1 are not supported after 6/30/22
  - Ciphers CBC and RC4 are not supported after 6/30/21
New Telemetry Requirements

- BAL-003-1.1 Requirements for Frequency Response:
  - Droop Setting
  - Governor dead band
  - Operational ramp rate
  - Governor Block status

- Implementation schedule posted in Telemetry BPM.
Helpful Links

- Certification of Metering Facilities

- Meter Data Acquisition and Processing Procedure

- 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
- RIG Acceptance Test (RAT) Procedures
- RIG/DPG Validation Procedure
- Metering Exemptions from Compliance
Helpful Links (Cont.)

- BPM for Metering
  [Link](http://bpmcm.caiso.com/Pages/BPMDetails.aspx?BPM=Metering)

- SQMD Template
  [Link](http://www.caiso.com/Documents/SQMDPlanTemplate.docx)

- SQMD Template Tutorial
  [Link](http://www.caiso.com/Documents/SQMDResourceTemplateTutorial.pdf)

- Operating Procedure 5750 – Submission and Approval Process
  [Link](http://www.caiso.com/Documents/5750.pdf)

- EDAS Document Checklists
  [Link](http://www.caiso.com/Documents/Checklist-CommunicationBlockDrawing.pdf)
  [Link](http://www.caiso.com/Documents/Checklist-MeteringAndRIGDrawingRequirements.pdf)
EDAS Contact Information

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Thank you!

If you have any further questions, please send them to RIF@caiso.com