



Metering and Telemetry

Energy Data Acquisition Specialist (EDAS)

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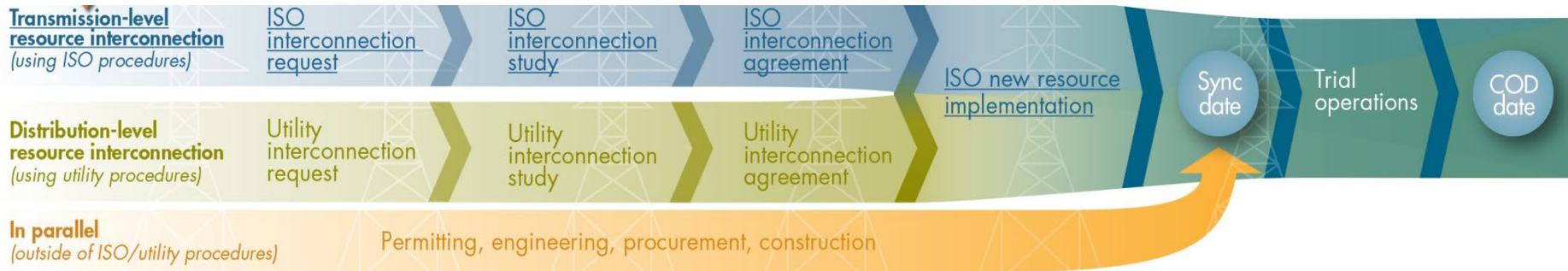
Topics

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



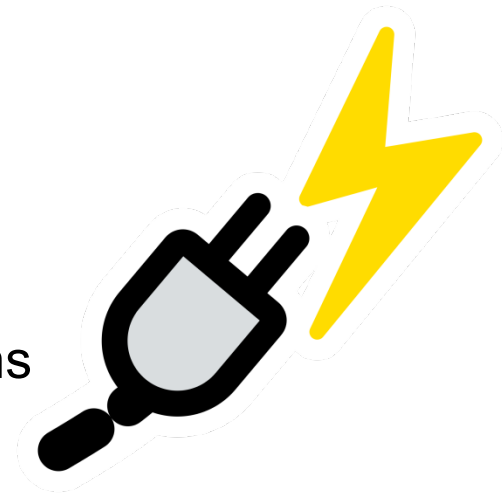
Interconnection Process Map

You are here



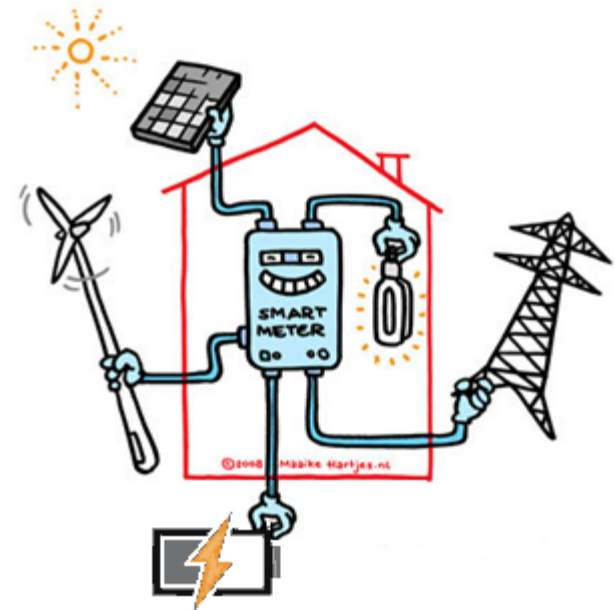
What is EDAS?

- 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



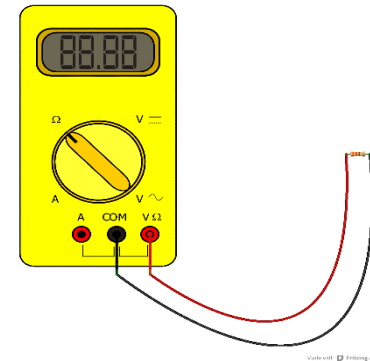
Fieldwork Projects

- 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

Disclaimer: A confirmed fieldwork appointment must be accompanied by an OMS outage. Please schedule an appropriate OMS outage once you have received a confirmed fieldwork appointment. Inaccurate information will cause your appointment request to be delayed.

Date	Work Types Available
3/4/2021	Device Replacement RIG Certificate Renewal Maintenance/Troubleshooting
3/15/2021	New Site Point to Point Device Replacement RIG Certificate Renewal Maintenance/Troubleshooting
3/16/2021	New Site Point to Point Device Replacement RIG Certificate Renewal Maintenance/Troubleshooting
3/17/2021	New Site Point to Point Device Replacement RIG Certificate Renewal Maintenance/Troubleshooting
3/18/2021	New Site Point to Point Device Replacement RIG Certificate Renewal Maintenance/Troubleshooting
3/22/2021	RIG Certificate Renewal Maintenance/Troubleshooting
3/29/2021	New Site Point to Point Device Replacement RIG Certificate Renewal Maintenance/Troubleshooting
3/30/2021	New Site Point to Point Device Replacement RIG Certificate Renewal Maintenance/Troubleshooting
3/31/2021	New Site Point to Point Device Replacement RIG Certificate Renewal Maintenance/Troubleshooting
4/1/2021	New Site Point to Point Device Replacement RIG Certificate Renewal

Contact Details	
Contact Name *	<input type="text"/>
Contact Phone *	<input type="text"/>
Contact Email *	<input type="text"/>

Details	
Resource Name *	<input type="text"/>
Request Type *	<input type="text" value="Test - Meter Maintenance/Troubleshooting"/>
Required: NRI Project Code, Resource ID and Device ID	
NRI Project Code	<input type="text"/>
Meter Device ID or RIG Name	<input type="text"/>
Specify a single Meter Device ID or RIG Name	
Resource ID	<input type="text"/>
Description of Work	<input type="text"/>
Provide detailed description of work and provide any additional Device IDs, if any, for meter work	
Desired Test Date	<input type="text"/>
Select a desired test date. Leave blank for form request only	


Submit Request Reset

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 ≥ 45 MW's.
 - (14) Business days after notification of the telemetry issue for resources < 45 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.

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

V1.7 Telemetry Exemption Request Form		
Please fill out one form per Resource or Exemption type and send the request to edas@caiso.com in a word document format (.docx). A PDF document will not be accepted.		
Site Name: <input type="text"/>	Date: 2/23/2021	
RIG ID: <input type="text"/>	Resource ID (*List a single Resource ID): <input type="text"/>	
<small>Example: IRG123 or IDG012 Example: GENERA_2_UNIT</small>		
Requested Exemption Start Date: <input type="text"/>	Requested Exemption End Date: <input type="text"/>	
Resource Owner's Information		
Name: <input type="text"/>	Title: <input type="text"/>	Company: <input type="text"/>
Address: <input type="text"/> City: <input type="text"/> State: <input type="text"/> Zip: <input type="text"/>		
Email: <input type="text"/>		Phone #: <input type="text"/>
Exemption Requestor Information		
Name: <input type="text"/>	Email: <input type="text"/>	Organization: <input type="text"/>
Exemption Request Information		
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: <input type="text"/>		<input type="checkbox"/> Renewal <small>Leave checked if "new submission"</small>
<input type="text"/>		
<i>Leave the below sections blank – they will be filled out by EDAS personnel</i>		
CAISO Conditions/Comments		
<input type="text"/>		
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.		
Scheduling Coordinator's Information		
SC Contact Name: <input type="text"/>	SC Email: <input type="text"/>	SC Organization: <input type="text"/>

Exemption Start Date: <input type="text"/>	Exemption End Date: <input type="text"/>
<small>Determined by date of original submission</small>	
ISO Manager's Signature: <input type="text"/>	Status: <input type="text"/>
Date: <input type="text"/>	

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.

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
 - [Notification] Telemetry Exemption for EXAMPLE_2_UNIT2 – IRG001 Expires TODAY, 3/3/2021

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Status	Resource ID	Device ID	SCID	MW	Date Notified	Deadline to Fix	Active Exe	Latest Exempti	Latest Exempti	Telemetry Issue Type	Notes	
2	PENDING	EXAMPLE_2_UNIT1	IRG000	CISO	50	2/17/2021	2/24/2021				Entire RTU down	Exemption submitted 2/19	
3	ACTIVE	EXAMPLE_2_UNIT2	IRG001	CISO	10	2/3/2021	2/24/2021				Entire RTU down		
4	ACTIVE	EXAMPLE_2_UNIT3	IRG002	CISO	50	2/19/2021	2/26/2021				Issue with some points	STG UCON (DNP# 59), EHA-001_CB to EHA-012_CB (DNP #34,35,36,53,54,39,40	
5	ACTIVE	EXAMPLE_2_UNIT4	IRG003	CISO	10	2/5/2021	2/26/2021				Issue with some points	T1 HSIDE BNK KV6, MVR6, MW6, UPMV, UPMW down.	
6	ACTIVE	EXAMPLE_2_UNIT8	IRG007	CISO	50	2/22/2021	3/1/2021				Entire RTU down		
7	ACTIVE	EXAMPLE_2_UNIT10	IRG009	CISO	10	2/15/2021	3/5/2021				Entire RTU down		
8	PENDING	EXAMPLE_2_UNIT11	IRG010	CISO	10	2/15/2021	3/5/2021				Entire RTU down		
9	PENDING	EXAMPLE_2_UNIT12	IRG011	CISO	10	2/15/2021	3/5/2021				Entire RTU down		

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

<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

- RIG/DPG Validation Procedure

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>

EDAS Contact Information

➤ EDAS:

- CIDI Inquiries
- Fieldwork Phone: (916) 608-5826
- Email: edas@caiso.com

➤ EDAS Team:

- Priyanka Namburi
- Mike Ucol
- David Acevedo
- Denis Korneyenko
- Vitaliy Daniliuk



Thank you!

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