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Fieldwork Guide


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REVISION HISTORY

VERSION NO. (Must match header)	DATE	REVISED BY	DESCRIPTION
3.1	6/29/2023	EDAS(MU)	Grammatical corrections and revised verbiage around RIG IP Changes.
3.0	2/7/2023	EDAS(MU)	Updated Project Details Form instructions for Meter and RIG projects to align with new version of Project Details Form. Included verbiage around coordinating an appointment deemed as an emergency/priority. Added matrix of required forms for various fieldwork scenarios.
2.9	10/3/2022	EDAS(MU)	Additional Language around POR Calc
2.8	4/13/2022	EDAS(MU)	Revised instructions around Fieldwork Request Tool. A "Request - ..." only requests a meter form to have certain information prepopulated on the form and does not request for a fieldwork appointment date.
2.7	2/23/2022	EDAS (MU)	Revised language around Meter Seals on Forms. All Meter Seal information is always required regardless of the work. Even if work is done remotely and no seals are cut, Seals should still be verified and entered on the form. If a seal is not required then "NA " is entered, no other variations and no blank fields are accepted for Seal Number information.
2.6	1/27/2022	EDAS (MU)	Clarification added to RIG Disaggregations
2.5	12/16/2021	EDAS (MU)	Included instructions on how to complete Programmed losses fields and verbiage to state that the Remarks Section of Meter Forms is required.
2.4	11/4/2021	EDAS (MU)	Added additional verbiage regarding Meter IP Changes and appointment requests. Added Instructions for Rescheduling fieldwork appointments using the Request Tool
2.3	7/27/2021	EDAS (MU)	Added additional verbiage regarding fieldwork. IP Changes cannot be scheduled any earlier than the Friday of the following week after acceptance of either Meter Config for Meter IP Changes and RIG Details for RIG IP Changes. IP Changes also cannot be supported on Thursdays or during the week of a target Model Promotion.
2.2	3/31/2021	EDAS (MU)	Added Quick Reference Guides for Meter Replacements
2.1	3/26/2021	EDAS (MU)	Added Quick Reference Guides for RIG Replacements and RIG Disaggregations


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2	2/3/2021	EDAS (MU)	Added Appendix, Quick Reference Guides for fieldwork
1.9	1/21/2021	EDAS (MU)	Updated to add Procedure for adding additional meters to an existing Resource
1.8	9/8/2020	EDAS (MU)	Updated Procedure for PMax Changes
1.7	11/19/2019	EDAS (MU)	Updated included matrix for Projects, sections for canceling and rescheduling appointments
1.6	8/2/2018	EDAS (MU)	Updated procedure for RIMS project details form
1.5	7/16/2018	EDAS (MU)	Updated procedure for RIMS project details form
1.4	4/15/2018	EDAS (MU)	Updated procedures for RIMS and EDAS Request Tool
1.3	9/13/2017	EDAS (MU)	Updated verbiage
1.2	8/29/2016	EDAS (MU)	Included additional details pertaining to Meter Reprograms
1.1	6/29/2016	EDAS (MU)	Updates to include all Meter Work and instruction
1.0	6/6/2016	EDAS (MU)	Created Document

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INTRODUCTION

The purpose of this document is to provide guidelines relevant to the procedures required when performing device (Meter or RIG) fieldwork.


Preparation

All meter work will require an ISO Project Code and therefore the submittal of a Project Details Form to RIMS. **One Project Code is required per Device.** Depending on the type of RIG work being performed, it may or may not require an ISO Project Code.

Matrices:


RIMS Project Requirements

Device	Type of Work	RIMS Project Required (Y/N)
Meter and/or RIG	New Site/Device/Points Point to Point Test	Y
Meter and/or RIG	Communication Maintenance/Troubleshooting (To be used for work that is not being done directly to CAISO polled Meter and/or RIG but will impact data to CAISO, i.e. Router Replacement)	N
Meter	Maintenance/Communication Change/Troubleshooting	Y
Meter	Replacement	Y
Meter	Adding Meters to Existing Resource	Y
RIG	IP Change/Add a Backup IP	Y
RIG	Reconfiguration (i.e. Removing points from an existing RIG to a New RIG or adding points to an existing RIG)	Y
RIG	Replacement	Y
RIG	Certificate Renewal/Maintenance	N

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Meter Document Requirements

Type of Work	NRI Project Type	Form Required	Inspection Type
Brand new Resource entering the market	As directed in NRI Guide	MSVS	New Install
Meter being replaced with another meter	Meter Replacement	MSVS	Meter Replacement
Additional Meters being added to existing Resource	Meter Replacement	MSVS	New Install
Point of metering changing	Meter Replacement	MSVS	New Install
Repurposing of a meter (i.e. changing a loss calculation meter to a main meter, taking a meter from a retired Resource to be used on another Resource etc.)	Meter Replacement	MSVS	New Install
IP Change requiring either access to program or seal cut	Meter Maintenance	Meter Maintenance	Communication Change
Accuracy Testing	Meter Maintenance	Meter Maintenance	Meter Maintenance
Meter program change only (of any sort)	Meter Maintenance	MSVS	Meter Reprogram
Recertification of CTs, PTs, Meter circuit, burden test etc.	Meter Maintenance	MSVS	Re-Inspection
Physical meter location change only (kV point of metering, CT/PT location not changing)	Meter Maintenance	MSVS	Re-Inspection
Troubleshooting that requires access to meter either physically or programmatically	Meter Maintenance	Meter Maintenance	Meter Maintenance
Meter IP Change in conjunction with a Replacement	Meter Replacement	MSVS with notes in Remarks section for IP Change	Meter Replacement
Meter IP Change in conjunction with a Re-Inspection	Meter Maintenance	MSVS with notes in Remarks section for IP Change	Re-Inspection
Meter IP Change in conjunction with accuracy testing	Meter Maintenance	Meter Maintenance with notes in Remarks section for IP Change	Meter Maintenance
CT/PT equipment change	Meter Maintenance	MSVS	Re-Inspection
PMax Change	As directed in NRI Guide	MSVS	PMax Change
*Any situation not covered above	*Coordinate with EDAS	*Coordinate with EDAS	*Coordinate with EDAS

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- **Opening a New Meter Project with NRI**


- The NRI Guide and Checklist can be found online at: <http://www.caiso.com/participate/Pages/NewResourceImplementation/Default.aspx>
- Obtain a new project registration code via the [RIMS public site](#) and follow the links provided in the registration email.
- A link to the latest Project Details Form version will be provided in the registration email.
- Complete the RIMS Project Details Form
 - New Resources coming into the ISO
 - Project Details form must be completed in its entirety as required by the type of project
 - Meter and RIG Projects
 - Section 1:
 - For **Meter Replacements** or **Adding Additional Meters to an Existing Resource** – Select “**Meter Replacement**” from the drop down menu
 - For **Meter Maintenance, Meter Reprogram, Re-Inspection or Communication Change** – Select “**Meter Maintenance**” from the drop down menu
 - For **RIG Reconfigurations, RIG Replacements, RIG IP Changes** or to **Add a Backup IP Address** – Select “**RIG Reconfiguration**” from the drop down menu
 - Section 2: Complete Parts A through G
 - Part F: Please enter the site name as listed on the Meter Service Agreement (MSA). NOTE: The system will not accept an exact name match with another project in RIMS. you may receive an error requesting a revision in name. (Adding a phrase at the end may help, for example: Power Powerhouse Maintenance 2020)

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- Part G: Please include the **Device ID** and **Resource ID** in the project description as well as a detailed description of the work. For example “Meter Calibration” or “RIG Frequency Response Points addition”

***If adding additional meters to an Existing Resource, you must include the following in the project description – “**Adding (number of meters) Meters to Resource (Resource ID)**”. Example: “**Adding 4 Meters to Resource CAISO_2_UNIT1**”

- Sections 3: Complete parts A-C in accordance with the Project Details Form instructions.
 - Section 6: Complete Part A (Date expected to complete the work)
 - Section 7: Complete Parts A through C
- Save, upload and submit the Project Details Form in Word .docx format to [RIMS](#) using the registration code to access.
 - You will receive an email with the project code, the User Access Administrator will need this project code in order to provision access for RIMS Users for this project in RIMS.
 - The NRI project code will be the number you will use to upload your documents to NRI utilizing the proper file naming conventions outlined in the New Resource Implementation Guide.

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EDAS APPOINTMENTS

All Revenue Meter and Real Time Device fieldwork must be scheduled with Energy Data Acquisition Systems (EDAS) through the [EDAS Request Tool](#).

Requirements

The following requirements must be met for EDAS to support fieldwork:

- An approved appointment is required to perform any fieldwork related (Real Time Device and/or Metering) activities.
- Outage(s) must be scheduled for the date and time of the appointment through the Outage Management System (OMS) upon receiving an appointment confirmation.
- Any required documentation must be accepted via RIMS, i.e. Meter Config for New Meters or Meter Replacements; RIG Details for New RIGS, IP Address changes or addition of a Backup IP Address.

Note: No exceptions, unless the work in question is deemed an emergency by the ISO to support the operation of the grid.


Appointment Availability

All related fieldwork shall be performed during normal business hours.

- Monday – Thursday, 08:00 AM to 12:00 PM, 13:30 PM to 16:00 PM
- Closed daily for lunch from 12:00 PM to 13:00 PM
- A list of available dates and work supported is located on the right hand side of the EDAS Request Tool. (Note: Meter Maintenance work is not supported during the months of November and December unless deemed required or supported by documentation in order for the device to remain compliant)
- Note RIG and Meter IP Changes cannot be supported on Thursdays or during the week of a target Model Promotion.

Cancellations or Reschedules

Cancellations and Reschedules must be communicated to EDAS. Please do this by replying to the confirmation email.

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Request Form

The Online Request Form is used to associate your Project Code to a Device. Each Device must have its own approved request. Once a Project Code is associated to a Device, that Project Code can no longer be used for any other devices. For meter replacements, the tool must be used in order to retrieve your replacement Device ID.

NOTE: Each Project Number/Code must have its own appointment scheduled


1. Contact Details: All fields in this section are required
 - a. Contact Name
 - b. Contact Phone
 - c. Contact Email

2. Details: Certain fields are required based on the Request Type selected
 - a. **Resource Name is required**
 - b. **Request Type is required.** Based on the Request Type, blue text will appear below the drop down to indicate what fields are required.
(Note: only a single Resource ID, Device ID or Project Code will be accepted).

Request Type drop down provides two types of selections, prefixes are: “Test -” and “Request -”


- i. When selecting “**Test –**” in the Request Type drop down you must enter a desired test date. You will receive an email if the requested date is available. If your requested date is not available, you will receive an email with the next 3 available dates. The 3 available dates may only be available for a short time; please resubmit a request with one of the 3 dates immediately to assure that you can reserve the desired testing date. After the testing date is reserved, a final confirmation email with the testing date and time will be sent.

- ii. When selecting “**Request –**” in the Request Type drop down you will receive an email attachment of the form that was requested, filled out with current CAISO data if available. This does not request for a fieldwork appointment. You will have to use the “Test –” type of request mentioned above. Also note that for some Devices, no data or incorrect data may be pre-populated on the form. It is the responsibility of the Meter inspector to ensure the data is correct and accurate on the form that is officially submitted to CAISO for the project.

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iii. Request Types:

1. Test – New Site/Device/Points Point to Point: Schedules a Point to Point Test for New Resources onboarding with CAISO, or New RIG and/or Meter equipment for an Existing CAISO Resource.
2. Test – Meter Replacement: Schedules an appointment to Replace an existing CAISO Certified Meter. This option will issue a Replacement Device ID.
3. Test – Meter Maintenance/Troubleshooting: Schedules an appointment to complete any work on a CAISO Meter; Reprogram, CT/PT Changes, Calibration etc.
4. Test – Meter Maintenance (IP Change): Schedules an appointment to perform a meter communication change, i.e. IP or Phone Number change.
5. Test – RIG Replacement: Schedules an appointment to Replace an existing RIG
6. Test – RIG Certificate Renewal: Schedules an appointment to renew a RIG Certificate
7. Test – RIG Maintenance/Troubleshooting: Schedules an appointment to complete any RIG Work.
8. Test – Communication Maintenance/Troubleshooting: Schedules an appointment for support when conducting any network work that will impact data to the CAISO.
9. Request – MSVS Form” Requests an MSVS form only. Will associate the Project code and Device ID and populate a form. It will not schedule an appointment
10. Request – Meter Replacement MSVS Form: Will associate the Project code and newly assigned Device ID and populate a form. It will not schedule an appointment
11. Request – Meter Maintenance Form: Will associate the Project code and Device ID and populate a form. It will not schedule an appointment
12. Device IP Request: Will provide the IP associated with the Device.
13. Reschedule Appointment: Used to Reschedule an already approved appointment request

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EXAMPLE OF COMPLETED FORM

Contact Details

Contact Name *

Contact Phone *

Contact Email *

Details

Resource Name *

Request Type *
Required: NRI Project Code, Resource ID and Device ID being replaced

NRI Project Code

Meter Device ID or RIG Name
Specify a single Meter Device ID or RIG Name

Resource ID

Description of Work
Provide detailed description of work and provide any additional Device IDs, if any, for meter work

Desired Test Date
Select a desired test date. Leave blank for form request only


List of Work Type

- Test - New Site Point to Point
- Test - Meter Replacement
- Test - Meter Maintenance/Troubleshooting
- Test - RIG Replacement
- Test - RIG Certificate Renewal
- Test - RIG Maintenance/Troubleshooting
- Request - Calendar Date
- Request - MSVS Form
- Request - Meter Replacement MSVS
- Request - Meter Maintenance Form

If you need to include additional information, please add it to the Description of Work field.

For "Test -" type, a date is required for an appointment. For "Request -" type, for a form only request leave blank. For "Request -" for a form & test date, date is required.

Click on Submit Request

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The requester shall be able to view the summary page after the preferred appointment date has been submitted. An email will be sent to the submitter (Contact Email provided) either confirming or denying the request.


If the submitter would like to schedule another appointment, there is an option at the bottom of the screen to perform this function.

Hello Jane Smith,
 Your field work appointment request has been submitted successfully, you will receive an email confirmation in the same.

Request Details:	
<i>Request ID</i>	714
<i>Site Name</i>	Test company
<i>Contact Name</i>	Jane Smith
<i>Contact Phone</i>	9161234597
<i>Contact Email</i>	jsmith@test.com
<i>Internal ISO #</i>	16GEN9999
<i>Device ID</i>	5999999
<i>Resource ID</i>	XXXXXX_2_XXXXX
<i>Type of Work</i>	Meter Testing (Meter Only)
<i>Description of Work</i>	Replacing meter
<i>Desired Test Date</i>	09/13/2016

Option to schedule additional appointments

Submit another request

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Confirmations

An email will be sent out to the contact email provided and Project Contacts (if any) with either a confirmation of a scheduled or declined appointment request along with the appointment details or details of why the appointment was not scheduled. If the request is declined, follow the directions in the email and submit a new request, or if instructed, email EDAS.

Cancellations and Reschedules

If you need to **Cancel** an appointment, please reply to the confirmation you received from EDAS and request to cancel.


A Cancellation is defined as the work was canceled and no longer needed at all in which case you must also request to cancel the project in RIMS as well. No further work and appointments should be scheduled under that project.

For a **Reschedule**, if you wish to change the time of the appointment, use the **EDAS Request Tool** and Select **Reschedule Appointment** option in the **Request Type** dropdown field.

- Enter the **Original Request Number** you wish to reschedule in the **Resource Name** field and a valid Resource ID, Device ID or Project Code that matches the original request.
- Select the Desired Test Date and submit the request. Note that this will only work for a request number that was already approved and has not been completed.

*Emergency/Priority Appointments. If an appointment is needed sooner than what is available on the fieldwork calendar


- Send EDAS an email with the Project Code, Resource ID and Device ID in the subject line. In the email body explain in detail why the request should be considered a priority.
- Also in the email body, provide at least 3 proposed dates. If EDAS deems the work to be an Emergency/Priority, EDAS will coordinate with you over email on what date can be accommodated and instruct you on when to put in the appointment request.
- *Note that the exception/accommodation offer is only good until the end of that business day. Late submissions will be declined and a new outreach shall be made if the appointment is still needed. The previously coordinated date may no longer be available.

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RIG FIELDWORK

For a new RIG, IP Change or addition of a Backup RIG IP, a RIG Details Form will be required to be submitted into RIMS and accepted in order to be placed into the Scope for the changes.

For any fieldwork pertaining to the RIG, EDAS must first be contacted to verify the OMS Outage is active. EDAS will provide instructions for providing updates as required and manually override any values as necessary. If performing work that requires a Point to Point check, EDAS will administer the validation. Upon completion of the work, if not already done so, EDAS must be notified of the completion and/or of any issues still existing.

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METER FIELDWORK

New Installations, Meter Replacements, IP Changes or Programming changes which will impact the ISO’s Meter interrogation software require a Meter Configuration Worksheet to be uploaded to RIMS and accepted at least 5 business days prior to the appointment. *Note: if changing to a public IP there should be additional time allotted for firewall changes*

For a **Meter Replacement**, submit a request via the EDAS Request Tool. For the Device ID, enter in the Device ID being replaced. A New Device ID will be assigned and provided upon validation and in the email correspondence sent to the requestor from the EDAS Request Tool.

Prior to arriving on site it should be confirmed that there is an approved Fieldwork Appointment and OMS outage. Prior to starting any work on a meter, the ISO Meter Inspector must contact EDAS, confirm the OMS outage is Active and retrieve Hand Held Files (HHFs) from the meter. If meter work affects real time data to the ISO, periodic updates must be made as instructed by EDAS.


New Installs, Meter Replacements and certain Meter Reprogramming will require a Point to Point test administered by EDAS.

When performing any work that requires the programming of the meter to be accessed regardless of the inspection type, the Inspector shall verify the program in its entirety to ensure the program is operating correctly and compliant with the CAISO Tariff and BPMs. In addition, New Installs, Meter Replacements and Re-Inspections should be a complete validation/verification/certification of the metering configuration in its entirety to include inspecting instrument transformers. **If any discrepancies are identified, report them to EDAS immediately via phone and email as well as include detailed notes on the meter form.**

Upon completion of the work, contact EDAS to confirm communication and/or telemetry is restored and to provide detailed updates on the status of the project.

The **proper meter documentation must be submitted to RIMS within 5 business days of the work being completed.** Please use the most up to date forms which can be found on our website at:

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

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METER FORMS

There are 2 Metering Forms: Meter Maintenance and Meter Site Verification Sheet (MSVS).

This section will cover the important fields that will be required to successfully complete and submit the 2 new metering forms.


Review: Once the MSVS form is uploaded and submitted to RIMS, EDAS will review verify and validate the form.

Un-Accepted: If the submitted meter documentation contains any errors, it will be unaccepted. The RIMS User contacts of the project will receive an auto generated email notification from EDAS on the specific errors. Responsible parties shall either make the appropriate corrections to the form or take corrective actions to resolve any issues. RIMS User shall submit an updated version of the MSVS or Meter Maintenance form to NRI using the proper naming convention and versioning. The **Review** and **Accept** or **Un-Accepted** process will continue until a valid metering form is accepted.

Accept: Once the meter documentation passes validation, it will be accepted. EDAS will route the document (MSVS or Meter Maintenance) to the required signatories such as: Installer, Programmer, Inspector, and the Site Owner via DocuSign for signatures. All parties must sign the documents via DocuSign. After the complete execution of the MSVS or Meter Maintenance form, a copy will be available to all signing parties via DocuSign. For New Installs (New Projects coming into the ISO) the MSVS is required as part of meter validation to process the Certificate of Compliance (CoC).

Please submit the MSVS and Meter Maintenance forms in Microsoft Word Format. PDF formats will not be accepted. Signatures are accepted only through DocuSign.

For Helpful Hints, select the desired field on the form and press F1. A popup window will appear with a description and/or instructions for that field.

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Fields and Definitions

New Install: Meters in which the Site has not achieved ISO Commercial Operation. Or New meter being added to an Existing Resource, such as the addition of a feeder meter or backup meter. If a meter is repurposed, i.e. converting to a Line Loss Meter.

Meter Replacements: Existing ISO Meter is replaced with a new meter. Meter is not changing location or being repurposed in any way.

Meter Reprogram: Any changes to the meter programming to include but not limited to: addition or removal of a DCF, Line and/or transformer loss changes, Multiplier changes etc. *NOTE (if Reprogramming requires changes to the ISO's Revenue Quality Meter Data System, such as a meter changing from a 4ch to 6ch, 6ch to 4ch, changes to the Meter Multiplier and/or Pulse Multiplier will require a New Device ID to be assigned by the ISO)*

Meter Maintenance: Calibration, Battery Replacement, Troubleshooting etc.


Communication Changes: Changes to the meter communication such as IP address, Modem Number or Port changes

Re-Inspection: Any changes which result in the re-inspection of a meter where it does not constitute reprogramming or equipment changes. For example, removal of non ISO meters within the same circuit of the ISO meter in which no physical or programming changes are made to the ISO meter, however burdens are affected.


- Project Information:
 - New Meter Device ID: For New Installs and Meter Replacements
 - NRI Project Code: Project Number received from NRI through RIMS
 - Meter Designation: Type of meter selected from dropdown list, i.e. Main, Backup, Aux etc.
 - Meter Name (Optional): Name of the meter, i.e. Gen 1, Gen 2, T1, L1, Feeder 1 etc.
 - Existing Meter Device ID: Required for Meter Replacement, Re-Program or Re-Inspection

- Facility Information:
 - Site Name: Generator Project Name
 - Facility Address, City, State, Zip: Physical address of plant
 - Site Contact Name and Phone: Name and phone number for an individual on site


- CAISO Revenue Metering and Communication Information:

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- Inspection Type: Type of inspection performed selected from dropdown list, i.e. Test – New Site/Device/Points Point to Point, Request - Meter Replacement etc. Note: Meter Maintenance Form is used for Meter Main
 - Net MW: POR MW (For the Resource)
 - Site Aux MW: Aux MW for site
 - Distance to POR: Distance to ISO POR in miles
 - Meter kV: Metered voltage
 - Interconnect kV: Voltage at which site is interconnected
 - Meter Manufacturer: Manufacturer of Meter
 - Meter Model: Model of Meter
 - Meter Serial Number: Serial Number of Meter
 - Form: Meter Form
 - 3W Delta or 4W Wye: Check if 3W Delta or 4W Wye
 - Modem Communication: Check only if the meter is communicating via a dial up connection
 - CAISO Polled Meter: Check if meter is ISO polled
- Instrument Transformer Correction Factors:
 - Enter values if CTs/VTs do not met ISO requirements otherwise leave blank.
 - Tested and Programmed Transformer and Line Loss Compensation Values:
 - Enter both Tested and Programmed losses if transformer and/or transmission line losses are programmed and tested
 - Programmed losses should match what is provided on the PORCalc document. Form only handles 4 decimal places, any digits after this are truncated (do not round)
 - Transformer and/or Line Loss & Distribution Compensation Factor (DCF):
 - Loss: Select Yes if losses are programmed in the meter, No if no losses are programmed
 - DCF: If the site qualifies for a DCF, select the appropriate percentage programmed in the meter. If no DCF is programmed select None
 - CAISO Revenue Meter Seal Information:
 - Complete All fields with the As Left and As Found seal numbers. Enter the seal number in its entirety. If a field is not applicable, Enter “NA” (DO NOT ENTER “N/A”, “N A”, “Not Applicable” and DO NOT LEAVE BLANK)
 - Voltage and Current Transformer Information :

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- Enter all information for VT and CTs. If a 3 Wire Delta connection, B phase fields should be left blank and any list boxes should remain defaulted to say Select
- Test Standard Information:
 - All Test Standard information is required if a calibration test is performed
- Meter Calibration Test Results and Record:
 - If a meter calibration test is performed, all information is required
- Inspector Information and Final Remarks:
 - Enter detailed description of work. This is a required field
- Installer, Programmer, Inspector and Site Owner Information:
 - All information for the Installer, Programmer, Inspector and Site Owner are required. DO NOT provide a signature. Emails provided will be used to route the document for signatures via DocuSign.
 - Dates should be in chronological order, i.e. Inspection completion must not be before the Installation or Programming and the date of Owner review completed must not be before the date of Inspection.

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Meter Site Verification Sheet (MSVS)

This section will outline the documentation Requirements of the MSVS

- **New Install and Meter Replacement**
 - Complete the Following Sections
 - All Sections of the MSVS are required: Complete all fields
 - Meter Replacements must include both the New Device ID and Existing Device ID

- **Meter Reprogram**
 - Complete the Following Sections
 - Sections 1 through 8: Complete all fields
 - Reprograms must include the Existing Device ID, New Device ID field should be left blank
 - Section 9 Should be completed if information is available. If not leave all fields in this section blank
 - Sections 10 through 11: Complete if applicable, only required if accuracy testing was completed
 - Section 12: Very Detailed Remarks are required, including and not limited to dates, times, findings etc.
 - Section 13: Complete the following
 - If No Installer Leave all Installer fields blank, otherwise complete all Installer fields
 - Complete all fields for Programmer, Inspector and Site Owner

- **Re-Inspection**
 - Complete the Following Sections
 - Sections 1 through 9: Complete all fields
 - Reprograms must include the Existing Device ID, New Device ID field should be left blank
 - Sections 10 through 11: Should be completed to show accuracy testing
 - Section 12: Very Detailed Remarks are required, including and not limited to dates, times, findings etc.
 - Section 13: Complete the following
 - If No Installer Leave all Installer fields blank, otherwise complete all fields
 - If No Programmer Leave all Programmer fields blank, otherwise complete all Programmer fields
 - Complete all fields for Inspector and Site Owner

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- **PMax Change**

- Complete the Following Sections
 - If No Inspection required
 - Sections 1 through 3: Complete all fields
 - Section 4: Complete Meter information
 - Section 8: Complete All Seal Information. If there is a seal that is not required then enter “NA”
 - Section 12: Enter any Remarks, this is a required field
 - Section 13: Complete all fields
 - Leave all fields for Installer, Programmer and Inspector blank
 - Complete all Site Owner information
 - If an Inspection is required
 - Sections 1 through 3: Complete all fields
 - Sections 4 through 6: Complete all applicable information
 - Sections 6 and 7: Complete if applicable
 - Section 8: Complete All Seal information. If there is a seal that is not required then enter “NA”
 - Sections 9 through 11: Complete if applicable
 - Section 12: Enter any remarks, this is a required field
 - Section 13: Complete all Inspector and Site Owner Information

Upload and submit the completed form to RIMS


File Naming convention should be as follows:

(Project Code) MSVS (Device ID) ver(#)

Example:

16GENXXXX MSVS 590000 ver1

16METERXXXX MSVS 2900000 ver1

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Meter Maintenance Form

This section will outline the documentation Requirements when meter maintenance is performed on a Certified ISO Meter.

- **Meter Maintenance**
 - Complete the Following Sections
 - Sections 1 through 3: Complete all fields.
 - Section 4 through 6: Complete all applicable information
 - Section 7: Complete All Seal information. If there is a seal that is not required then enter “NA”
 - Sections 8 and 9: Complete all information if meter was tested. If not tested, leave all information blank
 - Sections 10 and 11: Complete all information

- **Communication Change, Load Provider Change**
 - Complete the following Sections
 - Section 1, 2 and 3: Complete all fields.
 - Section 4, 5 and 6: Leave as is (Not applicable)
 - Section 7: Complete All Seal information. If there is a seal that is not required then enter “NA”
 - Sections 8 and 9: Complete if meter was also accuracy tested otherwise leave all fields with the default values
 - Section 10: Remarks section is required to describe the work and changes completed
 - Section 11: Complete all fields
 - If No Inspection was required
 - Leave Inspector Information Blank
 - Complete all Site Owner Information
 - If Inspection was required
 - Complete all Inspector and Site Owner Information


Upload and submit the completed form to RIMS

File Naming convention should be as follows:

(Project Code) Meter Maintenance (Device ID) ver(#)

Example:

16METERMTXXXX Meter Maintenance 5900000 ver1

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POR CALC

This section will outline the POR Calc documentation Requirements when applicable

- Calculations of applicable Transformer and/or Line Losses shall be displayed on the document
- Watt and VAR Losses shall be clearly represented for each Resource in the total calculation
- Total Watt and VAR Percent Losses shall be clearly outlined on the document and be reconciled with programmed losses on the MSVS Form
- Resource ID and/or NRI Project Code shall be provided for each Resource part of the total calculation. If a future site is depicted on the calculation and no Resource ID or NRI Project Code is available yet, indicate Future Resource and provide Site Name. *Note: MW values for all Resources included in a scheme shall be reconciled with the Resource ID's PMax as indicated in Master File.*


Upload and submit the completed form to RIMS

File Naming convention should be as follows:

(Project Code) PORCalc (Device ID) ver(#)

Example:

16METERMTXXXX PORCalc 5900000 ver1

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APPENDIX: QUICK REFERENCE GUIDES


CT/PT Related Fieldwork

Will this result in any changes to the Meter Programming, cutting of CAISO Meter Seals or the changing of an Instrument Transformer?

One project is required per meter.

If **YES** please complete the following:

1. **Get** Access to RIMS. Follow the RIMS Quick Start Guide:
<http://www.caiso.com/Documents/NRIQuickStartGuide2018RIMS.pdf>
2. **Create** a new RIMS project. Request Type: **NRI Project Details Form**.
3. **Input** the following on the **RIMS Project Details Form**:
 - a. Project type: **Meter Maintenance** (METERMT)
 - b. In the **Project Description** include the **Resource ID, Device ID** and provide a description of the work.
4. **Provision** access to the project in RIMS. Please contact UAARequests@caiso.com for assistance regarding access to RIMS projects.
5. **Submit** a **Fieldwork** request for **Meter Maintenance/Troubleshooting**. Please refer to the appropriate section in this guide for specific instructions regarding fieldwork.
 - a. EDAS Request Tool:
<http://www.caiso.com/fieldworksupport/Pages/default.aspx>
6. **Create** an **OMS** outage upon confirmation for the date and time of the appointment.
7. **On date and time of appointment**:
 - a. **Ensure OMS** is active
 - b. **Obtain** clearance from EDAS at the start of appointment to begin work
 - c. **Perform** work
 - d. **Test** with EDAS if applicable (Onsite during the work there should be a CAISO Authorized Inspector to confirm the programming change, verify any equipment changes and remove/replace seals)
8. **Terminate OMS** once work is completed.
9. **Complete** relevant documentation: **Meter Site Verification Sheet (MSVS)** and submit into **RIMS**
10. **Form** will be validated and then routed to relevant parties for signature.
11. **Execute** MSVS form. Once fully executed, EDAS will accept the document in RIMS.
12. **Project** Status will be updated to Completed in RIMS by EDAS.


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Updating Meter IP Addresses

One project is required per meter.

To complete a Meter IP Change, complete the following:

1. **Get** access to RIMS. Follow the RIMS Quick Start Guide:
<http://www.caiso.com/Documents/NRIQuickStartGuide2018RIMS.pdf>
2. **Create** a new RIMS project. Request Type: **NRI Project Details Form**.
3. **Input** the following on the **RIMS Project Details Form**:
 - a. Project type: **Meter Maintenance** (METERMT)
 - b. In the **Project Description** include the **Resource ID, Device ID** and provide a description of the work.
4. **Provision** access to the project in RIMS. Please contact UAARRequests@caiso.com for assistance regarding access to RIMS projects.
5. **Submit** a **Fieldwork** request for **Meter Maintenance (IP Change)**. Please refer to the appropriate section in this guide for specific instructions regarding fieldwork.
 - a. EDAS Request Tool:
<http://www.caiso.com/fieldworksupport/Pages/default.aspx>
 - b. The appointment must be scheduled a minimum of 21 days out from the day the request is being made.
6. **Complete the following**:
 - a. **Notify** EDAS of intent to change to IP address. EDAS will mark the MeterConfig as required for the project(s) created.
 - b. **Submit** MeterConfig document into RIMS.
 - c. **MeterConfig** must be **Accepted** in RIMS prior to appointment. This should be done no less than one week from the date the change is expected to occur.
 - d. **MeterConfig**:
<http://www.caiso.com/Documents/MeterConfigurationWorksheet.docx>
7. **For Changes to Static Public IP**: Upon acceptance of the Meter Config, the appointment must be scheduled no earlier than the Friday of the following week. IP Changes cannot be supported on Thursdays or during the target week of a Model Build.
8. **Create** an **OMS** outage upon confirmation for the date and time of the appointment.
9. **On date and time of appointment**:
 - a. **Ensure OMS** is active
 - b. **Obtain** clearance from EDAS at start of appointment to begin work
 - c. **Implement** change.
 - d. **Test** with EDAS
10. **Terminate OMS** once work is complete
11. **Complete Meter Maintenance Form** and submit via **RIMS**. Refer to the appropriate section of this guide for instructions on completing the form.
12. **Form** will be validated and then routed to relevant parties for signature.
13. **Execute** Meter Form. Once the Meter Maintenance form is fully executed, EDAS will accept the document in RIMS.
14. **Project** Status will be updated to Completed in RIMS by EDAS.


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Meter Maintenance

One project is required per meter.

To complete a Meter Maintenance, complete the following:

1. **Get** access to RIMS. Follow the RIMS Quick Start Guide:
<http://www.caiso.com/Documents/NRIQuickStartGuide2018RIMS.pdf>
2. **Create** a new RIMS project. Request Type: **NRI Project Details Form**.
3. **Input** the following on the **RIMS Project Details Form**:
 - a. Project type: **Meter Maintenance** (METERMT)
 - b. In the **Project Description** include the **Resource ID, Device ID** and provide a description of the work.
4. **Provision** access to the project in RIMS. Please contact UAARquests@caiso.com for assistance regarding access to RIMS projects.
5. **Submit** a **Fieldwork** request for **Meter Maintenance**. Please refer to the appropriate section in this guide for specific instructions regarding fieldwork.
 - a. EDAS Request Tool:
<http://www.caiso.com/fieldworksupport/Pages/default.aspx>
6. **Create** an **OMS** outage upon confirmation for the date and time of the appointment.
7. **On date and time of appointment**:
 - a. **Ensure OMS** is active
 - b. **Obtain** clearance from EDAS at start of appointment to begin work
 - c. **Perform** meter work.
 - d. **Notify** EDAS when work is completed
8. **Terminate OMS** once work is complete
9. **Complete Meter Maintenance Form** or **Meter Site Verification Sheet (MSVS)** depending on the type of inspection performed and submit via **RIMS**. Refer to the appropriate section of this guide for instructions on completing the form.
10. **Form** will be validated and then routed to relevant parties for signature.
11. **Execute** Meter Form. Once the Meter Maintenance form is fully executed, EDAS will accept the document in RIMS.
12. **Project** Status will be updated to Completed in RIMS by EDAS.


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Meter Replacement(s)

One project is required per meter.

To complete a Meter Replacement, complete the following:

1. **Get** access to RIMS. Follow the RIMS Quick Start Guide:
<http://www.caiso.com/Documents/NRIQuickStartGuide2018RIMS.pdf>
2. **Create** a new RIMS project. Request Type: **NRI Project Details Form**.
3. **Input** the following on the **RIMS Project Details Form**:
 - a. Project type: **Meter Replacement (METER)**
 - b. In the **Project Description** include the **Resource ID, Device ID** and provide a description of the work.
4. **Provision** access to the project in RIMS. Please contact UAARRequests@caiso.com for assistance regarding access to RIMS projects.
5. **Submit** a **Fieldwork** request for **Meter Replacement**. Please refer to the appropriate section in this guide for specific instructions regarding fieldwork. A new **Device ID** will be issued and provided in confirmation email.
 - a. EDAS Request Tool:
<http://www.caiso.com/fieldworksupport/Pages/default.aspx>
 - b. Each Project Number/Code must have its own fieldwork appointment scheduled.
 - c. The appointment must be scheduled a minimum of 15 days out from the day the request is being made.
6. **Complete the following**:
 - a. **Submit** MeterConfig document into RIMS.
 - b. **MeterConfig** must be **Accepted** in RIMS prior to appointment. This should be done no less than one week from the date the change is expected to occur.
 - c. **MeterConfig**:
<http://www.caiso.com/Documents/MeterConfigurationWorksheet.docx>
7. **Create** an **OMS** outage upon confirmation for the date and time of the appointment.
8. **On date and time of appointment**:
 - a. **Ensure OMS** is active
 - b. **Obtain** clearance from EDAS at start of appointment to begin work
 - c. **Implement** change.
 - d. **Test** with EDAS
9. **Terminate OMS** once work is complete
10. **Complete Meter Site Verification Sheet (MSVS)** and submit via **RIMS**. Refer to the appropriate section of this guide for instructions on completing the form.
11. **Form** will be validated and then routed to relevant parties for signature.
12. **Execute** Meter Form. Once the Meter Maintenance form is fully executed, EDAS will accept the document in RIMS.
13. **Project Status** will be updated to Completed in RIMS by EDAS.


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Updating RIG IP Address, including adding a Backup IP Address

If changing ECN or ANIRA IP Addresses, ATT may require you open a RIG project first when requesting the service. On average, the process can take 2-3 weeks. Timing with Database deployments may extend that time. **One project is required per RIG.**

To update an IP address for a RIG, complete the following:


1. **Get** access to RIMS. Follow the RIMS Quick Start Guide:
<http://www.caiso.com/Documents/NRIQuickStartGuide2018RIMS.pdf>
2. **Create** a new RIMS project. Request Type: **NRI Project Details Form**.
3. **Input** the following on the **RIMS Project Details Form**:
 - a. Project type: **RIG Reconfiguration (RIG)**
 - b. In the **Project Description** include the **Resource ID, Device ID** and provide a description of the work.
4. **Provision** access to the project in RIMS. Please contact UAARRequests@caiso.com for assistance regarding access to RIMS projects.
5. **Submit** RIG Details Form into RIMS
 - a. RIG Details Form:
<http://www.caiso.com/Documents/RemoteIntelligentGatewayDetails.docx>
 - b. If the New IP address is for a Public (Non ECN or ANIRA) address, then there is approximately a one week lead time before the change can occur.
 - c. Requests are processed weekly Monday through 3pm Friday at for implementation on Thursday of the following week.
6. **Upon** acceptance of the RIG Details Form, the RIMS Project will be updated with an assigned model build.
7. **Submit** a **Fieldwork** appointment for **RIG Maintenance/Troubleshooting** for a date after the week of the targeted model promotion date. IP Changes cannot be supported on Thursdays or during the target week of a Model Build. Please refer to the FNM Schedule <http://www.caiso.com/market/Pages/NetworkandResourceModeling/Default.aspx> and the appropriate section in this guide for specific instructions regarding fieldwork.
 - a. EDAS Request Tool:
<http://www.caiso.com/fieldworksupport/Pages/default.aspx>
8. **Create** an **OMS** outage upon confirmation for the date and time of the appointment.
9. **Provide** a meeting invite and call in number or a point of contact EDAS will communicate with on the date of the change.
10. **On date and time of appointment:**
 - a. **Ensure OMS** is active
 - b. **Obtain** clearance from EDAS at start of appointment to begin work
 - c. **Implement** changes
 - d. **Test** with EDAS
11. **Terminate OMS** once work is complete
12. Once all work is completed successfully, EDAS will update the Project Status to Completed in RIMS.

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Adding Points to a RIG

In order to add points to an existing RIG, follow the below steps. Depending on the type of points and impact, it may or may not be deployed as part of the FNM Schedule. **One project is required per RIG.**


1. **Get** access to RIMS. Follow the RIMS Quick Start Guide:
<http://www.caiso.com/Documents/NRIQuickStartGuide2018RIMS.pdf>
2. **Create** a new RIMS project. Request Type: **NRI Project Details Form**.
3. **Input** the following on the **RIMS Project Details Form**:
 - a. Project type: **RIG Reconfiguration (RIG)**
 - b. In the **Project Description** include the **Resource ID, Device ID** and specify what Points are being added. (Example: “Frequency Response”, “AGC” etc. If multiple things are being covered under the same appointment, include all relative work. Example: “Frequency Response and TLS Update”).
4. **Provision** access to the project in RIMS. Please contact UAARquests@caiso.com for assistance regarding access to RIMS projects.
5. **Submit** RIG Details Form into RIMS
 - a. RIG Details Form:
<http://www.caiso.com/Documents/RemoteIntelligentGatewayDetails.docx>
6. **Upon** acceptance of the RIG Details, EDAS will assign a Model, Create and Send the Points List to the RIMS project contacts. A copy of the RIG Points will also be available for download in RIMS.
7. **If** part of a model build, refer to the FNM Schedule for deployment date. If not part of a model build, EDAS will communicate deployment date that points will be ready for testing.
8. **Submit** a **Fieldwork** appointment for a **New Site/Device/Points Point to Point Test** appointment. Date should be on or after the deployment date.
 - a. EDAS Request Tool:
<http://www.caiso.com/fieldworksupport/Pages/default.aspx>
 - b. Each Project Number/Code will need its own fieldwork appointment scheduled.
9. **Create** an **OMS** outage upon confirmation for the date and time of the appointment.
10. **Provide** a meeting invite and call in number or a point of contact EDAS will communicate with on the date of the change.
11. **On the date and time of appointment**:
 - a. **Ensure** OMS is active
 - b. **Obtain** clearance from EDAS at start of appointment to begin work
 - c. **Test** with EDAS
12. **Terminate** OMS once work is complete
13. **Once** all work is completed successfully, EDAS will update the Project Status to Completed in RIMS.

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RIG Replacement

In order to Replace a RIG, follow the below steps.

1. **Get** access to RIMS. Follow the RIMS Quick Start Guide:
<http://www.caiso.com/Documents/NRIQuickStartGuide2018RIMS.pdf>
2. **Create** a new RIMS project. Request Type: **NRI Project Details Form**.
3. **Input** the following on the **RIMS Project Details Form**:
 - a. Project type: **RIG Reconfiguration (RIG)**
 - b. In the **Project Description** include the **Resource ID, Device ID** and specify that it is a RIG Replacement.
4. **Provision** access to the project in RIMS. Please contact UAARquests@caiso.com for assistance regarding access to RIMS projects.
5. **Submit** RIG Details Form into RIMS
 - a. RIG Details Form:
<http://www.caiso.com/Documents/RemoteIntelligentGatewayDetails.docx>
6. **After** acceptance of the RIG Details, **Submit** a **Fieldwork** appointment for a **RIG Replacement** appointment.
 - a. EDAS Request Tool:
<http://www.caiso.com/fieldworksupport/Pages/default.aspx>
7. **Create** an **OMS** outage upon confirmation for the date and time of the appointment.
8. **Provide** a meeting invite and call in number or a point of contact EDAS will communicate with on the date of the change.
9. **On the date and time of appointment**:
 - a. **Ensure** OMS is active
 - b. **Obtain** clearance from EDAS at start of appointment to begin work
 - c. **Test** with EDAS
10. **Terminate** OMS once work is complete
11. **Once** all work is completed successfully, EDAS will update the Project Status to Completed in RIMS.

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RIG Disaggregation

In order to perform a RIG Disaggregation (Removing Points from an existing RIG and putting them on a new RIG) follow the below steps. **One project per Resource ID**

1. **Get** access to RIMS. Follow the RIMS Quick Start Guide:
<http://www.caiso.com/Documents/NRIQuickStartGuide2018RIMS.pdf>
2. **Create** a new RIMS project. Request Type: **NRI Project Details Form**.
3. **Input** the following on the **RIMS Project Details Form**:
 - a. Project type: **RIG Reconfiguration (RIG)**
 - b. In the **Project Description** include the **Resource ID, Device ID** and specify what RIG the Resource is being removed from
4. **Provision** access to the project in RIMS. Please contact UAARRequests@caiso.com for assistance regarding access to RIMS projects.
5. **Submit** RIG Details Form into RIMS
 - a. RIG Details Form:
<http://www.caiso.com/Documents/RemoteIntelligentGatewayDetails.docx>
6. **Upon** acceptance of the RIG Details, EDAS will assign a Model, Create and Send the Points List to the RIMS project contacts. A copy of the RIG Points will also be available for download in RIMS.
7. **Refer** to the FNM Schedule for deployment date.
8. **Submit** a **Fieldwork** appointment for a **New Site/Device/Points Point to Point Test** appointment. Date should be on or after the deployment date.
 - a. EDAS Request Tool:
<http://www.caiso.com/fieldworksupport/Pages/default.aspx>
 - b. Each Project Number/Code will need its own fieldwork appointment scheduled.
9. **Create** an **OMS** outage upon confirmation for the date and time of the appointment.
10. **Provide** a meeting invite and call in number or a point of contact EDAS will communicate with on the date of the change.
11. **On the date and time of appointment**:
 - a. **Ensure** OMS is active
 - b. **Obtain** clearance from EDAS at start of appointment to begin work
 - c. **Test** with EDAS
12. **Terminate** OMS once work is complete
13. **Once** all work is completed successfully, EDAS will update the Project Status to Completed in RIMS.
14. *****Note** CAISO should receive Telemetry data from both the Old/Previous RIG and New RIG in parallel until CAISO confirms that the Modeling for the Market has moved from the Old/Previous RIG to the New RIG (typically within the next 2 subsequent model builds after P2P Testing has been completed)