



California ISO  
Shaping a Renewed Future

# Resource Interconnection Management System (RIMS)

## Transmission Training Manual

## Transmission Training Contents


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# 1. Launching the Market Participant Homepage

Type the following URL into the address field of Internet Explorer

<https://portal.caiso.com>

Since this is a secure site you will need to have a valid ISO certificate loaded on your computer first. If the certificate is valid you will see the following screen. You can also go directly to RIMS using the link <https://portal.caiso.com/rims>.


**California ISO**  
*Shaping a Renewed Future*

Market Applications


Market Participant Portal  
CAISO.com

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**Application Access**


 **AIM** Access and Identity Management

**Metering**


 **OMAR** Operational Meter Analysis & Reporting

**Renewables & Demand Response**


 **DRS** Demand Response System


 **PIRP** Participating Intermittent Resource Program

**Inquiries & Disputes**


 **CIDI** Customer Inquiry Dispute and Information

**OASIS**


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


 **OASIS History** through Trade Date 3/31/09


**Settlements**


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

**Market & Operations**


 **CMRI** CAISO Market Results Interface

 **CRR** Congestion Revenue Rights


 **SIBR** Scheduling Infrastructure & Business Rules


 **SIBR Reports**


**Outage Coordination**


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

**Systems & Resource Modeling**


 **Master File**


 **RIMS** Resource Interconnection Management System

 **RIMSG** Resource Interconnection Management System - Generation

 **TR** Transmission Registry

**Reliability Requirements**

 **CIRA** California ISO Interface for Resource Adequacy

 **RAAM** Resource Adequacy Availability Management

Link to RIMS Transmission and Apps & Studies Modules

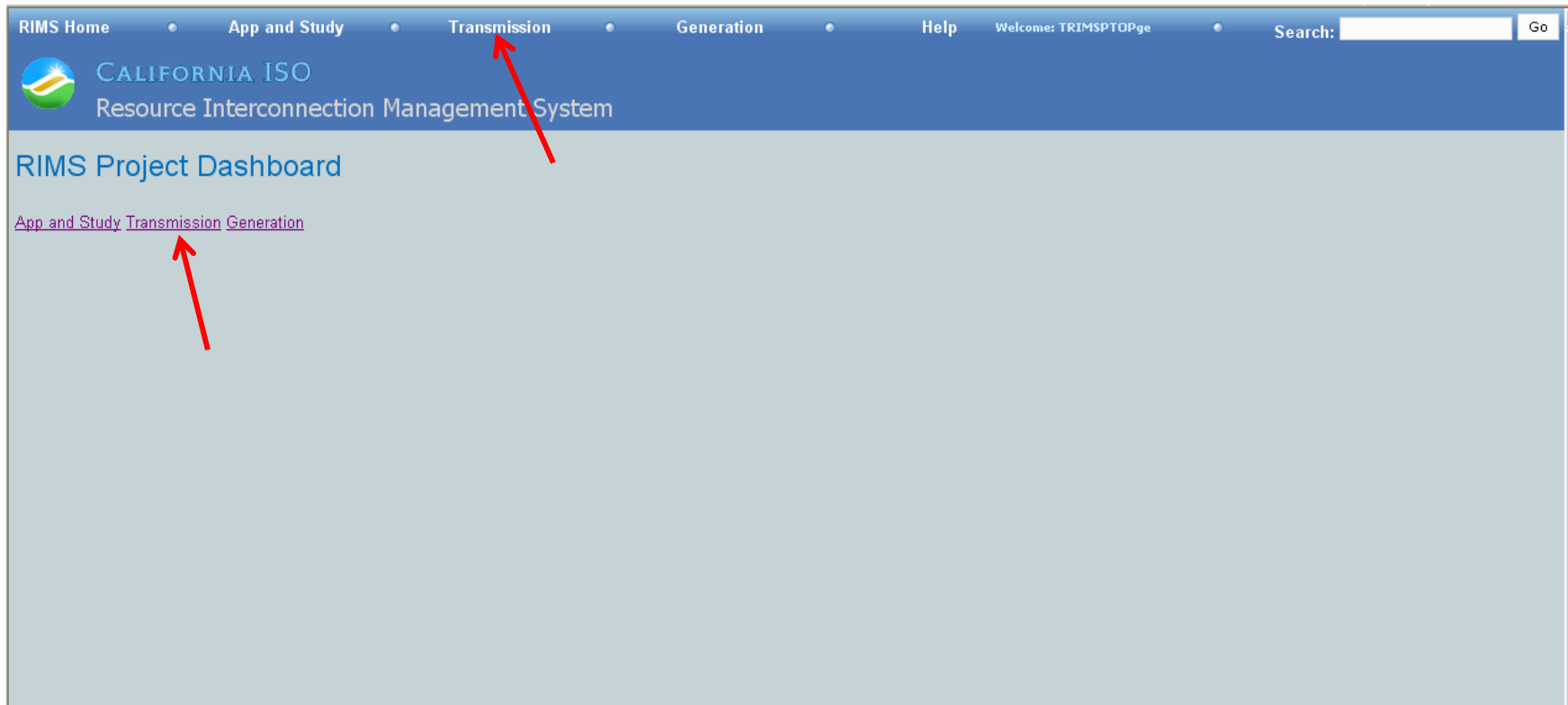
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Privacy Policy Terms of Use

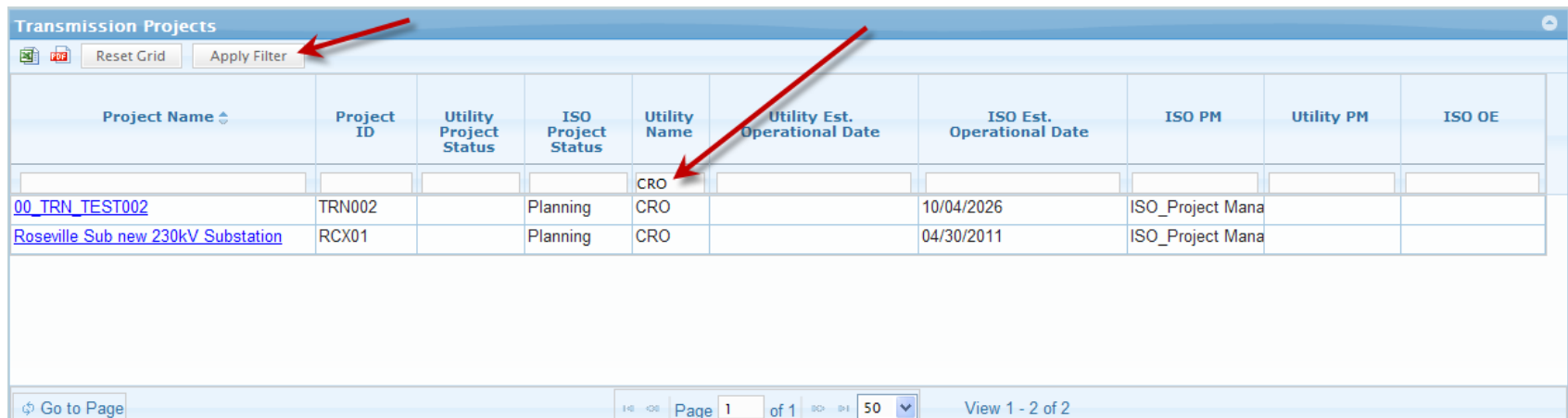
1.0

## 2. Navigate to Transmission

Initial view after using your certificate with RIMS is shown below. Note that the user name is in the upper right hand corner (in this example it is GE). Your certificate determines which modules are visible (App and Study, Transmission, and/or Generation). To access the Transmission module click on either of two [Transmission](#) links.



Since this example is logged in as a ISO representative the screen shows all project summaries. Any of the columns can be sorted by clicking on the desired column header or you can enter a word in the cell below the header and click on filter at the bottom of the screen. The example below shows a filter of “CRO” being added in the Utility Name field and clicking on the “Apply Filter” button therefore only projects at CRO are shown. The next example shows another filter options. An existing project can be accessed by double clicking on its blue project name.



Project Name	Project ID	Utility Project Status	ISO Project Status	Utility Name	Utility Est. Operational Date	ISO Est. Operational Date	ISO PM	Utility PM	ISO OE
<a href="#">00_TRN_TEST002</a>	TRN002		Planning	CRO		10/04/2026	ISO_Project Mana		
<a href="#">Roseville Sub new 230kV Substation</a>	RCX01		Planning	CRO		04/30/2011	ISO_Project Mana		

Go to Page 1 of 50 View 1 - 2 of 2

Clicking on a date field filter gives the following date range dropdown menu. Select the “Date Range” to see just projects at this utility for a specific date range. Note that you can export your filter results to an Excel spreadsheet or PDF report by clicking on the corresponding icon located in the upper left hand corner of the transmission projects screen.

Transmission Projects

Reset Grid Apply Filter

Project Name	Project ID	Utility Project Status	ISO Project Status	Utility Name	Utility Est. Operational Date	ISO Est. Operational Date	ISO PM	Utility PM	ISO OE
<a href="#">00_TRN_TEST002</a>	TRN002		Planning	CRO					
<a href="#">Roseville Sub new 230kV Substation</a>	RCX01		Planning	CRO					

Go to Page 1 of 1

RIMS Home

Today  
Last 7 days  
Month to date  
Year to date  
The previous Month  
Specific Date  
All Dates Before  
All Dates After  
Date Range

### 3. Adding a new Transmission Project

- To add a new project click on the [New Transmission Project](#) name in the upper left hand corner of the above summary screen to get the following screen example.
- Note that the user can only populate the fields that are faded and the fields that are required before it can be saved have an “ \* ” after the field name.
- The user of the following screen failed to complete all of the required fields before saving as noted by the **red outlined fields** with the 2 upper left hand notes explaining what is missing.
- **All entrees since the last successful save will be lost if** the user
  - exits this screen
  - clicks on either the refresh, reset, or back buttons
  - doesn't waiting until the [successfully been saved](#) message is displayed

Failed to create project

- Project Description is required
- Purpose & Benefit is required

Failed to create project

Project

Project Name \* ABC 115kV Substation, N Project ID \* COVX01 ISO Project Status \* Planning Utility Project Status Planning Utility Name \* City of Vernon

Project Details

Location \* Los Angeles County Capacity Increase (MW) Plan Cost \$MM \* NA Planned Original Cost \$MM (confidential)  
ISO Est. Operational Date \* 05/31/2012 Utility Est. Operational Date Actual Operational Date Utility Project Code  
SCADA Visibility SCADA Visibility Date MDAS Connection Date ISO Meter Inst. Date

Project Description \*

Purpose & Benefit \*

Miscellaneous

EMS Display Name Data Acquisition Method Inter/Intra Tie  
RAS? Related Project CPUC Report  
Market Model Impact Only Operating Procedure

Approval

Utility Approval ISO Approval CPUC Approval  
Approval Date Approval Date Approval Date

Activities

Failed to create project

Save



When the application has finished saving the new entrees it shows the message “[Failed to create project](#)” above the project name field plus the note “There are no Primary Contacts for this utility. Please contact ISO administrator. The application auto populates the Utility Contact and the ISO Project Manager Contact upon successfully saving. You will receive this message if either one of these has not been defined by the ISO administrator. Please contact Jim McHan at extension 5815 if you receive this message.

Failed to create project

There are no Primary Contacts for this utility. Please contact ISO administrator.

Failed to create project

Project

Project Name \*

ABC 115kV Substation, N

Project ID \*

COVX01

ISO Project Status \*

Planning

Utility Project Status

Planning

Utility Name \*

City of Vernon

Project Details

Location \*

Los Angeles County

Capacity Increase (MW)

Plan Cost \$MM \*

NA

Planned Original Cost \$MM (confidential)

ISO Est. Operational Date \*

05/31/2012

Utility Est. Operational Date

Actual Operational Date

Utility Project Code

SCADA Visibility

SCADA Visibility Date

MDAS Connection Date

ISO Meter Inst. Date

Project Description \*

New City of Vernon ABC 115kV Substation.

Purpose & Benefit \*

Expansion

Miscellaneous

EMS Display Name

Data Acquisition Method

Inter/Intra Tie

RAS?

Related Project

CPUC Report

Market Model Impact Only

Operating Procedure

Approval

Utility Approval

ISO Approval

CPUC Approval

Approval Date

Approval Date

Approval Date

4. **Selecting, changing, adding a contact** – the “Copy Contacts” link will show after the successful saving of a new project. If you have created a project for this same utility in the past the Copy Contacts will list that project and you can copy the same contacts into the current project

Project created

**Resource Summary** | **Phases**

**Project**

Project Name \* ABC 115kV Substation Project ID \* COVX01 ISO Project Status \* Planning Utility Project Status Planning Utility Name \* WAPA

**Contacts**

[Copy Contacts](#)

Utility Planning Rep  
Predefined Person  
[view/edit](#)

ISO Network Applic  
Engineer  
[Opt Out](#)  
[view/edit](#)

ISO Real-Time Ope  
[Opt Out](#)  
[view/edit](#)

ISO OST Engineer  
[Opt Out](#)  
[view/edit](#)

**Project Details**

Location \* Los Angeles County Capacity Increase (MW) Plan Cost \$MM \* NA Planned Original Cost \$MM (confidential)

**Copy Contacts**

Select project to copy contacts from

There will be a list of past projects here if you previously created a new project and populated the contact list. As you select each the previously selected contacts will show. If you want to copy these over to the current project select apply contacts. You can modify any of these as demonstrated in the next slide.

Close

To select a contact click on “**View/Edit Contact**” link, this brings up the contact administration window shown below.

Back to Transmission Projects

Resource Summary Phases

Project  
Project Name \*  
FOLSOM 230kV Substation

Contacts  
Utility Planning Representative  
Barbara Madrid  
[view/edit](#)

ISO Network Applications Engineer  
ISO Grid Operations Engineer  
ISO Master File Engineer

Project Details  
Location \*  
FOLSOM  
ISO Est. Operational Date \*  
SCADA Visibility Date  
Project Description \*  
New Folsom 230 kV substation.

MDAS Connection Date  
ISO Meter Inst. Date

**Contact Administration**  
Utility Project Manager

Search

Contact

First Name \* Barbara  
Title Sr. Project Manager  
Company Name GE  
City Anywhere  
Zip Code 12345  
Extension  
Fax Number

Last Name \* Madrid  
Organization \* PGE  
Street Address 123 First Street  
State California  
Phone Number \* 1234568033  
Cell Number  
Email Address \* cbedford580747@caiso.gov

PGE PGE

New Edit Save Apply Reset Remove Contact

## Selecting a contact

- The contact administration search field is very flexible it will bring back all contacts with any field that has any whole portion of what is entered in the field.
- In the following example “test” was entered into the search and it brought up all contacts with the word “test” shown in any field.
- Click on the desired contact’s name and then click on the “Apply” button to transfer it to the contact field on the summary page.
- This is the field used to know where the automatic notification e-mails will be sent.

# Selecting a contact example

Search for Contact:

test

GE DL	TEST Utility contact	1234567777	dleung@caiso.com
GE DL3	TEST Utility Rep Cont	4444444444	dleung@caiso.com
test	test	123123123	123123@test.com

City: SAN

State: California

Zip Code: 2222222

Phone Number\*: 333333333

Ext: 444

Fax Number: 5555555555

Email Address\*: jmchan@cais .com

\* Denotes required fields.

New Edit Save Apply Reset

## Adding a new contact

- If the desired contact is not shown in the drop down list you can add a new user by clicking on the “New” button at the bottom of the window and filling out the new contact information.
- The fields ending with an “ \* “ are required if “save” is selected before they are all filled in the required fields are marked in red and have the phrase “**value is required**” as shown below.
- When the required fields are filled in another “save” will send it to the summary screen and permanently add it to the contact list.

# Adding a new contact example

Contact

Contact Administration  
Utility Project Manager

Failed to save contact!

email cannot be blank

phone cannot be null

Search

Contact

First Name \*

Jane

Title

Company Name

City

Zip Code

Extension

Fax Number

Last Name \*

Doe

Organization \*

GE

Street Address

State

Phone Number \*

Cell Number

Email Address \*

# Editing a contact

- Contact information can also be edited by selecting the desired contact and then clicking on the “Edit” button at the bottom of the window.
- **Note** that editing any of the fields will change the same fields in all projects that have this contact (this includes the first and last names of the contact).

Transmission Resource Summary

[Back to Transmission Projects](#)

**Resource Summary** | Ph

**Project**  
Project Name \*  
FOLSOM 230kV Substation

**Contacts**  
Utility Planning Representative  
Barbara Madrid  
[view/edit](#)

ISO Network Applications Engineer  
ISO Grid Operations Engineer  
ISO Master File Engineer

**Project Details**  
Location \*  
FOLSOM

**Contact Administration**  
**Utility Project Manager**  
Search

**Contact**

First Name \*  
Jeff

Title  
Project Manager

Company Name  
GE

City  
Anywhere

Zip Code  
12345

Extension

Fax Number

Last Name \*  
Hart

Organization \*  
GE

Street Address  
1234 First St.

State  
California

Phone Number \*  
4159737648

Cell Number

Email Address \*  
cbedford380306@caiso.

**Edit existing contact**

New

Edit

Save

Apply

Reset

Remove Contact



## 5. OPTING OUT OF AUTOMATIC E-MAIL NOTICES & CHECK SHEETS (ISO).

Only ISO user groups can “Opt Out” of receiving e-mail notices associated with a specific project. The “Opt Out” feature also sets all phase check sheets to “NA” and should only be used for projects not related to the group. The following example is for the OE group. Note that when the person successfully opted out that the default went to “Opt In”. Selecting opt in reactivates the e-mail notices, but does not reset all of the “NAs” from the check lists.

**Resource Summary** | **Phases**

---

**Project**  
Project Name \*  
ABC 115kV Substation, N  
Project ID \*  
COVX01  
ISO Project Status \*  
Planning  
Utility Project Status  
Planning  
Utility Name \*  
WAPA

---

**Contacts**  
[Copy Contacts](#)

Utility Planning Representative * Predefined Person <a href="#">view/edit</a>	Utility Project Manager  <a href="#">view/edit</a>	ISO Project Manager * Jim McHan <a href="#">Opt Out</a> <a href="#">view/edit</a>	ISO Grid Assets Engineer Grid Assets <a href="#">Opt Out</a> <a href="#">view/edit</a>
ISO Network Applications Engineer Net Apps <a href="#">Opt Out</a> <a href="#">view/edit</a>	ISO Operations Engineer Jim Alford <a href="#">Opt In</a> <a href="#">view/edit</a>	ISO EMS Engineer EMS IT EMS IT <a href="#">Opt Out</a> <a href="#">view/edit</a>	ISO Outage Management Gene Quintana <a href="#">Opt Out</a> <a href="#">view/edit</a>
ISO Real-Time Operations  <a href="#">Opt Out</a> <a href="#">view/edit</a>	ISO Operations Data Compliance – Metering  <a href="#">Opt Out</a> <a href="#">view/edit</a>	ISO Operations Data Compliance – Telemetry  <a href="#">Opt Out</a> <a href="#">view/edit</a>	ISO Planning Engineer  <a href="#">Opt Out</a> <a href="#">view/edit</a>
ISO OST Engineer  <a href="#">Opt Out</a> <a href="#">view/edit</a>			

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**Project Details**

Location * Los Angeles County	Capacity Increase (MW) 	Plan Cost \$MM * NA	Planned Original Cost \$MM (confidential) 
----------------------------------	----------------------------	------------------------	---

## 6. Adding equipment ratings

- Any project which increases the existing capacity must list the equipment responsible for that increased capacity rating by clicking on the add button shown below.
- Note that when the add button is selected it allows the user to select the following types of equipment:
  - Lines
  - Transformer
  - Shunt Compensator
  - Series Compensator
- Show the highest continuous rating capacities in MVA.
- Multiple pieces of equipment can be added by clicking “Add” multiple times.

# Adding equipment ratings example

**Major Equipment Types and Ratings**

Transformer

Lines  
Series Compensator  
Shunt Compensator  
**Transformer**

MVA Rating (Summer) 400.0 MVA Rating (Winter) 450.0 Voltage Rating (High kV) 115.0 Voltage Rating (Low kV) 69.0 [edit](#)

**Miscellaneous**

EMS Display Name

RAS?

Market Model Impact Only ☐

Data Acquisition Method

Related Project

Operating Procedure

Inter/Intra Tie

CPUC Report ☐

**Approval**

Utility Approval

Approval Date

ISO Approval

Approval Date

CPUC Approval

Approval Date

**Activities**

## 7. Approval Status

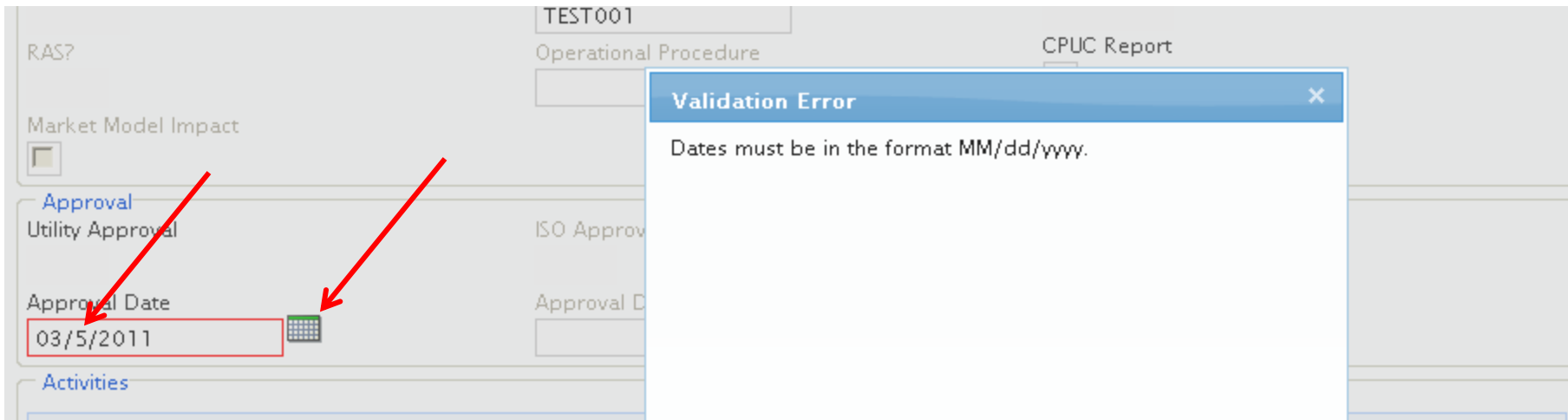
The last two fields that should be filled in on this screen are “Utility Approval” and “CPUC Approval” as shown below. The ISO Planning Engineer should fill out the “ISO Approval” field. These are a “yes” or “no” fields with associated calendars below each. These should be updated as the status changes. Note that the “Planned Original Cost \$MM” value can only be changed by the project manager after the creation of a project.

The screenshot displays a section titled "Approval" with three columns of input fields:

- Utility Approval:** A dropdown menu is open, showing "Yes" and "No" options. Below it is a date picker labeled "Approval Date".
- ISO Approval:** A dropdown menu is open, showing a single option. Below it is a date picker labeled "Approval Date".
- CPUC Approval:** A dropdown menu is open, showing a single option. Below it is a date picker labeled "Approval Date".

# Date indication

- Clicking on the calendar icon to the right of the date field brings up a calendar that can be used for selecting a date or the date can be typed into the field or any character can be changed in an existing date or it can be pasted in.



## 8. Project Phases

- Every project needs to have at least one phase. The phase information should be filled out by the originator of the project. Additional phases are required if the project involves energizing new/revised equipment at different time intervals.
- There is no limit on the number of phases that can be added.
- This screen is used to communicate with all involved groups when the model/screens/procedure need to be modified and what items are involved.
- To edit a phase, click on the “Edit” link below the Phase number.

# Project phase example

**Resource Summary** **Phases**

[Re-order Phases](#)

## Phase 1

[Edit](#)

**Project Management**

Phase ID \*  
1

Queue #  
678

Cluster ID  
C4

Operational?  
No

Start Date  
05/31/2011

End Date  
05/31/2011

Utility Phase Code  
reserved by utility use

Description (166 characters left)  
Add new 115/69 kV transformer BK4.

SLIC #s  
123456 [Add](#)

Choose Impacted Sub Stations

Impacted Sub Stations

[Documents](#)

Net Model Status  
Model Impact Assessment  
One Line?  
Date OENA Complete

Simplified  
Cleanup  
DB Number

**Fill this information in for projects caused by the interconnection of new/uprated generators**

**enter all outage requests numbers associated with this phase here.**

**This field is reserved for utility internal use for filtering phases.**

**Estimate completion of this phase must be filled in in order for status reports to work correctly.**

**Always fill this in and change to "Yes" when phase is complete**

**Add or view all single line diagrams and project details here**

## Phase example (cont.)

Simplified <input type="checkbox"/>	Cleanup <input type="checkbox"/>	DB Number <input type="text"/>	
PSLF Change? <input type="button" value="v"/>	PSLF CR Number <input type="text"/>	SCADA? <input type="button" value="v"/>	DBE Number <input type="text"/>
SCADA Finish DB Number <input type="text"/>		DCR? <input type="button" value="v"/>	DCR Number <input type="text"/>
<input type="button" value="Save"/>			

Phase Controls

Click here to add another phase to this project



## 9. Navigating from the Transmission Summary Screen

When you are finished with the Transmission Summary screen and have successfully saved all changes you can navigate to several locations as demonstrated on the next slide.

# Navigating back example

Takes the user to the RIMS home page

RIMS Home • App and Study • Transmission • Generation • Help Welcome: TRIMSPTOPge Search:  Go

**CALIFORNIA ISO**  
Resource Interconnection Management System

## Transmission Resource Summary

[Back to Transmission Projects](#)

**Resource Summary** | **Phases**

**Project**

Project Name *	Project ID *	ISO Project Status *	Utility Project Status	Utility Name *
FOLSOM 230kV Substation	GEX233	<input type="text"/>	Planning	GE

**Contacts**

Utility Planning Representative *	Utility Project Manager	ISO Project Manager *	ISO Grid Assets Engineer
Barbara Madrid <a href="#">view/edit</a>	Jeff Hart <a href="#">view/edit</a>	Ali Chowdhury	
ISO Network Applications Engineer	ISO Regional Transmission Engineer	ISO EMS Engineer	ISO Outage Management Engineer
ISO Grid Operations Engineer	ISO Metering Engineer	ISO Telemetry Engineer	ISO Network Model Engineer
ISO Master File Engineer	ISO OPT Engineer		

**Project Details**

Location *	Capacity Increase (MW)	Plan Cost \$MM *	Actual Cost \$MM (confidential)
FOLSOM		NA	

## 10. Reports & substation name editing can be accessed from the dashboard screen as shown below:

To add new substation to the drop down list.

Launches user to the report screen.

RIMS Home • App and Study • Transmission • Generation • Help Welcome: TRIMSPTOPge

CALIFORNIA ISO  
Resource Interconnection Management System

New Transmission Project Sub Station Administration Reports

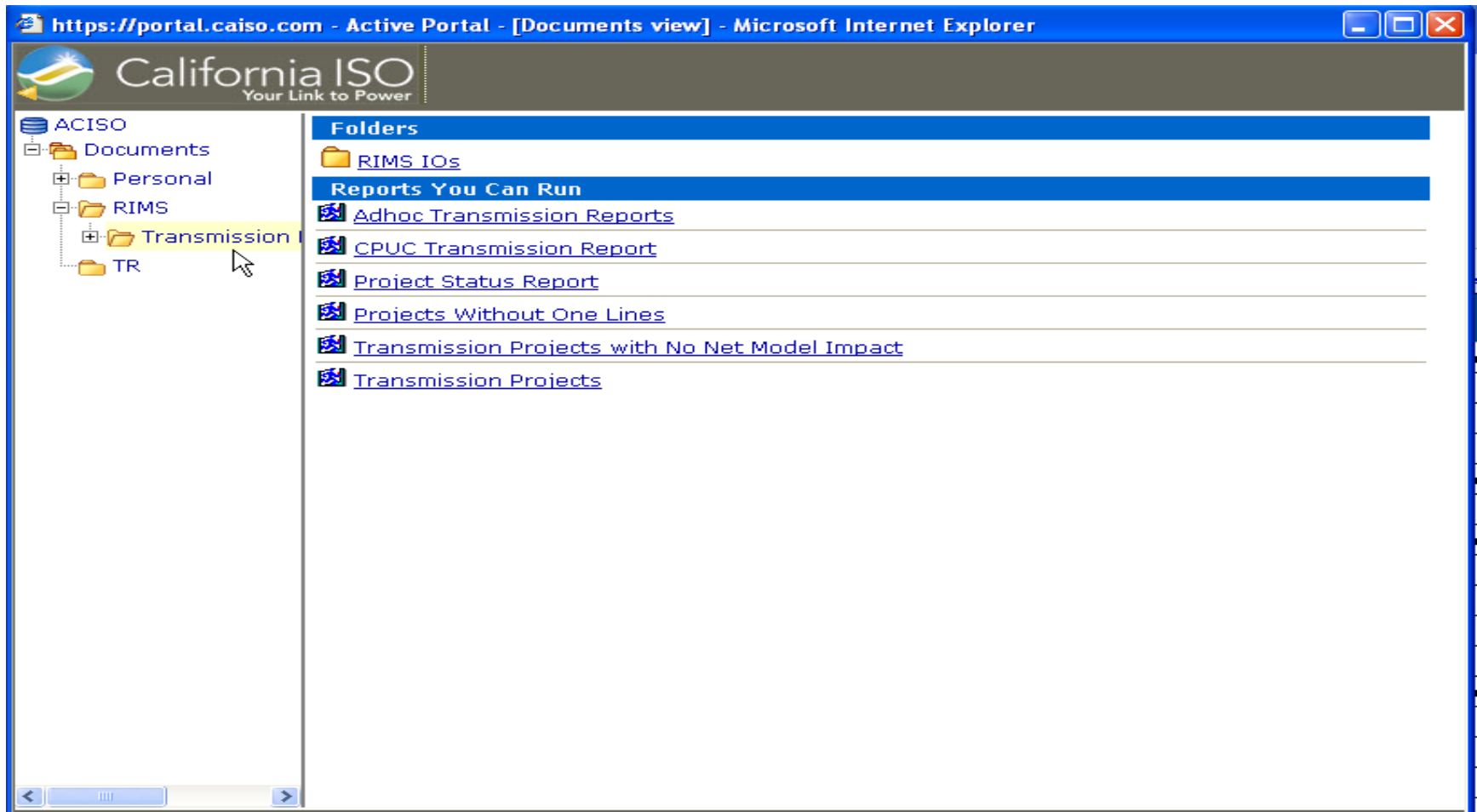
### Transmission Projects

Project Name	Project ID	Utility Project	Utility Name	Utility Est. O	ISO Est. Ope	ISO Project Mana	Utility PM
06-Gat Sub: Install Ne	Delete	Operational	GE	04/01/2009	04/01/2009	Loretta Barnard	Karena
23	44	Construction	GE		12/11/2009	Loretta Barnard	MarkTesting5145 ric
46 - Kittrick Sub: Inst	6572	Construction	GE	10/01/2009	10/01/2009	Loretta Barnard	Karena
46 - Sierra Brown	6435	Operational	GE	06/01/2009			Karena
46-Corcor Sub: Replac	6640	Operational	GE	04/22/2009	11/20/2009	MarkJR BUCK	Karena
4617-Sierra Forest	6691-17	Permitting	GE	10/23/2017	07/01/2009	Ali Chowdhury	LMG Barnard
4617a - Fres Airways:	6383123-17a	Permitting	GE	07/16/2016	08/01/2017	LGB Barnard	MArkTest Loretta
68-Henriet Sub:	5656	Operational	GE	03/11/2009			Karena
Standard Sub	T1020	Planning	GE	05/01/2010	05/01/2010	Loretta Barnard	GE PM-GROUP

Toggle Clear

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After clicking on “Reports” you will also need to click “OK” when the certificate window comes up after which the following window is shown. Note that there are up to 6 types of reports that can be run, but these are limited to 2 types for users outside the ISO.



Note the title block indicates the name of the report family, the dropdown box shows a choice of 3 reports, the date range needs to be selected on the right, and to run the report click on the “View Report” button.

The screenshot shows the California ISO web application interface. The top header features the California ISO logo and the tagline "Your Link to Power". On the left, a navigation pane lists "ACISO" and "Documents", with "Documents" expanded to show "Personal", "RIMS", "Transmission Reports" (highlighted in yellow), and "TR". The main content area is titled "Adhoc Transmission Reports". It includes a "Select Report" dropdown menu with options: "Project Information", "Project Information" (selected), "Equipment Information", and "Phase Information". To the right of the dropdown is a "Parameter Type" section with radio buttons for "All", "+ 120 days", "between now and", and "n" number of days. A date input field shows "1/7/2009". Below these options is a "View Report" button. A red arrow points to the "Adhoc Transmission Reports" title, another red arrow points to the "Select Report" dropdown, and a third red arrow points to the "View Report" button. At the bottom of the main content area, a text box contains the instruction: "Enter parameter if desired and press the 'View Report' button." The footer of the application shows navigation links: "TOC", "First", "Prev", "Next", "Last", "Goto", "Page 1 of 1", "100%", "Search", "Download", "Excel", "Print", and "Help X".

# 11. Transmission Module Conclusion

For individual questions, application problems or training related issues feel free to contact:

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