



Interconnection Application Options and Process

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Phelim Tavares, Sr. Interconnection Specialist
Linda Wright, Lead Interconnection Specialist

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Topics

- Interconnection Resource Team
- ISO Tariff and Business Practice Manuals (BPM)
- Application Options, Requirements, and Timelines
- Generator Downsizing Process
- Project Withdrawals
- Electronic Submission of Interconnection Requests (RIMS)



Interconnection Overview

Daune Wilson, Sr. Interconnection Specialist

Interconnection Resources – We're here to support you!

- Interconnection Customer's point of contact throughout application and study process
- Facilitates communications between all parties
- Conducts project scoping and study results meetings
- Ensures documentation and project information is up to date in the Resource Interconnection Management System
- General questions, IRInfo@caiso.com



California ISO Tariff

The California ISO operates under the terms and conditions of its FERC-approved tariff:

- Section 25 addresses interconnection of generating units

In addition, appendices of the tariff address generator interconnection processes:

- **Appendix DD**
 - Generator Interconnection Deliverability Allocation Procedures (commonly known as the GIDAP).
- **Appendix EE**
 - Large Generator Interconnection Agreement for interconnection requests processed under Tariff Appendix DD.
- **Appendix FF**
 - Small Generator Interconnection Agreement for interconnection requests processed under Tariff Appendix DD.

California ISO Tariff-cont.

- The CAISO tariff may be modified, amended, or supplemented as needed, subject to the approval of FERC
- Each section or appendix of the CAISO tariff is maintained and updated separately in accordance with FERC orders
- The CAISO tariff governs in case of any inconsistency or ambiguity with, business practice manuals, operating procedures, or interconnection agreements

Business Practice Manuals

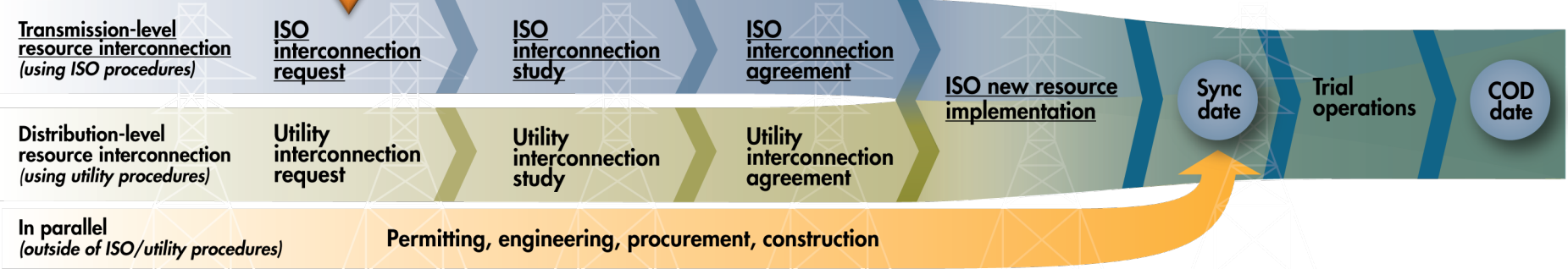
ISO Business Practice Manuals (BPMs) provide detailed guidelines, procedures, and examples.

Interconnection Resources Team References Three BPMs

- BPM for Generator Interconnection Deliverability Allocation Procedures (GIDAP)
 - Current, effective with Cluster 5 and forward
- BPM for Generator Interconnection Procedures (GIP)
 - Applicable only to existing Cluster 4 and earlier projects
- BPM for Distributed Generation for Deliverability (DGD)

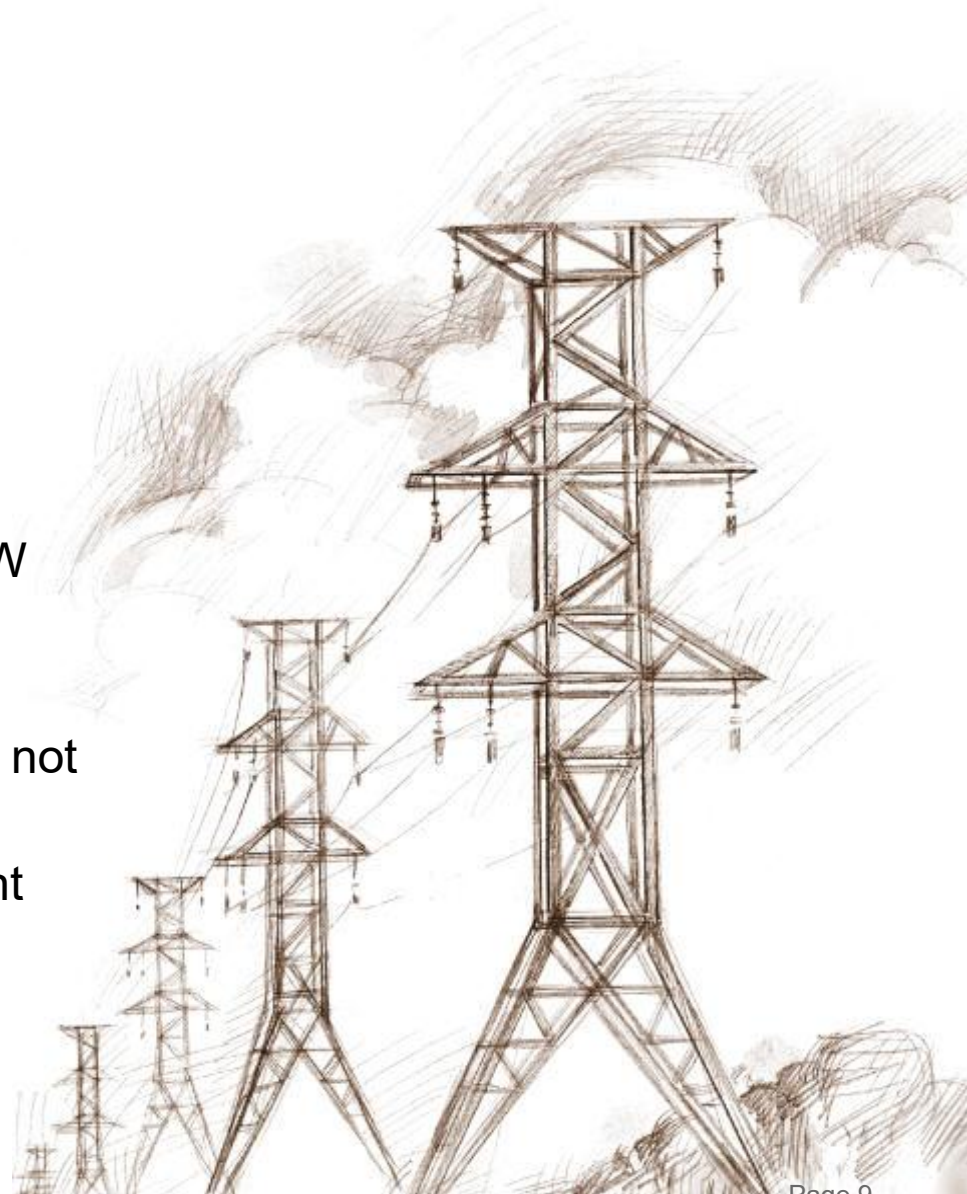
Interconnection Process Map

You are here



Application Options

- **Pre-Application**
 - Small project; 20 MW or less
- **Cluster study**
 - Small project; 20 MW or less
 - Large project; more than 20 MW
- **Independent Study Process**
 - When the cluster process does not accommodate desired COD
 - Must be electrically independent
- **Fast Track Process**
 - 5 MW or less



Pre-Applications

- Opportunity for Interconnection Customers with a proposed Small Generating Facility to receive a report of readily available data
- Requirements
 - \$300 Non-Refundable Fee
 - Pre-Application Request Form
- Report includes (as applicable):
 - Electrical configuration of the substation
 - Existing aggregate generation capacity for substation or circuit
 - Existing or known constraints for a proposed Point of Interconnection (POI)
 - Available capacity on substation or circuit likely to serve the proposed POI

Application Options Summary



Study Process	Application Window	Site Exclusivity (SE)	Study Deposits
Cluster	April 1-15	Deposit or Documents ≤ 20 MW = \$100K > 20 MW = \$250K	\$150k
Independent Study Process (ISP)	Anytime	SE Must be demonstrated	\$150k
Fast Track (FT)	Anytime	SE Must be demonstrated	\$500 processing fee

Interconnection Timeline Summary

Cluster 14 – Two+ years

Cluster 14 Application	Scoping Meeting	Phase I Study	Phase I Meeting	1 st Posting	Phase II Study	Phase II Meeting	Transmission Plan Deliverability	2 nd Posting
Apr 1-15, 2021	~June 2021	Jan 2022	Feb 2022	Apr 2022	Nov 2022	Dec 2022	Mar 2023	May 2023

Independent Study Process (ISP) – Eight months without deliverability

ISP Application	Electrical Independence	Scoping Meeting	Systems Impact and Facilities Study	Results Meeting	1 st Posting
Anytime	30 CD from ISP eligibility	Set date within 5 BD of Electrical Independence	<= 120 CD of Study Agreement	<= 20 BD of Study Results	<= 120 CD of Study Results

Fast Track (FT) – 10 weeks or more

FT Application	Initial Review (Screens)	Customer Options Meeting	Supplemental Review
Anytime	15 BD from FT Eligibility	10 BD from Determination of Upgrades / Additional Studies Needed	10 BD from Receipt of Review Deposit

Site Exclusivity

- Requirement for interconnection service
 - Initially, interconnection customers may provide a deposit
 - \$100k/small and \$250k/large
- For private land, Site Exclusivity is:
 - (a) Ownership of, a leasehold interest in, or a right to develop property upon which the Generating Facility will be located consisting of a minimum of 50% of the acreage reasonably necessary to accommodate the Generating Facility; or
 - (b) an option to purchase or acquire a leasehold interest in property upon which the Generating Facility will be located consisting of a minimum of 50% of the acreage reasonably necessary to accommodate the Generating Facility.
- For public land, please consult Appendix A of the CAISO tariff (“Site Exclusivity”) and 5.1.3 of the BPM for GIDAP

Site Exclusivity-cont.

- Common problems with documentation:
 - The demonstration of Site Exclusivity, at a minimum, must be through the Commercial Operation Date
 - Most commonly an issue for leases or options to lease
 - The name of the interconnection customer and the name of the lease/option/grant holder do not match
 - Must provide an assignment agreement, certified organizational chart, or other documentation to demonstrate that the interconnection customer (as listed on the interconnection request) holds the property interest
 - The rights to the land must include the right to develop the proposed project.
 - Not just the right to occupy for the purposes of environmental or other assessments.

Project Naming Requirement

NERC COM-002 Requirement

Stricter requirements for project name selection

- Duplicated or Unacceptable Project Names will:
 - Cause issues on the Operations Floor
 - Not be accepted into RIMS
 - Require changes after the IR submission
- Valid and acceptable project names will:
 - Provide clear and concise communications
 - Provide a smooth transition for each stage of the project

Tools

- Section 5.2 of GIDAP BPM, Selecting a Project Name
- [Prohibited Project Name List](#) (link)

Cluster Study, Application Process

- **Application Window open April 1st – April 15th**
- **Complete Interconnection Request Package**
 - **Submit IR more than 5 BDs early** for opportunity to cure incomplete package
 - ISO has 5 BDs to deem IR Package Complete
 - Day-for-day extension for ISO delays
 - All IR Package elements must be received by April 15
Packages deemed incomplete WILL NOT be studied in Cluster 14
 - **Funds preferred via Fed Wire**; checks are accepted

Cluster Study, Application Process

Complete Interconnection Request Package must include:

- (i) An Interconnection Study Deposit of \$150,000
- (ii) A completed application in the form of Appendix 1, Word doc
 - a. Including Attachment A, Excel doc
 - b. Study agreement, authorized signatory, & state of incorporation for IC
- (iii) Demonstration of Site Exclusivity or posting of a SE Deposit
- (iv) A load flow model
- (v) A dynamic data file
- (vi) A reactive power capability document
- (vii) A site drawing
- (viii) A single-line diagram
- (ix) A flat run plot and a bump test plot from the positive sequence transient stability simulation application
- (x) A plot showing the requested MW at the Point of Interconnection from the positive sequence load flow application

Cluster Study, Application Process

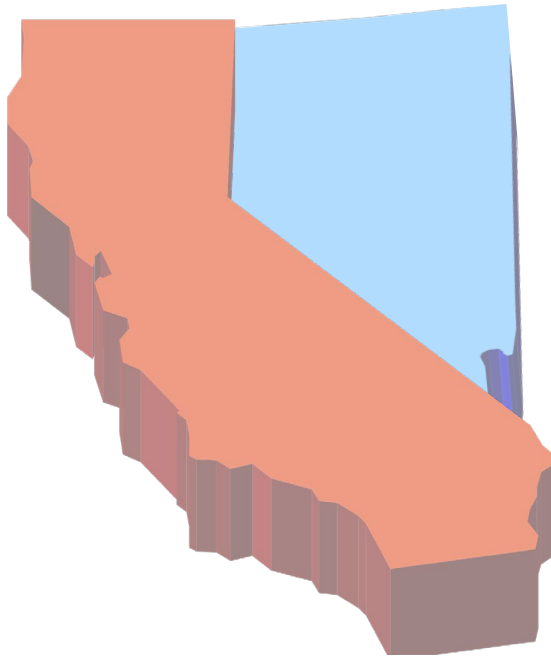
- Validation & Deficiencies Cure of Interconnection Request (IR)
 - ISO has 10 business days to determine IR validity (initial review)
 - ISO has 5 BDs to communicate IR status (subsequent Reviews)
 - Day-for-day extension for ISO delays until May 31
 - ICs do not have response timeline requirements
- June 30th cut-off to cure all deficiencies
 - Plus any extensions due to ISO delay
 - Cure deficiencies in required timeframe to be included in cluster study
- Once all applications are validated:
 - Queue numbers assigned
 - Queue report is available in RIMS

Questions?

Cluster, Independent Study, and Fast Track Process Overview

Phelim Tavares, Sr. Interconnection Specialist

Cluster Study Process



- Interconnection Requests (IR) submitted April 1st – April 15th each year are studied together
- Study costs shared between projects assigned to same study group
- Two cost components:
 - Network Upgrade costs assigned to projects on pro rata basis, if shared
 - Interconnection Facilities costs are project specific, not shared

Cluster - Customer Meetings & Studies

Cluster 14 Application	Scoping Meeting	Phase I Study	Phase I Meeting	1st Posting	Phase II Study	Phase II Meeting	Transmission Plan Deliverability	2nd Posting
Apr 2021	~June 2021	Jan 2022	Feb 2022	April 2022	Nov 2022	Dec 2022	Mar 2023	May 2023

- Approximately 2 years for above timeline with deliverability

	Scoping Meeting	Phase I Study *	Phase I Results Meeting *	Phase II Study *	Phase II Results Meeting *
Purpose	In-Service / COD P.O.I. Transmission system	NU & IF Costs & Timeline Study Report	Study Results Cost Responsibility for Upgrades	Updated NU & IF Costs & Timeline Study Report	Updated Study Results Cost Responsibility for upgrades
Timing	No later than June 30	Begins July 1 170 CD to Complete	Within 30 CD of Phase I Study Report	Begins May 1 205 CD to Complete	Within 30 CD of Phase II Study Report

*Planned dates shown. Also applicable to ISP projects with deliverability studied with the cluster.

Cluster – IC Cost Responsibility

- Generally, IC's maximum set by lower of Phase I and Phase II Network Upgrades (NU) costs
- No maximum for Interconnection Facilities (IF) costs
- May be impacted by:
 - Appendix B allowed changes
 - Reduced MWs
 - Deliverability decisions
 - Reassessment study impacts
- Cost responsibility definitions will be covered in the second presentation that covers the study results

Cluster - Modifications Between Phase I and II

Cluster 14 Application	Scoping Meeting	Phase I Study	Phase I Meeting	1st Posting	Phase II Study	Phase II Meeting	Transmission Plan Deliverability	2nd Posting
Apr 2021	~June 2021	Jan 2022	Feb 2022	April 2022	Nov 2022	Dec 2022	Mar 2023	May 2023

- Appendix B (to GISPA study agreement) due 10 business days after Phase I results meeting:
 - Confirms deliverability status & option A/B, project milestone dates, and other data provided in the IR
 - Identifies allowable modifications:
 - Decrease in MW output
 - Modify technical parameters of technology
 - Modify the interconnection configuration
 - Point of Interconnection (POI) Change



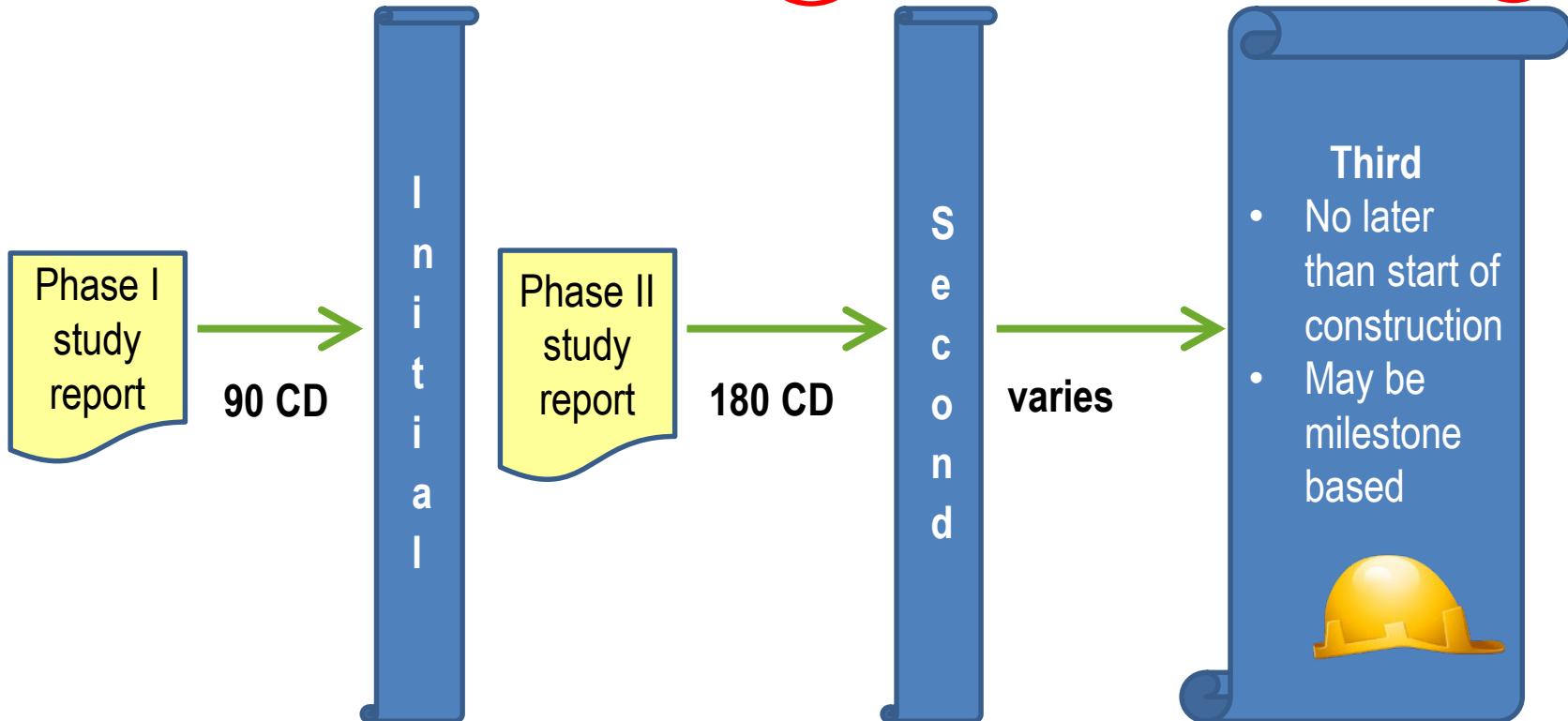
Cluster - Interconnection Financial Security

- Posted to PTO as security for project costs
 - Network Upgrades
 - Interconnection Facilities
- Posting formulas
 - Initial – 15% of upgrades with qualifiers
 - Second – 30% of upgrades with qualifiers
 - Qualifiers include:
 - project size (initial posting only)
 - Minimums
 - Maximums



Cluster - Interconnection Financial Security

Cluster 14 Application	Scoping Meeting	Phase I Study	Phase I Meeting	1 st Posting	Phase II Study	Phase II Meeting	Transmission Plan Deliverability	2 nd Posting
Apr 2021	~June 2021	Jan 2022	Feb 2022	April 2022	May – Nov 2022	Dec 2022	Mar 2023	May 2023



Independent Study Process Application

- Can submit an Interconnection Request anytime, however it is advantageous to submit the applications anytime between November and March
- Eligibility:
 - Demonstrate cluster process cannot accommodate desired Commercial Operation Date, and provide evidence of the following:
 - Financial resources
 - Permitting and regulatory approval
 - Purchase order for gen equipment
 - Point of Interconnection
 - Reliability Network Upgrades
 - Site Exclusivity via documentation only
 - Electrical Independence
 - Deliverability Assessment included as part of next Cluster study



Independent Study Process - Customer Meetings & Studies

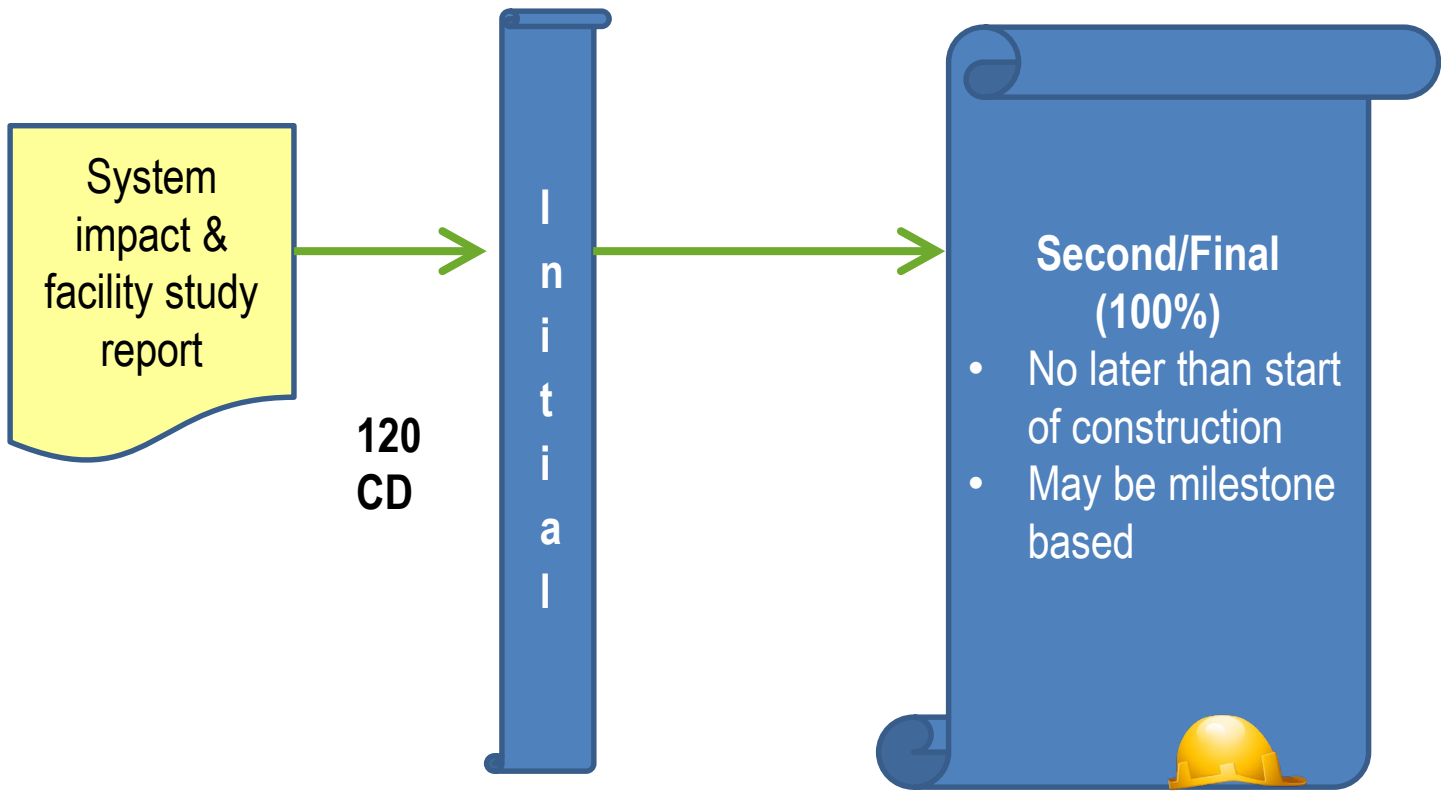
ISP Application	Electrical Independence	Scoping Meeting	Systems Impact and Facilities Study	Results Meeting	1 st Posting
Anytime	30 CD from ISP eligibility	30 CD of Electrical Independence	<= 120 CD of Study Agreement	<= 20 BD of Study Results	<= 120 CD of Study Results

- Approximately 8 months for above timeline through Results Meeting

	Scoping Meeting	System Impact and Facilities Study	Results Meeting
Purpose	Facility Loadings Instability, Short Circuit, Voltage, & Reliability Issues Prior System Studies	Short Circuit, Stability, & Power Flow Analysis IF & RNU Costs and Timeline Study Report Needed Studies	Study Results Cost Responsibility for Upgrades
Timing (Deliverability not included)	Scheduled within 5 BD of Notification of Electrical Independence	Completed within 120 CD after Execution of Study Agreement.	20 BD after System Impact and Facilities Study Report Provided to IC

Independent Study Process-Interconnection Financial Security

ISP
(non-deliverability
portion)



- Deliverability Studies follow the Cluster Timeline

Independent Study Process- Interconnection Financial Security

- Posted to PTO as security for assigned project costs
- Network Upgrades and Interconnection Facilities costs
 - No ADNUs
 - Large (>20 MW) vs. small (≤ 20 MW) formulas
- Cost Responsibility is established in the System Impact and Facilities study for Energy Only
- Deliverability portion is set forth in Phase I and Phase II study

Fast Track Study Process Application

- No larger than 5 MW with Energy Only status
- Submit Interconnection Request at any time
 - \$500 non-refundable processing fee
- Eligibility
 - Site Exclusivity via documentation only
 - Must pass all screens
- Customer Meetings, if required
 - Customer Options
 - Supplemental Review

PASS
FAIL



Fast Track Timelines and Meetings

FT Application	Initial Review (Screens)	Customer Options Meeting	Supplemental Review
Anytime	15 BD from FT Eligibility	10 BD from Determination of Upgrades/Additional Studies Needed	10 BD from Receipt of Review Deposit

- Approximately 10 weeks or more for above timeline

	Customer Options Meeting (if needed)	Supplemental Review (if needed)
Purpose	If IR cannot be approved with minimal costs, or a supplemental study, or other additional studies	Determines whether the facility can continue to qualify for interconnection under the FT process
Timing	Scheduled within 10 BD of determination that IR cannot be approved without modifications at minimal cost.	IC will agree to a review within 15 BD of the offer.

Fast Track-Cost Responsibility

- Financial Security is usually not required unless costs are identified in the supplemental review.
- Costs identified in the Customer Options Meeting or Supplemental Review.
 - Facility modifications
 - Modifications to the Participating TO's electric system

Questions?

Transmission Plan Deliverability Allocation and Other Study Processes

Phelim Tavares, Sr. Interconnection Specialist

Resource Adequacy & Deliverability

- Resource Adequacy (RA) is a CPUC program designed to:
 - Provide sufficient resources to the ISO to ensure safe and reliable operation of the grid in real time
 - Incentivize appropriate siting and construction of new resources to meet future reliability needs
- Deliverability is a resource attribute designated by ISO
 - Required for participation in the RA Program
 - Not to be confused with firm transmission service
 - Deliverability status does not guarantee that a project will avoid curtailment due to transmission congestion

Deliverability Statuses

- Full Capacity Deliverability Status (FCDS)
 - Allows a resource to provide RA Capacity to meet a Load Serving Entity's RA requirement
 - Net Qualifying Capacity payments settled bilaterally
- Energy Only Deliverability Status
 - Not eligible to provide RA Capacity
- Partial Capacity Deliverability Status
 - Only a fraction of generating facility capacity is Deliverable

Note:

- Operationally, no difference between Deliverability statuses
- The dispatch of energy is based on economics; not Deliverability Status

TP Deliverability Allocation Process: Affidavits

Cluster 14 Application	Scoping Meeting	Phase I Study	Phase I Meeting	1 st Posting	Phase II Study	Phase II Meeting	Transmission Plan Deliverability	2nd Posting
Apr 2021	~June 2021	Jul - Dec 2021	Jan 2022	Mar 2022	Nov 2022	Dec 2022	Mar 2023	May 2023



- Projects requesting FCDS must submit affidavit to be eligible for Deliverability allocation. Applies to:
 - Cluster, ISP, and PTO WDAT studied by ISO for Deliverability in current cluster
 - Parked projects
 - Energy Only projects seeking Deliverability from existing and approved transmission facilities
- Market Notice will specify due date (typically due early December)
- Projects must, at a minimum, select an allocation group and attest to current financing, permitting and land acquisition statuses
- Allocation groups will establish priority if insufficient Deliverability

TP Deliverability Allocation Group Descriptions

Allocation Group	Deliverability Status	Commercial Status (PPA or shortlisting must require Deliverability)	Can Build DNU's for Allocation?	Allocation Rank
1	Current Cluster Phase 2 Study / Parked	(i) Executed or reg-approved PPA; OR (ii) LSE serving its own load	Yes	Allocated 1 st
2	Current Cluster Phase 2 Study / Parked	(i) Shortlisted in a RFO/RFP; OR (ii) Negotiating a PPA	Yes	Allocated 2 nd
3	Current Cluster Phase 2 Study	Proceeding without a PPA	Yes	Allocated 3 rd

- Group 1: Must provide copy of executed PPA
- Group 2: Confirmation of shortlisting and terms on RFO/RFP required; or Terms of PPA and counterparty confirmation required
- Group 3: Projects proceeding to construction even if unable to secure PPA
 - Must accept allocation or WITHDRAW
 - Project will be converted Energy-Only if unable to comply with strict rules designed to limit time in Queue

TP Deliverability Allocation Group Descriptions

Allocation Group	Deliverability Status	Commercial Status	Can Build DNUs for Allocation?	Allocation Rank
4	(i) Converted to Energy-Only; OR (ii) Energy-Only projects that achieved Commercial Operation Date	Executed or regulator-approved PPA requiring FCDS	No	Allocated 4 th
5	(i) Converted to Energy-Only; OR (ii) Energy-Only projects that achieved Commercial Operation Date	Shortlisted in a RFO/RFP or Negotiating a PPA	No	Allocated 5 th
6	Converted to Energy-Only	Commercial Operation Date achieved	No	Allocated 6 th
7	Energy-Only	Commercial Operation Date achieved	No	Allocated 7 th

- Must submit a seeking TP Deliverability affidavit and \$60,000 study deposit as described in Market Notice

TP Deliverability Allocation Results

Cluster 14 Application	Scoping Meeting	Phase I Study	Phase I Meeting	1 st Posting	Phase II Study	Phase II Meeting	Transmission Plan Deliverability	2nd Posting
Apr 2021	~June 2021	Jul - Dec 2021	Jan 2022	Mar 2022	Nov 2022	Dec 2022	Mar 2023	May 2023

- Transmission Plan (TP) Deliverability allocation:
 - Determined from most recent Transmission Plan and eligible projects seeking Deliverability
 - Projects may be allocated 0% - 100% of requested amount
 - Deliverability allocation results released to all eligible projects requesting FCDS in mid-March
 - Within seven calendar days of results notice, IC must confirm how to proceed via customer options form (accept allocation, decline, park, etc.)

Distributed Generation (DG) Seeking Deliverability



- Annual Process
 - February - July
- Must apply to Utility Distribution Company (UDC)
- Eligibility
 - Wholesale Distribution Access Tariff or CPUC Rule 21
- Business Practice Manual on Distributed Generation for Deliverability

Annual Downsizing Opportunity

- Reduce existing project MW size for projects in the CAISO queue
 - Apply annually, Oct 15 – Nov 15
 - Separate downsizing request application
 - \$60K study deposit
 - Meet the eligibility requirements:
 - Project must be in good standing
 - Included in the annual reassessment and downsizing results study



Reassessments

- Annual downsizing and reassessment study report:
 - Shows the impacts of downsized projects, results of TP Deliverability, and withdrawals in the CAISO queue
 - Any active project that has complete the Phase II study and is impacted and/or submitted a request through the Annual Downsizing will receive this report
 - Issued around late July each year

Questions?

Withdrawals, Refunds, and Recovery

Linda Wright, Lead Interconnection Specialist

Withdrawals, Refunds, and Recovery

IC may withdraw at any time.



Email



or

Written
Notice



ISO may withdraw an IR if the IC fails to adhere to certain requirements of the Tariff

Withdrawals, Refunds, and Recovery (Cont.)

Effects on study deposit

Scoping Meeting for Cluster and ISP projects



100% of
Unused Portion



Phase I for Cluster System Impact and Facilities Study for ISP Results Meeting



Difference between study deposit and greater of costs incurred or one-half of study deposit to a max of \$75K



No
Refund

Withdrawals, Refunds and Recovery (Cont.)

Financial Security for **Interconnection Facilities**

- Release of entire posted amount, except any amounts necessary to pay for costs incurred or irrevocably committed.



Withdrawals Refunds and Recovery (Cont.)

Financial Security for **Network Upgrades** for Cluster and ISP projects

- On 2/19/19 FERC approved CAISO's proposed removal of all conditions for partial IFS recovery
- All projects qualify for recovery of 50% of IFS postings for NUs upon withdrawal
 - Less any irrevocably committed funds by PTO towards any NUs

Withdrawals Refunds and Recovery (Cont.)

Initial Posting



Second Posting



Construction



Formula for non-refundable portion: Lesser of IFS (plus any other provided security plus any separately provided capital):

less all costs and expenses incurred or irrevocably committed,

OR

minus the lesser of 50% of posted value **or** \$10K/MW (\$20K/MW after second posting)

Withdrawals Refunds and Recovery (Cont.)

Withdrawal between the initial posting and the deadline for the second posting for a cluster project

Example 1:

Project size: 100 MW

Interconnection Financial Security (IFS) posted for Network Upgrades (NUs): \$20M

50% of posted amount or \$10K/MW, whichever is less is calculated:

50% of \$20M = \$10M

\$10K x 100 MW = \$1M

The lesser amount, \$1,000,000 is deducted from the posted security.

\$20M (deposit)

- 1M (\$10K/MW)

\$19M Recovered by IC

Withdrawals Refunds and Recovery (Cont.)

Withdrawal between the initial posting and the deadline for the second posting for a cluster project

Example 2:

1,250 MW project

IFS posted for NUs: \$20M

50% of posted amount or \$10K/MW, whichever is less is calculated:

50% of \$20M = \$10M

\$10K x 1,250 MW = \$12.5M

The lesser amount, \$10M is deducted from the posted security.

\$20M (deposit)

- 10M (50%)

\$10M Recovered by IC

Withdrawals Refunds and Recovery (Cont.)

Withdrawal between the second posting and the commencement of construction activities for a cluster project

Example 1:

Project size: 100 MW

IFS posted for NUs: \$20M

50% of posted amount or \$20K/MW, whichever is less is calculated:

50% of \$20M = \$10M

\$20K x 100 MW = \$2M

The lesser amount, \$2M is deducted from the posted security.

\$20M (deposit)

- 2M (\$20K/MW)

\$18M Recovered by IC

Withdrawals Refunds and Recovery (Cont.)

Withdrawal between the second posting and the commencement of construction activities for a cluster project

Example 2:

Project size: 1,000 MW

IFS posted for NUs: \$20M

50% of posted amount or \$20K/MW, whichever is less is calculated:

50% of \$20M = \$10M

\$20K x 1K MW = \$20M

The lesser amount, \$10M is deducted from the posted security.

\$20M (deposit)

- 10M (50%)

\$10M Recovered by IC

Questions?

RIMS App & Study Module

Linda Wright, Lead Interconnection Specialist

Electronic Interconnection Request Submission

- Resource Interconnection Management System (RIMS) is a secure web-based database application
- Electronic submission of Interconnection Requests accomplished via a user interface from the CAISO website
- RIMS5 User Guide is available on-line
- Access to RIMS is established by the CAISO's Access and Identity Management (AIM) system

New Request

First Name:

Last Name:

Email:

Confirm Email:

Requested Project Name:

Request Type:

Register

Retrieve Request

Registration Code:

Submit

1. Fill in the "New Request" section above to receive a registration code via email that will allow you to upload an Interconnection Request or Project Details Form and associated documents. This only needs to be done once for each project to be submitted.

2. Once a registration code is received, paste it into "Registration Code" field to upload required project files.

Resource Interconnection Management System (RIMS) is the CAISO's system for tracking several different interconnection processes at the CAISO. A training presentation for RIMS is available [here](#).

Queue Viewing Instructions

- 1. Click on "Reporting" tab in top left corner of this screen
- 2. Once you are on the report dashboard, use scroll bar on bottom to view information on the right side of the report screen
- 3. Use Action Toolbar icons at top left of report dashboard to customize the view. Expand the following section to view the details.

Action Toolbar

- 4. Export the report to Excel to further evaluate data
- 5. Link to more information: [RIMS User Guide](#)

App & Study Module (Interconnection Request)

CAISO Queue Interconnection Requests are tracked in the App & Study Module. Click [here](#) for process guidance and forms. Please select the "Interconnection Request" request type at the left to submit this type of project.

Annual Cluster Application Window
April 1st - April 15th

Market Participation Asset Implementation Module (Project Details Form)

The MPAI module tracks requests going through CAISO's New Resource Implementation (NRI) process for modeling resources into CAISO markets and model (this process applies to all resources wishing to participate in CAISO markets, regardless of interconnection level. Click [here](#) for process guidance and forms. Please select the "NRI Project Details Form" request type at the left to submit this type of project.

Electronic Interconnection Request Submission (cont'd)

New Request

First Name:

Last Name:

Email:


Confirm Email:

Requested Project Name:

Request Type:

Retrieve Request

Registration Code:



1. Fill in the "New Request" section above to receive a registration code via email that will allow you to upload an Interconnection Request or Project Details Form and associated documents. This only needs to be done once for each project to be submitted.
2. Once a registration code is received, paste it into "Registration Code" field to upload required project files.

Electronic Interconnection Request Submission (cont'd)



rims-noreply@caiso.com

Wright, Linda

CAISO Project Registration - Requested Project Name

Action Items

Here are the details of your project registration

Project Name :Requested Project Name

Registration Code :21AS15509_TLMHX9_KF7CGH_GUWJTG

Please click on the link below to upload supporting documents:

<https://rimspub.caiso.com/rims5>

Please click on the link below to download Interconnection Request template. This is the only acceptable version, do not use past versions:

<http://www.caiso.com/PublishedDocuments/GeneratingFacilityData-AttachmentAtoAppendix1.xlsx>

Electronic Interconnection Request Submission (cont'd)

New Request

First Name:

Last Name:

Email:

Confirm Email:

Requested Project Name:

Request Type:

Retrieve Request

Registration Code:

←

1. Fill in the "New Request" section above to receive a registration code via email that will allow you to upload an Interconnection Request or Project Details Form and associated documents. This only needs to be done once for each project to be submitted.
2. Once a registration code is received, paste it into "Registration Code" field to upload required project files.

Electronic Interconnection Request Submission (cont'd)

INTERCONNECTION REQUEST

Project Name: Requested Project Name

Uploaded Files				
Document Type	File Name	Uploaded Status	Uploaded Date	Comment

Upload Project Files



Inventory of Documents to Upload	
Document Type Appendix DD Appendix 1 - Interconnection Request Attachment A to Appendix 1 - Generating Facility Data	Project Types All
Evidence of Site Exclusivity, including names, addresses, and contact information of site owner(s)	All
Site drawing to scale	All
Single-line diagram	All
Plot of generator terminal voltage vs field current	Synchronous
Block diagram of excitation system	Synchronous
Load Flow Model (*.epc)	All
Dynamic Model (*.dyd)	All
Google Map (*.kmz) showing project site	SCE project only
Manufacturers Specifications (optional)	Optional
Reactive Power Curve (optional)	Optional
Storage Supplemental Data Sheet (sheet supplied to IC after initial IR submission)	Storage
Other	As needed

NOTE: The Interconnection Request form found on the Generation Interconnection webpage is the **ONLY** version that is compatible with the electronic submission process

Save As Draft

- By checking this box, you understand that electronic submission is not considered a complete and/or valid Interconnection Request until the CAISO provides acknowledgement within ten (10) Business Days of receipt that the Interconnection Request, which includes the timely receipt of study deposit funds, is deemed complete and/or valid pursuant to CAISO Tariff Appendix DD Section 3.5.2. In the event that the CAISO identifies any deficiencies in the interconnection request, you will have an opportunity to cure pursuant to Appendix DD Section 3.5.2.2.

Submit Registration for Validation

Electronic Interconnection Request Submission (cont'd)

Upload Project Files

Please add comments after upload
Select a Document Type:
Interconnection Request

Choose File No file chosen

Upload

Upload Project Files

Please add comments after upload
Select a Document Type:
Interconnection Request

- Interconnection Request
- Attachment A to Appendix 1
- Evidence of Site Exclusivity
- Single-line diagram
- Dynamic Model
- Google Map
- Site drawing to scale
- Gen Terminal Voltage vs Field Current
- Block Diagram of Excitation System
- Load Flow Model
- Manufacturers Specifications
- Reactive Power Curve
- Storage Supplemental Data Sheet
- Other Documents

Upload Cancel

Electronic Interconnection Request Submission (cont'd)

INTERCONNECTION REQUEST

Project Name: Requested Project Name

Uploaded Files					
Document Type	File Name	Uploaded Status	Uploaded Date		Comment
Interconnection Request	Requested Project Name IR.docx	SUCCESS	02/22/2021	Delete	0 Comments
Other Documents	GeneratingFacilityData-AttachmentAtoAppendix1-20210218.xlsx	SUCCESS	02/22/2021	Delete	0 Comments

Upload Project Files

Save As Draft

OR

- By checking this box, you understand that electronic submission is not considered a complete and/or valid Interconnection Request until the CAISO provides acknowledgement within ten (10) Business Days of receipt that the Interconnection Request, which includes the timely receipt of study deposit funds, is deemed complete and/or valid pursuant to CAISO Tariff Appendix DD Section 3.5.2. In the event that the CAISO identifies any deficiencies in the interconnection request, you will have an opportunity to cure pursuant to Appendix DD Section 3.5.2.2.

Submit Registration for Validation



04/01/2021 10:00:00 Your registration request has been submitted successfully.

Accessing RIMS

Once RIMS access is established via AIM, those provisioned access to a project will be able to:

- See screens that detail the project and its progress
- Access documents –
THIS IS WHERE YOU WILL VIEW YOUR STUDY REPORTS
- Upload documents
- View IC, CAISO and PTO contact information

Cluster Project

▼ Resource Summary

Project Name:

Queue Position:

Queue Date:

Project Cost Code:

Study Type: Queue Cluster Process

Cluster Number: C09

PTO:

Affected PTO:

POI:

Check box to send POI notification

Voltage Level(kV):

Project Status:

Project Status Date:

QM Project Standing:

Queue Management Project Count

Requested Deliverability: Energy Only

Current Approved Net MW:

Check box to send capacity change notification

Project Description:

Interconnection Request Info

Contact First Name: RIMS

Contact Last Name: Tester05

Contact Title:

Signature Date:

Current Interconnection Customer

AIM Org: Nexant Inc. - Merchant

Company Type:

State Incorporated:

Parent Company:

Interconnection Customer (Legal Entity):

Project Location

Address:

City: County:

State: Zip Code:

Latitude: Longitude:

Comments

Available RIMS Screens

▶ Equipment Configuration

▶ Deliverability and Transmission Implementation Details

▶ Project Details

▶ Block Implementation and Phasing

▶ Documents

▶ Project Contacts

Equipment Configuration

General Description

equipment configuration comments with updates

NEW/EXISTING Generation

- New Generation Facility
- Existing Generation Facility

Generation Type and Fuel Type



Generator Type	Fuel Type	Net MW
Photovoltaic	Solar	79

Other Generation and Fuel Type



Other Generator Type	Other Fuel Type	Net MW	Comments
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Project Megawatt



Total Generating Facility Gross Capacity (MVA)	Total Generating Facility Gross Output (MW)	Generating Facility Auxiliary Load (MW)	Maximum Net MW Electrical Output (MW)	Net MW Increase to an Existing Facility (MW)	Anticipated Line Losses (MW)	Requested Net MW at POI (MW)
						79

Automatic Control Scheme

Project Milestones



Type	In Service Date	Trial Operation Date	COD Date	Term of Service	Send COD date change Notification
IR	03/15/2021	04/15/2021	06/30/2021	20	
CURRENT	10/01/2022	10/21/2022	12/31/2022	20	
FINAL					

Generation as Modeled and Implemented



Resource ID	MW	In-Service Date	COD	Fully Network Model DB Number
-------------	----	-----------------	-----	-------------------------------

Downsizing Requests



Date Received	Original MW Size	Post Downsizing MW	Deposit Date	Withdrawn Date
---------------	------------------	--------------------	--------------	----------------

Requested Deliverability
 On Peak
 (for purposes of Net Qualifying Capacity): Full Capacity Check box to send status notification

Off Peak
 (for Projects Containing Wind or Solar): Off-Peak Deliverability

Annual Full Capacity Deliverability

Received Date	Study Cluster	Assigned MW	Allocation Date	Percentage (%)
		60	08/15/2017	60

TPD Affidavit

Affidavit Type	Date Received	Valid	Score	Comments	Allocation Detail (MW)	Accepted (MW)	Parked (MW)	Energy Only (MW)	Withdrawn (MW)
Allocation	10/01/2016	Y	17		50	20	20	5	5
Retention	10/01/2017	Y	17	no change to allocation detail	50	20	20	5	5

Affected Systems Mitigations will appear on Weekly Digest Emails to responsible project contacts as listed in Notification Contacts table when the Current Approved Initial Synchronization Date (from the Project Milestone table) is less than 180 days away, and Affected Status Mitigation Status is not set as complete. Also, a Bulk Loader is available for this table.

Affected Systems

Affected System	Potential or Identified?	Mitigation Type	Mitigation Status	Mitigation Date Completed	Send task reminder?	Notes
-----------------	--------------------------	-----------------	-------------------	---------------------------	---------------------	-------

Transmission as Modeled and Implemented

Phase Description	Phase ID	Primary Purpose	Utility Project Status	Phase has SPS/RAS	Approved In-Service Date	Full Network Model DB#	Complete?
-------------------	----------	-----------------	------------------------	-------------------	--------------------------	------------------------	-----------

▼ Project Details

▼ IR Checklist

Interconnection Request				
Checklist Item	Status	Status Date	History	Comments
Interconnection Request Form	Received	03/24/2016		0 Comments
Attachment A to Appendix 1	Received	03/24/2016		0 Comments
Study Deposit	Received	10/24/2016		0 Comments
Site Exclusivity	Documents	10/24/2016		0 Comments
PTO IR Review	Valid Received from PTO	03/30/2016		2 Comments
IR Package				0 Comments
PTO Engagement Letter				0 Comments
Scoping Meeting				0 Comments
Scoping Meeting Minutes				0 Comments
Point of Interconnection				0 Comments
Study Agreement				0 Comments
IR Tab Status				0 Comments

▼ Phase I Checklist

Phase I Study				
Checklist Item	Status	Status Date	History	Comments
Phase I Study Report				0 Comments
Phase I Study Results Meeting				0 Comments
Phase I Study Meeting Minutes				0 Comments
Appendix B				0 Comments
Phase I Tab Status				0 Comments

▶ Phase II Checklist

▶ GIA Checklist

▶ Financial Security

▶ Study Costs

▼ Study Costs

Project Status : ACTIVE

Amounts Invoiced as of 02/22/2021

Project Billing

Project Cost Code:
 Project Name: Cluster Project
 Study deposit:

Comments

study cost comments


To Date Cost
 Invoiced by PTO:
 Accrued by ISO:
 Total:

Study Refund to IC:
 Invoice to IC:
 Payment from IC:











Cluster Study Charges

Scoping Meeting			Phase I Study			Phase II Study		
PTO Charges	ISO Charges	Total Charges	PTO Charges	ISO Charges	Total Charges	PTO Charges	ISO Charges	Total Charges

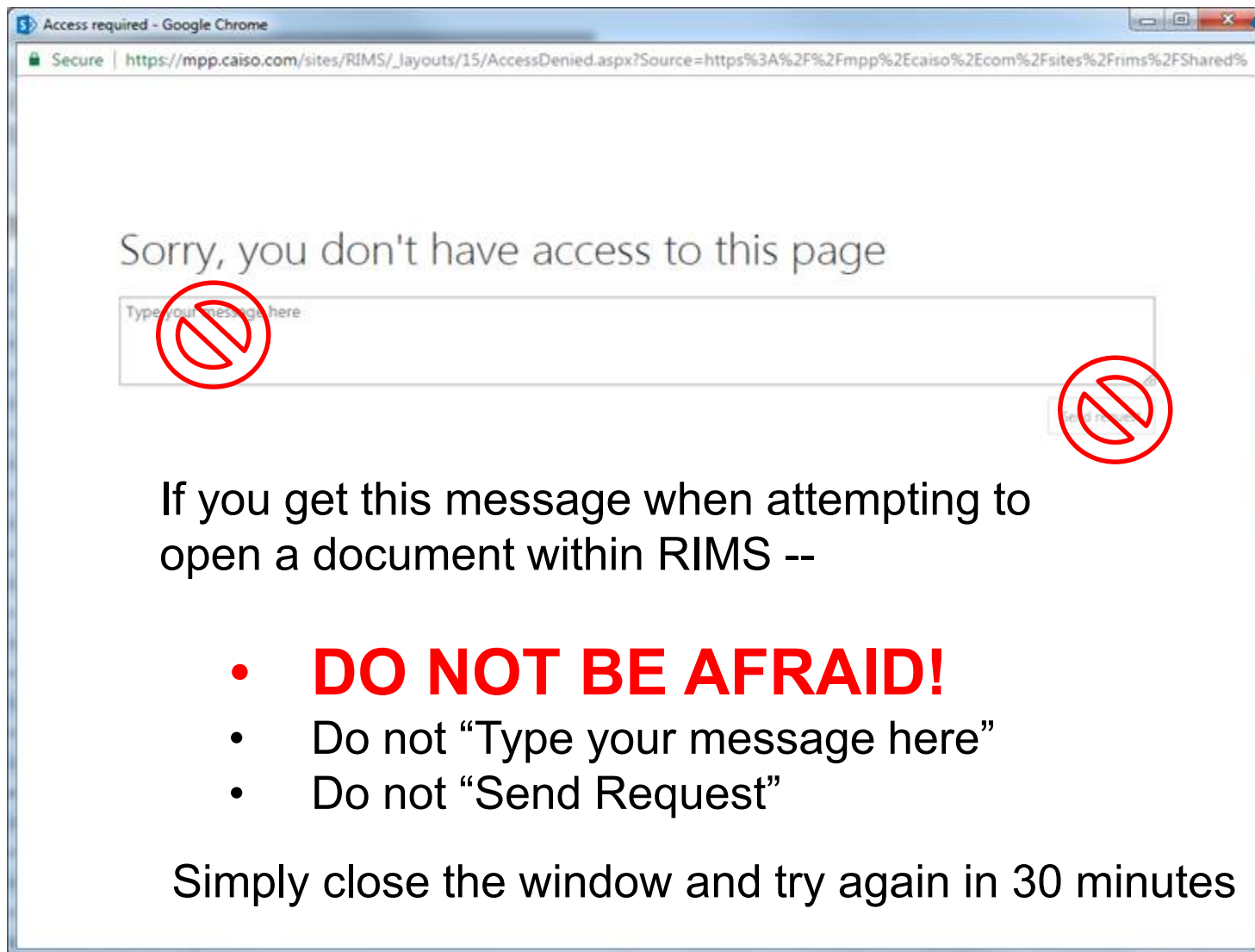
Uploaded Invoice

Document Group	Document Type	File Name	Sharepoint Link	Uploaded Status	User	Uploaded Date	Comment		
INVOICE	Invoice	invoice.pdf		SUCCESS	HXU	03/31/2016	0 Comments	Delete	View Version

Uploaded Files

Document Group	Document Type	File Name	Sharepoint Link	Uploaded Status	User	Uploaded Date	Comment	
IR	Dynamic Data	dynamic_model.dyd		SUCCESS	HXU	03/31/2016	0 Comments	Delete
IR	Attachment A to Appendix 1	AS_IR_FORM_Cluster_v4(1).docx		SUCCESS	RTester05	03/23/2016	0 Comments	Delete
IR	Load Flow Model	load_flow_model.epc		SUCCESS	RTester05	03/24/2016	0 Comments	Delete
IR	Map	google_map.kmz		SUCCESS	RTester05	03/24/2016	0 Comments	Delete
IR	Other Documents	misc.txt		SUCCESS	HXU	03/31/2016	0 Comments	Delete
IR	Other Documents	other_project_file.zip		SUCCESS	HXU	10/31/2016	0 Comments	Delete
IR	Site Exclusivity	site_exclusive.txt		SUCCESS	HXU	03/31/2016	0 Comments	Delete
IR	Single Line Diagram	single_line_diagram.jpg		SUCCESS	RTester05	03/24/2016	0 Comments	Delete
IR	Storage Supplemental Data Sheet	storage_supplemental.txt		SUCCESS	HXU	03/31/2016	0 Comments	Delete
PHASE2	Reassessment Downsizing Report	reassessment.txt		SUCCESS	HXU	10/31/2016	0 Comments	Delete

[Upload Project Files](#)



Access required - Google Chrome

Secure | [https://mpp.caiso.com/sites/RIMS/_layouts/15/AccessDenied.aspx?Source=https%3A%2F%2Fmpp%2Ecaiso%2Ecom%2Fsites%2Firms%2Fshared%](https://mpp.caiso.com/sites/RIMS/_layouts/15/AccessDenied.aspx?Source=https%3A%2F%2Fmpp%2Ecaiso%2Ecom%2Fsites%2Firms%2Fshared%2F)

Sorry, you don't have access to this page

Type your message here

Send Request




If you get this message when attempting to open a document within RIMS --

- **DO NOT BE AFRAID!**
- Do not “Type your message here”
- Do not “Send Request”





Simply close the window and try again in 30 minutes

▼ Project Contacts





The Project Manager for your project is:

CAISO Project Manager				
  				
Name	Contact Type	Role	Email	Phone
Haitao Xu	ISO Project Manager	ISO Admin	hxu@caiso.com	(916) 802-0875

Please contact the Project Manager first for project inquiries and activities.

CAISO Contacts				
   				
Name	Contact Type	Role	Email	Phone
Haitao Xu	ISO Engineer	ISO Admin	hxu@caiso.com	(916) 802-0875
Judy Brown	ISO Interconnection Specialist	ISO Admin	jbrown@caiso.com	916-608-7062
Raeann Quadro	ISO Queue Management	ISO Admin	rquadro@caiso.com	(916) 749-8392

External Contacts (from AIM)									
									
Name	Contact Type	Role	Email	Phone	Address 1	Address 2	City	State	Zip Code

Notification Contacts										
   										
First Name	Last Name	Contact Type	Role	Email	Phone	Address 1	Address 2	City	State	Zip Code
John	Smith	IC Primary	notification	jsmith@abc.test	123-4567				Arizona	
Susie	Queue	PTO Engineer	notification	susie@email.test					None	

Planning to submit an Interconnection Request in Cluster 14?

- Submit IR early
 - Establish your RIMS IR registration and access for your team
 - RIMS could reject your IR form for incomplete or invalid information
 - PRO TIP: DO NOT CUT AND PASTE INFORMATION!**
 - Remember to upload documents one at a time and wait for SUCCESS status before continuing with another document
 - Apply early -- allows time to resolve IR data deficiencies
 - Cluster 14 application window is April 1-15, 2021

Resources

Affidavit for Cluster 5 and Later Queue Clusters seeking Transmission Planning Deliverability

<http://www.caiso.com/Documents/AffidavitTemplate-Cluster5-LaterQueueClustersSeekingTPDeliverability.doc>

Appendix B to Generator Interconnection Study Process Agreement

<http://www.caiso.com/Documents/AppendixB-GeneratorInterconnectionStudyProcessAgreement.doc>

Business Practice Manuals (BPM)

- **Generator Interconnection and Deliverability Allocation Procedures (GIDAP)**

<http://bpmcm.caiso.com/Pages/BPMDetails.aspx?BPM=Generator%20Interconnection%20and%20Deliverability%20Allocation%20Procedures>

- **Generator Management**

[http://bpmcm.caiso.com/Pages/BPMDetails.aspx?BPM=Generator Management](http://bpmcm.caiso.com/Pages/BPMDetails.aspx?BPM=Generator%20Management)

Deliverability Allocation Customer Options Form

<http://www.caiso.com/Documents/DeliverabilityAllocationCustomerOptionsForm.doc>

Energy Storage Roadmap

<http://www.caiso.com/informed/Pages/StakeholderProcesses/EnergyStorageInterconnection.aspx>

Resources

Generator Interconnection and Deliverability Allocation Procedures Cluster Process Summary

<http://www.caiso.com/Documents/GeneratorInterconnection-DeliverabilityAllocationProceduresClusterProcessSummary.pdf>

GIDAP Customer Guidelines

<http://www.caiso.com/Documents/GIDAPCustomerGuidelines.xls>

Generator Interconnection Webpage

<http://www.caiso.com/planning/Pages/GeneratorInterconnection/Default.aspx>

Interconnection Request and Generating Facility Data

(Tariff Appendix DD Appendix 1 – IR, and Attachment A to Appendix 1 – Technical Data)

<http://www.caiso.com/Documents/GIDAPAppendix1-AttachmentA-Appendix1-InterconnectionRequest-GeneratingFacilityData.doc>

ISO Generator Interconnection Queue

<http://www.caiso.com/Documents/ISOGeneratorInterconnectionQueueExcel.xls>

Participating Transmission Owner financial security instruments

<http://www.caiso.com/planning/Pages/GeneratorInterconnection/GeneratorInterconnectionApplicationProcess/Default.aspx>

Resources

Participating Transmission Owner per unit costs

<http://www.caiso.com/planning/Pages/GeneratorInterconnection/GeneratorInterconnectionApplicationProcess/Default.aspx>

Resource Interconnection Fair Webpage

<http://www.caiso.com/informed/Pages/MeetingsEvents/PublicForums/Default.aspx>

Sample IR/Tech Data

<http://www.caiso.com/Documents/SampleInterconnectionRequest-TechnicalData-Solar-Wind.pdf>

<http://www.caiso.com/Documents/SampleInterconnectionRequest-TechnicalData-Thermal.pdf>

Tariff Section 25

http://www.caiso.com/Documents/Section25_Interconnection-GeneratingUnits-Facilities_Dec3_2013.pdf

Tariff Appendix DD (GIDAP)

http://www.caiso.com/Documents/AppendixDD_GeneratorInterconnection-DeliverabilityAllocationProcess_Dec3_2013.pdf

Technical Bulletin: Reassessment Process Reallocation of Cost Shares for Network Upgrades and Posting

http://www.caiso.com/Documents/TechnicalBulletin_GIDAP-ReassessmentProcessReallocation-CostShares-NetworkUpgrades-Posting.pdf

Questions?

IRInfo@caiso.com