California ISO

RESOURCE INTERCONNECTION FAIR

IR Application Generator Facility Data Form Overview

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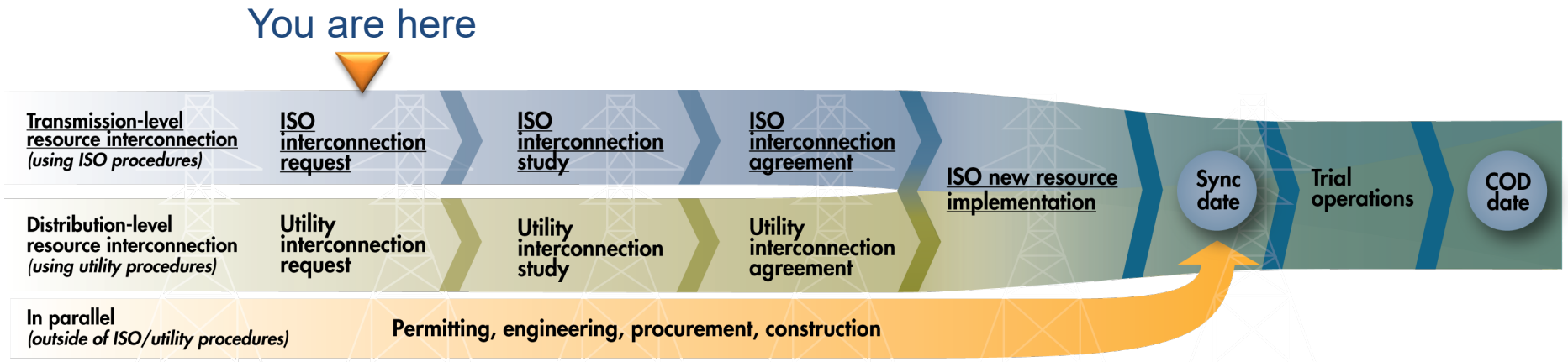
Objective – IR Application Generator Facility Data Form Overview

- Understand how to fill out the required documents for each Interconnection Application
  - Appendix 1, Interconnection Request (Word)
  - Attachment A to Appendix 1, Generator Facility Data (Excel)
- Have all documents completed and validated in time for the studies

Interconnection Process Map



Appendix 1 and Attachment A Instructions tab

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Appendix 1 Interconnection Request
INTERCONNECTION REQUEST

NO HARD COPY REQUIRED FOR INTERCONNECTION REQUESTS SUBMITTED ELECTRONICALLY VIA RIMS

Provide **one hard copy** of this completed form pursuant to Section 7 of this Appendix 1 below for non-electronic submissions.

1. The undersigned Interconnection Customer submi
Facility with the CAISO Controlled Grid pursuant t
☒ Queue Cluster Process.
☐ Deliverability from Non-Participating TOs purs

2. This Interconnection Request is for (**check only o**
☒ A proposed new Generating Facility.
☐ An increase in the generating capacity, repowe
Generating Facility.

3. Requested Deliverability Statuses are:

On-Peak (for purposes of Net Qualifying Capacity
☒ Full Capacity
☐ Partial Deliverability for ____ % of electrical
☐ Energy Only

Off-Peak: (for Projects Containing Wind or Solar
☒ Off-Peak Deliverability
☐ Economic Only

- Attachment A Instructions tab must match Appendix 1
- Guidelines and directions provided in Instructions tab

California ISO

CAISO Public Document
Version:14.2
Last Updated: Feb 23, 2021

Project Information Completed by Interconnection Customer (Must match Appendix 1)

Project Name	
Q# (if assigned)	
Interconnection Customer Name	
Interconnection Customer Contact	
Requested Point of Interconnection (POI)	
NRI Project Number (if assigned)	
Resource ID (if assigned)	

Please read the instructions below!

Table of Contents	Descriptions
Instructions	Project Specific Information (above) & Guidelines for this document
I. Project Configuration	Project Data Input
I-a. Short Circuit Data Table	Short Circuit Data Input for Inverters
II. Technical Validation	Validation Calcs based on Project Data input on Tab I.
III. Power Flow Model	Power Flow Model Tool
IV. Dynamic Model	Dynamic Model Data Tool
V. IR Validation & Comments	IR Review and Validation questions and verifications

Attachment A Project Configuration tab

- Project data and information
- Fill in Section I, II and all other applicable sections consistent with Appendix 1

Item #		UNITS		
	I. Overall Project MW Information			
I.1	Total Generating Facility gross capacity	MVA	0	
I.2	Total Generating Facility gross output	MW		*The gross MW output to achieve requested MW at POI*
I.3	Generating Facility Auxiliary Load	MW		
I.4	Project net capacity at Generating Facility	MW	0	
I.5	Anticipated Losses between the Generating Facility and POI	MW		*Include all transformer and line losses between the generating units and the POI at total Generating Facility gross output as calculated by the power flow model in .epc*
I.6	Desired net output at POI	MW	0	*must match MW value derived from power flow model in .epc file*
I.7	Standby Load when Generating Facility is off-line	MW		
I.8	For combined cycle plants, specify the plant net output capacity for an outage of the steam turbine or an outage of a single combustion turbine	MW		

	II. Individual Generating Facility Characteristics										
II.1	**Generating Facility Name**			Gen Type1	Gen Type2	Gen Type3	Gen Type4	Gen Type5	Gen Type6	Gen Type7	Gen Type8	Gen Type9
II.2	Technology											
II.3	Type (Scroll to the right for help info)											
II.4	Manufacturer											
II.5	Model Name											
II.6	Model Number											
II.7	Version (if applicable)											
II.8	Year Manufactured											
II.9	Number of Individual Generators or Inverters											
II.10	Nominal Terminal Voltage		kV									
II.11	Expected average high ambient temperature for the site		°C									
II.12	Individual generator rated MVA **at the temperature above**		MVA									
II.13	Individual generator rated MW **at the temperature above**		MW									
II.14	Individual generator power factor at rated MW											
II.15	Individual generator power factor regulation range at rated MW output	Leading (-)										
II.16		Lagging (+)										
II.17	Generator Voltage Regulation Range (+/-)		%									
II.18	Phase											
II.19	Connection											
II.20	**ACTION REQUIRED:**	**Please submit generator reactive capability curves**										

Tips:
Use "paste value only" to copy and paste;

Click here to proceed.

Please click this button after filling out or modifying Section

Show All Sections Below

Attachment A Project Configuration tab – New Data Item

	Power Plant Controller			
VII.18	Is there a Power Plant Controller (PPC)?			If yes, please answer the followings VII.19 to VII.31
VII.19	PPC manufacturer			
	PPC VOLTAGE/VAR CONTROL			
VII.20	Plant level voltage/Var control mode under continuous normal conditions			If other, please exp
VII.21	Plant level voltage/Var control mode under abnormal voltage conditions			If other, please exp
VII.22	Does the PPC freeze voltage/Var control at low voltage?			
VII.23	If yes above, enter the voltage at which PPC freezes	p.u.		
VII.24	Does the PPC implement voltage droop control?			
VII.25	If yes above, enter the voltage droop	%		
VII.26	Provide a general description of the control coordination among generators/inverters, reactive devices and transformer tap changers.			
	PPC FREQUENCY/MW CONTROL			
VII.27	Does the PPC controls overall primary frequency response capability			If yes, please answer the next question
VII.28	If yes above, will the PPC maintain headroom for upward frequency response (increasing output for low frequency)?			
VII.29	Describe how the MW at Point of Interconnection is controlled.			
VII.30	MW upward ramp rate limit (enter a positive number)	MW/min		
VII.31	MW downward ramp rate limit (enter a negative number)	MW/min		

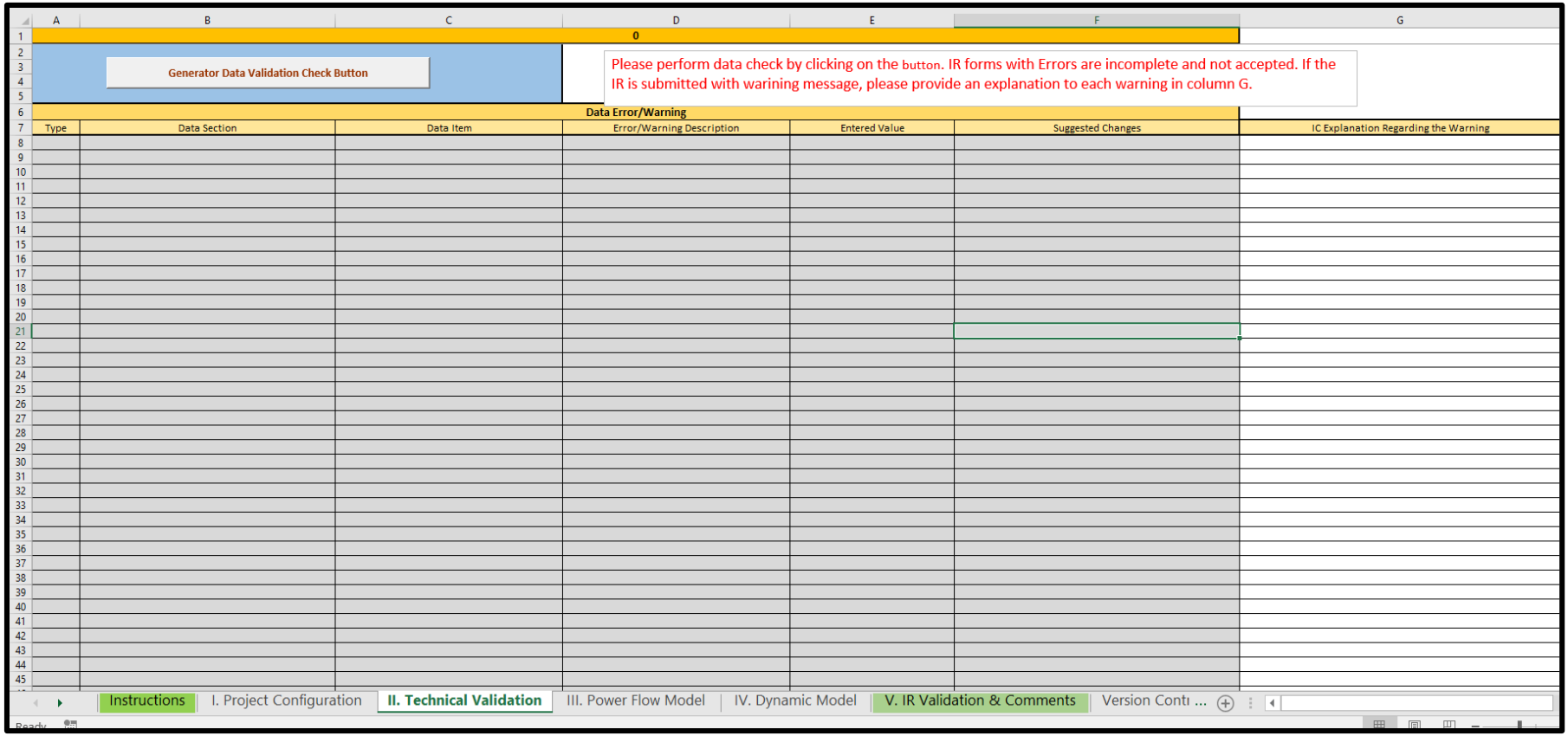
Attachment A Short Circuit Data Table tab

- Short circuit data for inverter based generators

Generating Facility Name		Gen Type1		
Positive Sequence Voltage (pu)	Positive Sequence Current (pu)	Negative Sequence Current (pu)	Positive Sequence Power Factor Angle (deg)	Negative Sequence Power Factor Angle (deg)
1 Cycle Time Frame				
0.9				
0.8				
0.7				
0.6				
0.5				
0.4				
0.3				
0.2				
0.1				
3 Cycle Time Frame				
0.9				
0.8				
0.7				
0.6				
0.5				
0.4				
0.3				
0.2				
0.1				
5 Cycle Time Frame				
0.9				
0.8				

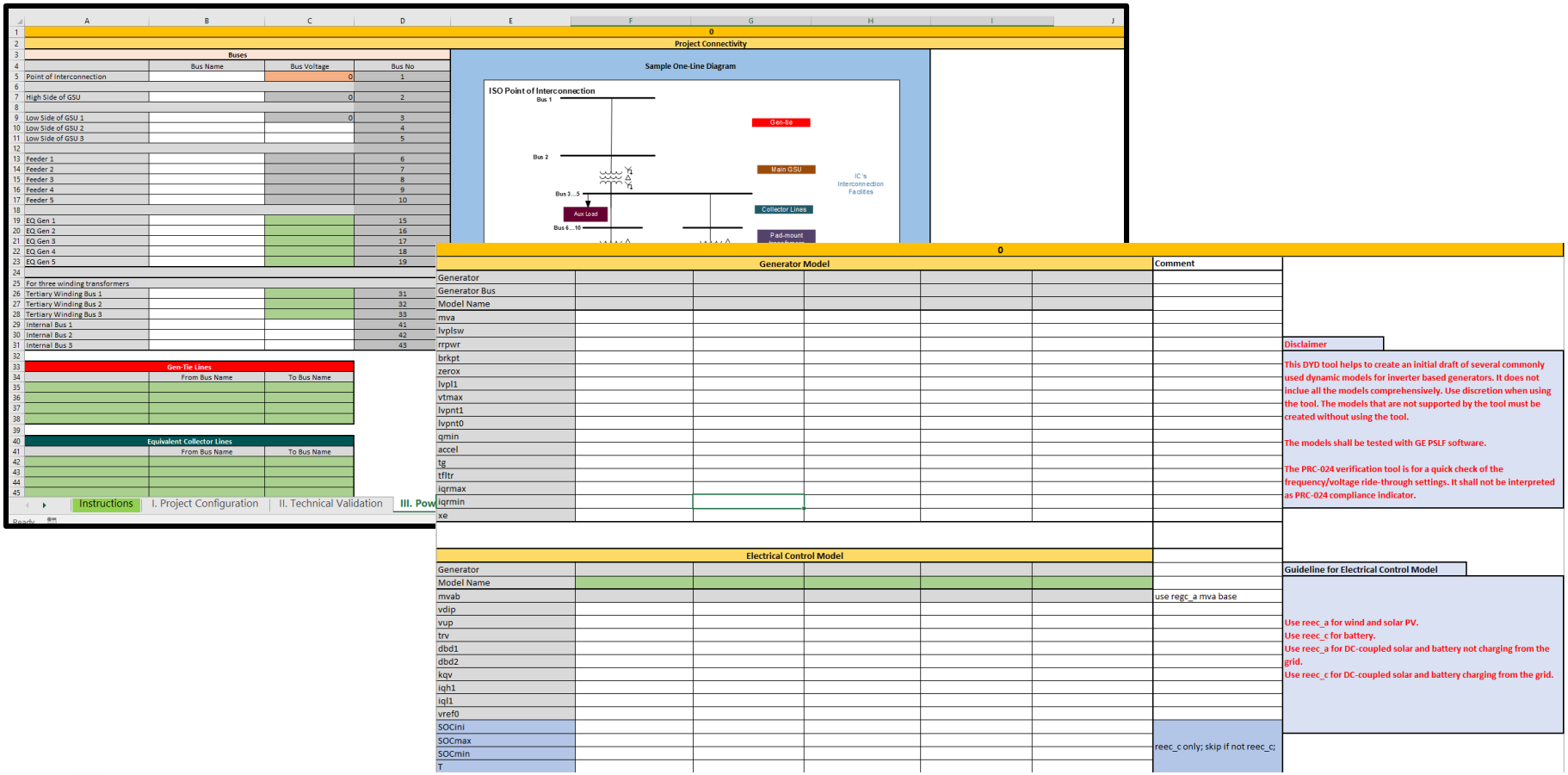
Attachment A Technical Validation tab

- Provides feedback on errors or missing data on Project Configuration tab
- All errors must be corrected before submitting form
- All warning messages must provide an explanation



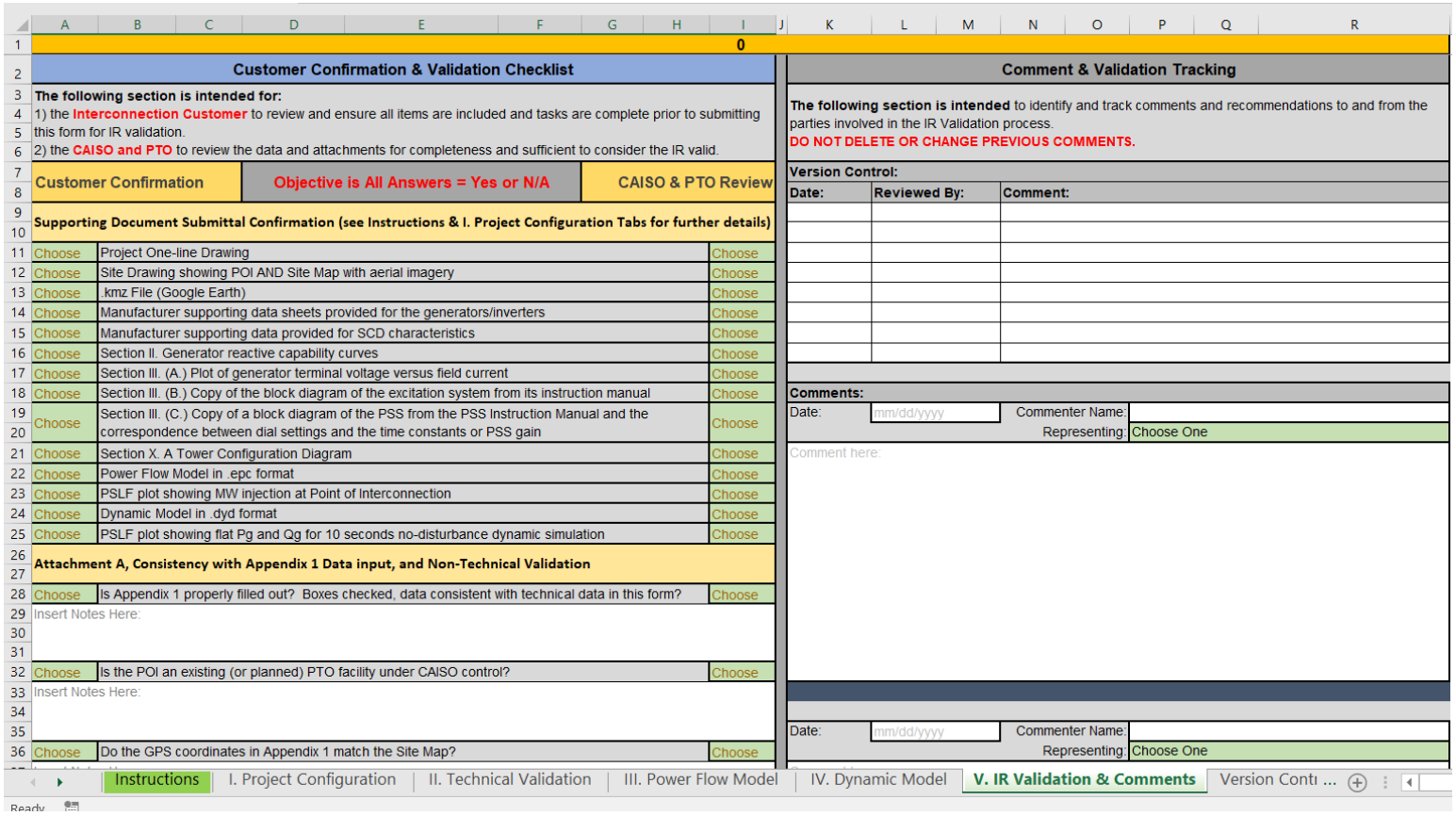
Attachment A Power Flow and Dynamic Model tabs

- Powerflow and dynamic data input and output
- Tools to help create *.epc and *.dyd files (use of tool is optional)
- May not fit all project configurations and must be tested before submission



Attachment A IR Validation & Comments tab

- Interconnection Customer to confirm prior to IR submission – make a selection in all question boxes in Column A
- ISO & PTO to confirm during IR validation process



		0	
Customer Confirmation & Validation Checklist			
The following section is intended for: 1) the **Interconnection Customer** to review and ensure all items are included and tasks are complete prior to submitting this form for IR validation. 2) the **CAISO and PTO** to review the data and attachments for completeness and sufficient to consider the IR valid.			
Customer Confirmation		**Objective is All Answers = Yes or N/A**	**CAISO & PTO Review**
Supporting Document Submittal Confirmation (see Instructions & I. Project Configuration Tabs for further details)			
Choose	Project One-line Drawing		Choose
Choose	Site Drawing showing POI AND Site Map with aerial imagery		Choose
Choose	.kmz File (Google Earth)		Choose
Choose	Manufacturer supporting data sheets provided for the generators/inverters		Choose
Choose	Manufacturer supporting data provided for SCD characteristics		Choose
Choose	Section II. Generator reactive capability curves		Choose
Choose	Section III. (A.) Plot of generator terminal voltage versus field current		Choose
Choose	Section III. (B.) Copy of the block diagram of the excitation system from its instruction manual		Choose
Choose	Section III. (C.) Copy of a block diagram of the PSS from the PSS Instruction Manual and the correspondence between dial settings and the time constants or PSS gain		Choose
Choose	Section X. A Tower Configuration Diagram		Choose
Choose	Power Flow Model in .epc format		Choose
Choose	PSLF plot showing MW injection at Point of Interconnection		Choose
Choose	Dynamic Model in .dyd format		Choose
Choose	PSLF plot showing flat Pg and Qg for 10 seconds no-disturbance dynamic simulation		Choose
Attachment A, Consistency with Appendix 1 Data input, and Non-Technical Validation			
Choose	Is Appendix 1 properly filled out? Boxes checked, data consistent with technical data in this form?		Choose
Insert Notes Here:			
Choose	Is the POI an existing (or planned) PTO facility under CAISO control?		Choose
Insert Notes Here:			
Choose	Do the GPS coordinates in Appendix 1 match the Site Map?		Choose

Comment & Validation Tracking		
The following section is intended to identify and track comments and recommendations to and from the parties involved in the IR Validation process. **DO NOT DELETE OR CHANGE PREVIOUS COMMENTS.**		
Version Control:		
Date:	**Reviewed By:**	**Comment:**
Comments:		
Date: mm/dd/yyyy	Commenter Name:	
	Representing:	Choose One
Comment here:		
Date: mm/dd/yyyy	Commenter Name:	
	Representing:	Choose One

Instructions | I. Project Configuration | II. Technical Validation | III. Power Flow Model | IV. Dynamic Model | V. IR Validation & Comments | Version Contr ...

Ready

Dynamic Models for Inverter-Based Interconnection Requests

- Usability requirement: no errors, initialize properly, flat run
- Modeling requirement: equivalencing and scaling, proper models
- Performance requirement: primary frequency response, automatic voltage regulation, fault ride-through

http://www.caiso.com/Documents/InverterBasedInterconnectionRequestsIBRDynamicModelReviewGuideline.pdf

Technical Requirements for Asynchronous Generating Facilities

Power Factor Requirement

- Maintain a composite power delivery at continuous rated power output
- Dynamic reactive power within the range of 0.95 leading to 0.95 lagging at the high-side of the generator substation
  - Utilize combination of the inherent dynamic reactive power capability of the inverter, dynamic reactive power devices (e.g., Static VAR Compensators), and static reactive power devices (e.g., capacitors) to make up for losses.

http://www.caiso.com/Documents/EvaluateGeneratorReactiveCapability-WhitePaper.pdf

Primary Frequency Response

- Provide active power primary frequency response capability with a 5% droop for both under and over-frequency conditions, and a maximum deadband of ±36mHz.

Voltage Ride-through Capability

1. Remain online for voltage disturbance
2. Momentary cessation is prohibited unless when the transient high voltage ≥ 1.2 pu
3. For transient low voltage conditions, inject reactive current proportional to terminal voltage reduction and reaches full reactive current at voltage of 0.5 pu
4. For transient high voltage between 1.0 pu and 1.2 pu, absorb reactive current
5. Automatically transition to normal current injection upon voltage recovery to 0.9 pu ~ 1.1 pu and ramp up active current at a minimum ramp rate of 100% per second

Voltage Ride-through Capability

6. Inverters may not trip or cease current injection for momentary loss of the phase lock loop
7. Following an inverter trip, make at lease one attempt to resynchronize with 2.5 min unless tripped due to a fatal fault code
8. Coordinate inverter controls with plant level controller

Diagnostic Equipment Requirements for Inverter-based Generation

For plants with net export > 20 MW

1. Plant level data: monitor plant voltage, current and power factor, and any plant protective relay trips.
2. Inverter level data: record ride through events and phase lock loop status
3. Time synchronization of data (1 mSec)
4. Data retention: retain data for 30 calendar days
5. Data reporting: provide data within 10 calendar days
6. Install a PMU or equivalent (minimum 30 samples per sec). Real time telemetry is not required.

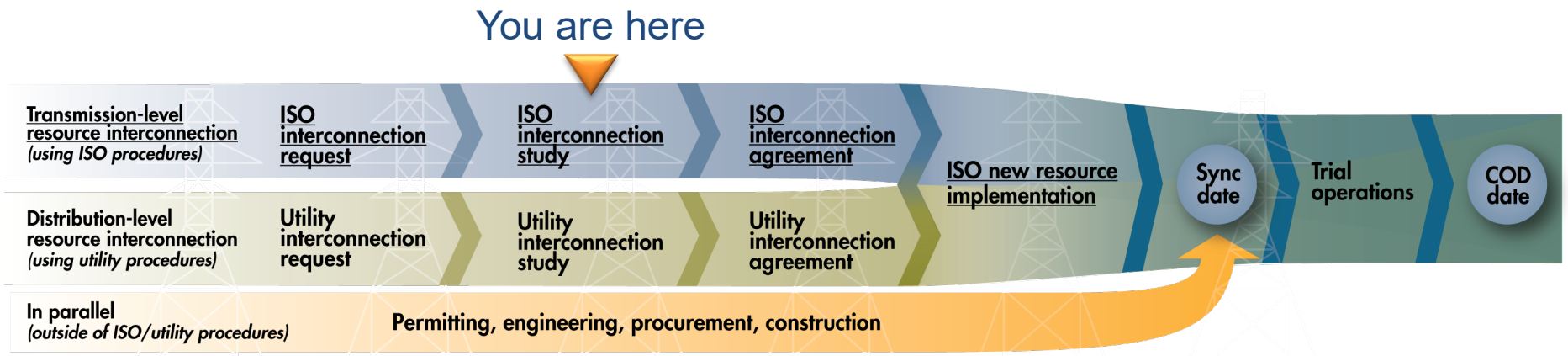
Questions?

Studies & Study Results

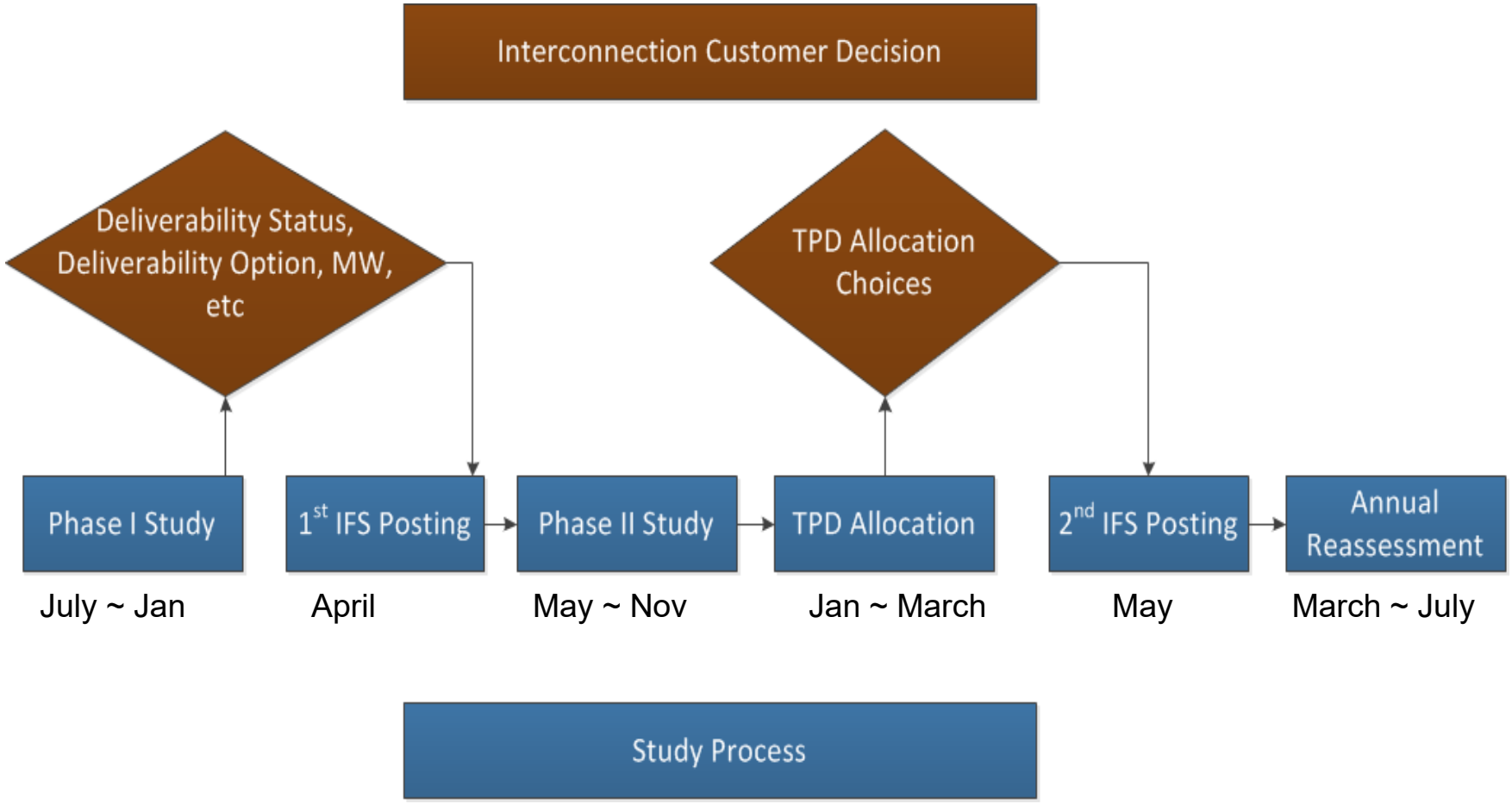
Objective – Studies, Study Results

- Understand the study processes and study results
- Understand generation deliverability
- Understand different types of network upgrades
- Understand cost allocation and cost responsibilities
- Understand requirements for posting financial security

Interconnection Process Map



Generation Interconnection Study Process-General Timeline



Acronyms:
IFS - Interconnection Financial Security
TPD – Transmission Plan Deliverability

Scope of Interconnection Studies

- Deliverability Assessment
  - On-Peak Deliverability Assessment
  - Off-Peak Deliverability Assessment

- Reliability Assessment
  - Power Flow Contingency Analysis
  - Post-Transient Stability Analysis
  - Transient Stability Analysis
  - Energy Storage Charging Analysis
  - Short Circuit Analysis

Deliverability Assessment

	On-Peak	Off-Peak
Purpose	Ensure system reliability, i.e. generation capacity is not constrained by the transmission capability when needed for reliability; for Resource Adequacy purpose	Address renewable curtailment due to local transmission constraints
Resources under Test	FCDS/PCDS	Wind and Solar
Load Condition	Summer peak sale and peak consumption	55% ~ 60% of summer peak sale; corresponding to load levels in many hours in all seasons
Non-intermittent Resources	QC	Historical minimum
Intermittent Resources	Low to medium output per methodology	Medium to high output per methodology

Deliverability Statuses

- On-Peak: for Resource Adequacy (RA)
  - Full Capacity Deliverability Status (FCDS), Partial Capacity Deliverability Status (PCDS) or Energy-Only (EO)
  - FCDS and PCDS resources can count for Resource Adequacy; EO can't
- Off-Peak: Reduces curtailment risk; not required for RA
  - Off-Peak Deliverability Status (OPDS) or Off-Peak Energy Only (OPEO)
  - OPDS interconnection requests fund local off-peak network upgrades; OPEO can't.

On-Peak Deliverability Assessment

- Ensure generation capacity is not constrained by the transmission when needed for system reliability
- Two study scenarios that align the generation outputs with the load conditions when the system capacity needs are the highest
- Two types of constraints and associated upgrades are identified
  - Local Delivery Network Upgrades for local constraints
  - Area Delivery Network Upgrades for area constraints

Area Constraints and Transmission Plan Deliverability (TPD)

- For each area constraint, a Transmission Plan Deliverability (TPD) is calculated
  - Renewable portfolios are developed by the CPUC and then utilized in the ISO Transmission Planning Process (TPP)
  - ISO TPP approves new transmission upgrades to meet reliability, economic planning and policy needs
  - The transmission system with the TPP approved transmission upgrades provides capability to support a certain level of generation deliverability behind each area constraint, which is called Transmission Plan Deliverability (TPD)

Deliverability Option Associated with FCDS/PCDS

- Option (A)
  - The interconnection request requires Transmission Plan Deliverability to move forward
- Option (B)
  - The interconnection customer is willing to fund ADNUs if they fail to receive a TPD allocation

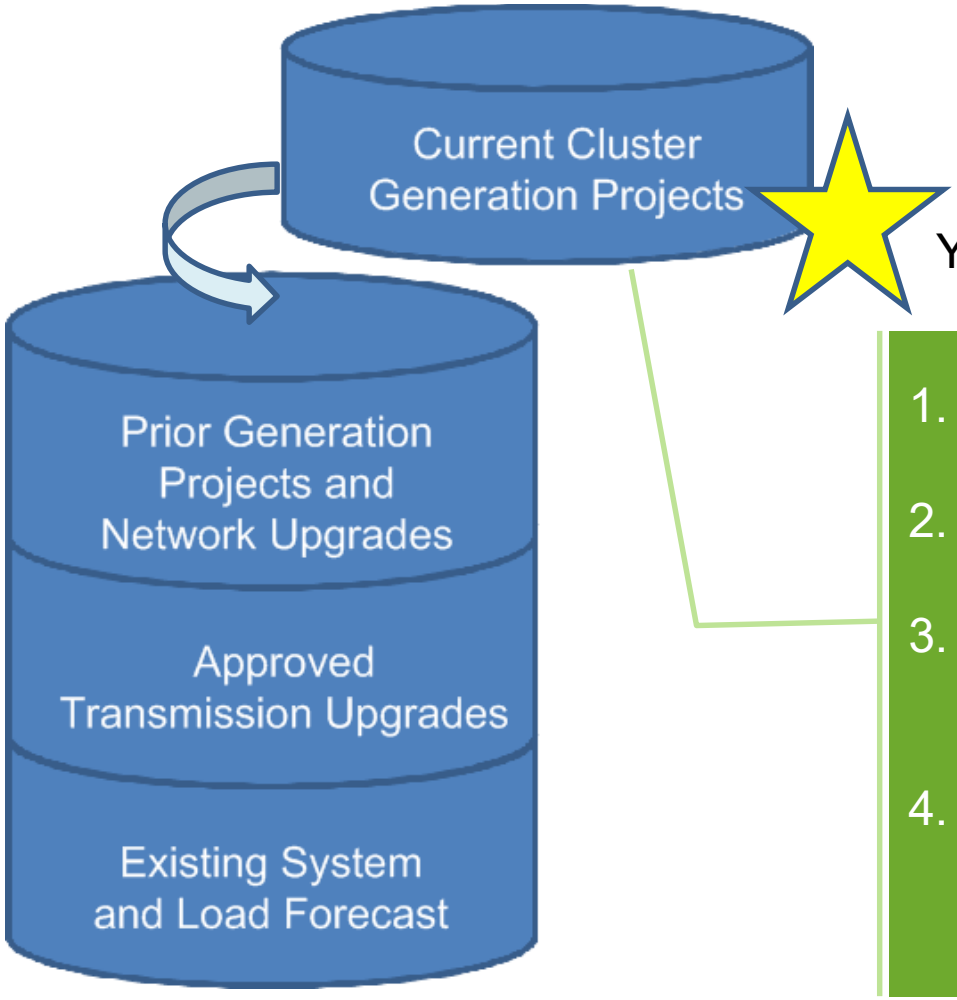
Questions?

Study Process

Phase I and Phase II Studies

Phase I and Phase II Studies – Model Development

Study Assumptions



Your project is here!

1. Cluster projects in ISO Queue
2. Cluster projects in WDAT Queue
3. ISP projects requesting deliverability in ISO Queue
4. ISP projects requesting deliverability in WDAT Queue

Acronyms:
WDAT – Wholesale Distribution Access Tariff
ISP – Independent Study Process

Phase I and Phase II Studies

Studies are performed based on applicable ISO Tariff and in coordination with the applicable PTOs

- Deliverability Assessment
  - Generating Mode
    - On Peak
    - Off-Peak
- Reliability Assessment
  - Generating Mode (Simultaneous maximum generation)
    - On Peak
    - Off-Peak
  - Charging Mode (Simultaneous max charging)
    - Peak or Shoulder Peak
    - Off-Peak

Additional Phase II Operational Study

Current Cluster date-based transmission assessment is performed.

- Year by year peak deliverability assessments
- Year by year reliability assessments
- One study model per study year
- Transmission upgrades are modeled according to their in-service dates
- Generation projects are modeled according to their commercial operation dates

Phase I and Phase II Studies – what to expect out of the studies

- Facilities required to interconnect the project
  - Some are PTO's Interconnection Facilities (IF)
  - Some are Interconnection Reliability Network Upgrades (IRNU)
- Upgrades to mitigate adverse impacts and deliver power to the grid
  - General Reliability Network Upgrades (GRNU)
  - Local Delivery Network Upgrades (LDNU)
  - Area Delivery Network Upgrades (ADNU)
  - Local Off Peak Delivery Network Upgrades (LOPNU)
  - Area Off Peak Delivery Network Upgrades (AOPNU)

Phase I and Phase II Studies – what to expect out of the studies (Cont'd)

- Estimated costs and construction time for IFs and NUs
- Potential Affected System impacts and coordination

Purposes of Network Upgrades

IRNU	Achieve physical interconnection to the grid e.g. equipping a bus position at the POI substation to terminate the gen-tie
GRNU	Mitigate reliability impacts e.g. circuit breaker upgrades, RAS
LDNU	Mitigate local deliverability constraints to be able to count for Resource Adequacy e.g. line reconductoring needed for a few generators in a small localized area
ADNU	Increase generation deliverability behind an area constraint e.g. a major upgrade to provide incremental deliverability for generators spread in a wide area
LOPNU	Mitigate local transmission constraints due to high wind and solar output
AOPNU	Relieve area transmission constraints due to high wind and solar output (information only)

Applicability of Network Upgrades

IRNU	All interconnection requests
GRNU	All interconnection requests
LDNU	FCDS/PCDS interconnection requests
ADNU	Option B FCDS/PCDS interconnection requests
LOPNU	OPDS interconnection requests that contain wind or solar
AOPNU	For information only

Affected Systems

- The ISO does not comprehensively study the impacts on Affected Systems
- The Interconnection Customer shall:
  - cooperate with the ISO in all matters related to the Affected System studies,
  - enter into a study agreement with the Identified Affected System Operator to evaluate potential impacts on the Identified Affected System, and
  - pay for necessary studies and any upgrades necessary to mitigate the impacts of the interconnection on the Identified Affected Systems

Questions?

Study Process

Annual Reassessment

TPD Allocation

- All projects must meet the criteria for one of the seven allocation groups (eligible) to receive TPD allocation
- In an electrical area ***without*** ***binding area constraints***, all eligible projects receive TPD allocation
- In an electrical area ***with*** ***binding area constraints***
  - TPD is first reserved for prior commitments;
  - TPD is then allocated to current generation projects in the electrical area based on the grouping and ranking scores reflecting the project development status in the submitted affidavits
- Option (A) and Option (B) projects get the same treatment in the TPD allocation study

TPD Allocation (Cont.)

- If a project does not receive full allocation for its requested deliverability status
  - Option (A) projects may park the entire or a portion of the project and get a second chance of TPD allocation, and a third chance of TPD allocation if TPD is still available and not assigned NUs needed by other projects in the same or later clusters
  - Both Option (A) and Option (B) projects may change the project size or deliverability status to match the allocation

Reassessment

- The Network Upgrade requirements could change after the Phase II study due to:
  - Generation project withdrawals
  - Generation project downsizing
  - Generation project modifications allowed by the tariff
  - System condition changes, such as newly approved transmission upgrades, resource retirement, etc.
- The reassessment is completed to update the Network Upgrade requirements and cost responsibility following TPD allocation

Questions?

For Cluster 10 and prior

Cost Responsibility and Max Cost Responsibility

Cost Re-allocation in the Annual Reassessment

- NU cost re-allocation (CR)
  - If an NU is no longer needed for all projects in the reassessment, the cost is removed
  - If an NU or its alternative is needed, the cost is allocated to the remaining projects in the original responsible group *pro rata* on the Phase II cost allocation factors
- Maximum (RNU + LDNU) cost responsibility (MCR)
  - Original MCR: lower between Phase I and Phase II
  - Current MCR: maximum RNU and LDNU cost responsibility effective until the reassessment is issued
  - Updated MCR: maximum RNU and LDNU cost responsibility updated in the reassessment and effective once the reassessment is issued

Final Costs in the Annual Reassessment

- Updated maximum (RNU+LDNU) cost responsibility
  - If (CR) is at least 20% lower and at least $1M lower than the current MCR,

    updated MCR = min{*current MCR*,

    sum of 100% costs of all remaining (RNU + LDNU)}
  - If {(CR) > current MCR} and {current MCR < original MCR},

    updated MCR = min{*(CR)*, *original MCR*}
  - Otherwise, ***updated MCR*** = current MCR
- ***Current cost responsibility (CCR)*** = min {*(CR)*, *(Updated MCR)*}

For Cluster 11 and beyond

Cost Responsibility, Max Cost Responsibility and Max Cost Exposure

Network Upgrade Groups

- Assigned Network Upgrade (ANU)

  RNUs, LDNUs and LOPNUs for which the Interconnection Customer has a direct cost responsibility.

- Conditionally Assigned Network Upgrade (CANU)

  RNUs, LDNUs and LOPNUs whose cost responsibility is assigned to an earlier Interconnection Customer, but which may fall to the then current Interconnection Customer.

- Precursor Network Upgrade (PNU)

  Network Upgrades required for an Interconnection Customer that consist of (1) Network Upgrades whose cost responsibility is assigned to an earlier Interconnection Customer that has executed its GIA; and (2) Network Upgrades in the approved CAISO Transmission Plan.

Cost Responsibility Definitions

- Current Cost Responsibility (CCR)

  The sum of the Interconnection Customer's current allocated costs for ANUs, not to exceed the MCR. This cost is used to calculate the Interconnection Customer's IFS requirement.

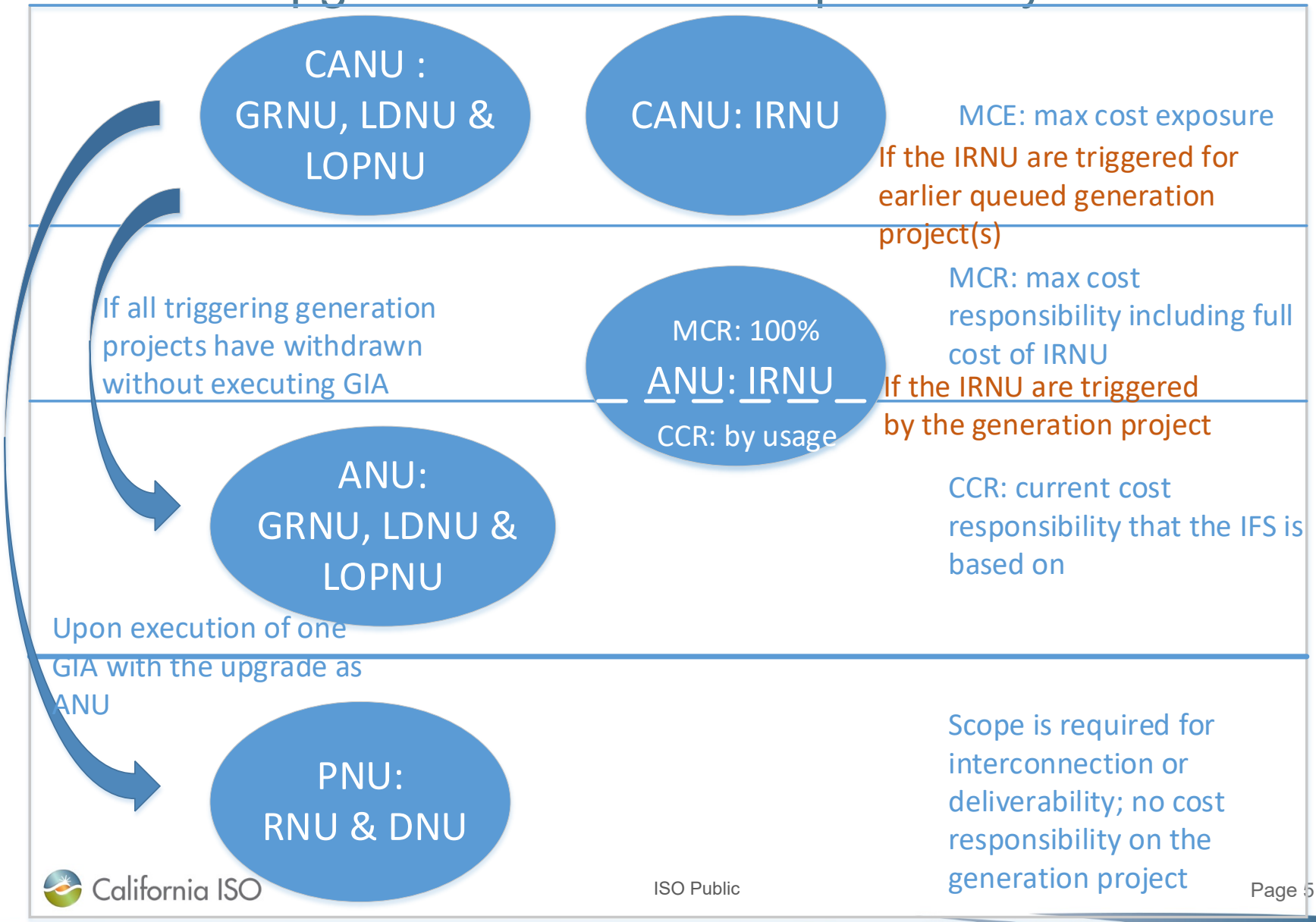
- Maximum Cost Responsibility (MCR)

  The lower sum of an Interconnection Customer's (1) full cost of assigned IRNUs and (2) allocated costs for all other ANUs, from its Phase I or Phase II Interconnection Studies, not to exceed the MCE.

- Maximum Cost Exposure (MCE)

  The sum of (1) the Interconnection Customer's MCR and (2) the cost of the Interconnection Customer's CANUs from its Phase I or Phase II Interconnection Studies.

Network Upgrades and Cost Responsibility



Phase I and Phase II Cost Allocation

- RNU, LDNU and LOPNU cost allocation

Network Upgrade Type	ANU		CANU
	CCR Allocation	MCR Allocation	MCE Allocation
IRNU	Equally divided	Full cost	Full cost
GRNU – short circuit upgrades	Pro rata by short circuit contributions		
GRNU – other	Pro rata by MWs at POI		
LDNU	Pro rata by flow impacts		
LOPNU	Pro rata by flow impacts		

- Phase I ADNU assignment: Project MW x Cost Rate
- Phase II ADNU cost allocation for Option (B): pro rata by flow impacts

CCR, MCR and MCE at Phase I

- Upon completion of Phase I study
  - CCR = allocated ANU: basis for first IFS posting
  - MCR = full cost of IRNU + other allocated ANU
  - MCE = MCR + CANU allocation
- Option (B) interconnection requests also post IFS for assigned ADNU cost

CCR, MCR and MCE at Phase II

- Upon completion of Phase II study
  - MCR = lower between(Phase I ANU MCR + Phase I CANU converting to ANU in Phase II, Phase II ANU MCR allocation)
  - CCR = lower between (Phase II ANU CCR allocation, Phase II MCR): basis for second IFS posting
  - MCE = Phase II MCR + Phase II CANU allocation
- Option (B) interconnection requests not receiving TPD allocation also post IFS for allocated ADNU cost

  * CCR and MCE cost could be higher in Phase II than Phase I

Cost Re-Allocation in Reassessment

- For ANU in reassessment
  - If new upgrades are identified for the first time, allocate cost the same as Phase I and Phase II
  - Otherwise, re-allocate among remaining active projects by normalizing Phase II cost shares

- For CANU in reassessment
  - No re-allocation after Phase II, i.e. fixed at Phase II allocation in reassessment if still needed

CCR, MCR and MCE in Reassessment

- If a CANU is no longer needed or becomes PNU, MCE is reduced by the Phase II allocated CANU cost.
- If a CANU becomes ANU, MCR increases by the Phase II allocated CANU cost.
- If projects in the same cluster triggering an IRNU as ANU posted 3rd IFS, the MCR for other projects sharing the IRNU is reduced by the posted amount.

CCR, MCR and MCE in Reassessment (Cont'd)

- If ANU reallocation is at least 20% lower and at least $1M lower than the MCR,

  MCR = min{*MCR*, *sum of 100% costs of all remaining ANUs*}

- If ANU reallocation > MCR and MCR < Phase II MCR,

  MCR = min{ANU reallocation, Phase II MCR + Phase II CANU converted to ANU}

- *CCR = min{ANU reallocation, MCR}*

Questions?

Study Reports

Phase I and Phase II Study Reports and Addenda

- During the life-cycle of interconnection process, an IC will receive various project reports from the ISO
  - Final Phase I and Phase II study reports
  - Addendum to Phase I and/or Phase II report
    - Correction to non-substantial errors or omissions
    - Remove cost responsibility after an assigned NU is approved in TPP
    - Does not change the next IFS posting due date
  - Revised Phase I and/or Phase II reports
    - Correction to substantial errors or omissions
    - May change the next IFS posting due date

Post-Phase II Notification and Updates

- During the life cycle of interconnection process, an IC will also receive from the ISO:
  - Notification of TPD allocation results
    - Information about the TPD allocation results
  - Annual reassessment reports
    - Updated NU requirements and cost responsibility

Resources

- Deliverability assessment methodology
  http://www.caiso.com/Documents/PLANNING/Reliability%20requirements/Deliverability/Deliverability%20assessment%20methodologies
- TPP and TPD

  http://www.caiso.com/planning/Pages/TransmissionPlanning/Default.aspx
- Study plans, data and reports

  https://portal.caiso.com/MPP_files/MPPApps.html

  (This is a secure website that requires signed NDA with the ISO and certificate)
- Network upgrade cost responsibility

  http://www.caiso.com/Documents/Upgrade-Cost-Responsibility-Implementation.pdf

Resources

- Instructions to Transmission Plan Data NDA submission
  http://www.caiso.com/Documents/RegionalTransmissionNonDisclosureAgreementSubmissionInstructions.pdf
- Regional Transmission NDA Form
  http://www.caiso.com/Documents/RegionalTransmissionNDA.pdf

Questions?