California ISO

New Resource Implementation (NRI) Stakeholder Fair
May 1st, 2024

Welcome

Our presentation will begin shortly.

Today's Presenters: Andrew Brown, Chandra Wagner
NRI Team: Andrew Brown, Chandra Wagner, Beverly Cline, Nura Nasser

Housekeeping

Keep yourself muted to minimize background noise

Unmute to ask verbal questions or write questions in the chat pod

Raise your hand using WebEx interactivity tools

Today's Objectives

Goals of the NRI Process	Current Standards and Processes	Future Look Ahead

- What goals is the CAISO trying to achieve with the NRI Process?
- What is currently impacting these goals?
- How can the customer help reach these goals?

- Starting the NRI process
- Timelines
- Deliverables
- Pre-requisites
- How these relate to NRI goals

- What improvements are in the pipeline to achieve these goals

Section 1: NRI Process Goals and Impacts

NRI Process Goals
Current Impacts
Things to Have Before Starting

New Resource Implementation Goals

Our Goal:
Efficiently implement reliable resources into the CAISO market through effective resource validation and integration.

- Verify each new resource enters the market correctly, following FERC and NERC standards, and the CAISO Tariff and BPMs, with the ability to operate reliably.
  - ❖ *Reliable operation is key to the CAISO's core responsibility as a balancing authority.*

- Provide a clear, process for customers to enter the market following the above referenced standards.

- Provide support for customers participating in the market.

- Manage a fair environment where new resources can enter the market and operate commercially.
  - ❖ **The CAISO is committed to moving projects in an orderly manner from initial request to Commercial Operation. We want to help!**

Current NRI Process Impacts
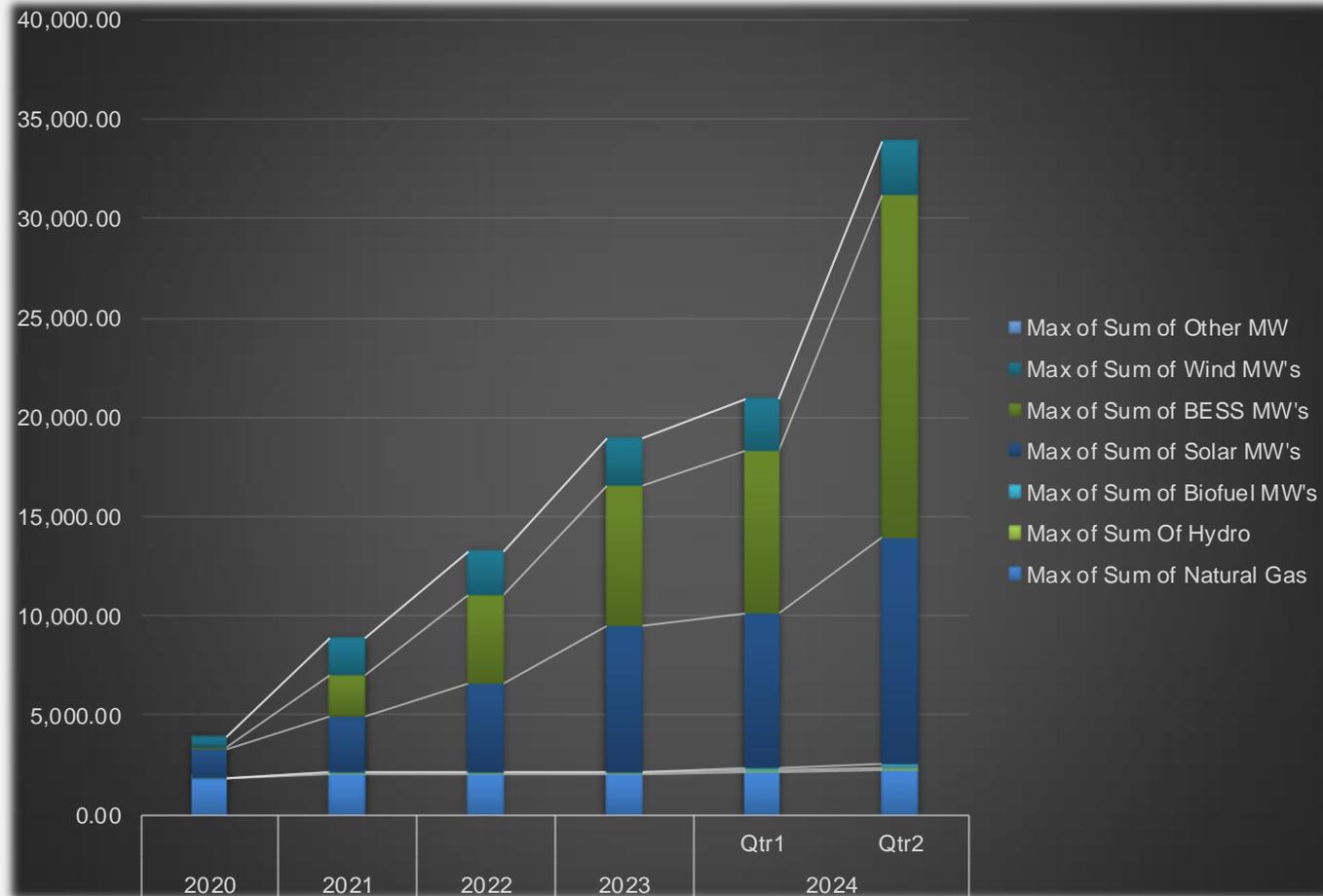
- Increase in number of projects entering the NRI process.

- Rapidly increasing complexity of new projects.

- Increase in energy demands and resource adequacy requirements.

- FERC Order 2023 and the increase in pressure to shorten the timeline to COD.

This data includes resources that have achieved their Commercial Operation Date as of January 10, 2024. Data beyond January 10th is generation information that is estimated based on the best available information to the CAISO. Also note that the data includes pseudo-tie and dynamic resources as they are considered to be within the CAISO BAA and can be shown for resource adequacy.

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Before Starting the NRI Process

These requirements should be considered prior to starting the NRI Process

- ✓ Have an executed Interconnection Agreement.

- ✓ No open MMAs or anticipated MMAs during the NRI Process.

- ✓ Resources should be construction ready.

- ✓ Review FNM schedule and Bucket timelines to ensure that project schedule is feasible.
  - ❖ *Projects should <u>not</u> count on expedited reviews or escalations to reach project milestones*

- ✓ Achieving CAISO commercial operations approval means your project is ready to operate in the market. Make sure your construction and contractual schedules line up with this.
  - ❖ *Resource Adequacy timelines are not factored into the NRI process*

Before Starting the NRI Process

Completion Timelines

- Average time to complete is between 6-9 months but projects should analyze their agreements, equipment and construction requirements, and CAISO timelines prior to starting the process.

- Estimated time to complete an NRI project can vary based on various factor including, but not limited to:

|		
• FNM Schedule • Document completeness • Project complexity	• Project type • IA requirements • Construction and equipment status	• Transmission impacts • Market impacts • PPA requirements • Process changes

Section 2: Process Overview

High Level Flow Diagrams
Process Review Presentation Structure

High Level Interconnection Process Map

You may be familiar with this high level process image,

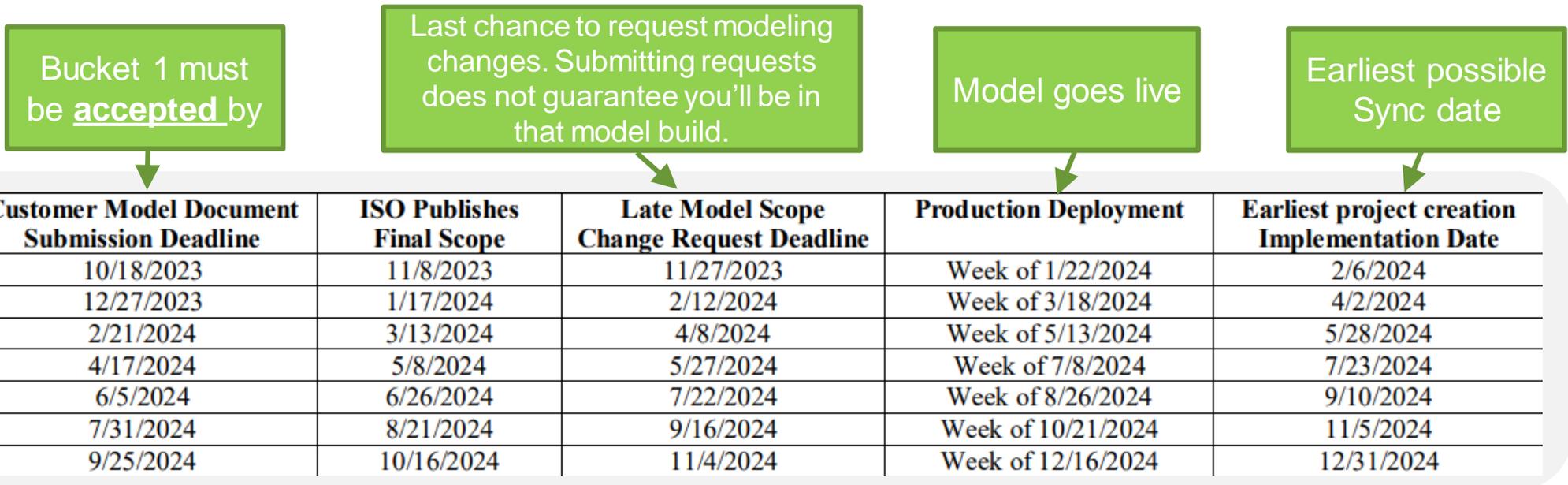so let's dig a little deeper.

High Level NRI Process Flow
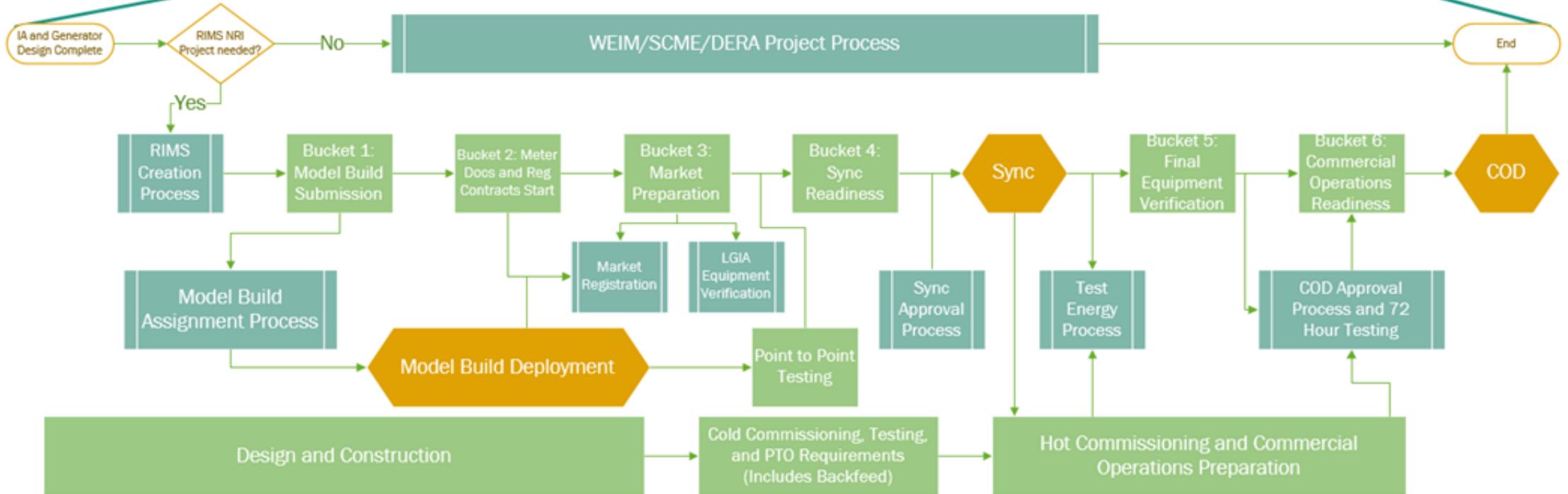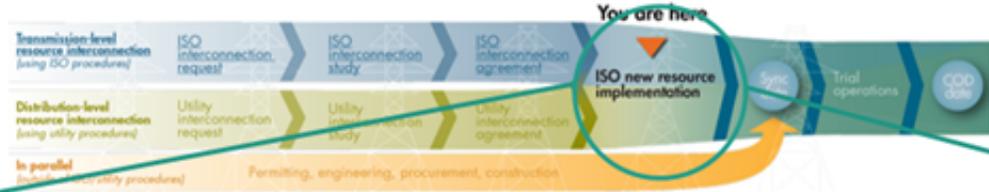
Section 3: Getting Started

Determining Your Timeline
How to Start
Process by Project Type
RIMS Access

Determining Your Timeline:
The Full Network Model (FNM) Build Schedule

- Project schedules are dependent on the FNM schedule. These dates *cannot* be circumvented for any reason, so plan accordingly!

- Visit our [Network and Resource Modeling](#) page for up to date schedules, scopes, and guides!

Bucket 1 must be **accepted** by

Last chance to request modeling changes. Submitting requests does not guarantee you'll be in that model build.

Model goes live

Earliest possible Sync date

FNM Label	Customer Model Document Submission Deadline	ISO Publishes Final Scope	Late Model Scope Change Request Deadline	Production Deployment	Earliest project creation Implementation Date
24M1_DB126	10/18/2023	11/8/2023	11/27/2023	Week of 1/22/2024	2/6/2024
24M3_DB127	12/27/2023	1/17/2024	2/12/2024	Week of 3/18/2024	4/2/2024
24M5_DB128	2/21/2024	3/13/2024	4/8/2024	Week of 5/13/2024	5/28/2024
24M7_DB129	4/17/2024	5/8/2024	5/27/2024	Week of 7/8/2024	7/23/2024
24M8_DB130	6/5/2024	6/26/2024	7/22/2024	Week of 8/26/2024	9/10/2024
24M10_DB131	7/31/2024	8/21/2024	9/16/2024	Week of 10/21/2024	11/5/2024
24M12_DB132	9/25/2024	10/16/2024	11/4/2024	Week of 12/16/2024	12/31/2024

Determining Your Timeline:
Resource Adequacy

RA Compliance Year	Annual RA Plans Deadline
2024	10/31/2023
2025	10/31/2024

[Resource Adequacy Due Dates](#)

RA Trade Month	Plan Submission Due Date	Plan Revision Due Date	RA Substitute Capacity (RASC) Assessment Start Date
Jan-2024	11/17/2023	12/02/2023	12/03/2023
Feb-2024	12/18/2023	01/02/2024	01/03/2024
Mar-2024	01/16/2024	01/31/2024	02/01/2024
Apr-2024	02/16/2024	03/02/2024	03/03/2024
May-2024	03/17/2024	04/01/2024	04/02/2024
Jun-2024	04/17/2024	05/02/2024	05/03/2024
Jul-2024	05/17/2024	06/01/2024	06/02/2024
Aug-2024	06/17/2024	07/02/2024	07/03/2024
Sep-2024	07/18/2024	08/02/2024	08/03/2024
Oct-2024	08/17/2024	09/01/2024	09/02/2024
Nov-2024	09/17/2024	10/02/2024	10/03/2024
Dec-2024	10/17/2024	11/01/2024	11/02/2024
Jan-2025	11/17/2024	12/02/2024	12/03/2024
Feb-2025	12/18/2024	01/02/2025	01/03/2025

*Note: ISO due date dates may differ from CPUC.

- If your resource will participate in Resource Adequacy (RA) you will need to consider RA application (NQC and EFC) timelines in your project schedule.

- Projects must go COD before submitting RA applications.

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Determining Your Process:
Process by Project Type

RIMS Process Projects

- New Resources Entering the CAISO BA (ISOME and SCME metering schemes)
- Dynamic Transfer (Dynamic and Pseudo Tie)
- Qualifying Facility (QF) Conversions
- Meter Maintenance
- RIG Reconfiguration

NRI Inbox Process Projects

- New SCME WEIM Resources
- Updates to existing SCME WEIM Projects
- Updates to existing SCME Projects within the CAISO BA
- Existing ISOME Resources transitioning to SCME
- Distributed Energy Resource Provider (DERP)

How to Start:
Two Processes

Determine project type and process needs ➤ Navigate to the NRI webpage ➤ Complete correct Project Details form for your project type ➤ Submit (by RIMS or NRI email depending on step 1)

RIMS Process

Use:
➡ **RIMS Quick Start Guide**
➡ **RIMS Project Details Form**
➡ **Create RIMS Project**

NRI Inbox Process

Use:
➡ **New Resource Implementation Quick Start Guide**
➡ **Project Details Form**

Process via RIMS:

- RIMS Project Details Form (v16)
- Will require access from a UAA
- Deliverables must be uploaded to RIMS
- Changes to project details can be made through RIMS

Process via NRI Inbox

- Project Details Form (v9b)
- No UAA access required
- Deliverables are submitted through email
- Changes to project details require an emailed, updated Project Details Form.

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How do you get access to your project in RIMS?

Your UAA can provide you access to RIMS

- A UAA is User Access Administrator for the new project's owner company.

- After you create a new RIMS project, your UAA needs to request access the application access page.
  - ❖ <u>Every</u> new RIMS project must have a UAA request access, regardless of if they are a UAA for other projects for the customer company.

  - ❖ The User Access Administrator Agreement is used to grant access and can be found by navigating to the CAISO website > Participate > [Application Access](#).

  - ❖ Access requests require a project code

  - ❖ UAA Application can take up to 7 calendar days to process

Submit a CIDI ticket or reach out to UAARequests@caiso.com if you have more questions!
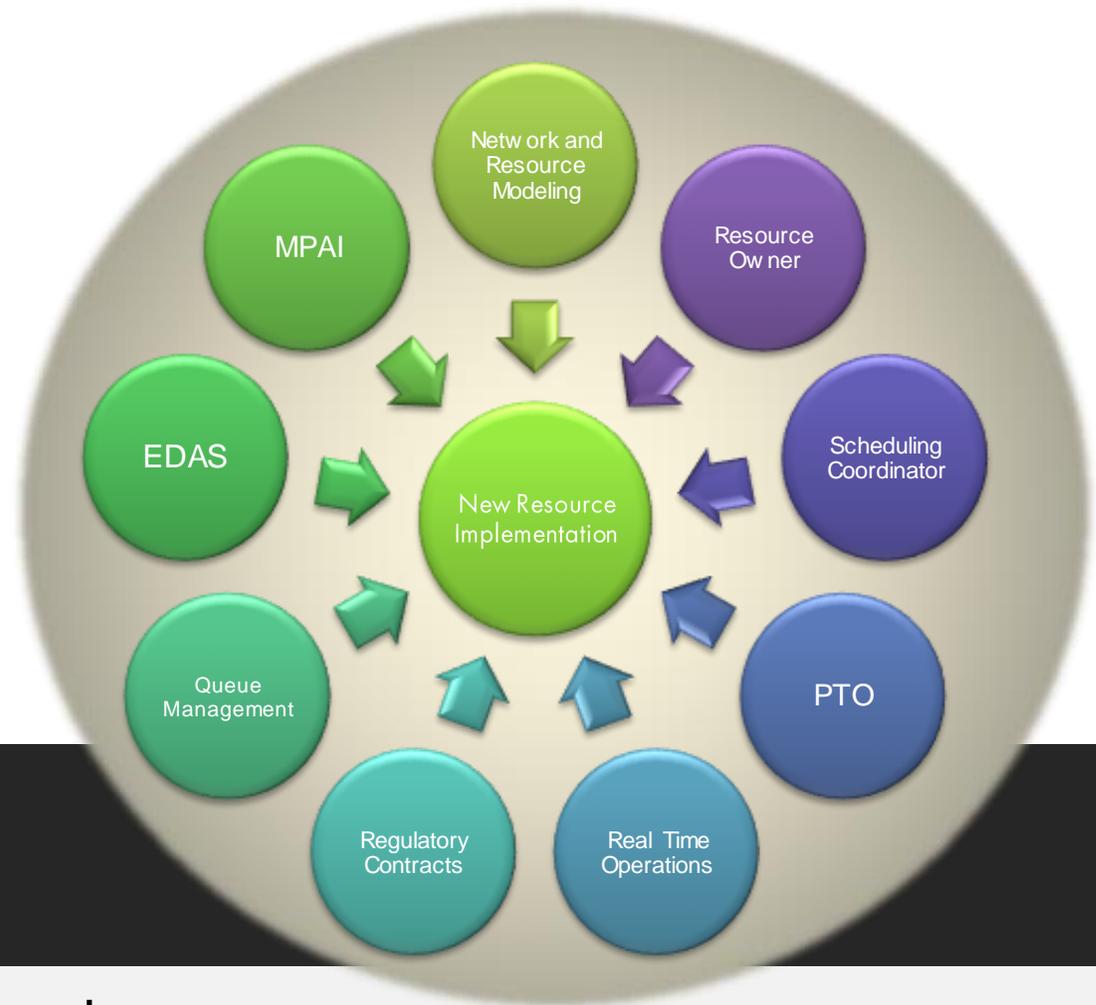
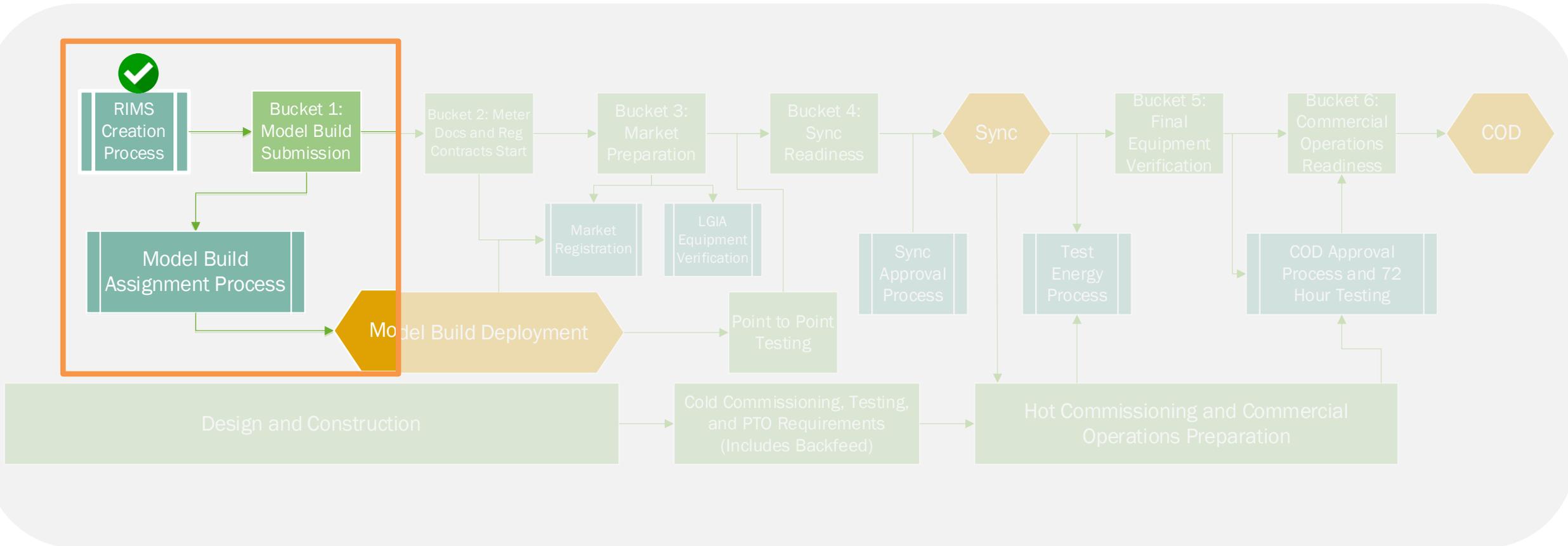# Section 4: Buckets, Deliverables, and Sub-Processes

Buckets 1 through 2: Modeling Assignment
Buckets 2 through 3: Registering Resource with CAISO
Buckets 3 through 4: Test Energy Preparation
Buckets 5 through 6: Sync to COD

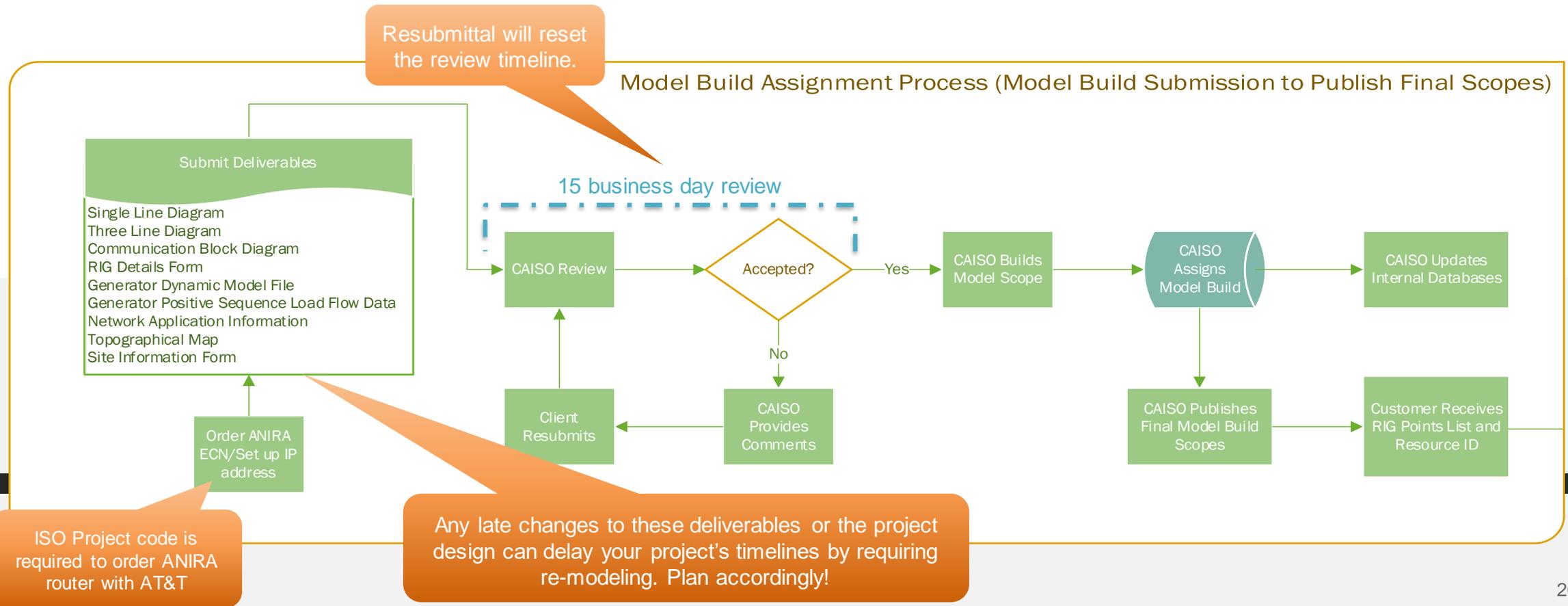# Buckets 1 through 2:
Modeling Assignment

Model Assignment Process

The submissions in Bucket 1 dictate how your resource will be modeled and able to participate in the market. Multiple CAISO business units work together to make sure projects are accurately modeled. It is crucial that during this step:
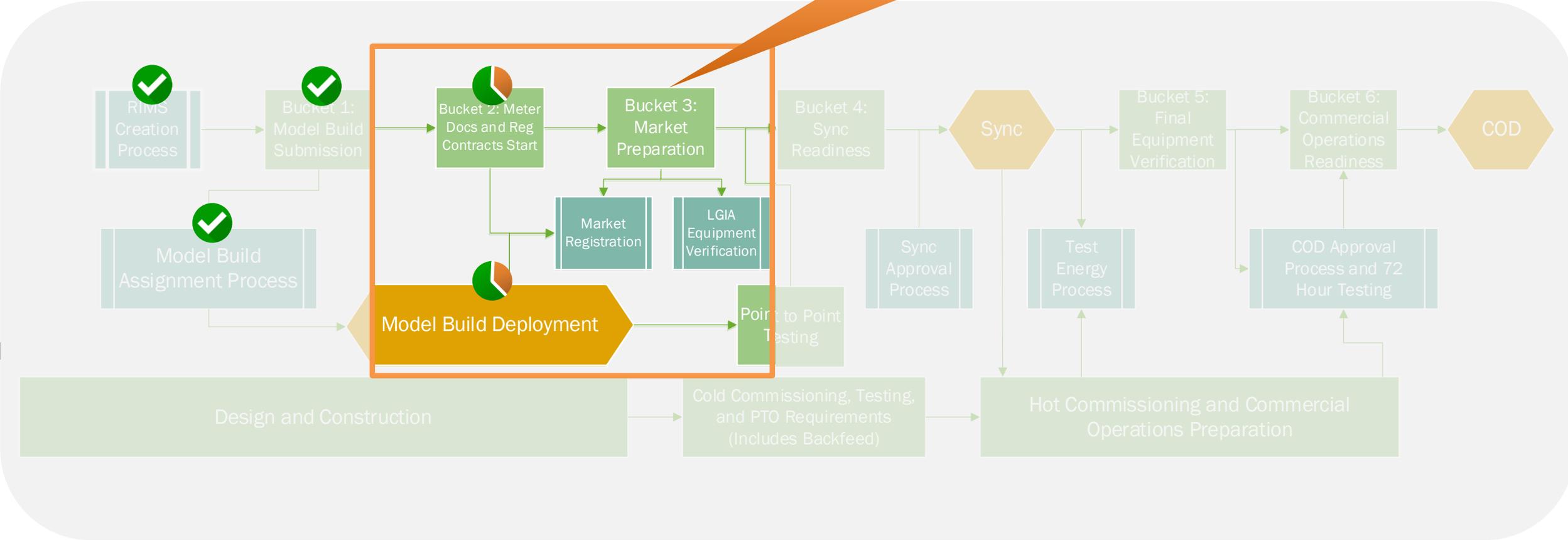
1. The designs submitted should be issued for construction and as accurate as possible.

2. You work with your PTO and Queue Management, if you have a 3-part agreement, to confirm equipment, POIs, and other design details are accurate to the IA and PTO model submissions.

Resubmittal will reset the review timeline.

Model Build Assignment Process (Model Build Submission to Publish Final Scopes)

Submit Deliverables

Single Line Diagram
Three Line Diagram
Communication Block Diagram
RIG Details Form
Generator Dynamic Model File
Generator Positive Sequence Load Flow Data
Network Application Information
Topographical Map
Site Information Form

15 business day review

CAISO Review → Accepted? → Yes → CAISO Builds Model Scope → CAISO Assigns Model Build → CAISO Updates Internal Databases

Accepted? → No → CAISO Provides Comments → Client Resubmits

CAISO Assigns Model Build → CAISO Publishes Final Model Build Scopes → Customer Receives RIG Points List and Resource ID

Order ANIRA ECN/Set up IP address

ISO Project code is required to order ANIRA router with AT&T

Any late changes to these deliverables or the project design can delay your project's timelines by requiring re-modeling. Plan accordingly!
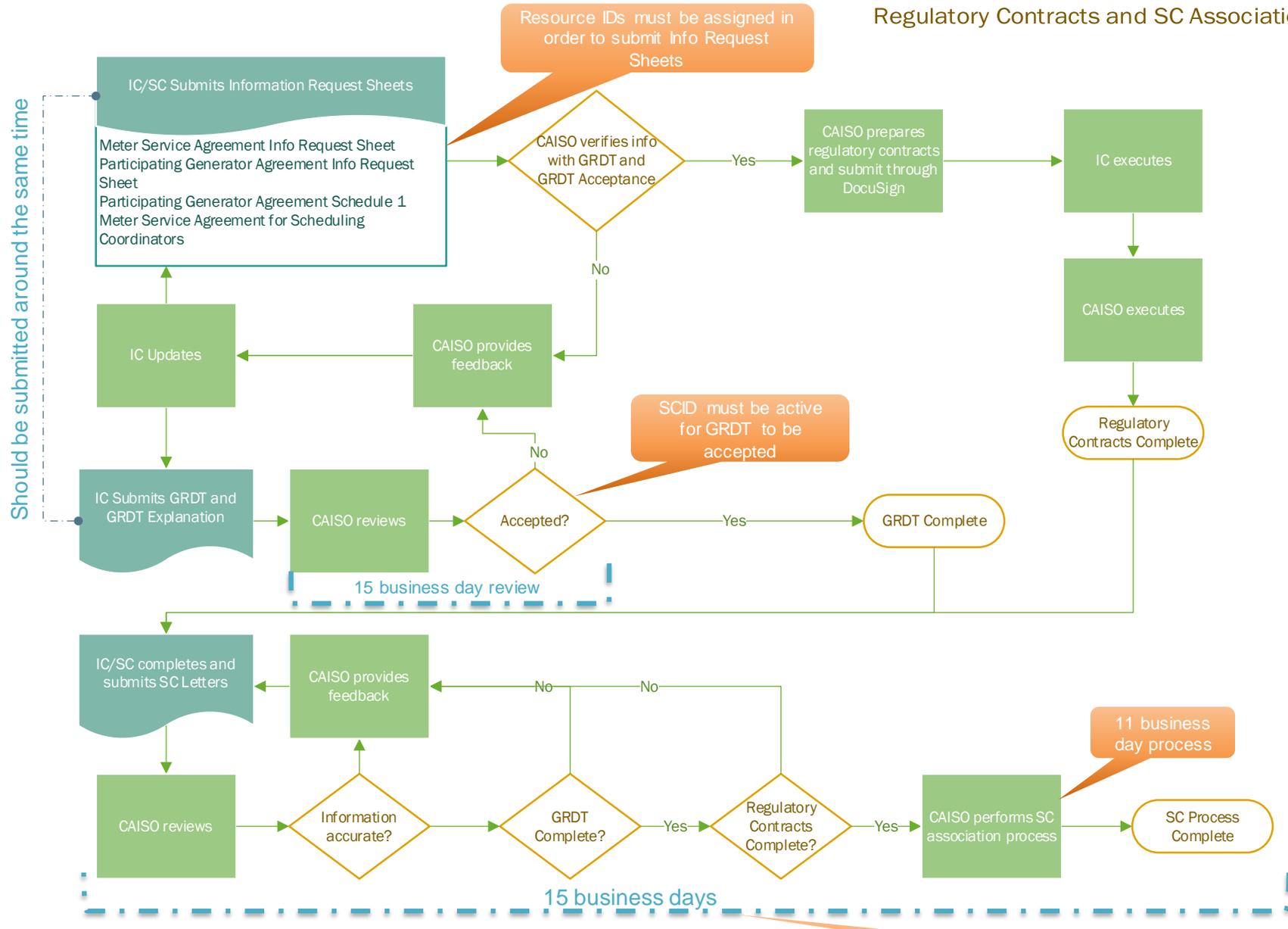
Buckets 2 through 3:
Market Preparation

Bucket 3 does include meter and telemetry documentation that is not represented as a specific, separate process on this flow chart. Those documents will be covered in the Test Energy Preparation section with Point to Point Testing.

RIMS Creation Process

Bucket 1: Model Build Submission

Model Build Assignment Process

Bucket 2: Meter Docs and Reg Contracts Start

Bucket 3: Market Preparation

Market Registration

LGIA Equipment Verification

Model Build Deployment

Point to Point Testing

Bucket 4: Sync Readiness

Sync

Sync Approval Process

Test Energy Process

Bucket 5: Final Equipment Verification

Bucket 6: Commercial Operations Readiness

COD

COD Approval Process and 72 Hour Testing

Design and Construction

Cold Commissioning, Testing, and PTO Requirements (Includes Backfeed)

Hot Commissioning and Commercial Operations Preparation

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Regulatory Contracts and SC Association

Should be submitted around the same time

IC/SC Submits Information Request Sheets

Meter Service Agreement Info Request Sheet
Participating Generator Agreement Info Request Sheet
Participating Generator Agreement Schedule 1
Meter Service Agreement for Scheduling Coordinators

Resource IDs must be assigned in order to submit Info Request Sheets

CAISO verifies info with GRDT and GRDT Acceptance — Yes → CAISO prepares regulatory contracts and submit through DocuSign → IC executes → CAISO executes → Regulatory Contracts Complete

No

IC Updates ← CAISO provides feedback ← (No)

IC Submits GRDT and GRDT Explanation → CAISO reviews → Accepted? — Yes → GRDT Complete

No

SCID must be active for GRDT to be accepted

15 business day review

IC/SC completes and submits SC Letters ← CAISO provides feedback ← No ← No

CAISO reviews → Information accurate? → GRDT Complete? — Yes → Regulatory Contracts Complete? — Yes → CAISO performs SC association process → SC Process Complete

11 business day process

15 business days

Reminder: Resubmittal will reset the review timelines.

One of the many processes in Bucket 3 is Regulatory Contracts Execution and SC Association. The model build assignment models the project in CAISO's systems like EMMS, but this process is what allows it to operate in the market through the Full Network Model.

Quick tips:
- Start GRDT as early as possible and work with your SC to complete it.
- Meter Service Agreements should include Meter Exemptions. Submit Meter Exemptions now to avoid delays at COD.
- These are all completed in Bucket 3 and must be accepted by your Bucket 3 deadline, but they cannot all be completed at the same time.
- Pay attention to the order of submittal and acceptance and remember the review timelines!
- SC Association must be effective 7 days before Sync. SC Association to effective date process is 11 business days from submittal. Resubmittals due to errors will reset this timeline. Carefully review letters before submittal!
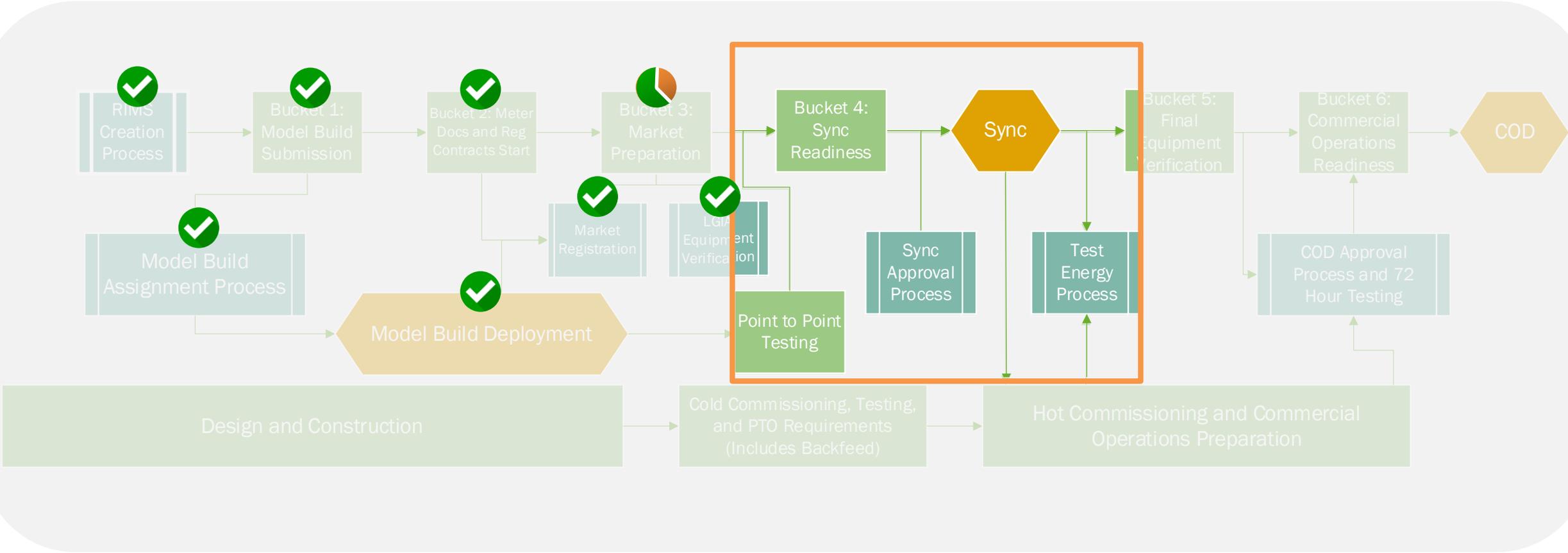
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Market Preparation Part 2:
LGIA Equipment and Configuration Compliance Verification

- During Bucket 3, you will submit documentation to verify your project's equipment has met LGIA requirements. These are the Control and Protection submittals.
- This consists of 3 submittals that will be reviewed against the LGIA, any MMAs, and NERC, FERC, and CAISO Tariff requirements.
  - There should not be any MMAs in progress when this is submitted.
  - MMAs could cause a need for resubmittal.

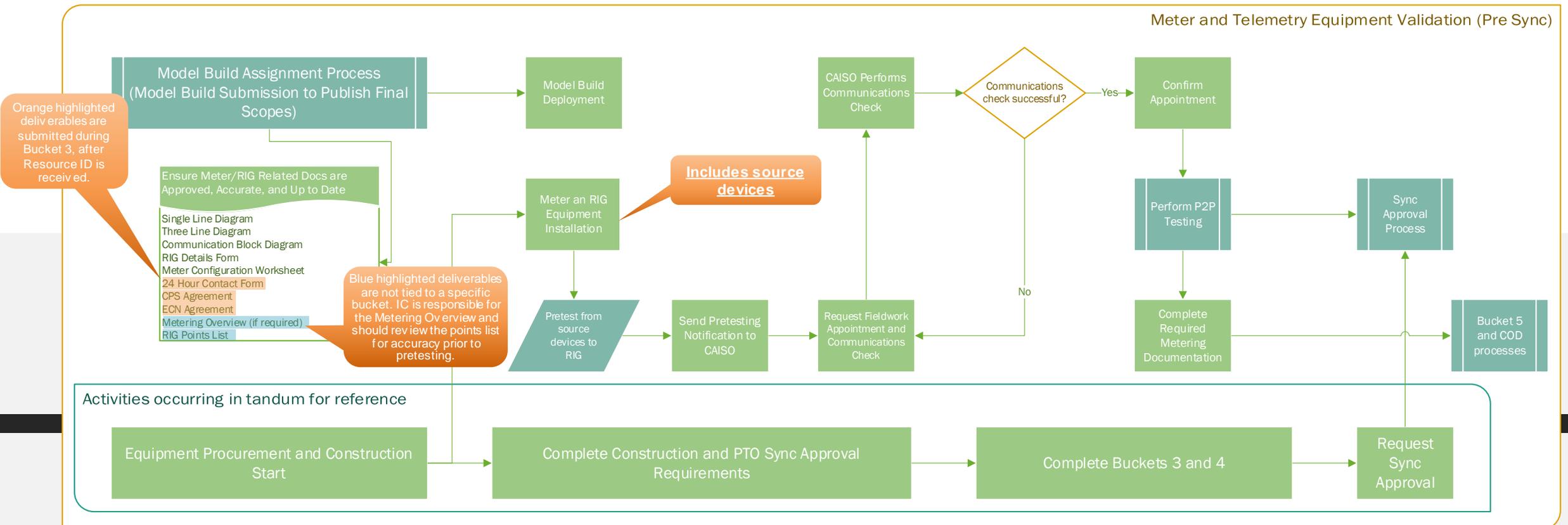| ControlProtection	ControlProtectionInverter	ControlProtection InverterReport

• SLD and 3LD showing relays, meter, CTs, and PTs
• Circuit breaker trip and close control circuits (typically DC) for all circuit breakers
• Bill of material for all protective relays
• Complete list of relay settings for all protective relays
	• Excel Template called "Generating Facility Data – Attachment A to Appendix 1"
	• Project information on first tab must match RIMS
	• Tab 3, "I-a. Short Circuit Data Table", must be completed with SLG, LL, and 3LG data
		• Report from the inverter manufacturer with the following information:
		   • Whether momentary cessation or reactive current injection is used
		   • Anti-islanding status
		   • Startup ramp rate
		   • Shutdown ramp rate
		   • Model number of the inverters
		   • Inverter maximum rated output.
		   • Total number of inverters to be installed at the project site.

Tips for Submission	**Tips for Submission**	**Tips for Submission**
• Only include documentation listed above. Submitting more than is requested will lengthen review and make submitting more challenging. • RIMS can only accept about 10MB files. You may break up submission into multiple files, use naming called out in the NRI Guide. • Submit with a linked table of contents or index page. If you need to break up the file, include the linked TOC or index page at the top of each submittal. • Relay settings must be submitted as PDF files. • The ISO recommends getting relay setting approval prior to relay programming and testing. • Provide a linked TOC or index for the relay settings as well or submit separate files for each relay.	• This is the same submittal used for Interconnection Requests and MMA updates. • Make sure you are using the latest template version. Version can be found on the "Instructions" Tab. • Do not include "Q" in the queue number. Queue number should be the number only.	• Submission should be a PDF file. • Latest pro forma GIAs no longer permit use of momentary cessation. If momentary cessation must be used, a supporting explanation should be provided. • For reactive current injection, report must include the voltage settings at which the inverter will enter this mode, the time the inverter takes to return to normal (P priority) mode following the clearance of the disturbance, and also the K factor that is used. The CAISO prefers reactive current injection with K factor equal to 2. • High Voltage Ride Through (OVRT) and Low Voltage Ride Through (LVRT) should be 1.1 pu and 0.9 pu, respectively.
Submit all of these at the same time. Control and Protection submittals will not be approved until all 3 parts are received.		

Buckets 3 through 4:
Test Energy Preparation

Test Energy Preparation Part 1: Pre-Sync Meter and Telemetry Verification

Metering and Telemetry work is not specifically tied to a Bucket but occurs mainly between Bucket 3, Bucket 4, and Sync. EDAS will discuss more details but key points for the process:

- Model build must be deployed before P2P. Avoid scheduling P2Ps before or the week of deployment. EDAS cannot see your RIG prior to full model deployment.

- ECN must be live and pretesting must be completed and confirmed to EDAS prior to scheduling an appointment.

- P2P testing is a requirement for Sync. While Sync can be requested as soon as Buckets 1-4 are complete, you should aim to have P2P completed before Bucket 4.

- P2P testing is crucial to verifying CAISO equipment and resource readiness.

Meter and Telemetry Equipment Validation (Pre Sync)

Model Build Assignment Process (Model Build Submission to Publish Final Scopes)

Model Build Deployment

CAISO Performs Communications Check

Communications check successful? — Yes → Confirm Appointment

Orange highlighted deliverables are submitted during Bucket 3, after Resource ID is received.

Ensure Meter/RIG Related Docs are Approved, Accurate, and Up to Date

Single Line Diagram
Three Line Diagram
Communication Block Diagram
RIG Details Form
Meter Configuration Worksheet
24 Hour Contact Form
CPS Agreement
ECN Agreement
Metering Overview (if required)
RIG Points List

Meter an RIG Equipment Installation

Includes source devices

Blue highlighted deliverables are not tied to a specific bucket. IC is responsible for the Metering Overview and should review the points list for accuracy prior to pretesting.

Pretest from source devices to RIG

Send Pretesting Notification to CAISO

Request Fieldwork Appointment and Communications Check

No

Perform P2P Testing

Sync Approval Process

Complete Required Metering Documentation

Bucket 5 and COD processes

Activities occurring in tandem for reference

Equipment Procurement and Construction Start

Complete Construction and PTO Sync Approval Requirements

Complete Buckets 3 and 4

Request Sync Approval

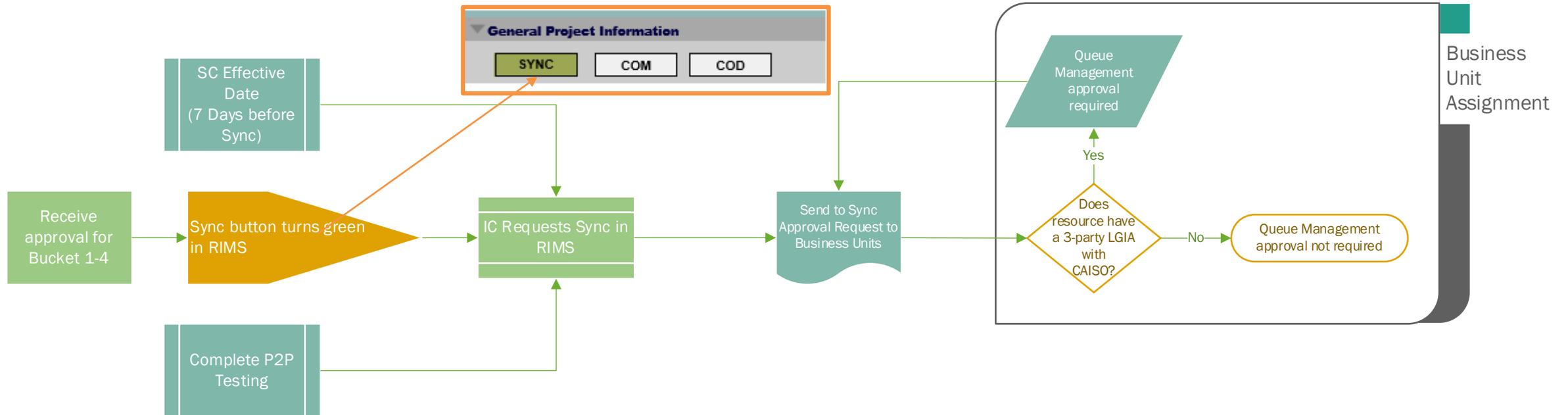# Consider these do's and do not's before scheduling P2P

Do

- Ensure all meter and RIG related documentation is submitted, approved, and up to date. (List in flow diagram below).
- Install ECN, meters, RIG, and all required source devices prior to scheduling P2P.
- Be flexible with scheduling, you likely will not be able to get the exact date you want.
- Build pretesting into your project schedule. Meters, RIG, and source devices need to be pretested in order to be P2P ready. A notification should be sent to EDAS confirming pretesting, otherwise your appointment can be canceled.
- Review the BPMs for Telemetry and Metering. And reach out to EDAS if you have questions on scaling, polarity, or any other data expectations prior to pretesting. Ideally, as soon as you receive the CAISO Points List.

Do Not

- Avoid requesting appointments too early (ie before successful pretesting). One, this bogs down our appointment calendar, preventing any flexibility and making scheduling or rescheduling your appointment challenging. Two, attempting to complete a P2P test when your resource is not ready just because you have an appointment will not help your project's timeline. Partial P2Ps will not be accepted. Multiple retests will only cause delays of Sync and review of RIG and Meter related deliverables.
- Do not rely on non-originating/reporting devices, like a PPC, to force points or dropouts. This can lead to issues during the 72 hour test before COD and cause your project significant delays.
- Don't forget to pretest quality!
- For BESS projects, don't forget to test the BESS idle flag.
- Do not make any changes to the RIG, meters, or devices /mapping that is providing data to the RIG.

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Test Energy Preparation Part 2a:
Sync Request

- Sync cannot be requested prior to buckets 1-4 being accepted. RIMS will not allow it.
- You can request Sync before P2P testing is completed, but you will not receive full Sync Approval without P2P testing complete. Partial P2Ps do not count as complete.

- Bucket 4 is the PTO Sync Approval Letter. This approval is granted after you have met all PTO requirements for synchronization and connecting to the grid.
- Sync is not the same as backfeed. The CAISO NRI process does not grant backfeed approval. Majority of the time, backfeed is something you need in place in order to complete PTO sync approval requirements.

- In Service vs Initial Synchronization. In Service typically refers to backfeed or your in service date with the PTO. Initial Synchronization is approval from CAISO to start test energy (trial operations) to the grid.
- Once you request Sync, it is sent to the relevant business units for review.
  - Which business units you need approval from will depend on varying project details factors like project type/IA type and size.

Test Energy Preparation Part 2b:
Sync Request Business Unit (BU) Review

The Market Participant Asset Implementation (MPAI/NRI) sector of the Model and Contract Implementation (MCI) group checks that all NRI-related prerequisites are complete.

Queue Management checks to make sure all LGIA requirements for Sync are met including things like the Transmission Checksheet and verifying no MMAs are currently in progress.

Business Unit Review

10 calendar days
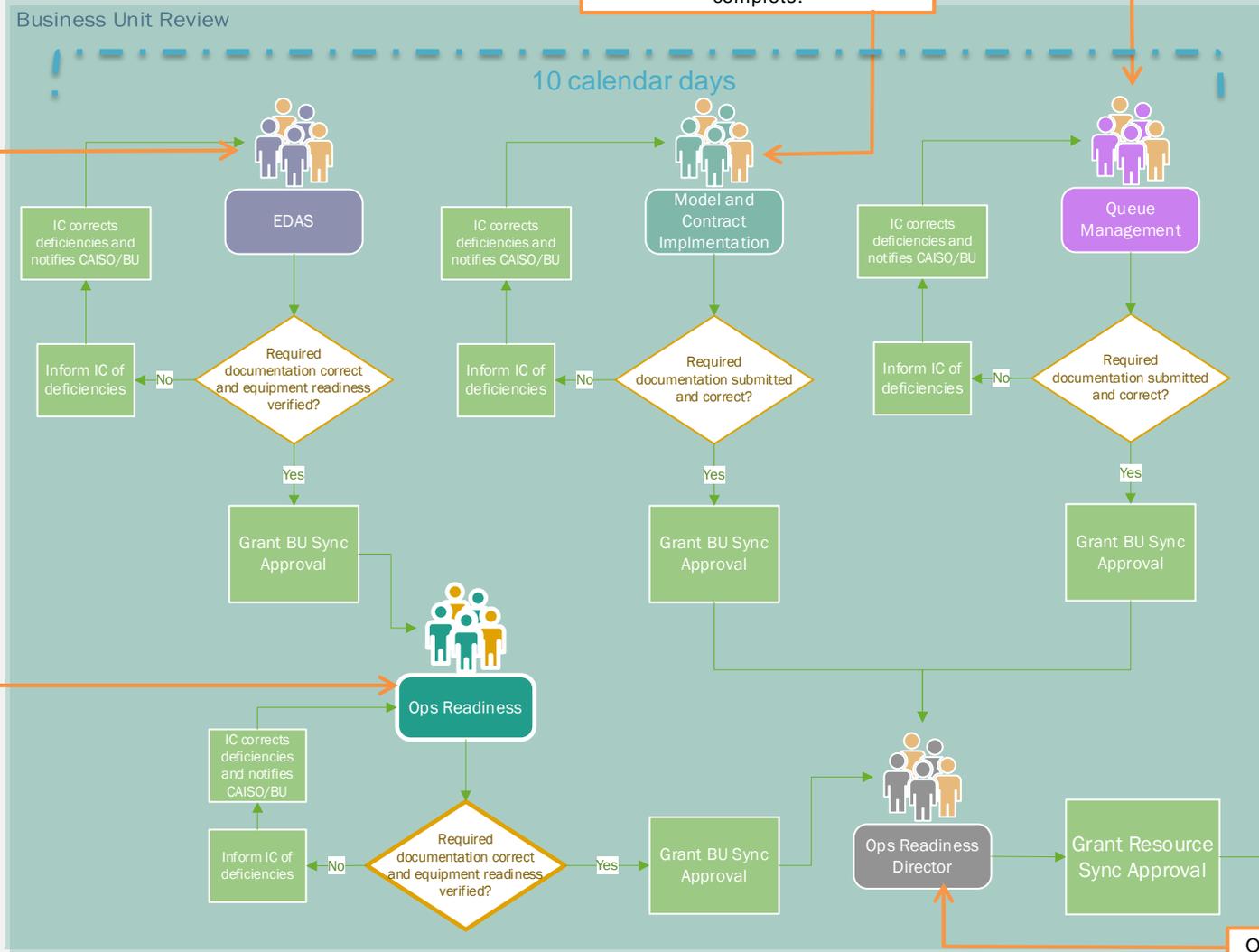
EDAS and Ops Readiness reviews encompass verification of metering, telemetry, accuracy of build, resource's visibility in CAISO systems, and more.

IC corrects deficiencies and notifies CAISO/BU

EDAS

Model and Contract Implmentation

Queue Management

IC corrects deficiencies and notifies CAISO/BU

IC corrects deficiencies and notifies CAISO/BU

Inform IC of deficiencies

Required documentation correct and equipment readiness verified?
No

Inform IC of deficiencies

Required documentation submitted and correct?
No

Inform IC of deficiencies

Required documentation submitted and correct?
No

Yes

Yes

Yes

Grant BU Sync Approval

Grant BU Sync Approval

Grant BU Sync Approval

Ops Readiness

IC corrects deficiencies and notifies CAISO/BU

Inform IC of deficiencies
No

Required documentation correct and equipment readiness verified?
Yes

Grant BU Sync Approval

Ops Readiness Director

Grant Resource Sync Approval

SC Contacts Outage Management 24 hours before sync

RIMS Sends Sync Approval email and Test Energy Schedule

IC Completes Test Energy Schedule and submits to SC

SC Submits Test Energy Schedule

SC notifies Outage Management and Real Time Desk immediately before Sync

Resource commences Sync/Test Energy

At this point, the Scheduling Coordinator can start the Test Energy Process as laid out in Operating Procedures 5320 and 5320A, found on the Operating Procedures webpage. This will be covered in more detail during the Grid Operations presentation later today.

Once all other Business Units have provided their approval, a final review is completed by Ops Readiness Director Group and final Sync Approval is provided.
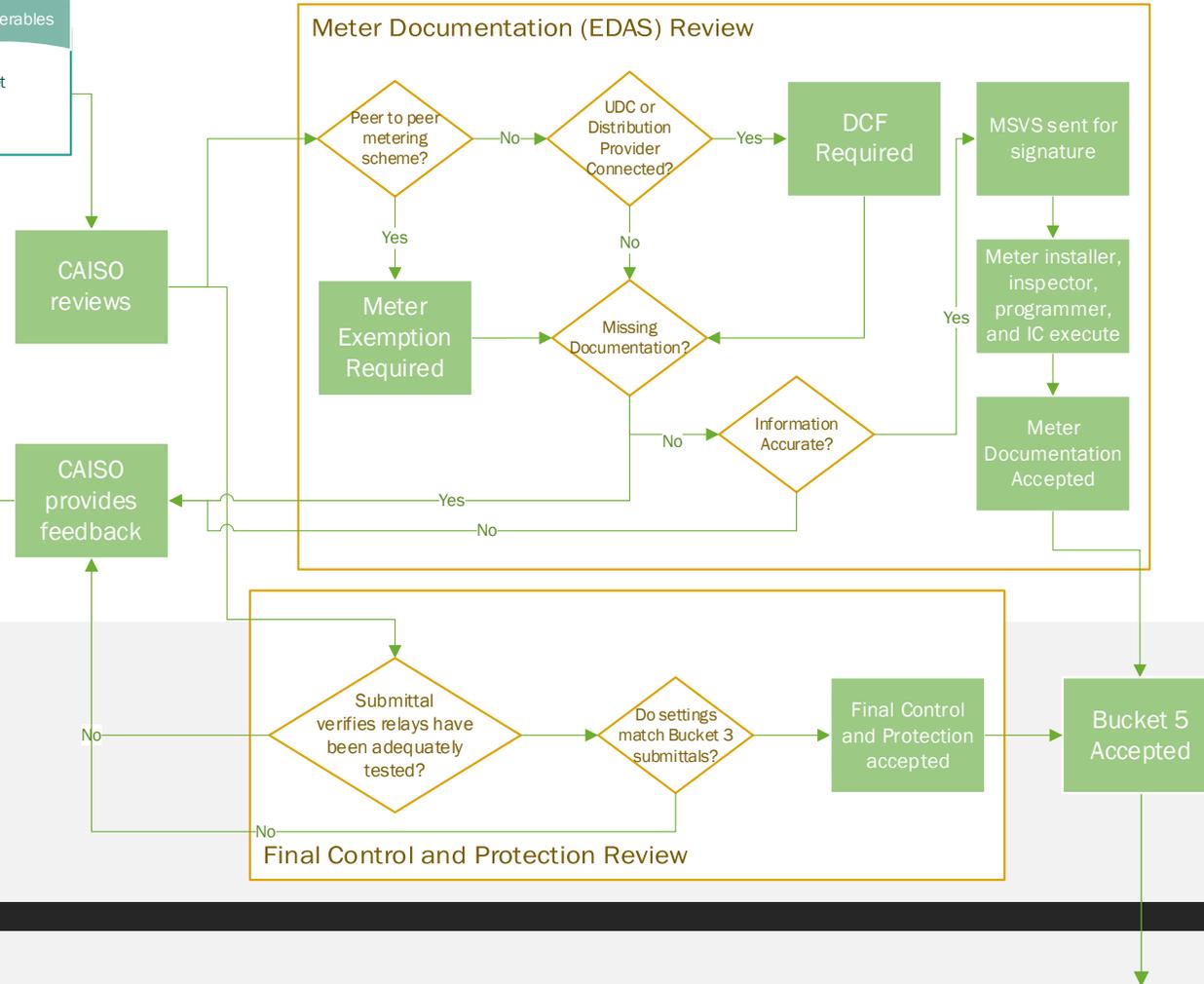
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Buckets 5 through 6:
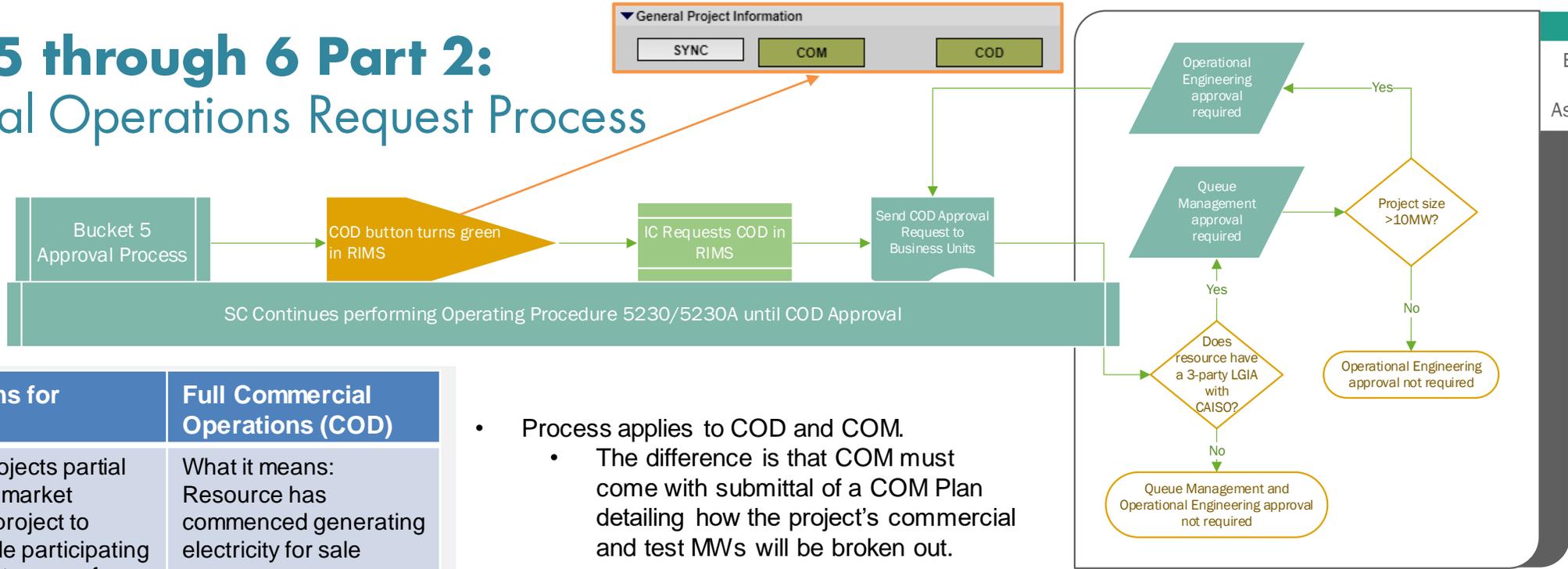## Trial Operations to Commercial Operations
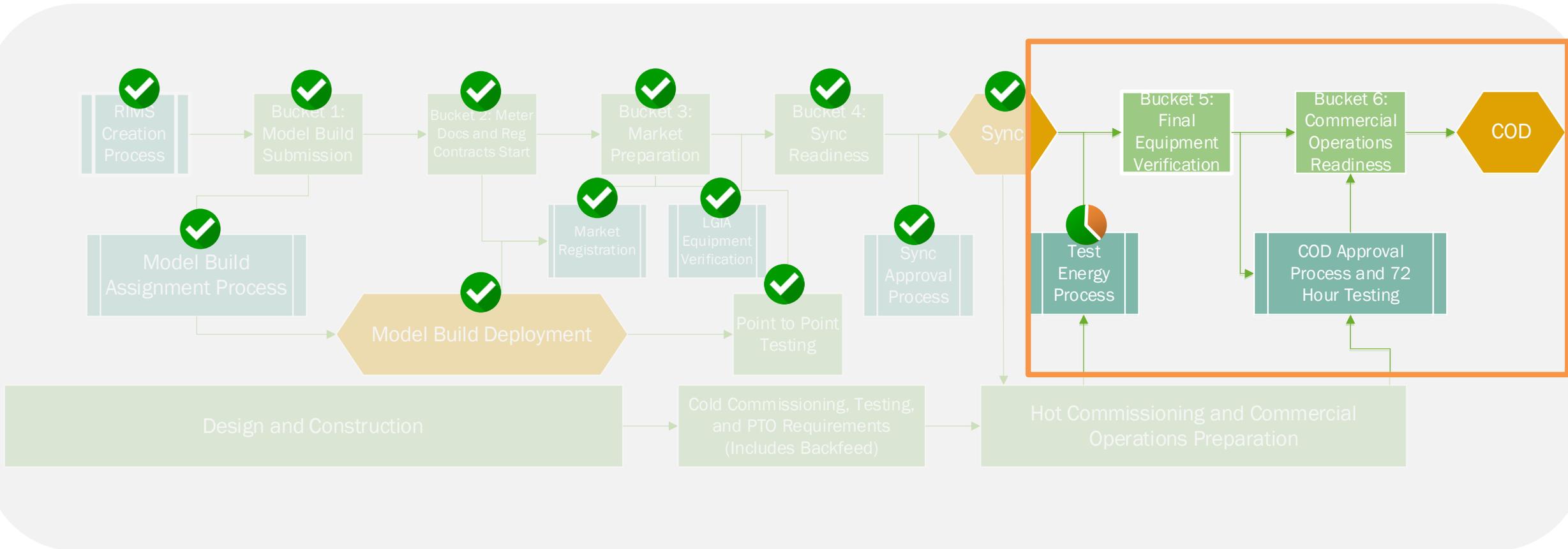
Buckets 5 through 6 Part 1:
Final Equipment Documentation Verification

Metering and Telemetry	LGIA Equipment and Configuration Compliance	Test Energy Procedure
Documents: Meter Site Verification Sheet (MSVS) Point of Receipt Calculation (PORCalc) Distribution Compensation Factor Supporting Documentation (DCF)	Documents: Certified Relay Test Reports (FinalControl ProtectionReport)	Documents: Test Energy Schedule
Submission Tips: • QC, QC, QC. Most common reasons for MSVS rejections are due to small errors like typos. • A PORCalc document must be submitted for each meter associated with the project. • DCF submittal is documentation from the Utility Distribution Company (UDC) or Distribution Provider verifying DCF compensation. • Meter documentation should be submitted together to avoid reviewing delays.	Submission Tips: • Tested settings should match settings submitted in Bucket 3. If settings are changed, resubmittal of settings will be needed. This could cause COD Delays. • Like the ControlProtection submittals in Bucket 3, submit with a linked index or table of contents page. If file is too large, file may be split.	Process Tips: • Discuss test energy schedules and submittal processes with your SC prior to requesting Sync. • From Sync through COD, procedure 5230/5230A should be performed. • Not following these processes could result in a hold on performing test energy being applied to the out of compliance resource. This could cause delays.

IC Submits Bucket 5 Deliverables

Meter Site Verification Sheet
Point of Receipt Calculation
Final Control and Protection

Meter Documentation (EDAS) Review

CAISO reviews

CAISO provides feedback

Peer to peer metering scheme? — No → UDC or Distribution Provider Connected? — Yes → DCF Required

Peer to peer metering scheme? — Yes → Meter Exemption Required

UDC or Distribution Provider Connected? — No → Missing Documentation?

Missing Documentation? — Yes → (to CAISO provides feedback)
Missing Documentation? — No → Information Accurate?

Information Accurate? — No → (to CAISO provides feedback)
Information Accurate? — Yes → Meter Documentation Accepted

DCF Required → MSVS sent for signature → Meter installer, inspector, programmer, and IC execute → Meter Documentation Accepted

Final Control and Protection Review

Submittal verifies relays have been adequately tested? — No → (to CAISO provides feedback)
Submittal verifies relays have been adequately tested? → Do settings match Bucket 3 submittals? — No → (feedback)
Do settings match Bucket 3 submittals? → Final Control and Protection accepted

Bucket 5 Accepted

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Buckets 5 through 6 Part 2:
Commercial Operations Request Process

General Project Information

| SYNC | COM | COD |

Flow chart (left to right):

Bucket 5 Approval Process → COD button turns green in RIMS → IC Requests COD in RIMS → Send COD Approval Request to Business Units

SC Continues performing Operating Procedure 5230/5230A until COD Approval

Business Unit Assignment flow:

Does resource have a 3-party LGIA with CAISO?
- No → Queue Management and Operational Engineering approval not required
- Yes → Queue Management approval required → Does resource... Project size >10MW?
  - Yes → Operational Engineering approval required
  - No → Operational Engineering approval not required

Commercial Operations for Markets (COM)	Full Commercial Operations (COD)
What it means: Grants projects partial commercial operation for market participation to allow the project to operate in the market while participating in trial operations with test energy for remaining megawatt capacity.	What it means: Resource has commenced generating electricity for sale
When to request: Projects with a block implementation plan	When to request: Projects who will enter the market with entire MW capacity

• COM Plan
• PTO COD Approval Letter
• COM Request
• COM Declaration
• Increase MWs
  • PTO COD Approval Letter
  • COD Declaration
• Full MW CODs
  • PTO COD Approval Letter
  • COD Declaration
	• PTO COD Approval Letter
	• COD Request
	• COD Declaration

- Process applies to COD and COM.
  - The difference is that COM must come with submittal of a COM Plan detailing how the project's commercial and test MWs will be broken out.

- COD cannot be requested prior to buckets 1-5 being accepted.

- PTO COD Approval Letter should be submitted with the COD Request.
  - This approval is granted after you have met all PTO requirements for COD and connecting to the grid.
  - If requesting COD, there should be no conditional limitations on the project (such as a network upgrade).

- Like Sync, once you request COD, it is sent to the relevant business units for review.
  - Which business units you need approval from will depend on varying project details factors like project type/IA type and size.

- COD means the project is complete and ready to operate in the market. You should not request COD until the project has completed all testing and requirements for operating reliably in the market.

Business Unit Review

This chart references "COD". Commercial Operations Request Review and Declaration process is the same for COD and COM.

The MPAI sector of the MCI group checks that all NRI-related prerequisites are complete.

Queue Management checks to make sure all LGIA requirements for Sync are met including things like the Transmission Checksheet and verifying no MMAs are currently in progress.

COD must be declared with the COD Declaration Letter in order for resource to be commercially operational in the market.

10 business days

Re-checks of 72 hour data will occur after IC has submitted confirmation of the issue being resolved. CAISO still needs 72 *consecutive* hours of good data to pass.

COC review is the final metering check that grants the Metering Certificate of Compliance. All meter documentation and meter data is re-reviewed at this stage. It is possible that more information or re-submittal of documentation will be requested. This can affect review timelines.

EDAS performs the 72 hour test. 72 hours *consecutive* of good data must be observed. This verification is crucial to project operations. If a resource passes the 72 hour test but then has a telemetry issue, this can trigger retesting of the 72 hour data.

Once all other Business Units have provided their approval, a final review is completed by Ops Readiness Director Group, then the Market Services Director Group. These approvals trigger the final COD approval.

California ISO

Resource Adequacy Application
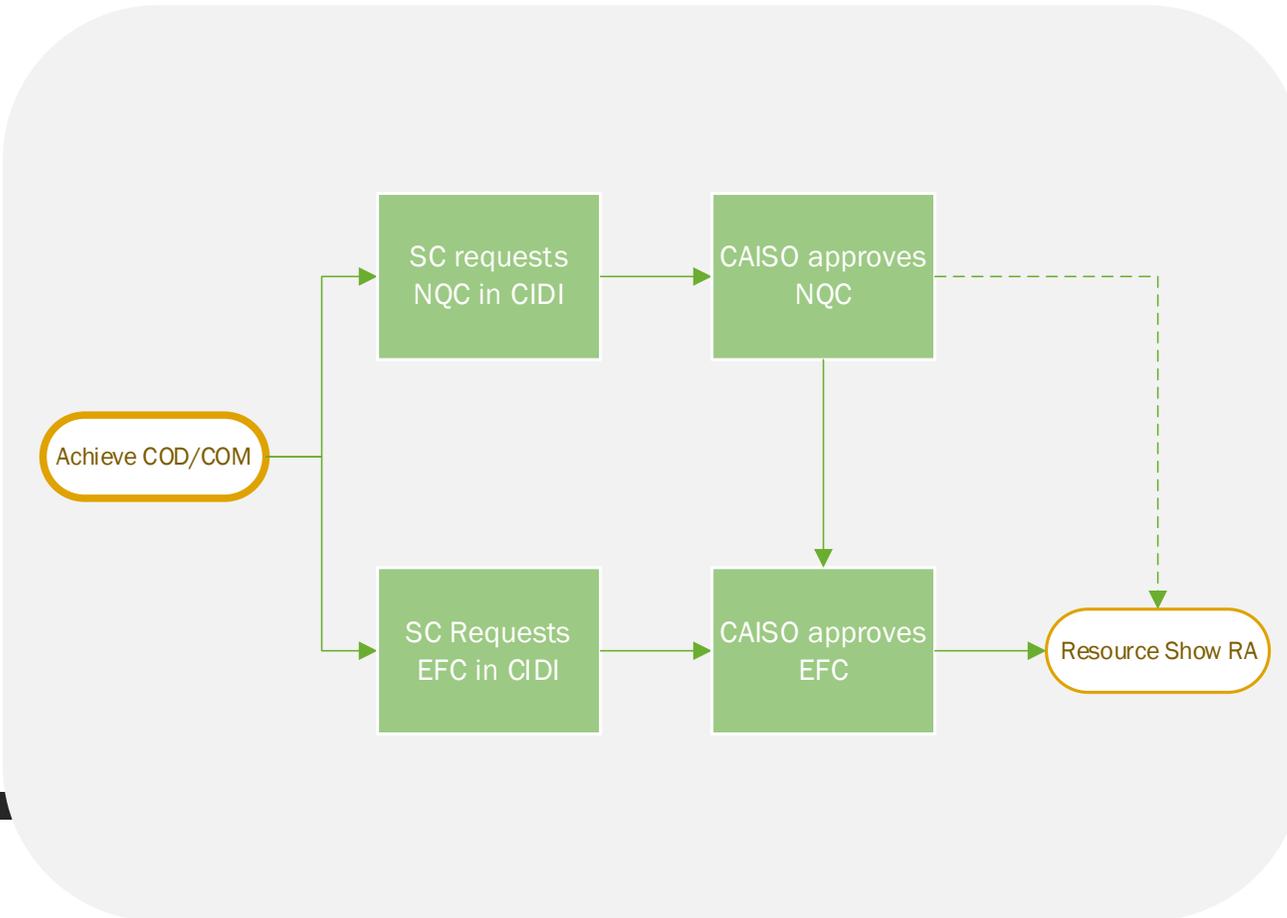
- After achieving COD or COM, resources may participate in the RA program by:
  - Submitting NQC requests in CIRA to be able to show generic RA.
  - Submitting EFC requests in CIDI to be able to show flex RA.

- Please allocate two weeks for this process (most cases are process within a week).

- Please refer to the following for more details:
  - Reliability Requirements Business Practice Manual
  - Reliability Requirements webpage

Tips for Success and RIMS Reminders

Start Early

- Start agreements early and build in time for reviews and resubmittals into your schedules
- Identify updates as soon as possible
- Identify your UAA as soon as you start the NRI process

Keep Up with Rules and Guides

- Check the NRI webpage for updates frequently
- Use BOTH the NRI Guide and the NRI Checklist
- Attend Stakeholder meetings
- Sign up for [Notifications](#) on our website (Daily Briefing covers documentation updates!)

Keep Project Info Current

- Keep dates current and accurate
- Keep email distributions lists current
- Pay attention to Bucket due dates
- Check Bucket Notes and FNM updates often
- Review previously submitted documents for accuracy before Sync and COD in case of any changes

Reach Out with Questions

- Include project code(s) in all communications (emails and CIDI tickets)
- Other helpful information you can include are Resource IDs (once assigned) and Queue Numbers
- Utilize contact methods such as CIDI and email

Reference Links -

New Resource Implementation Webpage:
[California ISO - New Resource Implementation (caiso.com)](#)
NRI Checklist:
https://www.caiso.com/Documents/NewResourceImplementationChecklist.xlsx
NRI Guide:
https://www.caiso.com/Documents/NewResourceImplementationGuide.doc
New Scheduling Coordinator and Resource Owner Reference Guide:
https://www.caiso.com/Documents/new-scheduling-coordinator-and-resource-owner-reference-guide.pdf
Full Network Model Webpage:
[California ISO - Network and Resource Modeling (caiso.com)](#)
Operating Procedure 5320 and 5320A:
https://www.caiso.com/Documents/5320.pdf, https://www.caiso.com/Documents/5320A.pdf
RIMS Quick Start Guide:
https://www.caiso.com/Documents/NRIQuickStartGuide2018RIMS.pdf
UAA and Application Access Webpage:
[California ISO - Application access (caiso.com)](#)
Metering and Telemetry Webpage:
[California ISO - Metering and telemetry (caiso.com)](#)

California ISO

Future Enhancement Pipeline and Wrap Up

Future Enhancements Pipeline
Wrap Up
Q&A

What are working on to improve our ability to reach NRI goals?

- CAISO Website and documentation refreshes

- SCME and DERA project processes moving to RIMS

- NRI Post COD Survey

Today we covered:

1. The goal of the NRI process to efficiently implement new, reliable resources in the CAISO market.

2. Current factors implementing success of these goals.

3. Our current standards and processes and how they work achieve NRI goals.

4. Future enhancements the CAISO is working on to evolve the process and accommodate this ever changing and growing industry.

Wrap Up

Summary, Q&A

Have NRI Process specific questions? Reach out to NewResourceImplementation@caiso.com or fill out a CIDI ticket and reference NRI in the subject.

Thank you for your participation!

For more detailed information on anything presented, please visit our website at: www.caiso.com or send an email to: NewResourceImplementation@caiso.com.

For resource specific questions or concerns, please submit a CIDI ticket, RE: NRI.