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Document Title:	Senate Bill 319 – Transmission Infrastructure Planning and Permitting Guidebook
Description:	Senate Bill 319 – Transmission Infrastructure Planning and Permitting Guidebook CEC/CPUC/CAISO Joint Agency Presentation November 15, 2024
Filer:	susan fleming
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	11/14/2024 4:30:16 PM
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Senate Bill 319 – Transmission Infrastructure Planning and Permitting Guidebook

CEC/CPUC/CAISO Joint Agency Presentation

November 15, 2024

Agenda

- Overview of SB 319
- Guidebook Outline
- CEC/CPUC/CAISO Transmission and Resource Planning MOU
- CEC/CPUC/CAISO Transmission Planning Processes
- CPUC Transmission Permitting Process
- Public Comment
- Next Steps

Kelsey Choing, CEC

SB 319 (McGuire, 2023) – Background

By July 1, 2025, the CEC, CPUC, and CAISO jointly develop a Guidebook that describes the state's transmission infrastructure planning and permitting processes to include:

- A description of the different stages of transmission development
- Analysis of the average timeframes for planning and permitting
- The roles, responsibilities, and decision-making authority of federal/state agencies, including:
  - Interfaces with federal agencies (timing, sequence, coordination with federal permitting agencies)
  - Coordination between reviews under California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA)

SB 319 (McGuire, 2023) – Background (cont.)

- The CEC/CPUC/CAISO must:
  - Make a “reasonable and good faith effort” to consult with all relevant local, state, tribal, and federal agencies.
  - Provide an opportunity for stakeholder input in the Guidebook development.
  - Provide an opportunity for public comment on the draft.

Guidebook Scope

- Planning within the CAISO balancing authority area
- Permitting within the jurisdiction of the CPUC/CEC
- Existing processes under CPUC General Order (GO) 131-D
- Federal processes interfacing with CAISO planning and CPUC/CEC permitting processes
- Analysis of average planning and permitting timelines for CEC/CPUC/CAISO processes and interdependent federal processes
- Description of and analysis of average planning and permitting timelines for state and federal agency-specific roles and CEQA/NEPA interfaces

Guidebook Outline

Chapter 1: Introduction and Background

Chapter 2: Transmission Planning

- **State Transmission Planning**
  - Joint Agency Planning Memorandum of Understanding (MOU)
  - Agency Roles and Products for Transmission Planning
    - Planning for Transmission Needs
    - Planning to Evaluate Long-Term Goals
    - Corridor Planning

Guidebook Outline (cont.)

Chapter 2: Transmission Planning (continued)

- **Federal Transmission Planning in California**
  - Federal Energy Regulatory Commission (FERC)
  - Department of Energy (DOE) Grid Deployment Office
  - Other Federal/National Planning
  - Western Regional Planning
- **Local Government Planning**
  - General Plan Development
  - Participation in State Efforts

Guidebook Outline (cont.)

Chapter 3: Transmission Permitting

- **State Permitting Processes in California**
  - CPUC General Order (GO) 131-D (or Successor GO)
  - Other State Permits or Approvals
  - Average Process Timelines
- **Federal Permitting Processes in California**
  - Federal Permits
  - FERC Backstop Transmission Permitting
  - Average Timelines

Guidebook Outline (cont.)

Chapter 3: Transmission Permitting (continued)

- **Interfaces Between State and Federal Permitting**
  - State and Federal Permitting Coordination and Timing
- **Environmental Reviews**
  - California Environmental Quality Act (CEQA) Reviews
  - National Environmental Policy Act (NEPA) Reviews

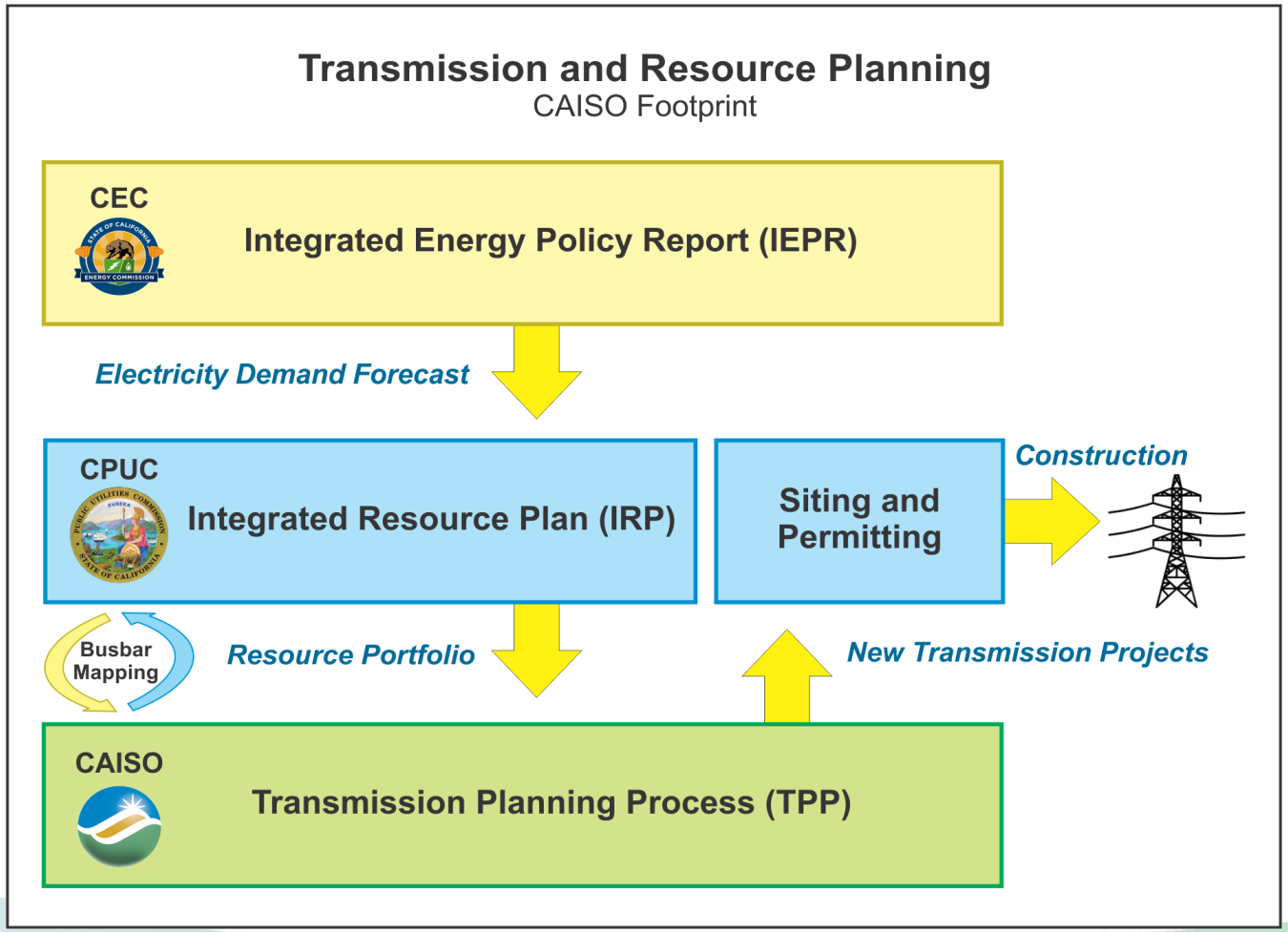
Your Input Is Requested

- **If you represent an agency whose process(es) are relevant to the Guidebook's scope, we welcome your input:**
  - Description(s) of your agency's role(s)
  - Authoritative documents/resources detailing regulations, guidelines, best practices, etc.
  - Informational graphics
- **If you represent an entity affected by transmission development, we welcome your input:**
  - Which topics related to existing transmission planning and permitting processes are most important to have described in the Guidebook?
  - What planning documents, reports, or other materials should the Guidebook consider?

CEC/CPUC/CAISO MOU

The CPUC/CEC/CAISO Memorandum of Understanding signed in December 2022:

- Tightens the linkages between transmission planning, generation planning, resource procurement, and interconnection process
- Clarifies and re-emphasizes a commitment to collaboration to successfully achieve California's reliability and policy goals



Melissa Jones, CEC

CEC IEPR

Warren-Alquist Act

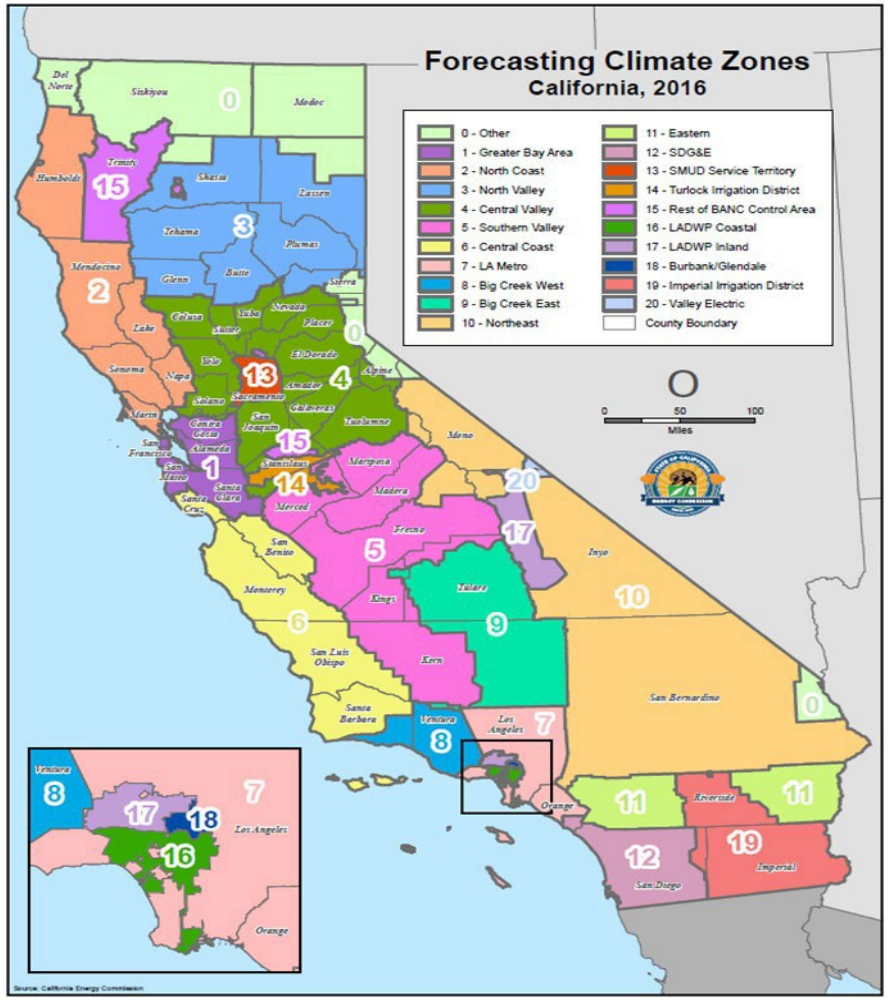
Established the CEC

Public Resources Code 25301(a)

CEC conducts assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices.

Demand Forecast Zones

Planning Area	Forecast Zone
PG&E TAC Area	1. Greater Bay Area
	2. North Coast
	3. North Valley
	4. Central Valley
	5. Southern Valley
	6. Central Coast
SCE TAC Area	7. LA Metro
	8. Big Creek West
	9. Big Creek East
	10. Northeast
	11. Eastern
Northern California Non-California ISO (NCNC)	13. SMUD
	14. Turlock Irrigation District
	15. Remainder of BANC



IEPR Demand Forecast

Foundational for electricity system planning in the state

- CPUC for Integrated Resource Planning
- CAISO for transmission system planning
- CPUC / utilities for resource adequacy requirements
- IOUs for planning

15+ year system-level forecast of electricity demand

- Annual electricity consumption and net peak
- Hourly electricity loads
- Additional Achievable scenarios to capture a range of uncertainties
  - energy efficiency
  - building and transportation electrification

Input Updates

Historical Energy Consumption

- 2022 sales and consumption added to the historical dataset

Economic and Demographic Activity

- Moody's economic projections - May 2023
- Department of Finance
  - Population projections - July 2023
  - Household projections – September 2023

Rates

- Updated historical rates
- Updated assumptions for future rate impacts

Seina Soufiani, CPUC

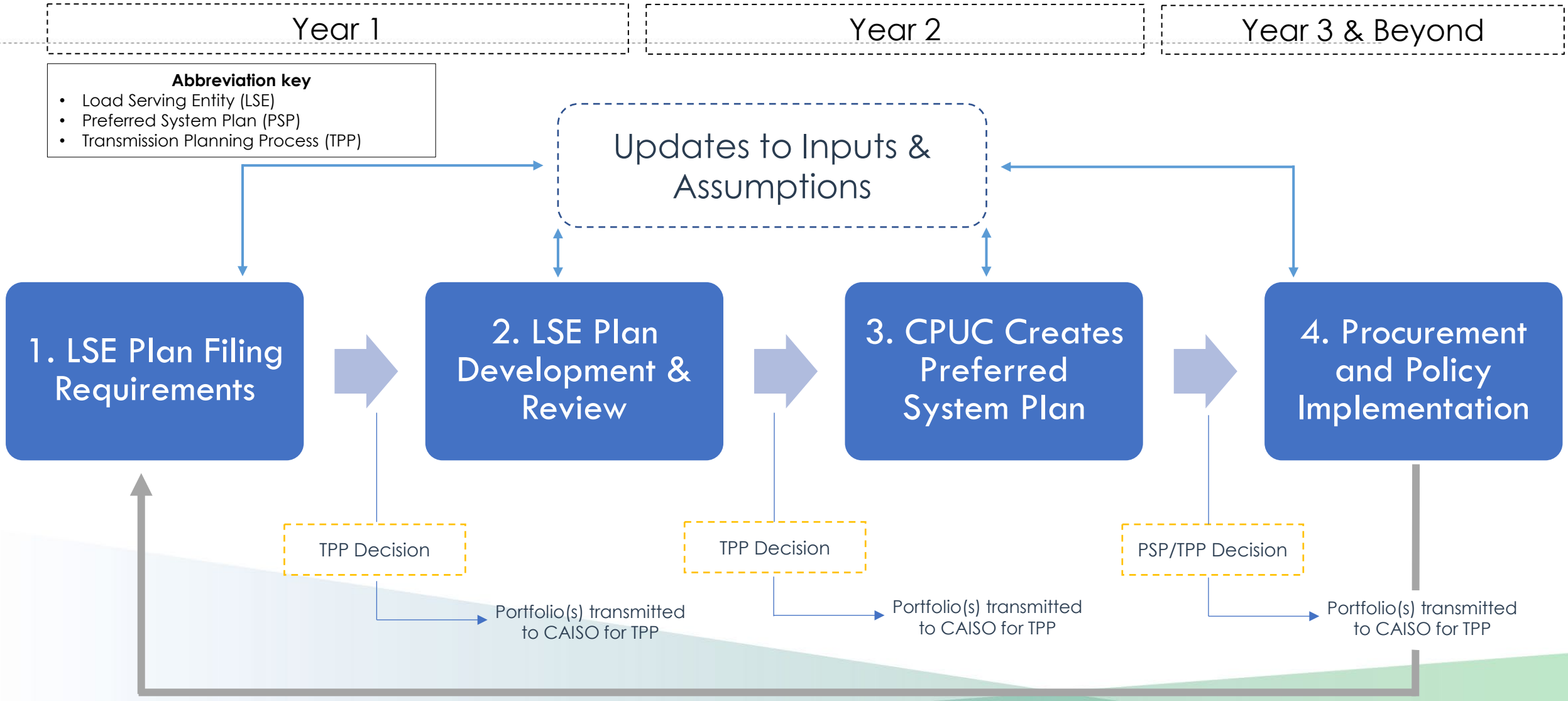
Statutory Basis for IRP

- **SB 350** (De León, 2015) established Integrated Resource Planning (IRP) and mandates that the CPUC:
  - Identify a diverse and balanced portfolio of resources… that provides optimal integration of renewable energy in a cost-effective manner (PU Code Section 454.51)
  - "...adopt a process for each load-serving entity…to file an integrated resource plan…to ensure that load-serving entities…" meet a host of policy aims and objectives (PU Code Section 454.52)
  - The CPUC's IRP obligations are applicable to all CPUC-jurisdictional Load Serving Entities (LSEs)
- **SB 100** established a landmark policy requiring renewable energy and zero-carbon resources supply 100 percent of electric retail sales to end-use customers by 2045

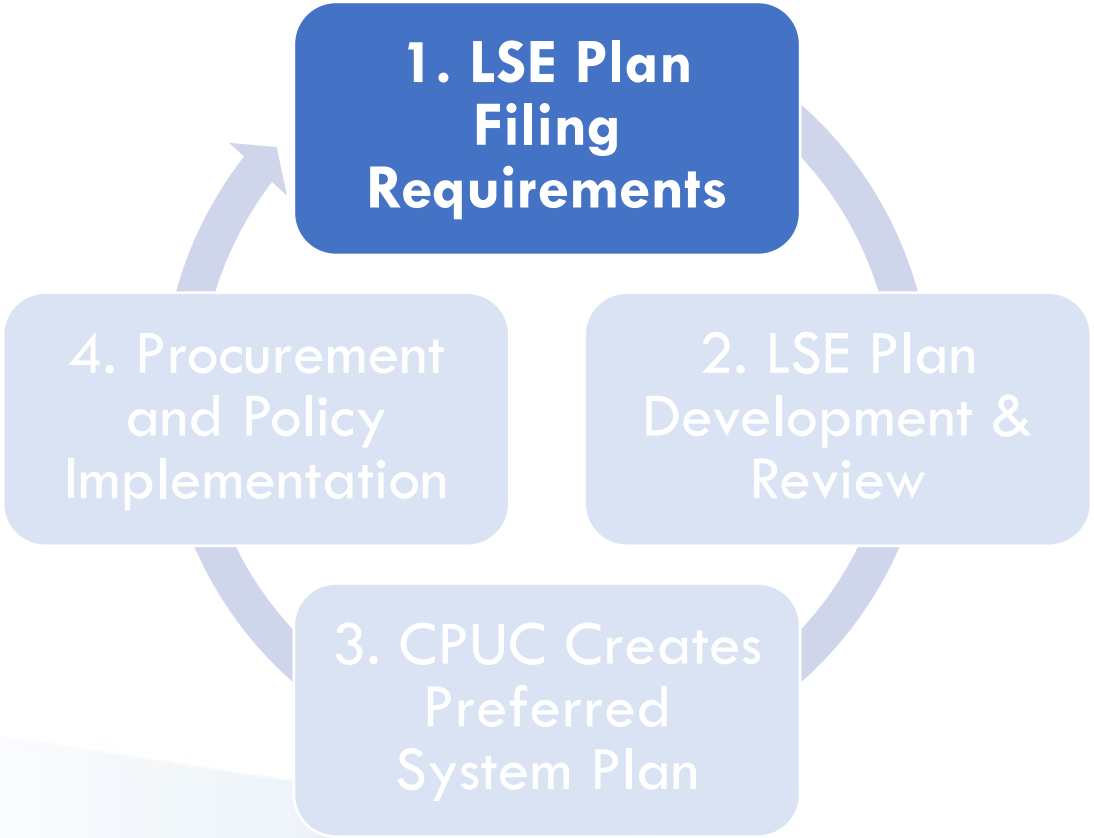
CPUC & Integrated Resource Planning

- CPUC established the **Integrated Resource Planning** process for setting electricity resource planning targets for CPUC-Jurisdictional LSEs in CAISO's BAA
  - Consistent with SB 350 (2015) and SB 100 (2018)
  - Designed as a multi-step analytical planning process with input from load-serving entities and stakeholders
- IRP intends to achieve a resource portfolio that achieves:
  - Reliability
  - Greenhouse Gas Emission (GHG) reductions and clean energy procurement
  - Least cost
- Most recently adopted IRP "Preferred System Plan", which plans for a portfolio that could reduce GHGs by 58% in 2035 compared to 2020 levels

Overview of an IRP Cycle (3 years)



Step 1: LSE Plan Filing Requirements

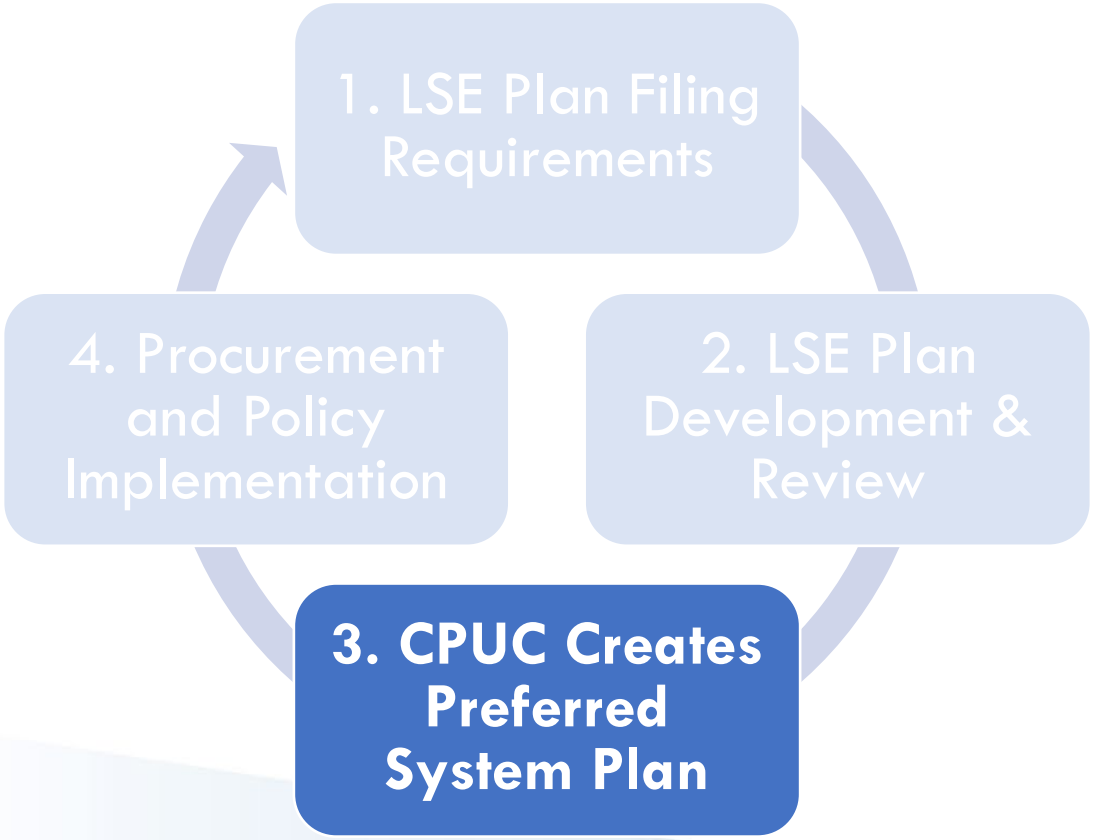


- CPUC conducts modeling to determine reliability, GHG, and other filing requirements
  - Use CARB Scoping Plan to derive range of GHG emissions levels for electric sector
  - Determine scenarios LSEs will have to plan for in their individual IRPs
- CPUC issues Filing Requirements to encourage LSEs to plan towards that future
  - Individual LSEs must submit IRPs demonstrating that their plans meet Commission required scenarios

Step 2: LSE Plan Development & Review

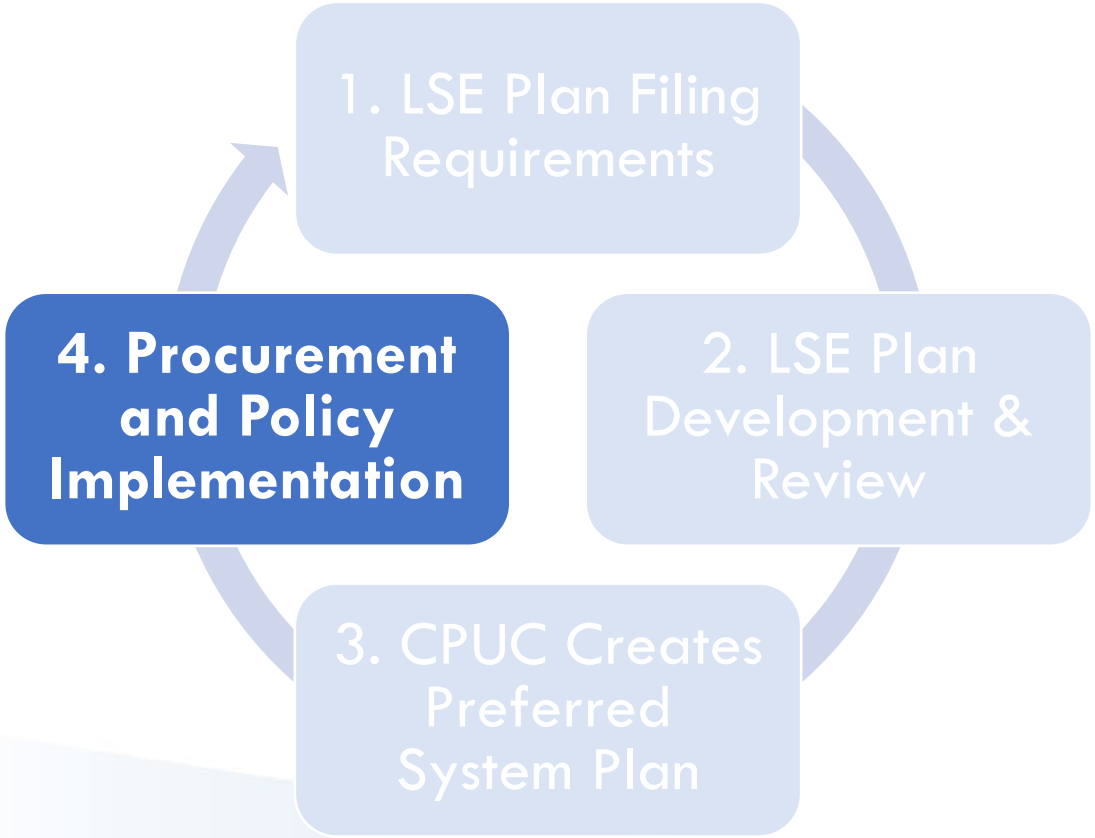
- LSE submit individual IRPs, which contain portfolios, clean system power calculators, and narrative templates that reflect state goals and satisfy Filing Requirements
- IRP stakeholders review LSE IRPs
- CPUC checks aggregated LSE plans for GHG, reliability, and cost goals

Step 3: CPUC Creates Preferred System Plan



- **CPUC Conducts Modeling**
  - *Capacity Expansion Modeling* that identifies portfolios to meet identified policy constraint, including sensitivity analysis
  - *Production Cost Modeling* evaluates the system reliability, operational performance, emissions, and operating cost of a given projection of future resource mix and load
- **CPUC Seeks Stakeholder Input on Potential Portfolios**
  - Proposed PSP portfolio and TPP sensitivity are released via ALJ Ruling
  - Staff conduct stakeholder workshop on proposed PSP portfolio and supplementary analysis
  - Staff adjust portfolio as needed based on stakeholder feedback
- **CPUC Adopts PSP Portfolio via Decision**
  - Adopted PSP portfolio also usually serves as TPP portfolio
  - Portfolio goes through CPUC busbar mapping process and is passed to CAISO for TPP process

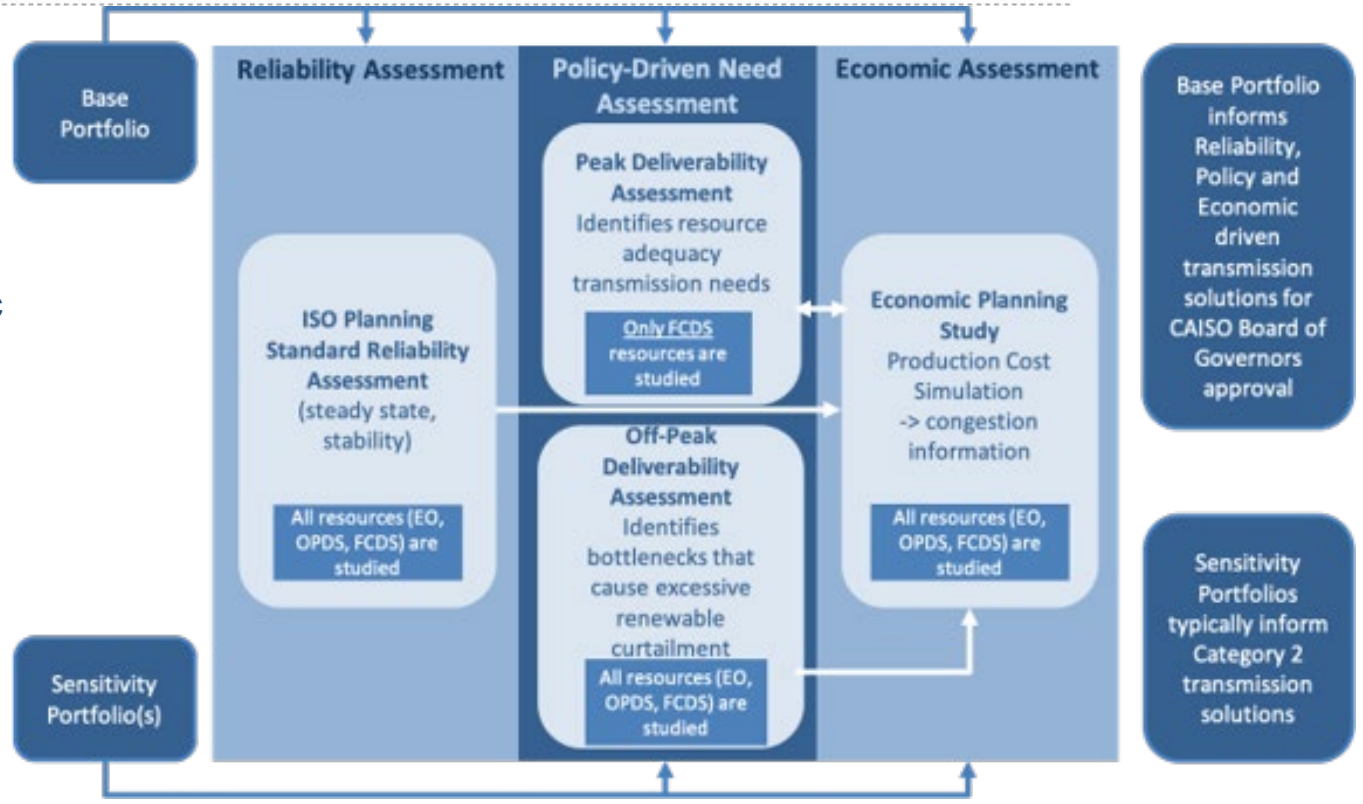
Step 4: Procurement and Policy Implementation



- LSEs conduct procurement
- CPUC monitors progress and decides if additional action is needed
- Three procurement decisions to date:
  - D.19-11-016 requiring Near-Term Reliability procurement of 3,300 MW of net qualifying capacity (NQC)
  - D.21-06-035 - Mid-Term Reliability 11,500 MW NQC
  - D.23-02-040 - Supplemental Mid-Term Reliability 4,000 MW NQC
- CPUC Staff developing proposal for a Reliable and Clean Power Procurement Program (RCPPP) to create a programmatic approach to procurement

IRP Role in the CAISO's Transmission Planning Process

- The CAISO's TPP is an annual comprehensive evaluation of the CAISO's transmission grid to:
  1. Address grid reliability requirements,
  2. Identify transmission projects needed to successfully meet California's policy goals, and
  3. Explore transmission projects that can bring economic benefits to consumers.
- TPP relies on CPUC developed resource portfolios and CEC developed load scenarios
  - In accordance with CPUC-CEC-CAISO Dec. 2022 MOU, which replaced and expanded on the May 2010 MOU between the CAISO and the CPUC
- The CPUC typically transmits multiple distinct portfolios developed in the IRP process:
  - Reliability and Policy-Driven Base Case portfolio
  - Policy-Driven Sensitivity portfolio(s)



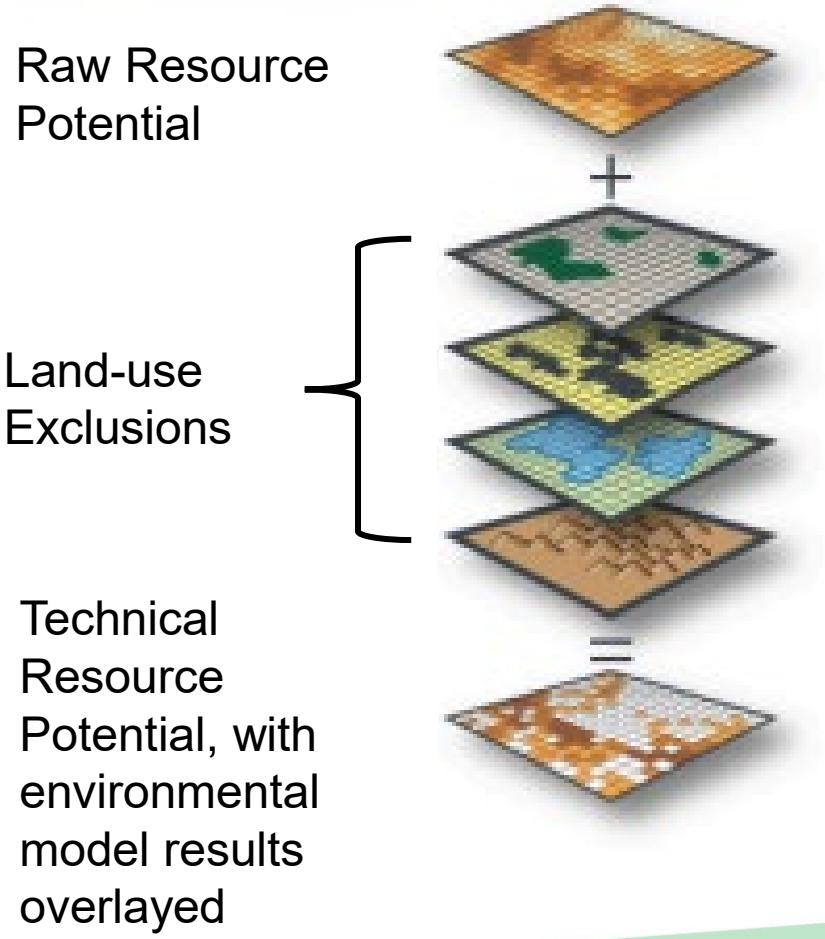
- Historically has focused on grid needs up to 10-years into the future but per Code § 454.57 (SB 887, 2022), portfolios passed to the CAISO now model out at least 15 years

Jim Bartridge, CEC

Busbar Mapping

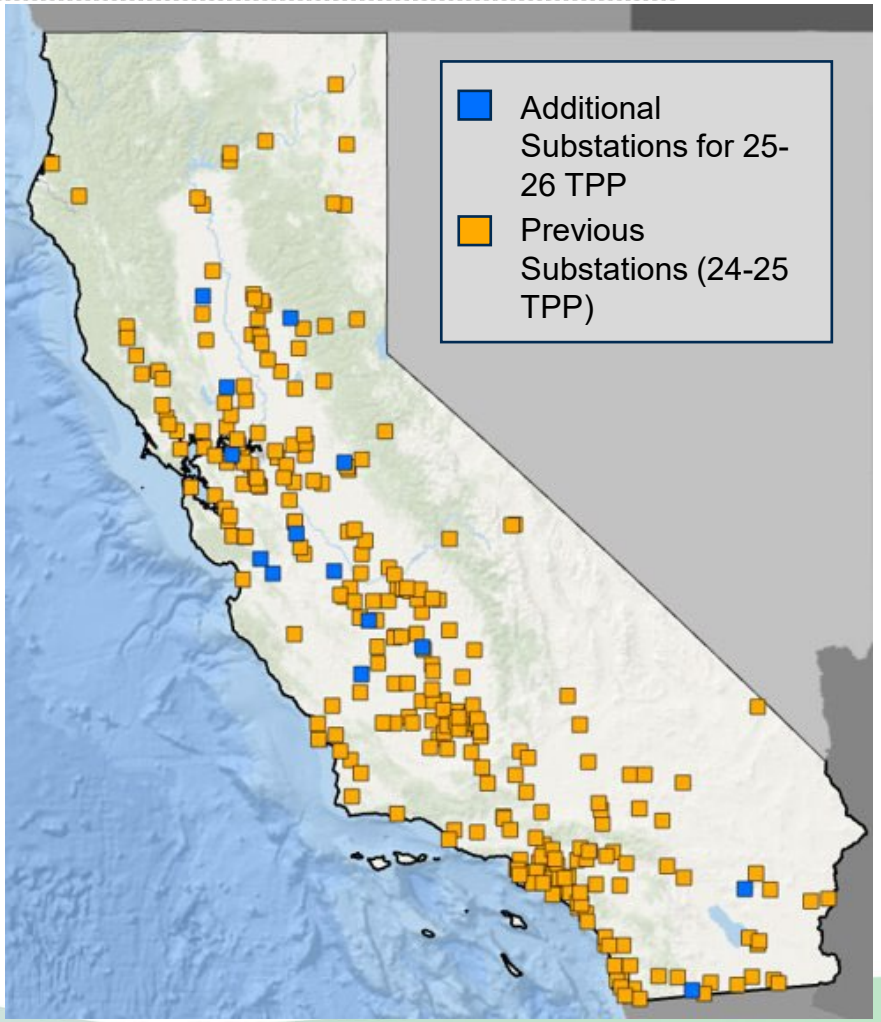
Busbar mapping is an iterative process with the three agencies providing input and expertise to:

- Refine geographically coarse portfolios developed through IRP to specific interconnection locations
- Provide understanding of land-use and environmental implications of portfolios
- Allow for early identification of issues or barriers to development
- Reduce potential environmental impacts and land use conflicts
- Help guide transmission planning



Busbar Approach

- CPUC identifies resource areas and substations for busbar mapping analysis
- California ISO provides relevant transmission information, including updates from recent studies
- CEC provides land use and environmental screening analysis for the resource areas
- CEC provides results/metrics to CPUC to identify any issues with resource allocation or environmental and land use criteria
- CPUC applies analysis and information for the mapping and coordinates the information transfers.



Busbar Criteria

The mapping criteria are organized into seven categories:

- System level transmission capability
- Substation level interconnection viability
- Land-use implications and feasibility factors
- Environmental (conservation and biological) impact factors
- Environmental (societal) and community impact factors
- Commercial and development interest
- Consistency with prior TPP portfolios

The criteria are ranked using a five-level scale, from strong compliance to significant non-compliance.

For more information, see November 5 Workshop: Assumptions for the 2025-2026 TPP

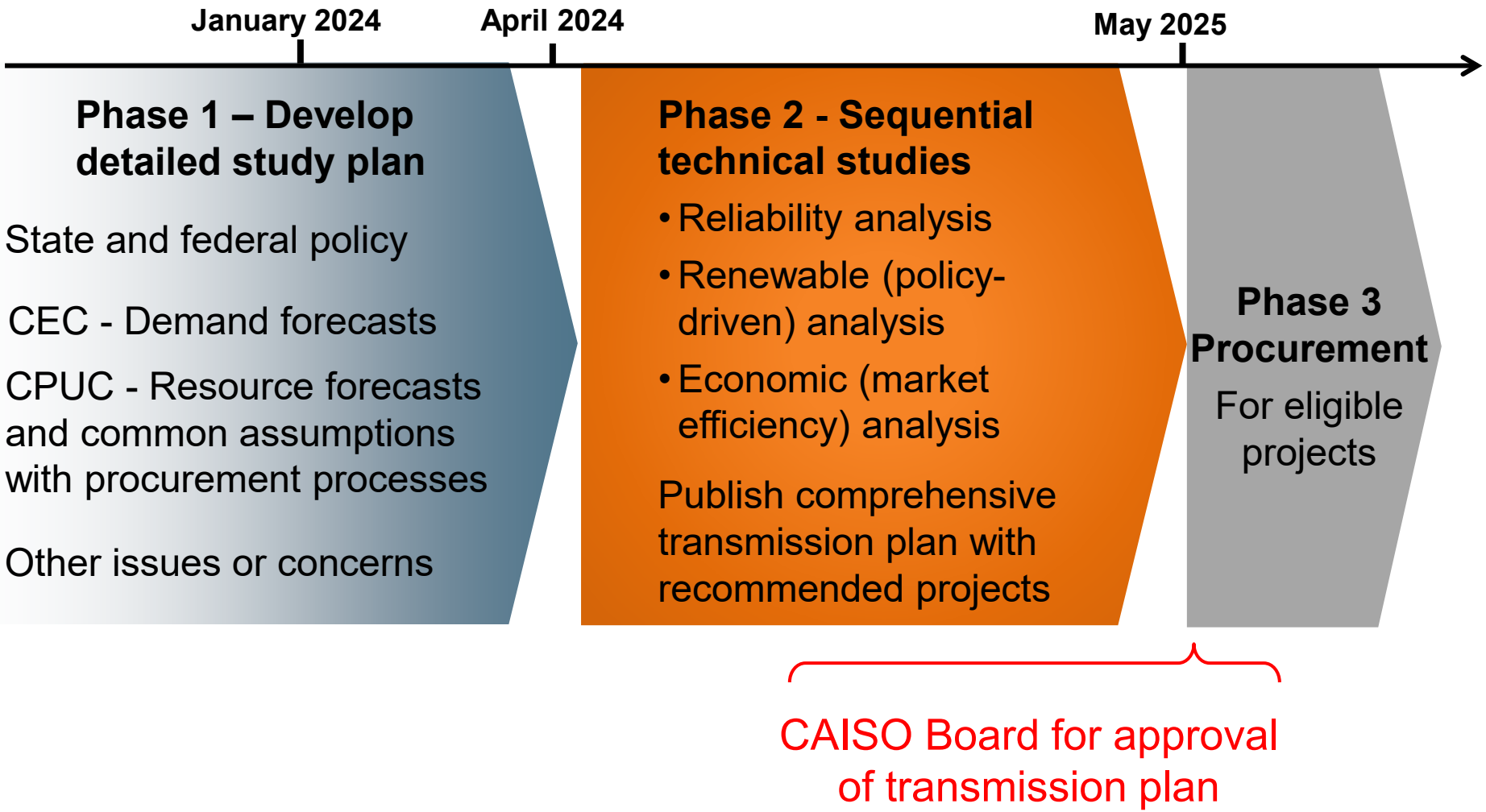
Cristy Sanada, California ISO

The CAISO leads the transmission planning process for the CAISO footprint, coordinated with load forecasts from the CEC and resource planning from the CPUC

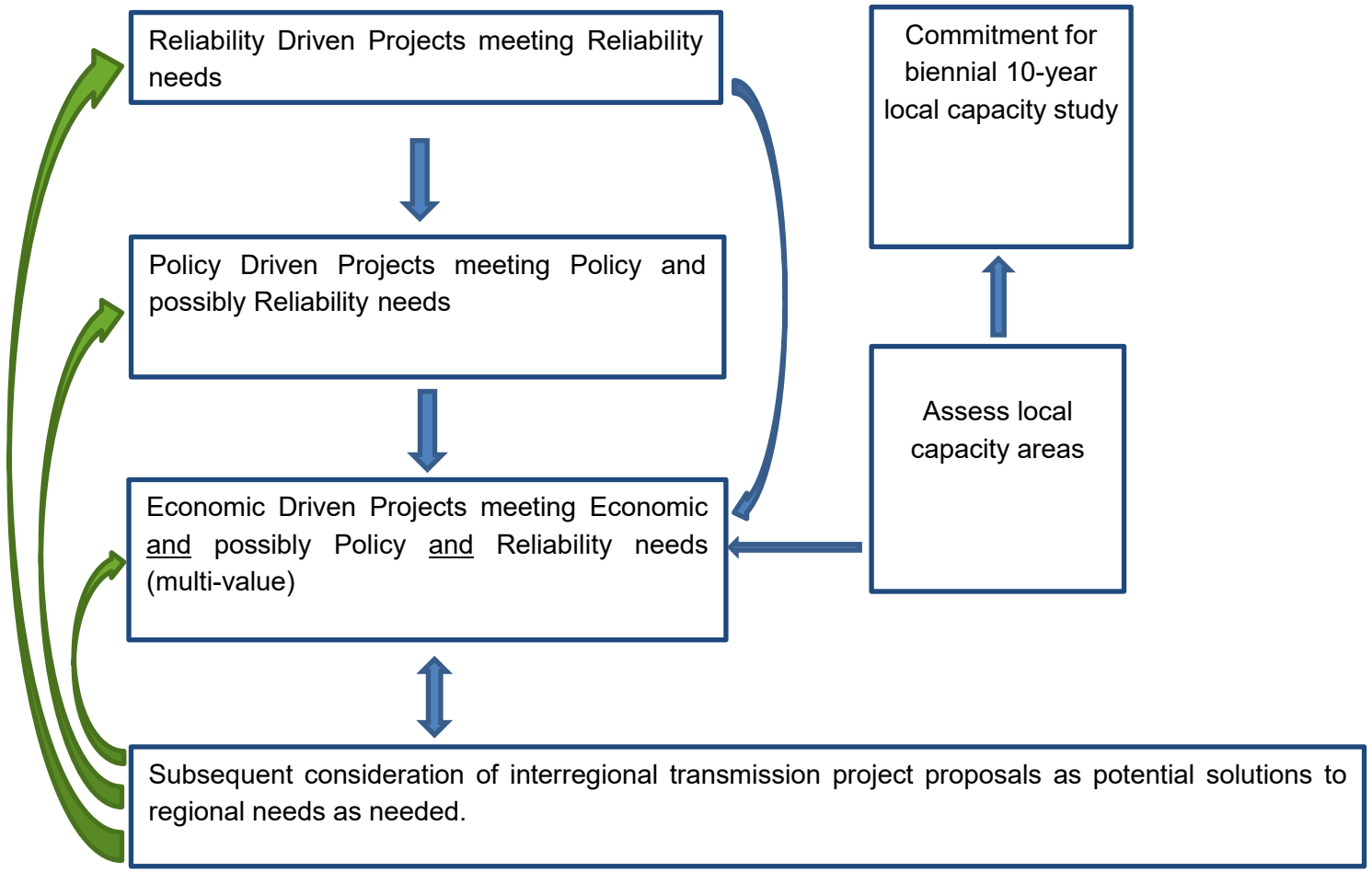
- Annual 10-Year transmission plan is the formal approval document for expansion planning in the CAISO footprint
  - Recent transmission plans have approved a significant amount of new grid infrastructure in response to accelerating load growth and clean energy needs
  - Focuses on most efficient and effective long-term solutions – including Grid Enhancing Technologies and non-wires solutions

- 20 Year Outlook assesses longer term needs
  - First prepared in 2022, updated in 2024
  - Establishes a longer-term direction and strategy
  - Provides context for nearer term decisions
  - Informs going-forward resource planning decisions

The CAISO's Transmission Planning Process follows an established process



Studies are coordinated as a part of the transmission planning process



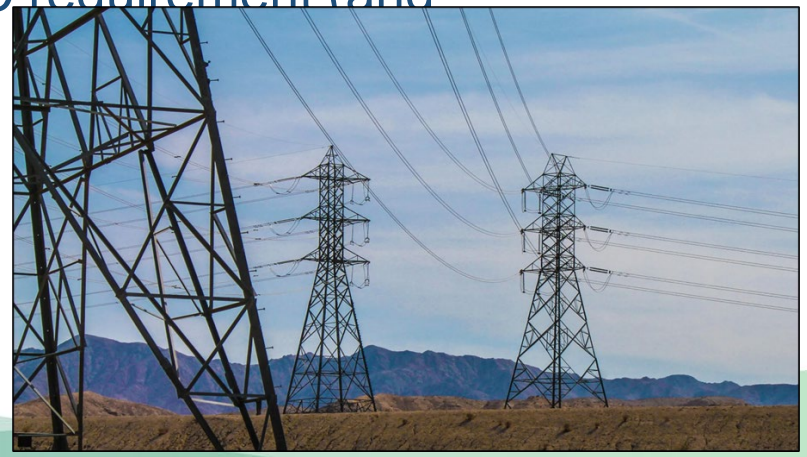
Michelle Wilson, CPUC

CPUC Transmission Permitting Process

- CPUC General Order 131-D includes rules for permitting the construction of electrical transmission lines (>200 kilovolts [kV]), power lines (50-200 kV), distribution lines (<50 kV), substations, and generation facilities by a public utility, including:
  - Permit submittal requirements and permit process requirements
  - Noticing requirements
  - Procedures for environmental review under the California Environmental Quality Act (CEQA)
- CPUC General Order 131-D is undergoing a revision whereby General Order 131-E is expected to be adopted by January 31, 2025

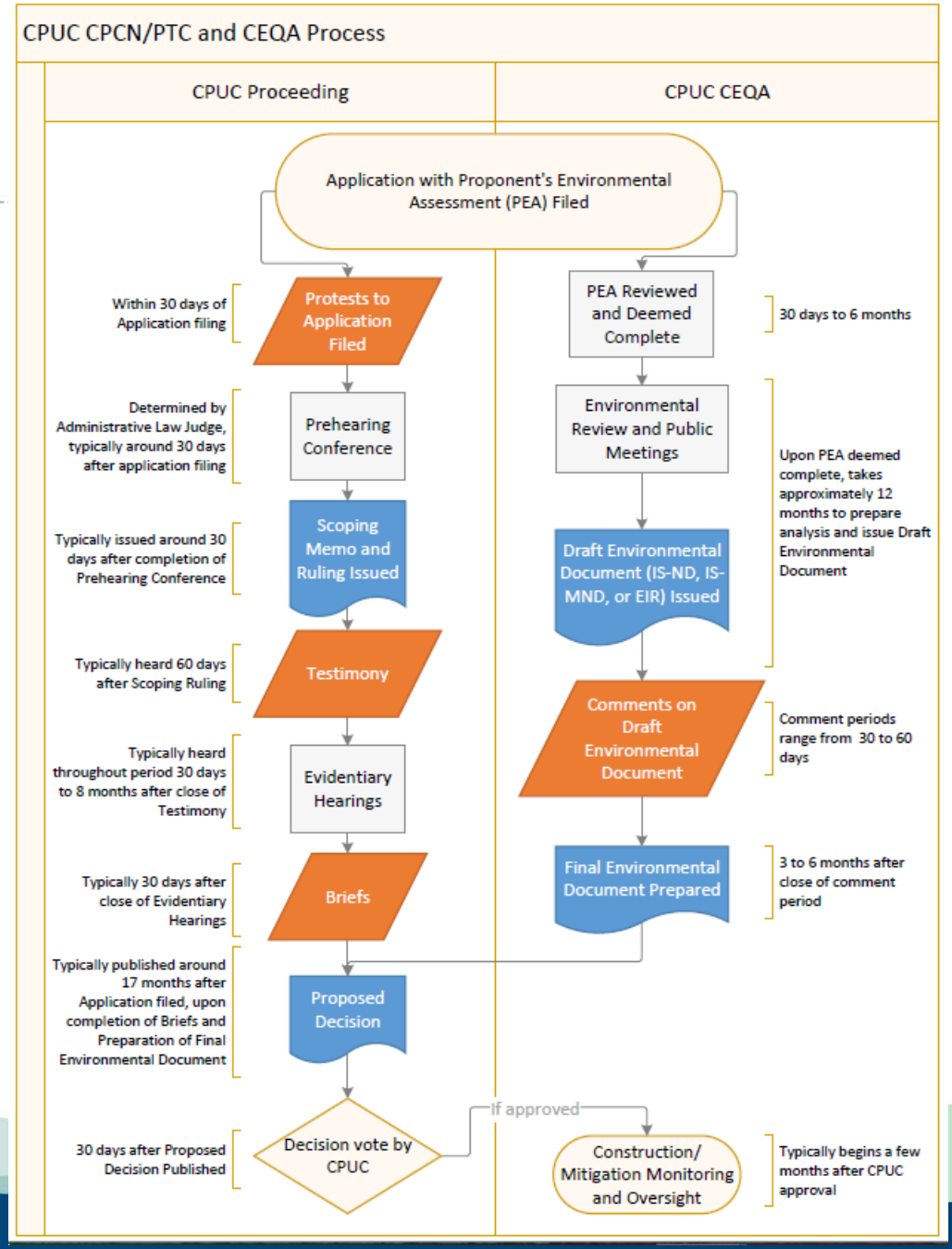
General Order (GO) 131 Overview

- CPUC issues the following approvals for electrical infrastructure as discussed in General Order 131:
  - Certificates of Public Convenience and Necessity (CPCN) that involve a formal proceeding and a review of project cost
  - Permits to construct (PTC) also that involve a formal proceeding but do not require review of project cost
  - Tier 2 advice letter process for projects exempt from the PTC requirement (and therefore do not involve a formal proceeding)
- CPCNs are required for new electrical transmission lines greater than 200 kV
- Permits are not required by CPUC to construct distribution lines (i.e., <50 kV)



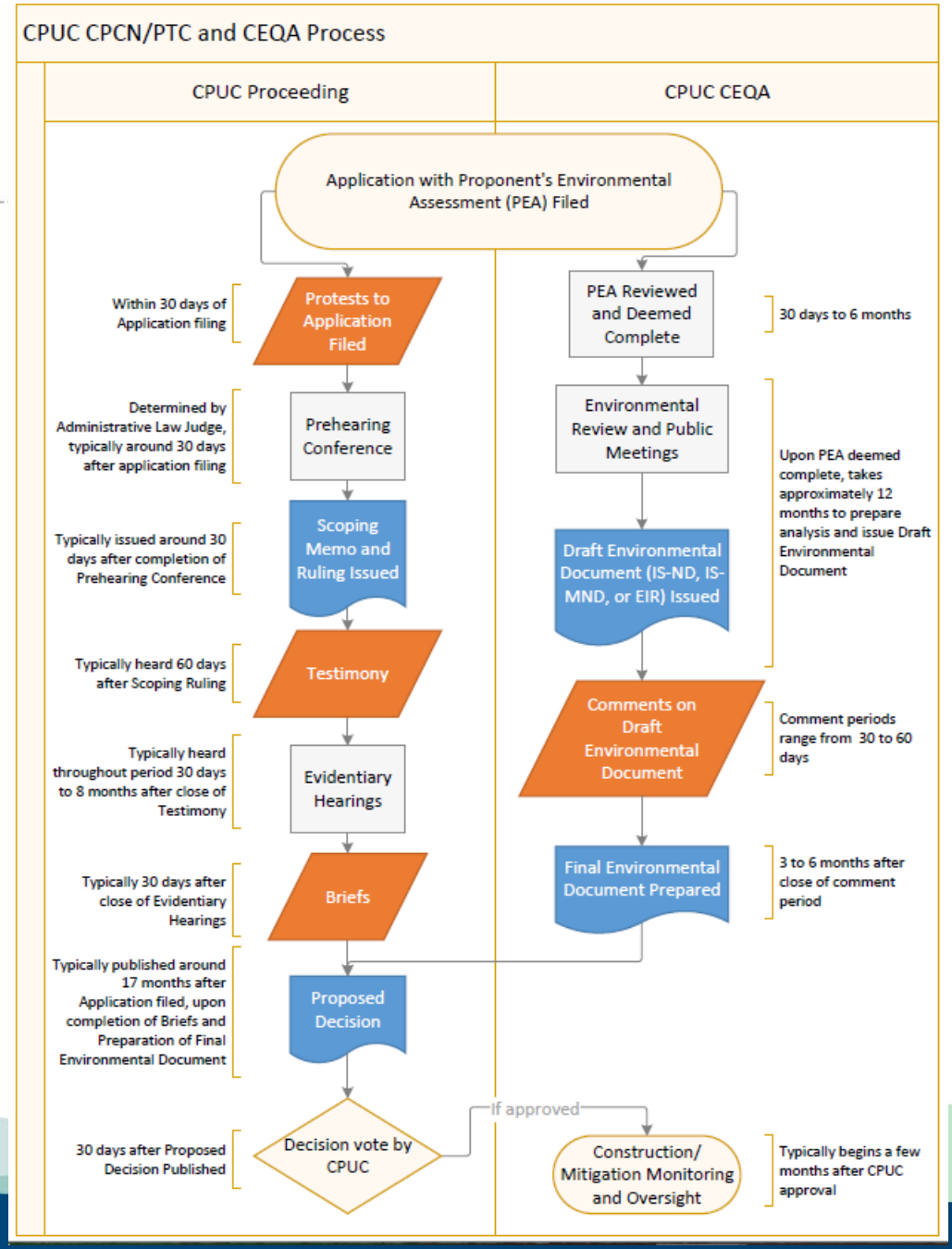
CPUC CEQA Process

- CPCN and PTC applications must include submittal of a Proponent's Environmental Assessment (PEA) or equivalent documentation (i.e., a detailed project description and an evaluation of project impacts by the applicant)
- CPUC reviews the application to determine if complete & issues deficiency letter(s) if not complete
- When complete, CPUC prepares a Negative Declaration, Mitigated Negative Declaration or Environmental Impact Report for the Project as appropriate
- CPUC's Energy Division is responsible for overseeing CEQA review of electrical infrastructure projects



CPUC Proceeding Process

- Parts of the proceeding for a CPCN or PTC can continue concurrently with environmental review of the project under CEQA
- An Administrative Law Judge (ALJ) oversees the proceeding and prepares a Proposed Decision
- The Proposed Decision is brought before the Commission for a vote; Alternate Decisions can also be proposed by Commissioners and be voted on
- CPUC's Energy Division conducts compliance monitoring during construction and post-construction restoration



CPUC Agency Coordination

- CPUC coordinates its CEQA review with other CEQA Responsible Agencies such as:
  - California Department of Fish and Wildlife
  - Regional Water Quality Control Boards
  - Air Pollution Control Districts or Air Quality Management Districts
- CPUC also coordinates with lead Federal agencies and their National Environmental Policy Act (NEPA) review of projects on federal land or requiring federal permits such as:
  - Bureau of Land Management (BLM)
  - U.S. Forest Service (USFS)
  - Department of Defense (DoD)
  - U.S. Army Corps of Engineers
- CPUC endeavors to sync up the CEQA and NEPA processes for a project with regular coordination meetings amongst all other agencies

Jack Bastida, CEC

Public Comment

Rules
- 3 minutes per person

Zoom
- Click “raise hand”

Telephone
- Press *9 to raise hand
- Press *6 to (un)mute

When called upon
- Unmute, spell name, state affiliation, if any

Written Comments:
- Due: December 6, 2024 by 5:00 p.m.
- Docket: 23-SB-319
- Submit at: https://efiling.energy.ca.gov/EComment/EComment.aspx?docketnumber=23-SB-319

3-MINUTE TIMER

Next Steps

Milestone/Deliverable	Date
Joint agency workshop on Guidebook scope and approach	November 15, 2024
Comments on workshop, scope, and approach due	December 6, 2024
Release draft Guidebook	Late April 2025
Joint agency workshop on draft Guidebook	Mid-May 2025
Publish final Guidebook (due date)	By July 1, 2025

Your Input Is Requested

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Thank You!

- CEC SB 319 Docket (23-SB-319)
- CEC Transmission Website

California Energy Commission

Kelsey Choing
kelsey.choing@energy.ca.gov

California Public Utilities Commission

Seina Soufiani
seina.soufiani@cpuc.ca.gov

California Independent System Operator

Cristy Sanada
csanada@caiso.com