

2006 CAISO Transmission Plan

Stakeholder Meeting

12/15/06

Gary DeShazo
Director, Regional Transmission-North



Introductions and Meeting Arrangements

- Restrooms & Break Rooms
- Lunch will be provided
- In case of emergency

Agenda

- I. Welcome & Introductions
- II. Meeting Arrangements
- III. Overview
 - A. New ISO Transmission Planning process
 - B. Integrated Planning Process
 - C. Framework of the CAISO Transmission Plan
- IV. Questions and Answers
- V. Lunch Break
- VI. 2006 CAISO Transmission Plan Report
- VII. Stakeholder Comments
- VIII. 2007 CAISO Transmission Plan

What the CAISO Hopes To Accomplish Today

- **Overview of the new process**
- **Objectives of the CAISO Transmission Plan**
- **Elements of the draft Plan**
- **Seek comments from stakeholders**
 - Are we on track
 - Stakeholder needs



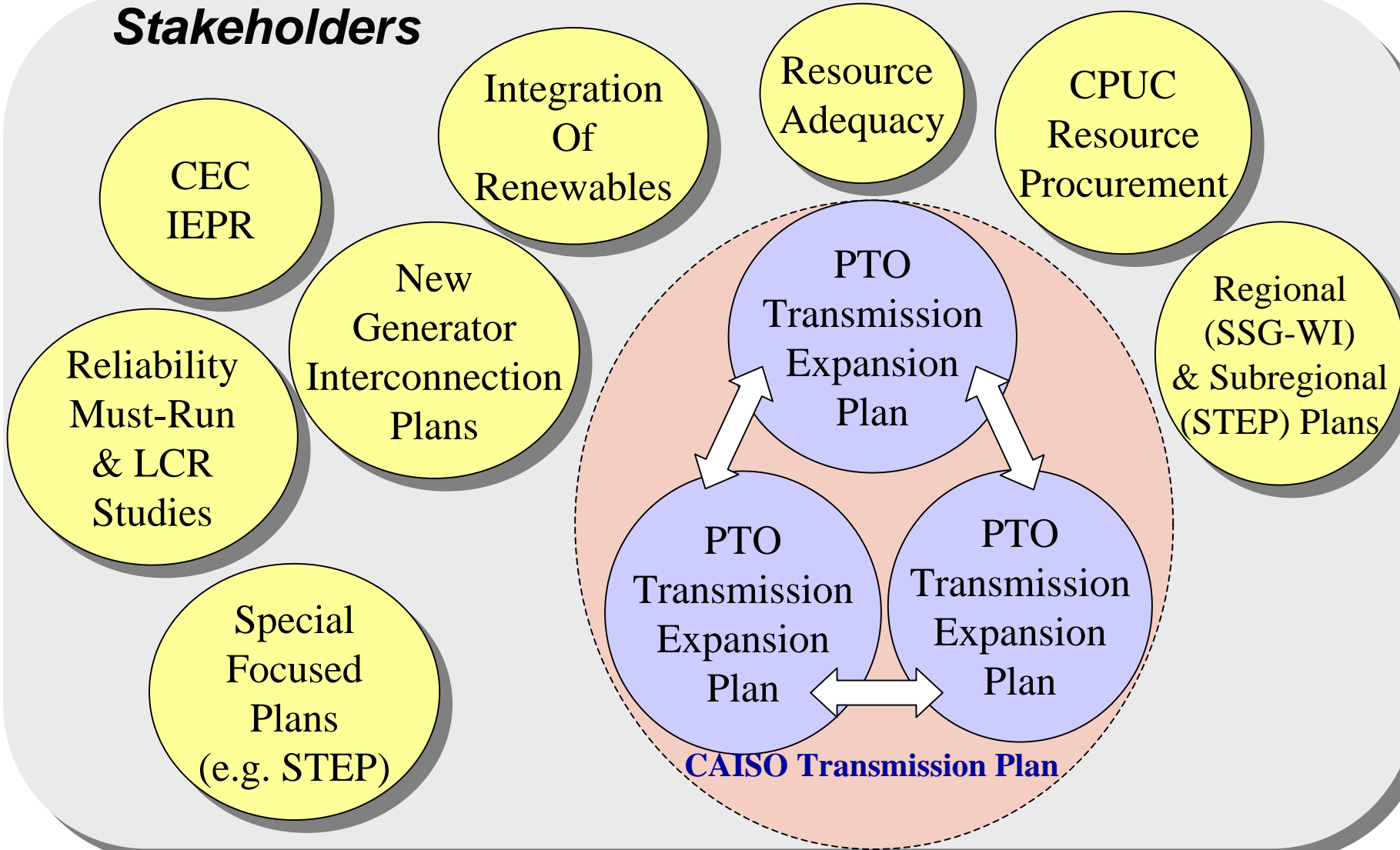
Hurdles the CAISO Faces “Today”

- **CAISO has operated around a reactionary planning process**
 - PTO’s develop plans, CAISO approves projects
 - Controlled Grid Study
- **Reliability Must Run and system congestion issues have been increasing**
 - Are addressed after the fact
 - Most of the time, but not all of the time
- **The issue of “Need” – Who makes the call?**
 - CAISO versus CPUC/CEQA
- **Roles and responsibilities**
 - CPUC and Resource Adequacy
 - CEC and Integrated Energy Policy Report
 - CAISO / PTO
 - Stakeholders
- **Everybody wants to have their fingers in the “pie”**
 - Clear vision
 - Coordination
 - Transparency



The Old CAISO Transmission Plan

Stakeholders



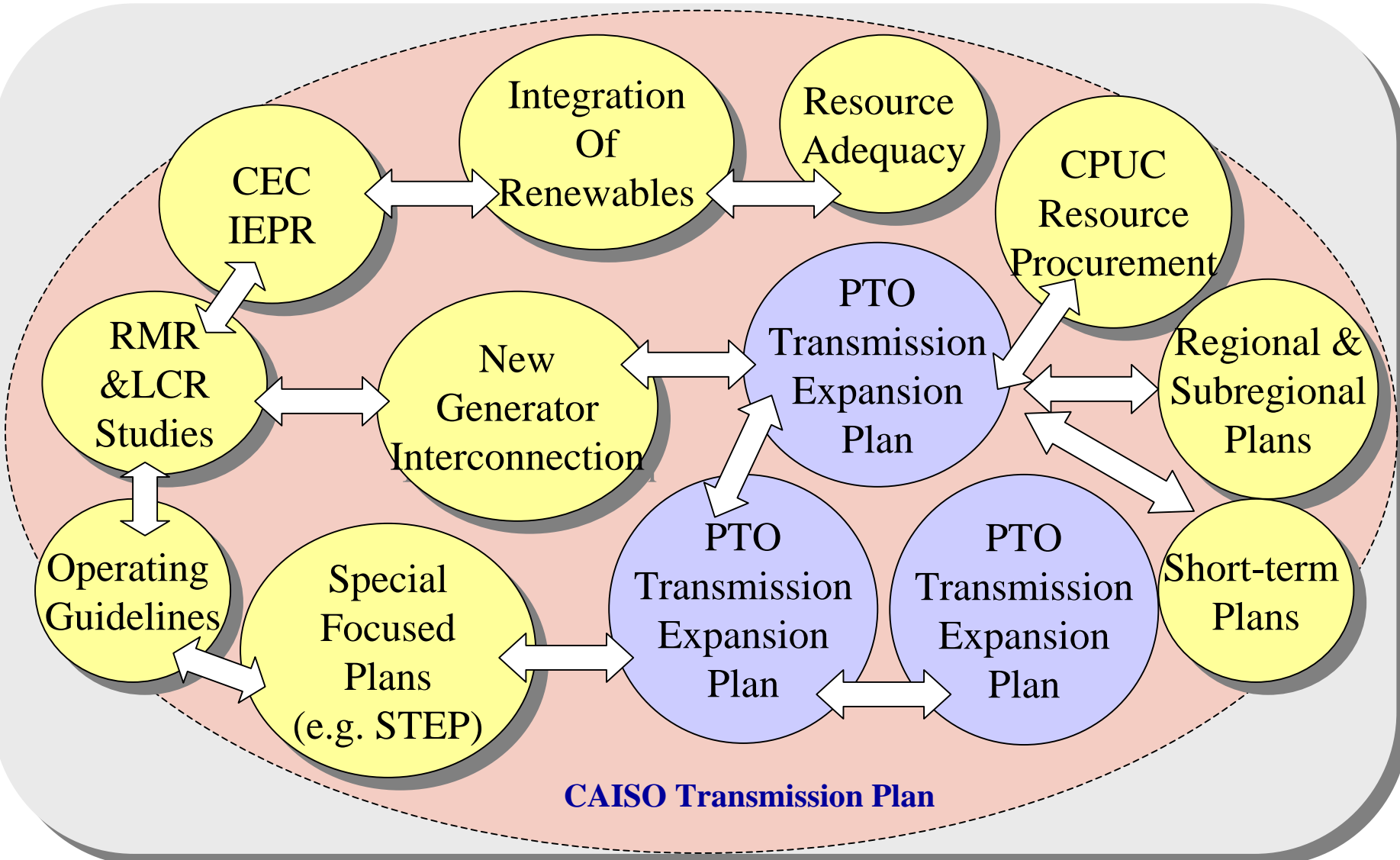


New Transmission Planning Process

- **Introduce the “New ISO Transmission Planning Process”**
- **Overcome the “hurdles”**
 - Realign vision to a proactive planning focus
 - Prepare an annual Transmission Plan
 - Champion process, coordination, and transparency
- **Integrate CPUC and CEC expertise into process and Plan**
 - CEC IEPR
 - CPUC RA
- **Streamline transmission planning process**
 - Address duplicative approval process
 - Partnership with PTOs
- **Consistent and repeatable**



The New CAISO Transmission Plan





New Transmission Planning Process

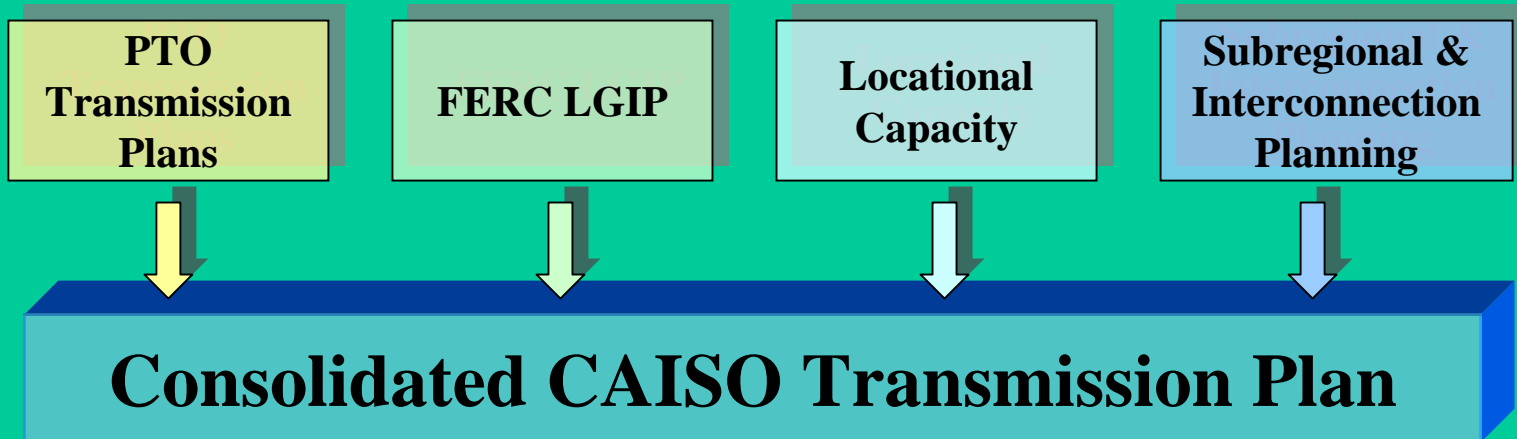
CAISO Objectives

- **Clarify the CAISO's role and build on our core strengths of reliability, planning, and system operation**
- **Align our focus and core strengths with those of the CEC and CPUC towards a common objective of a coordinated planning process**
- **Focus on proactively supporting and building on CEC and CPUC objectives**
 - CEC IEPR recommendations
 - CPUC Resource Adequacy through leadership in Deliverability and Locational Capacity determinations
- **Revitalize partnership with the PTOs in planning**
- **Seek to create a proactive planning partnership with “non-CAISO” transmission owners**
- **Champion the formation of a California Subregional Planning Group and the development of a bi-annual California transmission plan**



A Paradigm Change Is Desired

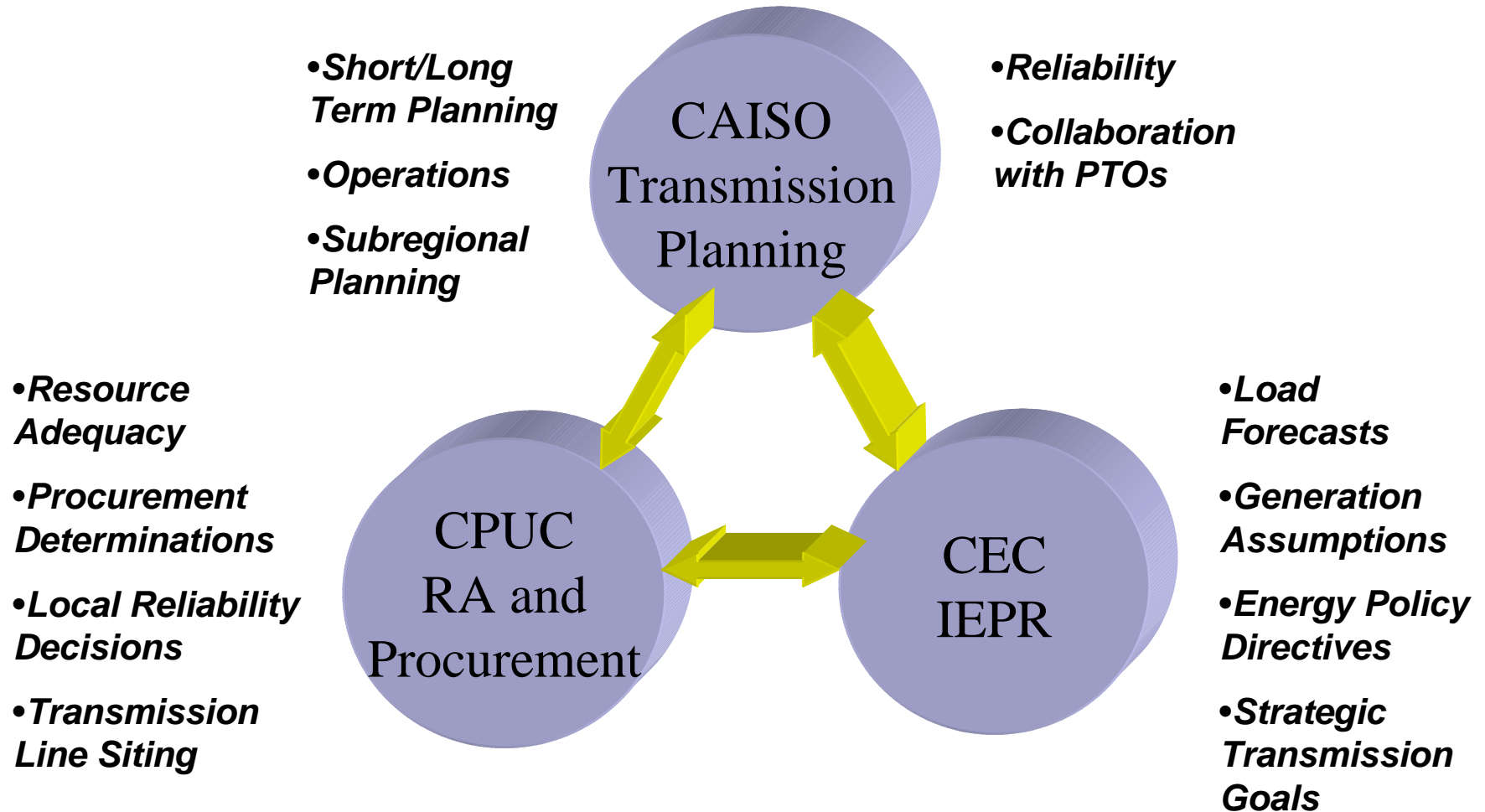
Subregional Planning





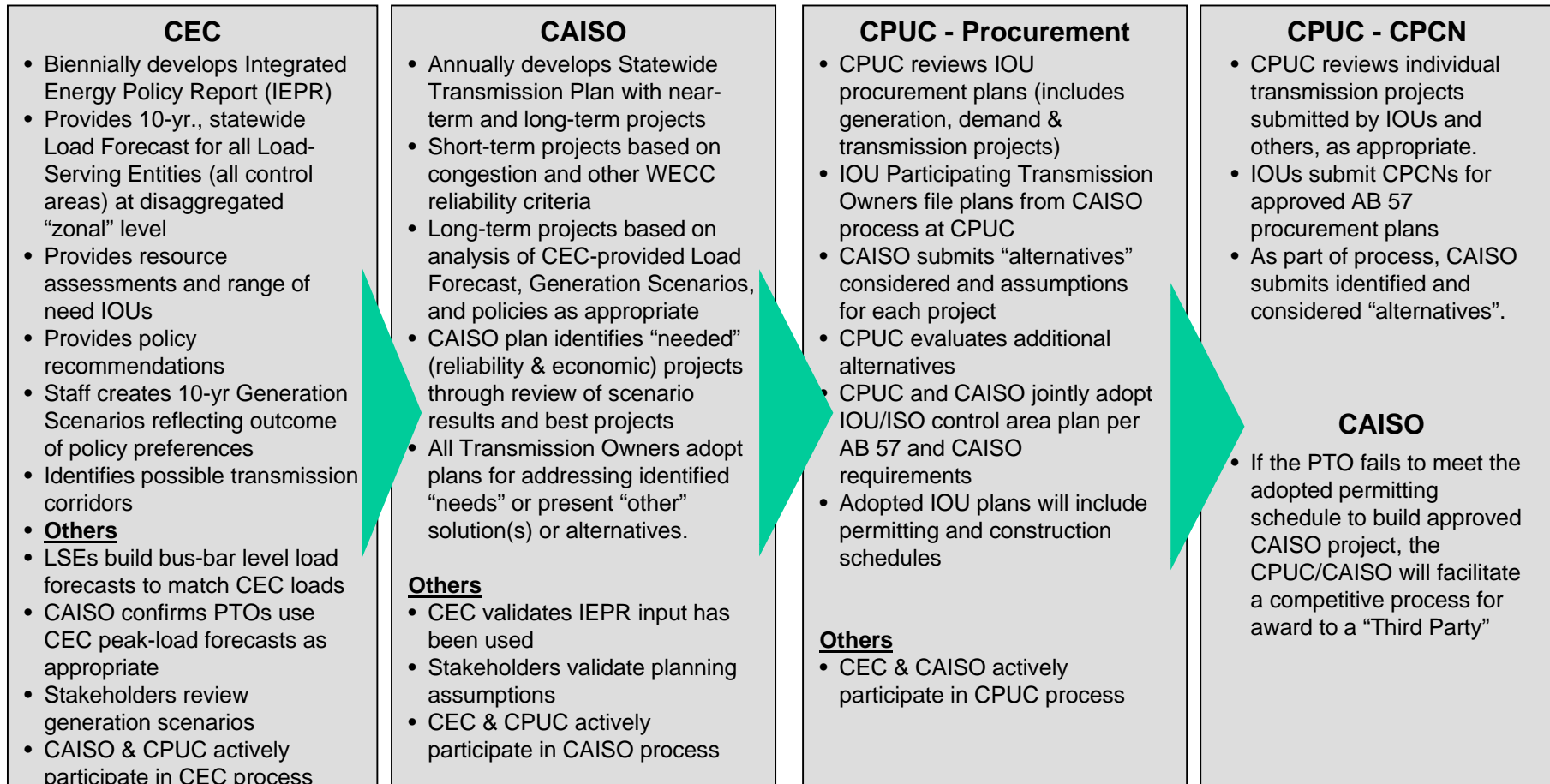
Streamlined Planning Process In California

Building On Core Strengths



One Year Ago . . .

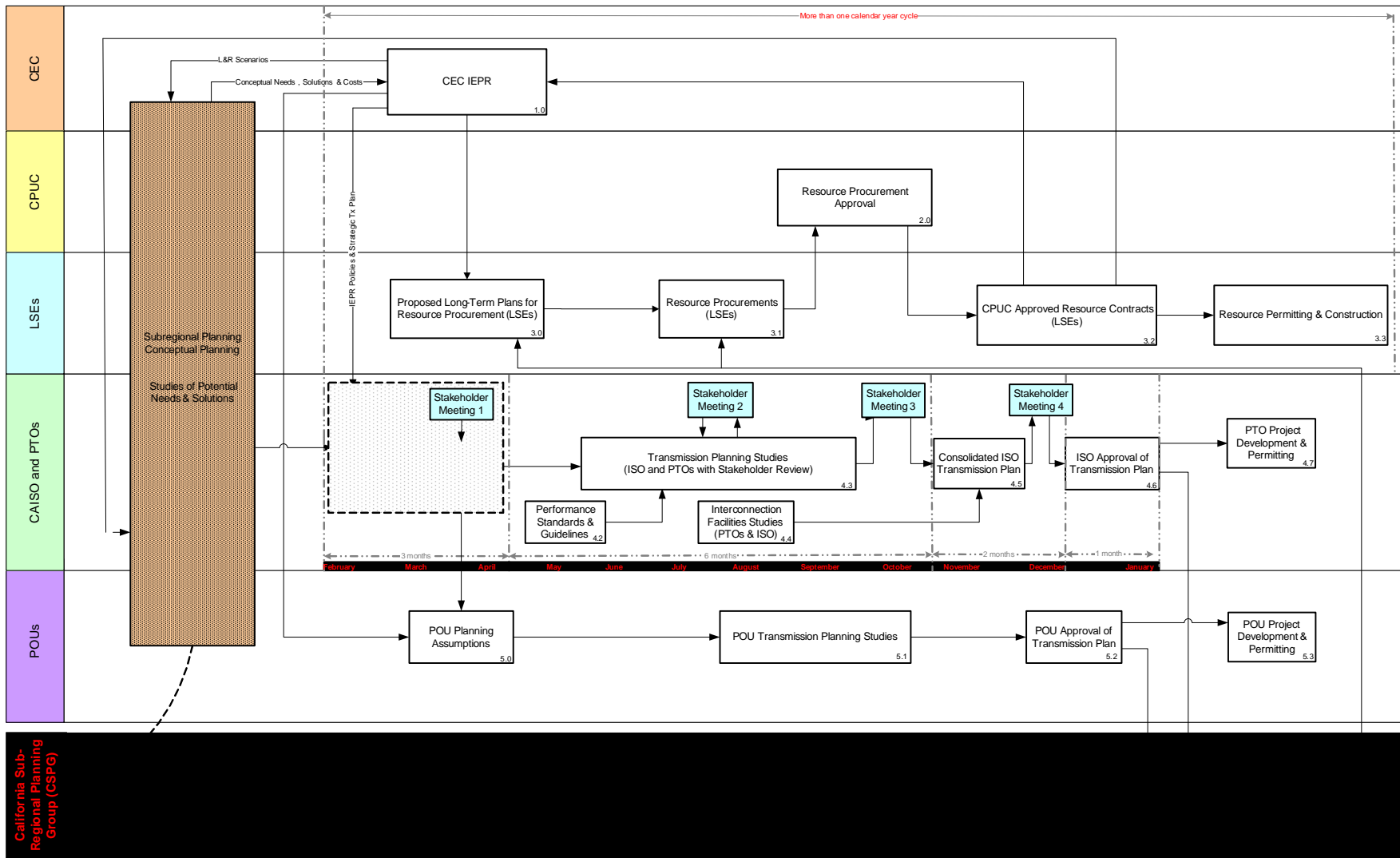
Infrastructure Development Process



Guiding Principles

- **Timely Project Development**
- **Be Consistent and Repeatable**
- **Be Transparent and Open**
- **Meaningful Stakeholder Participation**
- **Clearly Defined Inputs and Outputs**
- **Avoid Duplication**
- **Support State and Federal Policy Objectives**
- **Leverage Expertise**
- **Recognize Regionalization**
- **Provide for Feedback and Adjustment**

A Proposal For An Integrated Planning Process *



* By responsible entities and timeframe associated with each process that could fit in a single calendar year or more

--- A Possible Process

Overview of the CAISO Transmission Plan

Overview

- **Annual plan prepared jointly by the CAISO and PTOs and reviewed by stakeholders**
- **Coordinated with the PTOs, CEC, and CPUC**
 - Assumptions
 - Objectives
 - Schedule
- **Documents all relevant CAISO and PTO studies**
- **Fifteen year planning horizon**
- **Five year LCR horizon**
- **Baseline deliverability studies**
- **Projects to be considered for “approval” by the CAISO must be in the Plan**
 - No more closure letters
- **Integrate relevant CEC IEPR recommendations**
- **Submitted to the California Subregional Planning Group**

Questions?

2006 CAISO Transmission Plan Report

Paul Didsayabutra & Ben Stephenson

15/12/06

Overview: About this Draft Report

- Enhancement from the previous plans: More comprehensive, include not only transmission projects but also resources and operational issues
- Almost complete.
 - Long-term LCR is being finalized.
 - Phase II Generation Deliverability study is being finalized
 - PTOs are finalizing their expansion plans.

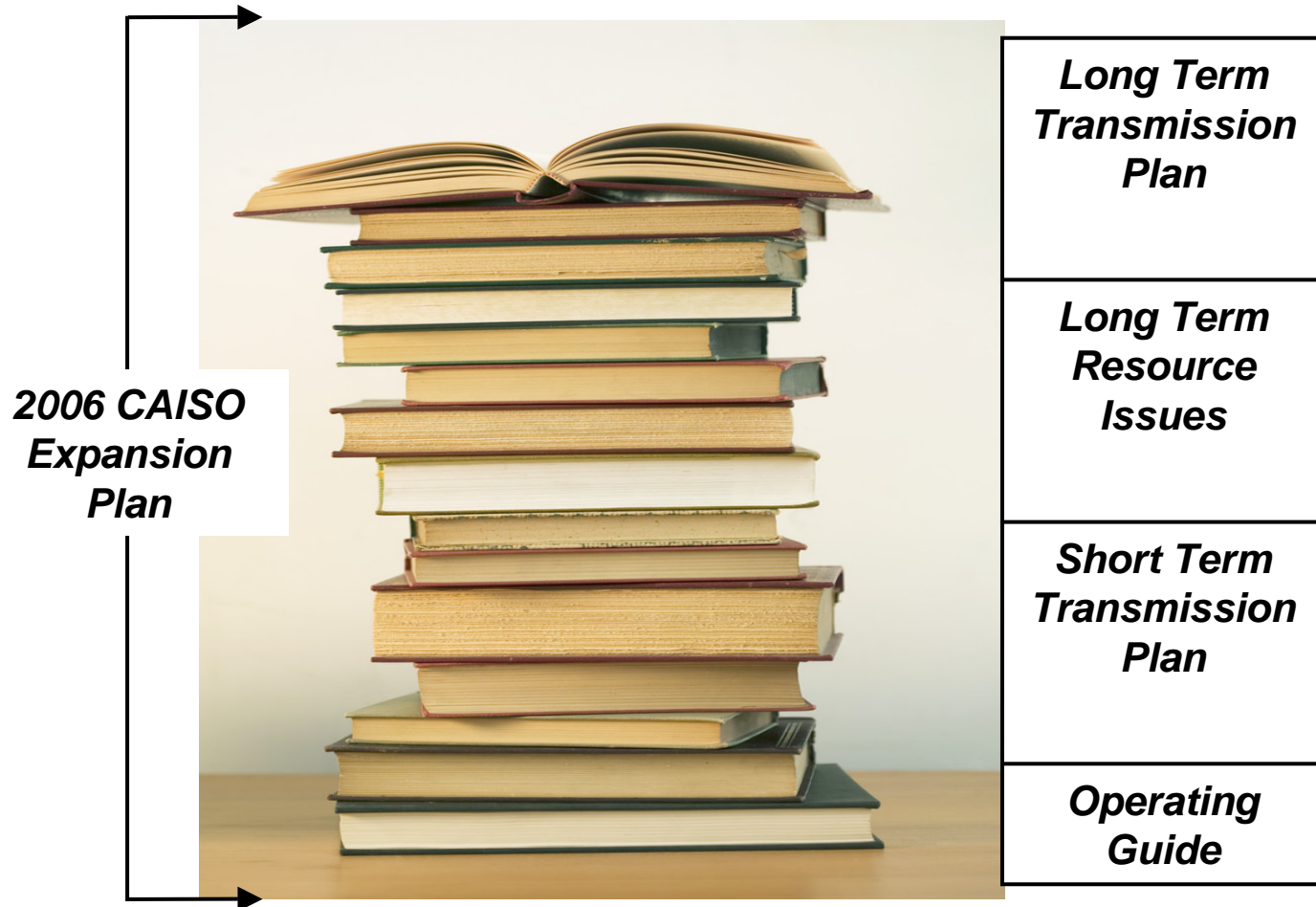
Contents

Currently, the plan covers 4 major areas and could be expanded to include more topics in the future years when new issues arise.

1. Long-Term Transmission Expansion Plans
2. Resource Adequacy and resource assessments
3. Short-term planning
4. Operating Guidelines

Toward the end, all of the information is used to assess the conditions in each area (Area Assessments)

Contents



Plan can be expanded to include more topics in future years when new issues arise



Long-term Transmission Plan

- PTO expansion plans
 - Annual expansion plans from PTOs
 - Includes general information of projects e.g. justifications, scopes, estimated costs, benefits, etc.

- Merchant Transmission Projects
 - Transmission projects from other developers in addition to PTOs



Long-term Transmission Plan

- Updates of ongoing projects:
 - Transmission Projects to accommodate state/federal requirements (Regulatory Projects) such RPS goals e.g. Sunpath, LEAPS, Tehachapi, Midway-Gregg etc.
 - Regional Transmission Projects: Connect California with outside resources e.g. PVD2, PNW/Canada to Northern California etc.
 - Other major activities

Resource Adequacy and Resource Issues

- Long-term Location Capacity Requirement Assessments:
 - In addition to 1 year ahead LCR
 - Assess 3 year and 5 year future LCR requirements.
- Baseline Generation Deliverability Assessments:
 - Deliverability assessments of import and generators.
 - Provides up to 5 year outlook of deliverability of resources.

Resource Adequacy and Resource Issues

- Generation Retirements Scenarios:
 - Assist CEC in its efforts of conducting a multi-year forward assessment of retirement and/or re-powering for aging power plants as stated in its 2005 IEPR
 - Specify the impacts of aging power plant retirement on local area reliability capacity
 - Also investigate potential transmission or generation options if the study finds reliability gap.



Resource Adequacy and Resource Issues

- New Resources:
 - Overview of LGIP process
 - Other useful information regarding generation interconnection (CAISO, CEC etc)



Short-Term Transmission Plans

- Short-Term Transmission
 - Consolidates List of Transmission Projects expected by Summer 2007, 2008, and 2009 (up to 3 years ahead)
 - Identifies operational gaps e.g. Congestion, Reliability
 - Proposes Short Term solutions to bridge the operational gaps.
 - Will be coordinated with long-term plan.



Short-Term Transmission Plan Contents

1. Consolidates List of Transmission Projects expected by Summer 2007, 2008, and 2009.

2. Identifies operational gaps
 - Congestion
 - Reliability



Short-Term Transmission Plan Contents

3. Proposes Short Term solutions to bridge the operational gaps
 - Transmission Line Re-Rates
 - Transmission Line Re-Conductor
 - Transformer Re-Rates
 - New SPS/RAS
 - Enhance Existing SPS/RAS
 - SCADA/RTU installation
 - System Re-Configuration
 - Maintain or Expedite projects already scheduled

Operating Guides

- Operating Guidelines:
 - Consolidates List of Transmission Projects expected by Summer 2007
 - Highlights the benefit of the project to the system
 - Provides a work-plan for updating each procedure affected by the new project



Operating Guide Contents

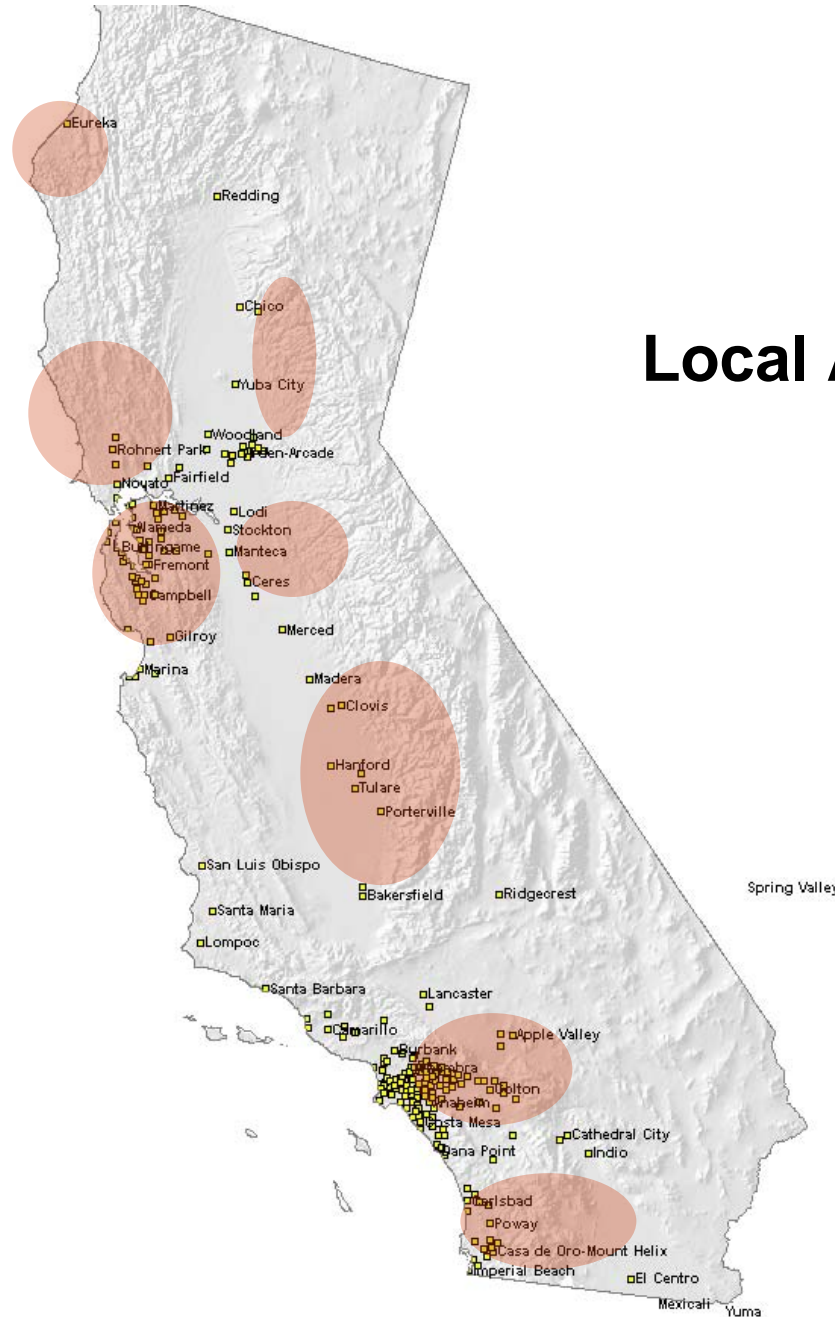
1. Consolidates List of Transmission Projects expected by Summer 2007
2. Highlights the benefit of the project to the system
3. Provides a work-plan for updating each procedure affected by the new project

Area Assessments

- Detailed analysis based on all available information.
 - Local areas
 - Overall system
- Currently, the assessments focus on local areas similar to LCR study (Humboldt, North Coast/North Bay, Sierra/North Valley, Bay Area, Stockton, Greater Fresno/Kern, LA Basin, San Diego)

Area Assessments

- Focus on the following topics:
 - Overview of each area e.g. boundaries, load forecasted, transmission system etc.
 - Identified problems, potential problems or concerns.
 - Plans currently available
 - Anything still missing? and what are the possible solutions?



Local Areas

Future Plans

- For future improvements, ensure the plans always stay up to date, and to address the ongoing activities.
- Also include new initiatives.
- More information of the issues identified in this section can be expected in the future CAISO Transmission Plans.

Future Plans

- Examples
 - Congestions Mitigations
 - Long-term Transmission Rights
 - Import allocation for Resource Adequacy
 - LOLP approach for LCR
 - MRTU-related issues
 - etc

2007 California ISO Transmission Plan

Process

- Up to four stakeholder meetings include technical studies from PTOs and CAISO.
- Tentative meetings and schedules
 - Stakeholder Meeting 1: Unified planning assumptions.
 - Stakeholder Meeting 2: Review of draft technical studies
 - Stakeholder Meeting 3: Final technical studies results
 - Stakeholder Meeting 4: 2007 CAISO Transmission Plan

Tentative Schedules

Meeting #	Date
1	April 2007
2	August 2007
3	October 2007
4	December 2007

Contacts

For any written comments:

regionaltransmission@caiso.com

To add names in the distribution list:

regionaltransmission@caiso.com

Please specify: *California ISO Transmission Plan* in the subject of the email.

Questions?