FERC Order 890

Strawman Proposal

In compliance with the Nine Planning Principles of the Final Rule

Submitted by the California Independent System Operator
Planning and Infrastructure Development

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California ISO Strawman Proposal

In Compliance with FERC’s Order 890 Final Rule

1. General Overview of Order 890

On February 16, 2007, the Federal Energy Regulatory Commission (FERC) amended the regulations and pro forma open access transmission tariff (OATT) originally adopted in Order Nos. 888 and 889 by issuing Order No. 890. Order No. 890 is intended to address lingering flaws in the OATT that undermine the efficient functioning of competitive wholesale energy markets. It does so by modifying specific, but multi-faceted, aspects of existing regulatory rules that FERC concluded continue to produce incentives for transmission providers to unduly discriminate against third-party transmission customers. This strawman proposal relates to one area of change – transmission planning. Order No. 890 mandates that transmission providers implement a coordinated, transparent and participatory transmission planning process as a means to alleviate opportunities for undue discrimination.

Under Order No. 890, FERC’s key requirements include:

1. Transmission providers must establish a coordinated, transparent and participatory transmission planning process.

2. Each transmission provider’s transmission planning process must meet each of FERC’s nine planning principles. These principles are coordination, openness, transparency, information exchange, comparability, dispute resolution, regional participation, economic planning studies, and cost allocation.

3. Transmission Providers must facilitate a meaningful process for stakeholders and customers to provide early input and help shape transmission plans.

4. The Commission requires transmission providers to disclose to all customers and other stakeholders the basic criteria, assumptions, and data that underlie their transmission system plans.

5. Transmission Providers must develop a dispute resolution process to manage disputes that arise from the transmission planning process.

6. Each Transmission Provider must describe its transmission planning process in its tariff and provide it as an attachment to its OATT.

2. Implementation Timeline

Under Order No. 890, each transmission provider is required to post a “Strawman” proposal by May 29, 2007 (within 75 days from publication of Order No. 890 in the Federal Register on March 15, 2007) that describes a transmission planning process that complies with each of Order
No. 890’s planning principles. This document represents the required strawman proposal (Strawman Proposal) and is intended to facilitate a FERC technical conference scheduled for June 26, 2007 in Phoenix to discuss the California subregion.

Following the technical conference, the CAISO intends to continue its own stakeholder process to complete development of a coordinated and regional planning process that complies with Order No. 890. The schedule for this stakeholder process will be issued following the FERC technical conference. A definitive proposal must be submitted to FERC by October 11, 2007 or 210 days after publication of Order No. 890 in the Federal Register.

3. The Structure of this Strawman Proposal

This Strawman Proposal represents the Transmission Planning practices of the CAISO and its underlying Participating Transmission Owners (PTOs). It consists of two major parts:

- Part I describes each of the Nine Planning Principles included in Order No. 890 and lists -in bullet form -the current and planned activities of the CAISO and PTOs that ensure compliance with each Principle. Part I serves as a reference and checklist.

- Part II provides a narrative description of the CAISO and PTOs coordinated Transmission Planning Process, including all current and planned activities. Part II outlines the CAISO and PTO Study Plan and Transmission Plan and contains a number of diagrams to aid visualization of the CAISO and PTO Transmission Planning processes.

PART I: Compliance

Part I describes Order No. 890’s Nine Planning Principles and outlines how the CAISO and PTOs intend to demonstrate compliance with each Planning Principle.

4.0 Compliance with Nine Planning Principles

4.1 Coordination

Key Elements:
✓ CAISO and PTOs Transmission Planning Process must include meetings with all of their transmission customers and interconnected neighbors to develop a transmission plan on a nondiscriminatory basis.

✓ The CAISO and PTOs Transmission Planning Process must provide early and meaningful interaction opportunities so customers and stakeholders can provide their inputs and help the development of the CAISO Transmission Plan.

✓ The CAISO and PTOs must consider meaningful inputs from the stakeholders in shaping their Transmission Planning Process.

✓ The Final Rule does not require specific requirements for coordination, such as number of meetings, ancillary concerns etc.

**CAISO and PTO Compliance:**
CAISO and the PTOs meet the Coordination Principle of FERC’s Order 890 through the following activities:

a. CAISO and PTO stakeholder meetings are open to customers and stakeholders and provide opportunities for participation and input toward shaping the planning of transmission.

b. CAISO and PTOs as well as regional and subregional transmission planning groups in which they participate communicate the planning of their transmission facilities at early stages to stakeholders and customers through market notices, emails and website announcements.

c. Stakeholders and the public can participate in CAISO and PTO transmission planning process and become aware of activities and progress by attending meetings, participating through telephone conferences and by subscribing to email services.

d. CAISO’s Transmission Plan is the core activity of its coordinated Transmission Planning Process. The Transmission Plan report contains detailed information on new proposed transmission projects within its Control Area and any external facility that will become of or be connected to the CAISO controlled grid.

e. CAISO initiates and coordinates at least three stakeholder meetings annually to present its Transmission Plan at various stages of development. These meetings are open to interested parties and include PTOs, stakeholders, Publicly Owned Utilities (POUs), State regulators such as the California Public Utilities Commission (CPUC) and the California Energy Commission (CEC).

f. The Transmission Plan provides details on all proposed new transmission facilities and is updated annually. The Transmission Plan also contains information on other
issues related to planning such as analysis of recent congestion studies, Local Capacity Requirements (LCR) and resource deliverability.

g. Stakeholders and other affected parties may utilize the activities that relate to the CAISO Transmission Plan to propose new transmission projects for evaluation or request specific studies.

h. As a key component of its coordinated Transmission Planning Process, CAISO and PTOs prepare a “Study Plan” which is provided to the stakeholders early in the process for input and comments. The Study Plan serves as the road map for the conduct of the annual Transmission Plan and lists study scope, planned stakeholders meetings, data assumptions, load forecasts and planned studies.

i. The CAISO coordinated Transmission Planning Process encompasses and is closely coordinated with the PTO’s transmission expansion planning activities. CAISO and PTOs participate in one another’s stakeholder meetings and other activities.

j. CAISO participates in a number of subregional and regional transmission planning groups and in subcommittees and working groups of the Western Electricity Coordinating Council (WECC) to ensure coordinated planning within the Western Interconnection power grid and to ensure that Seams issues are addressed.

k. CAISO plans to create a “Calendar of Events” on its website to announce all transmission planning activities including those of the PTOs and various subregional and regional transmission planning subcommittees to the public.

4.2 Openness

Key Elements:

- The CAISO and PTO Transmission Planning Process must be open to participation of all affected parties including but not limited to transmission customers, interconnection customers, state commissions and other stakeholders.

- CAISO and PTO meetings on particular subregional issues may be limited to the relevant subset of entities.

- CAISO and PTOs must develop mechanisms such as confidentiality agreements and password-protected access to manage the release of Critical Energy Infrastructure Information (CEII) to the public domain.

CAISO and PTO Compliance:

CAISO and the PTOs meet the Openness Principle of FERC’s Order 890 through the following activities:
a. CAISO and PTOs exercise an early and open process on planning California’s transmission and invite stakeholder participation through market notices, distribution lists, website announcements, emails etc.

b. CAISO’s coordinated Transmission Planning Process discloses all CAISO and PTO transmission planning activities through public stakeholder meetings.

c. CAISO and PTOs are considering expanding the use of teleconferencing and when possible web conferencing for their future meetings.

d. CAISO plans to create password-protected areas to protect proprietary information and prevent disclosure of critical infrastructure information to the public domain.

e. CAISO plans to develop a Non-Disclosure Agreement (NDA) where the affected parties can execute and have access to the CAISO, PTO and other detailed planning information.

f. CAISO provides non-confidential information including but not limited to data, assumptions, decision criteria, study methodology, results and conclusions etc. to all stakeholders and affected parties through its Study Plan and comprehensive study reports on new transmission projects.

g. CAISO maintains data confidentiality when:
   - Specifically designated as confidential by the data providers in accordance with good utility practices.
   - Release of such information may create adverse impacts on the operation of CAISO wholesale markets.
   - Release of such information may breach existing agreements and contracts including NDAs.
   - Involves third-party developed or other proprietary analysis tools, computer codes or any other material that is protected by intellectual property rights.

4.3 Transparency

Key Elements:

✓ CAISO and PTOs are required to disclose data, study methodology, basic criteria and assumptions that that underlie their Transmission Plan in written form. This has to be sufficiently detailed such that affected parties and customers can replicate studies.
✓ CAISO and PTOs must make simultaneous disclosures regarding the status of transmission projects to all parties of concern.

✓ CAISO and PTOs must consider demand response where such measures are available and are capable of providing the required functionality that is assessed in the transmission planning process.

CAISO and PTO Compliance:

CAISO and PTOs meet the Transparency Principle of FERC’s Order 890 through the following activities:

a. CAISO and PTOs utilize proven transmission planning practices recommended by WECC, NERC, NAESB and other credible institutions.

b. Through a stakeholder process, CAISO has developed methodology and performance standards for “reliability” assessment of its transmission system. These standards meet the minimum requirements of NERC and WECC standards and are available to the public through the CAISO website.

c. Through a stakeholder process, CAISO has developed a methodology and performance measures for “economic” assessment of its transmission system. This is available to the public through the CAISO website.

d. CAISO provides study assumptions, criteria, analysis results, conclusions and final recommendations on major facility studies through its Study Plan which will be posted on its website.

e. CAISO and PTOs provide sufficient planning information in a form that skilled practitioners using commercially available simulation tools can replicate such studies.

f. When proposed by stakeholders, the CAISO and PTOs evaluate the merits of demand response in lieu of transmission facilities where such measures are available and can reasonably meet CAISO’s and PTOs transmission planning requirements.

g. CAISO and PTOs support the initiative on directing NERC and NAESB toward development of common reliability standards and business practices on ATC.

h. CAISO utilizes the framework proposed by NERC on calculations of its TTC, ATC etc.

i. CAISO plans to develop a Business Process Manual (BPM) to describe its entire transmission planning process and practices in a comprehensive fashion.
4.4 Information Exchange

Key Elements:

 ✓ CAISO and PTOs in a stakeholder process must develop schedules and guidelines for the submittal of transmission planning information. Information provided within a specific category of participants should be uniform or equivalent in that class.

 ✓ Frequency, scope of study, and planning horizon must be consistent with Electric Reliability Organization (ERO) requirements.

CAISO and PTO Compliance:

CAISO and PTOs meet the Information Exchange Principle of FERC’s Order 890 through the following activities:

a. CAISO facilitates access to its own as well as PTOs’ studies through its website.

b. PTOs facilitate access to their own studies on the CAISO website or their own websites.

c. CAISO plans to provide periodic updates of major transmission project studies and posting them through the password-protected areas of its website. Stakeholders who have executed CAISO’s NDA can access a common and consistent source of information. This information includes but is not limited to project specific data, assumptions, criteria, study methodology, necessary analyses, required simulations and the status of each project such as under review, approved or rejected.

d. Through its website, CAISO plans to make the following information available:
   - Information regarding congestion frequency and costs;
   - A list of new generation in the LGIP process;
   - A link to CEC’s list of newly approved generation;
   - A link to CEC load and energy forecasts;
   - A link to PTO web sites for their major project activities, and
   - Studies which assess the impact of planned retirement of generation.
   - CAISO plans to make available on its website a list of project specific comments and the associated responses.

e. CAISO plans to create a list of relevant regional and subregional planning transmission groups and links to these group’s websites.

f. WECC facilitates access to its regional and wider area study results and conclusions on its website. CAISO in coordination with WECC posts the results of its regional and wider area studies on the WECC web site.
g. CAISO plans to develop Open Season guidelines for the submittal of stakeholder requested studies. These guidelines will be included in the CAISO Transmission Plan.

4.5 Comparability

Key Elements:

✓ The CAISO and PTO Transmission Plan must (1) meet the specific service requirements of the transmission customers and (2) otherwise treat similarly situated customers comparably in the transmission planning process.

CAISO and PTO Compliance:

CAISO and PTOs meet the Comparability Principle of FERC’s Order 890 through the following activities:

a. CAISO acts an independent reviewer of new facility additions and interconnections within its Control Area and its Controlled Grid and of interconnections with its neighboring systems.

b. CAISO evaluates each proposed facility independently based on its own merits without regard to the geographical location, potential ownership, facility type or the complexity of the required studies.

c. The CAISO practices the same approval process for facilitating access and new transmission investments to serve its own native load and third party service requests.

4.6 Dispute Resolution

Key Elements:

✓ CAISO and PTOs may use an existing dispute resolution process, but must address how it would work in the transmission planning process including both procedural and substantive planning disputes.

✓ CAISO and PTOs are encouraged to use the same format used by the Commission’s Dispute Resolution Service namely, Negotiations, Mediation and Arbitration.

✓ CAISO and PTOs must develop timing of a dispute resolution process consistent with their transmission planning process.

CAISO and PTO Compliance:

CAISO and PTOs meet the Dispute Resolution Principle of FERC’s Order 890 through the following activities:
a. As part of its Tariff, CAISO has a dispute resolution process for Market Participants and Transmission Owners to register disagreements as to any dispute under the tariff. These provisions of the tariff require negotiations first, followed by mediation (at the option of the parties), and then arbitration.

b. CAISO’s dispute resolution processes address both procedural and substantive transmission planning disputes.

c. At this time, the CAISO Dispute Resolution process fully accommodates the requirements of Order No. 890 and the business needs regarding transmission planning disputes.

4.7 Regional Participation

Key Elements:

✓ Each Transmission Provider (TP) must coordinate with interconnected systems to (1), share system plans to ensure simultaneous feasibility, (2) maximize use of consistent assumptions and data, and (3) identify system enhancements that relieve congestion or integrate new resources.

✓ A Transmission Planning proposal must specify the broader region in which it proposes to conduct integrated and coordinated regional planning.

✓ TPs must identify particular characteristics that dictate the geographical scope of the region.

✓ TPs should take into account in their planning process and accommodate existing institutions, physical characteristics and historical practices.

CAISO and PTO Compliance:

CAISO and PTOs meet the Regional Participation Principle of FERC’s Order 890 through the following activities:

a. The CAISO transmission planning practices encompass those of the California PTOs under the umbrellas of state regulatory agencies, WECC and NERC. These practices consider and account for the physical characteristics of the power grid in California and its extensive interconnections to the Western power grid and the historical transmission planning practices of its PTOs.

b. CAISO, PTOs and other entities participate in an open process on planning local, subregional, regional and external interconnection transmission facilities.
c. CAISO study practices enable both individual and aggregated simultaneous feasibility assessment including local, subregional, regional and external interconnection transmission facilities.

d. CAISO and PTOs encourage the participation of the non-jurisdictional entities such as Publicly Owned utilities and State regulatory agencies in their local subregional, regional and external interconnection transmission planning activities.

e. CAISO is participating in creation of a permanent committee, the CSPG (California Subregional Planning Group) to address subregional planning needs within California. This Committee is expected to be formed by end of 2007. Membership in this committee will include CAISO, transmission owners (including POUs), State regulators, LSEs, resource developers, third parties and other stakeholders.

f. Through participation in CSPG, the CAISO, PTOs and other participating entities plan to exchange data and information ensuring use of consistent assumptions and data for transmission planning studies.

g. CAISO and PTOs participate in the transmission expansion planning activities of WECC’s Transmission Expansion Planning Policy Committee (TEPPC), in accordance with WECC’s Proposed Western Transmission Planning Process Strawman for TEPPC and Sub-regional Review.

h. CAISO and PTOs participate in and exchange of information with the following regional and subregional transmission planning groups:

WECC:

- TEPPC- Transmission Expansion Planning Policy Committee and its subgroups
- PCC- Planning Coordination Committee
- TSS- Technical Studies Subcommittee
- RS- Reliability Subcommittee
- TAS- Technical Advisory Subcommittee
- SRWG- System Review Work Group
- MVWG- Modeling and Validation Work Group
- TOS-Technical Operations Subcommittee
- Regional Planning Review groups
- Loads and Resources Subcommittee

Subregional Planning Organizations:

- NTAC- Northern Transmission Assessment Committee
- CSPG: California Subregional Planning Group
Other Technical Regional Planning Groups:
- WATS: Western Arizona Transmission Studies Task Force

4.8 Economic Planning Studies

Key Elements:

- Transmission providers will prepare studies identifying “significant and recurring” congestion and post such studies on their OASIS.

- The studies should analyze and prepare reports on:
  - Location and magnitude of the congestion;
  - Possible remedies for the elimination of the congestion, in whole or part;
  - The associated costs of congestion, and
  - Costs to relieve congestion through system enhancements (or other means).

- CAISO and PTOs are required to consider both reliability and economics in their transmission planning practices.

- CAISO and PTOs must conduct studies, (1) to identify significant and recurring congestion locally, subregionally and between control areas, and (2) to integrate new generation resources or loads on an aggregated and regional basis to benefit a large number of customers. The results of these studies shall be posted on OASIS or website.

- Stakeholders have the right to request a number highly beneficial projects or studies annually to evaluate upgrades or other investments that could potentially reduce congestion or integrate new resources on an aggregated or regional basis. The costs for these studies will be recovered through the CAISO cost allocation methodology.

- The cost for studies requested in excess of those allotted will be borne by the stakeholders requesting the study.

- CAISO and PTOs must allow for an “Open Season” for the stakeholders to request studies and propose new transmission facilities for consideration.

- Stakeholders requesting study of a particular congested area must provide relevant data within their possession.

CAISO and PTO Compliance:

CAISO and PTOs meet the Economic Planning Studies Principle of FERC’s Order 890 through the following activities:

a. CAISO as well as PTO transmission planning processes consist of both reliability and economic analyses considerations.
b. CAISO plans to initiate and lead a stakeholder process to develop economic performance standards to be practiced by CAISO in the approval or rejection of new proposed transmission facilities.

c. CAISO studies utilize transmission data and models from WECC and other credible organizations.

d. Through an open stakeholder process, CAISO and PTOs plan to develop a process and criteria for “significant and recurring congestion”. This includes individual as well clustered congestion of facilities. A threshold will be determined to differentiate between trivial and significant congestion. Significant congestion will require serious consideration in the CAISO and PTO Transmission Planning Process and its elimination may require transmission upgrades or expansion. Upon completion, CAISO will post this criteria and its threshold on significant and recurring congestion on its website.

e. Stakeholders may request the study of a specific congestion or the study of beneficial transmission projects or integration of resources to mitigate congestion. CAISO and PTOs are planning to facilitate an “Open Season” process where by December 31st of each year, stakeholders and third parties may propose new facilities for evaluation or request studies for consideration in the following year’s Transmission Plan.

f. Stakeholders may request studies for consideration by the CAISO. CAISO plans to create and administer a stakeholder process to define the key requirements for submission of study request such as the Study Selection Criteria, study request forms, definition of scope of work, submission of supporting data etc.

g. Studies that are not identified by the CAISO administered Study Selection Criteria as highly beneficial to the CAISO ratepayers will have to be undertaken by the project proponents at their own expense.

h. CAISO posts results of forward and real time congestion and costs on its OASIS website.

i. CAISO and PTOs consider congestion frequency and costs when evaluating the economics of specific transmission facilities.

j. CAISO, through WECC and/or CSPG considers congestion frequency and costs when conducting regional, sub regional and interconnection-wide transmission planning activities.

k. CAISO and PTOs plan to utilize the results of congestion studies to develop measures to relieve transmission congestion. These measures include but are not limited to mapping areas where it would be beneficial to locate new generation facilities and the location of new transmission facility developments.
1. As a component of its Transmission Plan, CAISO plans to conduct an annual analysis to track and trend transmission congestion on its power grid. This analysis will identify the locations, frequencies and costs of congestion. Conclusions of this analysis as well as congestion analyses that are conducted by the WECC and possible mitigation measures will be included in Transmission Plan.

m. CAISO plans development of transmission planning practices that ensure feasibility of pre-assigned or long-term CRRs (Congestion Revenue Rights) during their ownership periods.

n. CAISO plans development of transmission planning practices that ensure feasibility of CRRs associated with merchant transmission lines.

o. CAISO plans to develop transmission planning practices to enable creation of long-term CRRs in response to customer requests.

4.9 Cost Allocation

Key Elements:

✓ The transmission planning process must address the allocation of the cost of new investments. This applies only to investments that do not fit under existing rate structures such as regional projects involving multiple transmission owners.

✓ Cost allocation methodology must recognize the Commission’s three general principles, which include:

- Fairly assigns costs among participants, including those that cause the cost and those that benefit from it;
- Creates incentives for new investment, and
- Supported by the state and other participants.

CAISO Compliance:

CAISO meets the Cost Allocation Principle of FERC’s Order 890 through the following activities:

a. Cost allocation of new projects has been addressed by CAISO’s Transmission Access Charge (TAC).
4.10 Additional Issues

4.10.1 Independent Third Party Coordinator
    Not Required

4.10.2 State Commission Participation
CAISO and PTO’s entire Transmission Planning Process is open to the State regulatory agencies which consist of the CPUC and CEC. These are active participant and integral component of transmission planning in California.

4.10.3 Recovery of Planning Costs
The costs of performing the CAISO’s transmission planning functions are generally recovered through the CAISO’s Grid Management Charge (GMC). Accordingly, to the extent a proposed project or congestion study is accepted by the CAISO for evaluation as part of the Study Plan detailing the development of the annual Transmission Plan, those costs will borne, based on their respective responsibilities, either by the CAISO and recovered through existing GMC procedures and practices or by the PTOs in accordance with their tariff authorities. On the other hand, to the extent a proposed project or congestion study is rejected by the CAISO for inclusion in the Study Plan, the costs of performing that study or project assessment will be the responsibility of the sponsor. However, the CAISO intends to evaluate the need to develop terms and conditions under which participants of the planning process would be required to contribute or otherwise pay for the cost of specific tasks or elements of the transmission planning process. If necessary, this cost recovery process is expected to be restricted to time and materials basis.

4.10.4 Open Season
CAISO and PTOs have agreed on an Open Season ending on December 31st for requests by stakeholder and third parties for specific studies or new proposed transmission facilities to be considered in the following year’s Transmission Plan.

4.10.5 Accommodation of Renewable Resources
CAISO, PTOs, CPUC and CEC have conducted transmission planning studies to facilitate integration of renewable resources.

CAISO, PTOs, CPUC and CEC are considering developing a uniform process for integration of renewables within their transmission grid as mandated by the California Public Utilities Commission.
PART II: Strawman Proposal

Part II provides a narrative description of the CAISO and PTOs coordinated Transmission Planning Process. It outlines the plans to comply with the Nine Planning Principles.

5. Overview of CAISO Transmission Planning

The California Independent System Operator Corporation (CAISO) provides electric transmission and related reliability services under both State and federal authority that are essential to the California economy as well as the health and welfare of its citizens. In this regard, the CAISO’s core mission can be divided into three interrelated cornerstones:

- Maintain reliable electric service;
- Improve the efficiency of electric system operations, including the provision of open and non-discriminatory access to the transmission facilities under its control; and
- Identify and promote new investments in transmission infrastructure in a coordinated, open, transparent and participatory manner.

In large measure, the ability to deliver reliable electric service through efficient market structures depends on the presence of sufficient physical infrastructure. The CAISO’s Transmission Planning Process is intended to facilitate timely, coordinated and least-cost development of electric infrastructure that maintains reliability and meets load growth. This will require:
Engaging stakeholders in the development of an coordinated transmission plan through meaningful, open and transparent process;
Continue building a strong partnership and shared vision with our Participating Transmission Owners (PTOs)
Continue to expand relationships with non-traditional stakeholders and third-party market participants;
Collaborate with state and federal agencies on relevant interest and jurisdiction toward development of CAISO transmission plan;
Minimizing uplift costs to provide needed transmission, and
Managing new resource interconnections.

As an integral component of its coordinated Transmission Planning Process, the CAISO is determined to actively eliminate congestion and Reliability Must-Run types of generation contracts where economical to create a robust transmission system and benefit all CAISO ratepayers.

Under the CAISO’s new wholesale market design - Market Redesign Technology Upgrade (MRTU) - which is expected to become operational in 2008, locational signals will be made available for developing resources in areas that would reduce or eliminate transmission congestion. This, in effect, takes the first step toward aligning CAISO’s coordinated Transmission Planning process with the restructuring of the electric power industry.

6. CAISO’s Transmission Planning Process

The coordinated Transmission Planning Process at the CAISO creates an integrated, open, participatory and transparent process for development and shaping CAISO’s annual Transmission Plan. The participants include PTOs, stakeholders, state regulatory agencies such as the California Public Utilities Commission (CPUC) and the California Energy Commission (CEC), Publicly Owned Utilities (POUs), regional and subregional planning committees, Load Serving Entities (LSEs), and affected customers.

The CAISO Transmission Planning Process encompasses and is closely coordinated with its PTOs’ transmission planning processes and emphasizes certainty in development, evaluation, approval, and implementation of key projects to assure reliable electric service while supporting California’s resource preference policies. This process coordinates the individual proceedings and processes of the CEC, CPUC and allows robust stakeholder involvement.

The CAISO’s coordinated Transmission Planning Process is intended to accomplish the following objectives:

1. Maintain the ability to reliability serve forecasted demand;
2. Conduct technical studies and future transmission assessments;
3. Assess the reliability and economics of the transmission infrastructure;
4. Provide open, meaningful and effective means for stakeholder participation in the planning process;
5. Analyze and consider congestion in the planning transmission facilities;
6. Encourage new investments;
7. Review and approve PTO, stakeholder and third party proposed transmission facilities;
8. Coordinate interconnections with neighboring systems and other control areas;
9. Interconnect new generation;
10. Integrate new renewable resources as mandated by State regulation;
11. When available and possible, consider non-wire solutions such as demand response;
12. Facilitate approval and interconnection of merchant transmission;
13. Preserve the feasibility of long-term transmission rights;
14. Review local resource adequacy and LSE capacity planning;
15. Account for planned generation retirements and other deactivations;
16. Consider risks associated with an aging infrastructure; and
17. Provide a process for disputing transmission planning related issues.

CAISO’s Transmission Planning Process accounts for the following roles and responsibilities for its participants:

<table>
<thead>
<tr>
<th>Participant</th>
<th>Roles and Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 CAISO</td>
<td>Acts as planning coordinator for the CAISO controlled grid, Performs NERC’ Planning Coordinator function, conducts transmission planning studies for the CAISO controlled grid, conducts independent review of new proposed projects, facilitates an Open Season for proposing new transmission projects and/or requesting studies, approves beneficial projects, administers LGIP process, participates in regional/subregional planning groups, conducts interconnection studies, and conducts simultaneous feasibility analyses.</td>
</tr>
<tr>
<td>2 PTOs</td>
<td>Perform NERC’s Transmission Planning function, conduct local and bulk transmission planning studies of its service area, propose new facilities, prepare meaningful cost estimates for new facilities, conduct interconnection studies and participate in regional/subregional planning groups.</td>
</tr>
<tr>
<td>3 Load Serving Entities (LSE)</td>
<td>Capacity planning and procurement to meet Resource Adequacy requirements, obtain necessary Congestion Revenue Rights (CRRs).</td>
</tr>
<tr>
<td>4 Publicly Owned Utilities (POU)</td>
<td>Participate in the transmission planning process, exchange information and coordinate plans with CAISO and PTOs.</td>
</tr>
</tbody>
</table>
The PTOs, CPUC, CEC and CAISO have committed to building relationships that utilize the core strengths of each party and ensure better coordination and alignment with the State and Federal policies. This process relies on CEC’s expertise in developing forward-looking analyses for projections of loads and resources. The CAISO by applying its transmission planning expertise oversees the development of an integrated forward looking Transmission Plan which utilizes CEC’s analyses as well as the PTOs’ assessments and CPUC mandates.

The CAISO’s Transmission Plan is used by the LSEs in developing their resource procurement plans as well as by the CPUC in reviewing those plans. The CPUC review of the LSE procurement plans involves the evaluation and potential approval of resources that may either displace planned transmission projects or require the development of extensive additional transmission to interconnect and integrate the resources. The CPUC uses the information included in the CAISO’s Transmission Plan to give its jurisdictional LSEs guidance and to decide whether to approve the LSEs’ resource procurement contracts. In addition, the CAISO and PTOs plan to use resource planning and procurement information from the CPUC and LSEs in planning new transmission projects.

CAISO’s coordinated Transmission Planning Process is shown in Figure 1. This Process is based on the following guiding principles:

- **Timely Project Development:** The process should promote timely development of needed transmission and resource projects.
• **Consistency and Repeatability:** The process must be designed and implemented such that it will be consistently followed by all PTOs and CPUC jurisdictional utilities.

• **Transparency and Openness:** The process must be transparent in that the methodology and assumptions are clearly established and accessible to all stakeholders.

• **Meaningful Stakeholder Participation:** This process must solicit and encourage the participation of all interested stakeholders.

• **Clearly Defined Inputs and Outputs:** Each major step should be clearly defined, including the entity that is responsible for specific inputs and outputs, and the linkages to other steps in the process.

• **Avoid Duplication:** Any request for information should be required to be submitted once in any forum throughout the process. Stakeholders should not be faced with participating in multiple forums for the same purpose.

• **Support State and Federal Policy Objectives:** It is imperative that each decision maker considers the overarching State and Federal objectives. This includes, but is not limited to the state’s goal of achieving the Renewables Portfolio Standard (RPS) and the federal requirements for open access and competition in the CAISO controlled Grid.

• **Leverage Expertise:** The process should promote collaboration and make optimal use of the focused expertise of the CEC, CPUC, CAISO, PTOs, stakeholders and LSEs.

• **Recognize Regionalization:** Any resource determination in California must be mindful of the impact on the grid and electric power markets, as it is one interconnected system in the Western United States. As such, California must coordinate transmission planning with the West-wide regional planning processes.

• **Flexibility for Feedback and Adjustment:** Any long term plan and policies must allow for some flexibility to accommodate emerging developments and short-term contingencies.

7. **CAISO’s Transmission Plan**

The CAISO’s Transmission Plan is the core product of its coordinated planning process for California (see Figure 1). The Transmission Plan details information on new proposed transmission projects within CAISO Control Area, and any external facility that will interconnect to the CAISO Controlled Grid and articulates the plans or key activities of each participating entity.

The CAISO Transmission Plan encompasses and is closely coordinated with PTO planning activities. CAISO initiates and coordinates at least three stakeholder meetings annually to create
and shape its Transmission Plan through various stages of development. The stakeholder meetings are open to all interested parties, including PTOs, POUs, CPUC, CEC, LSEs and all affected customers.

The Transmission Plan provides details on all proposed future transmission facilities and is updated annually. The Transmission Plan also contains information on other issues related to transmission planning such as congestion analysis, Local Capacity Requirement (LCR) and operational issues based on experiences learned from real-time operations.

Stakeholders and other affected parties may utilize the activities that relate to the CAISO Transmission Plan to participate, interact and propose new transmission projects or studies for evaluation and help shape the CAISO Transmission Plan.

The CAISO will maintain an “Open Season” for submission of studies and new project proposals with a cutoff date of December 31st. Proposals submitted before the cutoff date and meet CAISO’s Study Selection Criteria will be considered for analysis in the following year’s Transmission Plan.

The activities related to the Transmission Plan are announced well in advance through CAISO website, market notices and email subscription services. When possible, teleconferencing and web conferencing services will also be considered. Meetings are held throughout the State and structured to facilitate maximum stakeholder participation.

This Section summarizes the process in each planning cycle to produce the CAISO Transmission Plan. Extracted from the coordinated planning process diagram (Figure 1), Figure 2 provides a simpler overview of CAISO’s coordinated Transmission Planning Process. Figures 3, 4 and 5 provide further details of each key stage in the CAISO Transmission Planning Process.

7.1 The Contents of Transmission Plan

The CAISO’s Transmission Plan is a product of the CAISO’s coordinated Transmission Planning Process and is consistent with the guiding principles of the CAISO transmission planning practices. The Transmission Plan benefits stakeholders by providing detailed information on the performance of the CAISO transmission system and the direction of its future infrastructure development.

The CAISO published its very first Transmission Plan report and presented it to the CAISO Board of Governors in January of 2007. The CAISO intends to continuously improve its Transmission Plan consistent with full implementation of its coordinated Transmission Planning Process.

The Transmission Plan contains the following details:

**Executive Summary:** Provides an overview of the projects that are addressed by the Transmission Plan and the reliability concerns that they mitigate.
**Long-Term Transmission Plans:** Lists and describes significant long-term projects that are addressed by the Transmission Plan and the progress on various studies.

**PTO Transmission Plans:** Provides an overview of the projects proposed by each PTO and describes reliability issues for local areas of each PTO service territory.

**Regulatory Transmission Plans:** Lists and describes the projects that are required to meet the State of California’s RPS.

**Merchant Transmission Plans:** Describes individual merchant transmission projects, the project sponsors, estimated costs and benefits and expected on-line dates etc.

**Analysis of Transmission Congestion:** CAISO is currently working toward implementation of a new a wholesale market design where transmission congestion is assessed at nodal levels. CAISO is currently working on a new analysis methodology for consideration of forward and real time congestion in its transmission planning process.

**Resource Adequacy and related issues** Provides an overview of the state mandatory requirements for LSEs to procure sufficient capacity to meet their demand during peak hours.

**Local Capacity Assessments:** This chapter addresses local capacity requirements to ensure that local areas meet CAISO’s Local Reliability Criteria.

**Operating Guide:** This chapter provides early warning and guidelines to CAISO’s grid operations division on the possible impacts of new transmission projects and the need to revise existing operating procedures or develop new ones.

**Future Plans:** Describes the plans for enhancing the Transmission Plan including planned modifications to studies and analyses.

### 7.2 Stages of Transmission Plan Development

The CAISO’s Transmission Plan consists of three major stages of development and is updated annually as shown in Figure 6. This process was developed in a collective manner and has been agreed upon by various participants and stakeholders including:

- Major PTOs
- CPUC
- CEC
- Stakeholders
- Third-party participants

Each stage has specific tasks, objectives and timeline. CAISO conducts at least three stakeholder meetings annually to achieve the intended objectives of the various stages.
The specific objectives and deliverables of each stage of the Transmission Plan development are as follows:

7.2.1 Stage 1: Development of Unified Planning Assumptions

The objective of this Stage is to determine goals and agree on study assumptions for Transmission Plan studies. The necessary input is collected from various entities such as CEC-IEPR (Integrated Energy Policy Report), subregional planning groups such as CSPG, PTOs, CAISO, CPUC-approved resource contracts and POUs. The timeframe for Stage 1 development is February to May of each year. Stakeholder proposed projects submitted prior to the Open Season cutoff date (December 31st of the previous year) will be considered in Stage 1.

During January - February of each year, CAISO and PTOs meet and jointly develop the scope for the new annual planning cycle. As a result, a draft Study Plan (see Section 7.2.4) is developed which includes:

- Goals and objectives of each participating party;
- Study assumptions including load forecasts, transmission assumptions, generation assumptions, import, contingencies to be studied etc.
- Study Approach and methodology for each study, and
- Description of the studies to be performed.

The CAISO hosts the first stakeholder meeting around April-May to discuss and seek input on its draft Study Plan (Market Notice will be sent out at least two weeks before stakeholder meeting). The CAISO will then post all related documents on its website. Within approximately two weeks following the stakeholder meeting, stakeholders are requested to provide comments or inputs on the draft Study Plan. For the reasons of transparency CAISO requests that PTOs, stakeholders, CEC, CPUC and other parties provide their input, comments and questions electronically by sending email to regionaltransmission@caiso.com.

Within approximately four weeks following the first stakeholder meeting, the CAISO will post responses to comments on its website along with the final Study Plan, containing the Unified Planning Assumptions.

7.2.2 Stage 2: Performance of Technical Studies

The objective of this stage is to perform technical studies and present the study results to stakeholders. The studies follow the Study Plan use the Unified Planning Assumptions. The timeframe for this activity is May – October of each year.

The CAISO and PTOs perform technical studies according to the Study Plan. At the end of Stage 2, the CAISO and PTOs present the preliminary study results to stakeholders during the 2nd stakeholder meeting (around October of each year), seeking their input and comments. The following information is presented to the stakeholders:

- Summary of findings;
• Proposed mitigation plans for identified problems, and
• Findings on stakeholder requested studies and the need for further analysis.

Figure 7 provides detailed descriptions of the CAISO’s study procedures for reliability and economic analyses.

At times it may be more efficient to delegate to subcommittees such as WECC’s TEPPC (Transmission Expansion Planning Policy Committee) the responsibility to conduct specific planning studies. Under such circumstances, the CAISO and the PTOs will send a formal study request to the group of interest for their consideration.

The stakeholders are requested to submit their comments on all studies and provide their inputs no later than two weeks after the second stakeholder meeting. The CAISO posts comments received from stakeholders and responses on the website approximately four weeks after the second stakeholder meeting. At this stage, the final study will be used for the development of the CAISO Transmission Plan.

7.2.3 Stage 3: Development of Transmission Plan

The objective of this Stage is to develop the CAISO Transmission Plan report in coordination with PTOs and present it to the CAISO Board of Governors. The timeframe for this activity is November – January.

Within Stage 3, the CAISO develops a draft annual CAISO Transmission Plan report based on the final study results. This report lists the status of the transmission projects subject to CAISO management approval, i.e. requiring investment of less than $20 million, along with the basis of the CAISO’s decision on such projects. This report also lists the projects that require more than $20 million, which will be submitted to the CAISO Board of Governors for approval.

The CAISO presents this draft report to the stakeholders during the 3rd or if necessary 4th stakeholder meetings to seek input and identify potential improvement for the following year’s Transmission Plan. Stakeholder comments and CAISO responses will be posted on the website and the CAISO Transmission Plan report will be finalized and scheduled for presentation during the January (or February) CAISO Board of Governors meeting.

Upon Board of Governors approval, PTOs and other successful project sponsors may move toward the development and permitting of their project. The CAISO Transmission Plan is also provided to interested regional and subregional planning groups.

7.2.4 The Study Plan

The Study Plan is a roadmap for all activities that will be conducted throughout the study year. It is intended to create a framework and guide the performance of the studies that will make up the Transmission Plan.
The Transmission Plan includes both technical and process information. The technical details include scopes of work, study objectives, general assumptions, work plans, data and load forecasts. The non-technical details include timelines and coordination of activities.

Overall, the Study Plan describes:

- The stakeholder process for the upcoming year;
- Data that CAISO and PTOs will make available to stakeholders;
- Data that CAISO and PTOs will be requesting from stakeholders;
- Accessibility to sensitive information;
- Coordination with stakeholders and other participants at local, sub-regional and regional levels;
- Participant goals and objectives;
- A list of technical studies and anticipated deliverables;
- Detailed information on each planning study such as basic assumptions, methodology, criteria, and other related information.

As previously stated the coordinated Transmission Planning Process involves coordination and exchange of information among entities. At the beginning of each planning cycle, a draft Study Plan will be developed by the CAISO and PTOs to communicate all plans and planning assumptions. The CAISO and PTOs notify neighboring systems regarding this effort and incorporate assumptions obtained from neighboring systems in the Study Plan to make sure the most accurate assumptions are reflected in the draft Study Plan. During the first stakeholder meeting, stakeholders will be requested to review the draft Study Plan and provide comments on its assumptions. The final Study Plan will contain the Unified Planning Assumptions based on these inputs.

### 7.2.5 Transmission Plan Timelines and Milestones

The following describes the approximate proposed timelines and milestones for the CAISO Transmission Plan:

**By December 31st**: Request for studies including congestion and new proposed facilities shall be submitted to the CAISO formally for consideration in the following year’s Transmission Plan.

**By January 31st**: Previous year’s Transmission Plan recommendations are made to the CAISO Board of Governors.
By February 15th: CAISO identifies highly beneficial studies and projects that will be analyzed by the current year’s Transmission Plan according to the Study Selection Criteria. On this date, CAISO will also identify the proposed studies that will not be included for analysis by the Transmission Plan.

By May 31st: Stakeholder meeting is held to discuss Unified Study Assumptions.

By June 1st - October 31st: The Transmission Plan studies are performed.

By October 31st: Stakeholder meeting is held to discuss Transmission Plan study results. This date is also the deadline for submission of new proposed transmission facilities that require CAISO approval.

By November 1st - December 31st: The Transmission Plan is finalized.

8. Regional Committees and Work Groups

The CAISO and PTOs act as the initiators, organizers and participant in relevant forums for local, subregional and regional transmission planning committees and workshops. This facilitates CAISO’s coordinated Transmission Planning Process.

The CAISO participates in all PTO sponsored workshops along with stakeholders, State regulatory agencies, POUs in their assessment of the transmission needs in their service areas.

The CAISO and PTOs participate in subregional activities that may include entities outside the CAISO Control Area. CAISO and PTOs rely on WECC forums for analysis of external interconnections and the Western transmission systems.

For reasons of efficiency, CAISO and PTOs on occasions may need the expertise specific subregional and regional subcommittees and therefore request that those subcommittees conduct specific transmission planning studies.

Participation by the CAISO and PTOs in subregional and regional activities are based on the following guiding principles:

Open and Transparent Process: The CAISO’s coordinated Transmission Planning Process solicits participation from subregional, regional and Western wide forums. CAISO and PTOs facilitate open and impartial forums where stakeholders, generator owners, LSEs, and Federal and State commissions can participate and provide input toward shaping the CAISO Transmission Plan.

Common Data Sources: The CAISO and PTOs ensure that within all committees and workshops, all parties including stakeholders, third-parties, generator owners, LSEs and federal and state commissions have access to a common set of information such as data, models, base cases, study assumptions and decision criteria.
Simultaneous Feasibility Analysis: The CAISO acts as independent reviewer of new proposed projects in California and is responsible for macro-planning of the transmission system within its Control Area. Participants of local, subregional and regional committees may develop solutions that resolve specific transmission problems. The CAISO performs the necessary analysis and conducts simultaneous feasibility studies to ensure the aggregated effectiveness of all new proposed transmission facilities.

The CAISO and PTOs participate in the following regional and Subregional planning groups which CAISO and PTOs participates in:

WECC:
- TEPPC- Transmission Expansion Planning Policy Committee and its subgroups
- PCC- Planning Coordination Committee
- TSS- Technical Studies Subcommittee
- RS- Reliability Subcommittee
- TAS- Technical Advisory Subcommittee
- SRWG- System Review Work Group
- MVWG- Modeling and Validation Work Group
- TOS-Technical Operations Subcommittee
- WECC Regional Planning Process
- Loads and Resources Subcommittee

Subregional Planning Organizations:
- NTAC- Northern Transmission Assessment Committee
- CSPG- California subregional Planning Group (under development)

Other Technical Regional Planning Groups:
- WATS- Western Arizona Transmission Studies

The CAISO is participating in creation of the CSPG (California Subregional Planning Group) as a permanent committee to address subregional planning needs within California. This Committee is expected to be formed by end of 2007. Membership in this committee will include CAISO, transmission owners, State regulators, third parties and other stakeholders.

9. Data Sources and Tools

The process of planning transmission systems requires data, analysis tools, methodology, planning standards and decision criteria in both reliability as well as economics areas.

The CAISO and PTOs have been and propose to continue to utilize WECC as a primary source of data including models, base cases and tools for both CAISO and PTOs. In addition, CAISO and PTOs utilize data from the CEC, the Department of Energy (DOE) and the manufacturer of electric equipment. CAISO and PTOs rely on the CEC for demand and supply forecast information. The CEC is also used as the key source of data for newly planned and approved
generation. CAISO and PTOs rely on WECC and DOE for economic data such as forecasts of the price of natural gas.

It is often necessary to enhance or tailor WECC data, models and bases cases to better achieve particular study objectives. Under such circumstances CAISO and PTOs may modify the original WECC data. However, this is conducted in an open and transparent manner and is a key consideration in the Transmission Plan development process. The CAISO and PTOs recognize the importance of a common set of data, models and base cases.

An open, transparent process for exchange of information is an essential part of CAISO’s coordinated Transmission Planning Process. It facilitates the CAISO role as an independent reviewer of newly proposed projects. In addition it positions the CAISO to duplicate studies and to confirm findings and conclusions included in studies performed by PTOs or third-parties.

The CAISO and PTOs utilize proven transmission planning techniques including practices recommended by WECC, NERC, NAESB and other credible institutions.

The CAISO, PTOs and third-parties rely on equipment manufacturers for specific reliability and economic data related to the operation of such equipment.

CAISO relies on PTOs and other project proponents for preparation of meaningful and detailed cost estimates for the newly proposed facilities.

9.1 Data Confidentiality

The CAISO provides non-confidential data including but not limited to certain input assumptions, decision criteria, study methodology, results and conclusions to all stakeholders and affected parties through its comprehensive study reports that are made available on the password-protected areas of the CAISO website.

The CAISO and the PTOs exercise extreme care in handling proprietary and confidential information and preclude release of Critical Electric Infrastructure Information (CEII) to the public domain.

CAISO intends to create password-protected areas to protect propriety and confidential information. In addition, a Non-Disclosure Agreement (NDA) shall be developed to allow access to specified planning information.

CAISO maintains data confidentiality when:

- Specifically designated as confidential by the data providers in accordance with good utility practices.
- Release of such information may create adverse impacts on the operation of CAISO wholesale markets.
10. CAISO’s Transmission Planning Standards

Planning of transmission systems often requires analyses of both reliability and economics. These analyses enable transmission planning organizations to identify opportunities for new investments to maintain reliability at minimum cost to their consumers.

Through a collaborative stakeholder process, CAISO has developed methodology and performance standards for “reliability” assessment of its transmission system. This standard meets the minimum requirements of NERC and WECC and is available to the public through the CAISO website. The CAISO has also adopted certain reliability standards that exceed NERC or WECC standards in accordance with its statutory authority.

Through a stakeholder process and proceedings at the CPUC, CAISO has also developed a methodology and principles for the “economic” assessment of its transmission system called TEAM (Transmission Economic Assessment Methodology). Materials on TEAM can be found on the CAISO website.

CAISO and PTOs employ consistent planning standards to evaluate the transmission performance and address its future upgrades needs.

11. Proposal for New Facilities

11.1 PTO Proposed Facilities

In each planning cycle, PTOs conduct system assessment and propose transmission projects to the CAISO for evaluation and approval. As indicated in Section 8, CAISO staff participates in all PTO meeting to ensure effective coordination and communication throughout the process. According to the CAISO Transmission Planning Process Schedule, each PTO has to submit its proposed plans for proposed new economic facilities or studies before December 31st of the previous year. In addition, each PTO’s final expansion plan must be submitted to the CAISO by October 31st of each year. The PTO’s final expansion plan reflects those studies required to be performed by the PTO in accordance with the CAISO Study Plan and will receive CAISO review prior to approval. The PTO expansion plans are required to contain:

1) Transmission projects for which PTOs are seeking for approval or re-approval due to scope changes.
2) Conceptual transmission projects not yet requiring formal approval that captures the PTOs’ long-range vision for upgrading their transmission systems. This information is used to facilitate early participation of parties interested in the new transmission proposals. Conceptual transmission plans might remain in the Transmission Plan for several years before their analyses are completed.

11.2 Stakeholder or Third-Party Proposed Facilities

Stakeholders and third parties may propose new facilities at any time during the planning cycle. Such requests have to be formally submitted to the CAISO by December 31st of each year for consideration in the development of the following year’s Study Plan that underlies the composition of the Transmission Plan.

11.3 Request for Study

PTOs, transmission customers, and other interested parties may submit at any time during the planning cycle specific study proposals, such as a particular request to analyze congestion. Such a request must be formally submitted to the CAISO by December 31st of each year for consideration in the development of the following year’s Study Plan that underlies the composition of the Transmission Plan.

CAISO plans to develop a formal process for the stakeholders to request studies for evaluation of new proposed facilities as well as requests for analysis of congestion.

11.4 Study Selection Criteria

Due to limited resources to conduct transmission planning studies, CAISO and PTOs plan to sponsor a stakeholder process to develop a Selection Criteria to identify the projects and studies that are highly beneficial to the CAISO ratepayers.

CAISO plans to administer this Study Selection Criteria and will therefore identify the studies that are most qualified to be included the following year’s Transmission Plan.

Studies which do not meet the Study Selection Criteria will not be included in the Transmission Plan. The proponents of such projects may conduct their proposed studies on their own and at their own expense. As an independent reviewer, CAISO will evaluate the results of such analyses and consider the findings in the following year’s Transmission Plan provided that the study results are submitted formally by October 31st.

12. Dispute Resolution

The current CAISO Tariff includes dispute resolution procedures that apply to any dispute arising under the CAISO Tariff. These provisions of the CAISO Tariff require negotiations first, followed by mediation (at the option of the parties), and then arbitration. CAISO’s dispute resolution process may address both procedural and substantive transmission planning disputes.
At this time, the CAISO concludes that the dispute resolution process fully accommodates the requirements of Order No. 890 and the business needs regarding transmission planning disputes.

13. **Cost Allocation**

The CAISO satisfies the cost allocation principle of Order No. 890 through its FERC approved Tariff, including the provisions found in Section 24 and those relating to the Transmission Access Charge (TAC) in Appendix F.

14. **Recovery of Planning Costs**

The costs of performing the CAISO’s transmission planning functions are generally recovered through the CAISO’s Grid Management Charge (GMC). Accordingly, to the extent a proposed project or congestion study is accepted by the CAISO for evaluation as part of the Study Plan detailing the development of the annual Transmission Plan, those costs will borne, based on their respective responsibilities, either by the CAISO and recovered through existing GMC procedures and practices or by the PTOs in accordance with their tariff authorities. On the other hand, to the extent a proposed project or congestion study is rejected by the CAISO for inclusion in the Study Plan, the costs of performing that study or project assessment will be the responsibility of the sponsor. However, the CAISO intends to evaluate the need to develop terms and conditions under which participants of the planning process would be required to contribute or otherwise pay for the cost of specific tasks or elements of the transmission planning process. If necessary, this cost recovery process is expected to be restricted to time and materials basis.

15. **Treatment of Long-Term Transmission Rights**

California Market participants have expressed concerns over the preservation of their Congestion Revenue Rights (CRRs) over the duration of their ownerships (ten years). In response to this concern, CAISO plans to develop a process and the necessary methodology in its Transmission Planning Process to preserve long-term CRRs. CAISO plans to ensure that load growth as well as new investments or divestments shall not adversely impact the CRR ownership rights.


CAISO plans to develop a Business Process Manual (BPM) to fully describe and disclose its coordinated Transmission Planning process.

The BPM is intended to serve as a one-stop reference source for meaningful and effective participation in CAISO’s coordinated Transmission Planning Process.
Figure 1: CAISO’s coordinated Transmission Planning Process
Figure 2: CAISO Planning Process – See details in Figures 3, 4 and 5

Figure 3- Development of Unified Planning Assumptions
Figure 4- Conducting Planning Studies

Figure 5- Development of Annual CAISO Transmission Plan Report
Development and Shaping of CAISO Transmission Plan

Stakeholder Meeting #1
Study Plan

Stakeholder Meeting #2 (optional)
Problem Assessment

Stakeholder Meeting #3
Alternative Solutions

Stakeholder Meeting #4
CAISO Recommended Solutions

Final Transmission Plan

CAISO / PTOs

Initiate Organize

CAISO Board Approval

Timeline
Feb- May
Feb- May
June - Oct
Nov.-Dec.
January

Stakeholders CPUC, CEC POU's

Figure 6- Overview of Transmission Plan Development
Create Power Flow Cases with Updated Data from Stakeholders

Identify Criteria Violations

Obtain Study Data & Starting Base Case

Analyze Study Data & Starting Base Case

Identify Potential Mitigations

Obtain Stakeholder Comments and Input on Potential Solutions

Evaluate Effectiveness of Proposed Solution and Review Projects by PTOs & Stakeholders

Obtain Cost Estimates for the Proposed Solutions

Evaluate Competing Alternatives based on Effectiveness and Cost

Present Final Evaluation of Proposed Projects to Stakeholders

Final Recommendation

ANNUAL TRANSMISSION PLANNING ASSESSMENT

Study Plan

CAISO Study Procedure

Develop Simulation Assumptions

Develop Study Assumptions

Obtain Economic Data and Starting WECC Base Case

Develop Reference Case

Develop Project Alternative Cases

Check for Applicable Reliability Criteria

Perform Economic Study Analyses and Economic Sensitivity Analyses

Present Results to Stakeholders and Obtain Comments and Input

Compare Study Results of Proposed Alternatives

Identify Projects with Benefits to CAISO Rate Payers

Present Final Evaluation of Proposed Alternatives to Stakeholders

Figure 7: Overview CAISO’s Transmission Planning Studies