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October 31, 2008

The Honorable Kimberly D. Bose  
Secretary  
Federal Energy Regulatory Commission  
888 First Street, NE  
Washington, D.C. 20426

**Re: California Independent System Operator Corporation  
Docket No. OA08-62-000**

Dear Secretary Bose:

The California Independent System Operator Corporation (“CAISO”)<sup>1</sup> hereby submits this filing to comply with the Commission’s June 19, 2008 Order on Compliance in this docket.<sup>2</sup> The instant filing sets forth revisions to the CAISO’s existing and MRTU open access transmission tariffs (“CAISO Tariff”) pursuant to section 205 of the Federal Power Act. It also provides, for informational purposes, changes to the Business Practice Manual for Transmission Planning (“BPM”) as directed by the Commission.<sup>3</sup>

**I. Background.**

On February 16, 2007, the Commission issued Order No. 890, in which it required transmission providers to implement a coordinated, open, and transparent transmission planning process that satisfies nine planning

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<sup>1</sup> Capitalized terms not otherwise defined herein have the meanings set forth in the Master Definitions Supplement, Appendix A to the CAISO Tariff, and in the instant compliance filing.

<sup>2</sup> *Cal. Ind. Sys. Operator Corp.*, 123 FERC ¶ 61,283 (2008) (“Compliance Order”).

<sup>3</sup> *Preventing Undue Discrimination and Preference in Transmission Service*, Order No. 890, 72 Fed. Reg. 12,266 (Mar. 15, 2007), FERC Stats. & Regs., ¶ 31,241 (2007), *order on reh’g and clarification*, Order No. 890-A, 73 Fed. Reg. 2,984 (Jan. 16, 2008), FERC Stats. & Regs., Regs. Preambles ¶ 31,261 (2007); *order on reh’g and clarification*, Order No. 890-B, 73 Fed. Reg. 39,092 (July 8, 2008), 123 FERC ¶ 61,299 (2008).

principles.<sup>4</sup> The Commission declined to exempt Regional Transmission Organizations (“RTOs”) and Independent System Operators (“ISOs”) from the compliance obligations of Order No. 890 and required ISOs and RTOs to submit appropriate compliance filings. The CAISO made its compliance filing on December 21, 2007 regarding the transmission planning elements of Order No. 890, in which it proposed revisions to the CAISO Tariff and BPM.<sup>5</sup>

The Commission ruled on the CAISO’s proposed OATT and BPM revisions in the Compliance Order. In that order, the Commission found that, in general, the CAISO’s proposed Transmission Planning Process reflected the nine Order 890 principles. The Commission approved the CAISO’s compliance filing, effective December 21, 2007, subject to certain clarifications and modifications to be set forth in a compliance filing originally to be submitted within 90 days of the Compliance Order (September 17, 2008). In particular, the Commission found that the CAISO’s tariff and compliance filing “lacks sufficient clarity and specificity with respect to the planning conducted by its Participating Transmission Owners (‘PTOs’)” and that the tariff was “unclear with regard to which entities can propose a project or study for inclusion in the transmission plan and the process by which they may do so.”<sup>6</sup> In addition, the Commission directed the CAISO to propose changes to its OATT and BPM that would, among other things, clarify issues related to (1) the treatment of projects and study requests submitted through the Request Window;<sup>7</sup> (2) the opportunity for stakeholders to be involved in the evaluation of CAISO and PTO-proposed projects;<sup>8</sup> and (3) the criteria for identifying large projects that will be evaluated in a separate stakeholder process, including details as to how studies and projects developed outside of the Transmission Planning Process (e.g., the Large Generator Interconnection Process) will be integrated into the process.<sup>9</sup>

On September 2, 2008, the CAISO filed a Motion for Extension of Time for Compliance Filing (Motion), seeking until October 31, 2008 to submit the revisions and modifications identified in the Compliance Order. In the Motion, the CAISO explained that additional time was necessary for the CAISO thoroughly to address such topics as the coordination of transmission planning studies conducted by the PTOs and the CAISO and how such studies and mitigation proposals would be evaluated during the Transmission Planning Process. In particular, the CAISO had proposed to the PTOs that transmission planning roles and responsibilities be embodied in an agreement, negotiated outside the scope of the Order 890 proceeding, that would be coordinated with the Transmission Planning Process and described in the tariff and BPM. The Commission granted the CAISO Motion on September 3, 2008.

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<sup>4</sup> Order No. 890 at PP 435-437.

<sup>5</sup> The Commission also adopted numerous non-transmission planning reforms in Order No. 890. The CAISO submitted a compliance filing with regard to those reforms on October 11, 2007.

<sup>6</sup> Compliance Order at PP 17, 23.

<sup>7</sup> *Id.* at PP 23, 58.

<sup>8</sup> *Id.* at P 85.

<sup>9</sup> *Id.* at P 105.

With the issuance of a Market Notice and a subsequent conference call, CAISO initiated an open stakeholder process, targeted at entities registered with the North American Electric Reliability Corporation (“NERC”) as Transmission Planners within the CAISO Balancing Authority Area, to address coordination of planning activities and the evaluation of PTO study results and assessments through the Transmission Planning Process. Public meetings were held on September 25 and October 3, and additional conference calls were held on October 15 and 21. Parties presented written and oral comments in response to CAISO proposals set forth in a discussion document, as well as to draft tariff and BPM language. Ultimately, the PTOs and CAISO agreed that their respective roles and responsibilities should be described in the CAISO Tariff and the BPM, but that a CAISO/PTO transmission planning agreement to be used for NERC reliability standards compliance purposes would be deferred to later discussions.

Thus, the proposed modifications to the tariff and BPM that are set forth in the attachments to this transmittal letter reflect, in part, the open stakeholder discussions that necessitated the need for the compliance filing extension, as well as revisions that have been proposed in response to the other issues described in the Compliance Order.

## **II. Overview.**

In the Compliance Order, the Commission expressed concern, to varying degrees, regarding the CAISO’s compliance with certain of the Transmission Planning Principles. Specifically, the Commission either directed the CAISO to make revisions, or accepted revisions that the CAISO had agreed to make in response to intervenor comments and protests, to comply with the following Transmission Planning Principles: Coordination, Openness, Transparency, Comparability, Dispute Resolution, Regional Participation, and Economic Planning Studies. The CAISO proposes the following modifications in response to these concerns:

- All projects and requests for planning studies, whether submitted by PTOs or non-PTOs, will be submitted through the Request Window, which is open from August 15 through November 30 of each year. Reliability additions or upgrades can be proposed by any participant in the process through the Request Window in response to reliability needs identified in the studies conducted by the PTOs and CAISO.
- Both the CAISO and the PTOs, at the direction of the CAISO, will conduct system assessments and other planning studies during Stage 2 of the planning process, based on the Study Plan developed during Stage 1 with the input of all interested parties. Non-PTOs may also conduct studies

during the same period, based on the needs identified in the prior planning cycle and the Study Plan.<sup>10</sup>

- The CAISO will post the results of its studies and potential reliability mitigation solutions by mid-September of each Transmission Planning cycle. PTOs will post the results of their system assessments and reliability mitigation solutions by October 15 of each planning cycle. All transmission planning participants (as defined in the tariff and the BPM) will have until November 30 (the close of the Request Window) to respond to the study results posted by CAISO and the PTOs in both the current planning cycle and in the previous planning cycle.
- The transmission planning cycle has been extended by one month so that the annual Transmission Plan will be presented to the CAISO Board of Governors in February of each planning cycle. The Transmission Planning Process now spans thirteen months, beginning in January and ending in February. This provides additional time for interested parties to participate in the CAISO Stage 3 evaluation process and development of the annual Transmission Plan. Additional opportunities for public participation have been incorporated into the revised process.
- All projects must be submitted through the Request Window. Large Projects (a new proposed defined term) identified during Stage 2 and chosen as High Priority studies will be evaluated on a separate track that will coordinate with the overall planning process but may encompass more than one planning cycle.<sup>11</sup> Projects with capital costs of less than \$50 million will be approved by CAISO management during the same planning cycle. All other projects will be presented to the CAISO Board of Governors for approval on the schedule developed for the project and set forth in the annual Transmission Plan.
- This expanded planning process does not contemplate that projects will be proposed outside the Request Window.
- The CAISO-proposed tariff and BPM revisions clarify the disclosure of confidential information related to the Transmission Planning Process.

These general categories of proposed modifications, as well as the other revisions proposed specifically in response to other sections of the Compliance Order, are discussed in detail below.

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<sup>10</sup> Study Plan is defined in Tariff Appendix A as the plan to be developed pursuant to Section 24. 2.1 of Appendix EE, which sets forth the technical studies to be performed during the annual Transmission Planning Process.

<sup>11</sup> Large Projects are those transmission and substation facilities with capital costs of over \$200 million and above 200 kV. Other projects not meeting these criteria may also be identified by the CAISO as Large Projects.

### III. Proposed Tariff and BPM Transmission Planning Modifications.

#### A. CAISO Planning Process and the Role of PTOs<sup>12</sup>

In the Compliance Order, the Commission identified the need for greater elaboration of the role of PTOs in the CAISO Transmission Planning Process. The Commission stated:

Based on language in various places in the tariff, BPM, and the CAISO's pleadings in this proceeding, however, it appears that the bulk of the transmission planning for the CAISO-controlled grid may be initiated outside this process by the PTOs. . . . We are concerned . . . that the tariff and BPM do not clearly describe the relationship between its PTOs and the CAISO, how the stakeholders can participate in the PTO's development of needed expansions, how and when PTO projects are evaluated by the CAISO, how those projects are assimilated into the CAISO transmission plan, and the ability of non-PTOs to offer alternatives to PTO projects given the apparent difference between the treatment of PTOs and non-PTOs. Customers and stakeholders must not be excluded from the development of PTO-sponsored projects and PTO plans should not be incorporated into the CAISO plan using criteria and standards that are different from those used to assess alternative projects.<sup>13</sup>

Elsewhere in the Compliance Order, the Commission noted that CAISO relies on the unique expertise of its PTOs to perform reliability assessments of their respective systems, but that the tariff requires that these assessments be developed and performed in adherence with the Unified Planning Assumptions and Study Plan and vetted through the planning process.<sup>14</sup> However, the Commission found the tariff and BPM to be lacking in clarity and detail about the "extent of any transmission planning performed by its PTOs and how it meets the requirements of Order No. 890."<sup>15</sup>

In light of the Commission's concerns, the CAISO and its PTOs have re-examined their respective roles and responsibilities on a more granular level. Based on this examination, the CAISO and the PTOs developed a specific framework by which the system assessments that must be conducted for NERC transmission planning reliability standards compliance purposes will be coordinated.

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<sup>12</sup> Compliance Order at PP 15-17.

<sup>13</sup> *Id.* at P 16 (footnotes omitted).

<sup>14</sup> *Id.* at P 186.

<sup>15</sup> *Id.* at P 193.

The CAISO and its PTOs examined both the Order No. 890 principles currently embodied in the tariff and approved by the Commission and the transmission planning responsibilities imposed by NERC Reliability Standards TPL-001 through 004. The meetings and conferences held with the PTOs and interested parties resulted in general agreement on certain principles for transmission planning coordination of the PTOs' local system planning responsibilities and the CAISO's Planning Coordinator responsibilities:

- For NERC reliability standards compliance purposes, the CAISO is registered as a Planning Coordinator, and its PTOs are registered as Transmission Planners. Pursuant to its role as a Planning Coordinator, the CAISO has responsibility for planning across the Planning Coordinator's region. As such, the CAISO planning process assimilates and integrates the respective plans of the Planning Coordinator, Transmission Planners and Resource Planners into its Transmission Plan.
- In order for the CAISO to accomplish this holistic task, all Transmission Owners within its Planning Coordinator area are required to submit their local system information and mitigation proposals to the CAISO in accordance with the Transmission Planning Process. These system studies and mitigation proposals will be provided to CAISO by October 15 of each year and posted on the CAISO website for further input from interested parties. These data and plans provide the foundation for the CAISO Transmission Planning Process. In large measure, the provision of these data and plans constitutes the PTOs' compliance with their obligations as registered Transmission Planners under the NERC Reliability Functional Model.
- The CAISO will test and review the PTO data and plans in order to provide an independent evaluation of such data and plans. The CAISO will assimilate those projects receiving its approval during Stage 3 of the planning process into the CAISO transmission planning base cases. These base cases will then be studied on an integrated, Balancing Authority Area-wide basis to evaluate their robustness and the merit of the individual projects included in them, *i.e.*, an evaluation of the merit of the projects in a base case is tested in the context of an integrated transmission plan, considering seams and coordination issues between the individual systems of the PTOs and independent Balancing Authority Areas within and adjacent to the CAISO Balancing Authority Area, as well as other statewide energy policies directly or indirectly affecting transmission-system planning.
- In performing these functions and to assure that its Transmission Plan is consistent with the NERC Reliability Standards, the CAISO has an obligation to demonstrate compliance with NERC Reliability Standards TPL-001 through TPL-004 through high-level integrated simulations of

the system conditions described above and developing mitigation plans when potential performance criteria violations are identified.

The end result of this coordinated process, managed by the CAISO in accordance with FERC Order 890, is an integrated Transmission Plan developed in accordance with local and Balancing Authority Area-wide reliability requirements and applicable NERC Reliability Standards. The Transmission Plan resulting from this process is informed by the PTOs' assessment of their PTO Service Territory needs and the CAISO, among other things, integrates these assessments as part of its broader responsibilities for the oversight of inter-utility and regional coordination within the CAISO Balancing Authority Area, implementation of state and regional transmission-related policy goals, and market requirements.

Proposed Tariff § 24.2.2.1 contains the general description of the technical studies to be performed by the CAISO and the PTOs (at the direction of CAISO) based on the above principles. Proposed § 24.2.2.1(d) provides that the coordination of the CAISO and PTO study responsibilities, for the purposes of both NERC reliability standards compliance and development of the annual Transmission Plan through the Transmission Planning Process, will be as described in the BPM. To further clarify the coordination and integration of Balancing Authority Area-wide (CAISO) planning and local system (PTO) planning, proposed § 24.2.4.3 provides that the Transmission Plan will be used by CAISO as part of its compliance documentation for NERC transmission planning reliability standards purposes.

Revised BPM § 2.1.1.2 contains the details of the CAISO/PTO coordination meetings, data exchanges, studies and system assessments, representatives and timeframes. BPM Attachment 2 sets forth additional details regarding NERC reliability assessments, and Attachment 3 contains major study milestones and activities overlaid with the general Transmission Planning Process. § 2.1.1.2 provides details with regard to:

- 1) Planning data provided to CAISO by the PTOs.
- 2) PTO and CAISO technical studies identified in the Study Plan.
- 3) NERC reliability base cases developed by the PTOs.
- 4) Planning data developed by the PTOs and maintained by CAISO.
- 5) PTO transmission upgrades and additions submitted through the Request Window.
- 6) NERC reliability assessments performed by the PTOs and CAISO.
- 7) Technical studies conducted by CAISO.

- 8) Detailed scope of transmission projects developed by CAISO and PTOs.
- 9) Coordination of public meetings scheduled by CAISO.
- 10) Study reports provided by CAISO and the PTOs and development of the Transmission Plan.
- 11) Appointment of representatives to coordinate CAISO/PTO duties and responsibilities.

These general principles of coordinated local and system transmission planning, as well as the specific process details set forth in BPM § 2.1.1.2, were proposed by the CAISO and revised during the stakeholder process. The proposed revisions to the tariff and BPM respond to the Commission's request for clarification of the PTO/CAISO transmission planning roles and responsibilities.

The CAISO notes that while a general consensus was reached by the CAISO and interested stakeholders on a coordinated PTO/CAISO study process, the PTOs raised concerns regarding the proposed modifications to § 24.2.2.1(c). That section describes the CAISO technical study procedure and timeframe for posting its study results, including proposed preliminary mitigation solutions. Within approximately one month, the PTOs will submit their study results and proposed responses to the CAISO-identified needs and proposed mitigation solutions. Interested parties will then have an opportunity to review these study results at a public meeting, the timing of which will allow other responsive projects and Economic Study proposals to be submitted through the Request Window before it closes on November 30.

The concerns raised by the PTOs focus on the CAISO's proposal to identify mitigation solutions in its preliminary study results, before receiving the PTO study results. According to the PTOs, developing solutions to identified needs could compromise the CAISO's independence in ultimately selecting the projects to be included in the Transmission Plan and approved by management and the CAISO Governing Board. Additionally, they indicated that solutions proposed by the CAISO might appear to third parties as having more weight in the selection process than those proposed by the PTOs through the Request Window.

The CAISO considered the PTO input on this issue but has not revised its proposal to post study results and mitigation solutions prior to evaluating the PTO studies. Although the schedule for posting the technical study results has been modified, Tariff § 24 as originally revised and approved by the Commission contemplates that the CAISO is the party that will identify reliability needs and propose mitigation solutions. For example, § 24.2.(d) provides that the CAISO will "identify transmission upgrades and additions, including alternatives thereto,



deemed needed in accordance with Section 24.1 of this Appendix EE to address the existing and projected limitations.” § 24.1.1(c) also describes the circumstances under which CAISO will propose transmission upgrades and additions during the Transmission Planning Process.

Furthermore, CAISO strongly disagrees that proposing mitigation solutions compromises its independence in any way. To the contrary, CAISO views this step in the technical study process as an important part of its role as a Planning Coordinator for the Balancing Authority Area. CAISO does not intend to introduce fully developed transmission additions or upgrades as proposed mitigation solutions; that role is reserved for PTOs and Project Sponsors. CAISO has no financial stake in recommending proposed solutions and ultimately selecting the most cost efficient project. For all of these reasons, the CAISO proposed tariff and BPM revisions regarding CAISO-identified mitigation proposals are reasonable and should be adopted by the Commission without modification.

## **B. Compliance With Order 890’s Planning Principles**

The following discussion of the other proposed tariff and BPM language is, like the Compliance Order, organized according to the Order No. 890 Planning Principles, but the discussion will address only those Planning Principles on which the Commission directed the CAISO to submit revisions and modifications to the tariff and BPM. It should be noted that the revisions proposed by the CAISO include a reorganization of Section 24, Appendix EE, to better follow the sequencing of the Transmission Planning Process and to improve the clarity and transparency of the process. Because the reorganization has resulted in the renumbering of many tariff provisions in § 24, references herein to tariff sections will include both the previous and the proposed tariff section.

### **i. Coordination<sup>16</sup>**

In discussing the Coordination Principle, the Commission noted that the term “stakeholder” is not defined.<sup>17</sup> CAISO acknowledges that “stakeholder” was used often in the BPM in reference to public participation in the Transmission Planning Process, and this may have caused confusion regarding the intended CAISO transmission planning participants encompassed by the term. To provide clarification, the CAISO has eliminated the term “stakeholder” from the BPM and replaced it with the term Transmission Planning Process Participant (“TPP Participant”). TPP Participants include PTOs, Market Participants, Load Serving Entities, publicly-owned utilities, neighboring transmission providers, regional and sub-regional planning groups including WECC committees such as TEPPC, state regulatory authorities and other affected customers or entities. TPP Participants

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<sup>16</sup> *Id.* at PP 18-23.

<sup>17</sup> *Id.* at P 22, n. 22.

are able to participate in the Transmission Planning Process in accordance with the tariff.

The Commission also directed the CAISO to re-examine the § 24 tariff language to ensure that consistent terminology was used with respect to the parties able to propose a project or study for inclusion in the Transmission Plan.<sup>18</sup> For the purposes of providing clarification, proposed §§ 24.1, 24.1.1(b), 24.1.2 and 24.2.3.1 (formerly §24.2.3.2) consistently identify such parties: PTOs, Project Sponsors, Market Participants (which is a defined term in the CAISO Tariff), the CAISO, the CPUC, or CEC. Additionally, the CAISO has clarified the definition of Project Sponsor to include project developers who are not Market Participants but who would otherwise be eligible to propose Merchant Transmission facilities.<sup>19</sup> This clarification, as well as the proposed revisions to the confidential information disclosure provisions of § 20.4 discussed below, respond to the Commission's concerns that third parties were not being given an equal opportunity to propose projects through the Request Window and be involved in the development of PTO-sponsored projects.<sup>20</sup>

## ii. Openness<sup>21</sup>

The CAISO addressed in its Answer some of the concerns raised by various parties with respect to confidential information provided to the CAISO in the course of the Transmission Planning Process and the CAISO's disclosure of such confidential information. The CAISO agreed to make certain changes to the tariff as part of this compliance filing in response to these concerns. The Commission agreed with the changes that the CAISO proposed. Accordingly, CAISO proposes the following modifications to its Tariff:

- The CAISO is modifying § 20.2(h) to provide that transmission planning-related confidential information can be provided by Market Participants or Project Sponsors, clarifying that confidential information is dependent upon specific characteristics of the information, rather than its source.<sup>22</sup>
- In response to comments submitted by CMUA, the CAISO is modifying § 20.4(e) to replace "may be disclosed" with "shall be disclosed."<sup>23</sup> The cross-reference to §20.2(h) has been corrected.

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<sup>18</sup> *Id.* at P 23.

<sup>19</sup> See definition of Project Sponsor, Appendix A Definitions.

<sup>20</sup> See Compliance Order at P 16 ("customers and stakeholders must not be excluded from the development of PTO-sponsored projects...") and P 23 ("we find the CAISO's tariff is unclear with regard to which entities can propose a project or study for inclusion in the transmission plan...").

<sup>21</sup> Compliance Order at PP 24-39.

<sup>22</sup> See *Id.* at P 32.

<sup>23</sup> See *Id.* at P 33.

- The CAISO is modifying § 20.4(e)(ii) to state that information voluntarily provided to CAISO by LSEs pursuant to § 24.3.3 (formerly § 24.2.3.3) will be disclosed only on a composite basis and to eliminate the phrase “or represents.”<sup>24</sup>
- In response to comments submitted by PG&E, the CAISO is eliminating the reference to Bid information from § 24.3.3.<sup>25</sup>
- In response to the Commission’s direction to further clarify §§ 20.2 and 20.4,<sup>26</sup> the CAISO has further reviewed the disclosure provisions of § 20.4 and determined that § 20.4(e)(i) requires further clarification to incorporate the recently-modified provisions of the Large Generator Interconnection Procedures as well as the Small Generator Interconnection Procedures<sup>27</sup> and to more specifically identify the Transmission Planning Process participants entitled to receive study results and supporting documentation that might contain confidential information. § 20.4(e)(i) now provides that Critical Energy Infrastructure Information (“CEII”) may be provided to the following categories of participants:
  - (a) Market Participants;
  - (b) Electric utility regulatory agencies within California;
  - (c) Interconnection Customers that have submitted an Interconnection Request to the CAISO under the CAISO’s small and large generator interconnection procedures set forth in tariff § 25;
  - (d) Developers having pending or potential proposals for development of a Generating Facility or transmission additions, upgrades or facilities and who are performing studies in contemplation of filing an Interconnection Request or submitting a transmission infrastructure project through the ISO Transmission Planning Process; and,
  - (e) Not-for-profit organizations representing consumer regulatory or environmental interests

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<sup>24</sup> *Id.* at PP 30, 34-35, 37.

<sup>25</sup> *Id.* at P 29.

<sup>26</sup> *Id.* at P 38.

<sup>27</sup> *Cal. Indep. Sys. Operator Corp.*, 124 FERC ¶ 61,292 (2008).

before Local Regulatory Agencies or federal regulatory agencies.

With these proposed modifications, potential project developers who are not Market Participants will be able to access, through the CAISO secured website location, documents containing CEII that are necessary for these parties to conduct their own studies in support of generation or transmission infrastructure proposals or requests for planning studies. Additionally, not-for-profit organizations with an interest in participating in the assessment of particular projects that ultimately will be submitted to state or federal regulatory agencies for permitting and environmental review will be able to obtain confidential and CEII information as deemed necessary. These participants will be required to sign both the CAISO's Non-Disclosure Agreement ("NDA"), modified to include these tariff revisions, and the WECC non-member NDA in order to obtain access to WECC base case information.

### **iii. Transparency**

In the Compliance Order, the Commission directed limited modifications in accordance with the six transparency principles: (1) Transmission Planning Process Timeline; (2) Study Requests and the Request Window; (3) Screening Process; (4) Benefits and Justification; (5) CAISO discretion; and (6) Tariff versus BPM.<sup>28</sup>

#### **(a) Transmission Planning Process Timeline**

In response to concerns raised by BAMX, the Six Cities and CMUA, CAISO agreed in its Answer to make modifications to the Transmission Planning Process timeline that would make the process more transparent and provide for more meaningful public participation. Specifically, the CAISO offered (1) to complete all technical studies and publish results by October 17; (2) to hold stakeholder meetings on October 31; (3) to extend the Request Window to November 30; and (4) to hold a stakeholder meeting on or before December 10 to discuss the draft transmission plan.<sup>29</sup>

The revisions to the Transmission Planning Process timeline that the CAISO is proposing in this compliance filing contain slightly different dates for various study result postings and public meetings in order to provide greater opportunities for participation and meaningful evaluation and as part of compliance with the Commission's directive to address the role of PTOs in the Transmission Planning Process. The proposed timeline is consistent with the general intent of the CAISO's Answer to BAMX, Six Cities and CMUA. The revised Transmission Planning Process calendar is set forth in BPM Section 2.1.3 and includes the following significant dates:

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<sup>28</sup> Compliance Order at P 46.

<sup>29</sup> *Id.* at P 51.

- During December and January, CAISO solicits, and expects to receive, information from PTOs, neighboring Balancing Authorities, regional/sub-regional planning groups, and other TPP Participants.
- The draft Study Plan will be posted on the CAISO website in mid-February and a public meeting will be held in March to discuss it.
- The Study Plan will be finalized and posted by the end of March and additional public meetings will be held as necessary at the end of July.
- During the Stage 2 technical study phase of the planning cycle, local public meetings may be held in the PTO Service Territories of each PTO conducting system studies.
- The Request Window opens on August 15 and the results of CAISO's technical studies, including preliminary reliability solutions and the Congestion Data Summary results, will be posted by September 15.
- The PTOs will post their study results and proposed reliability solutions by October 15 and a public meeting will be held thereafter by the end of October. Non-PTOs will have until the end of November to respond to proposed solutions, projects and study proposals identified by CAISO and the PTOs, as well as projects submitted periodically through the Request Window.
- The Request Window closes on November 30 and the draft transmission plan is posted by the end of January.
- The final public meeting will be held in February and the transmission plan presented to the CAISO Board of Governors at the February Board meeting.

Under this revised schedule, which is discussed in detail throughout the BPM, participants will have additional time to respond to both CAISO and PTO studies and will have two weeks between the draft transmission plan posting and the final public meeting. Lengthening the entire Transmission Planning Process provides the CAISO with additional time to evaluate all of the information received through the Request Window and provide additional details of the projects and studies selected for approval and inclusion in the transmission plan. A more robust transmission plan will enable participants to conduct a more meaningful review of the draft document and provide comments prior to the Board presentation. This revised schedule addresses the concerns raised by BAMX, CMUA and Six Cites by making it more transparent and allowing more meaningful involvement.

## **(b) Study Requests and the Request Window**

At several places in the Compliance Order the Commission requested that the CAISO clarify the projects that are to be submitted through the Request Window and those that may be submitted for approval outside the Request Window. Specifically, the Commission directed CAISO to address the following topics: (1) the projects that must be submitted through the Request Window; (2) how PTO-sponsored reliability projects are treated; (3) whether PTO-sponsored economic and reliability projects with capital costs of less than \$50 million must be submitted through the Request Window and how such projects proceed to management approval; (4) whether demand response or merchant facility proposals submitted as alternatives to PTO-sponsored projects will be evaluated in the same process as the PTO-sponsored projects (or whether such proposals must wait for an additional cycle to be evaluated); and (5) how non-PTOs can respond to PTO-sponsored projects if they are proposed at the close of the Request Window.<sup>30</sup>

The proposed revisions to the CAISO tariff and BPM provide that all projects, whether PTO- or non-PTO-sponsored, must come through the Request Window. Proposed Tariff § 24.2.3 (formerly 24.2.2) and §§ 2.1.2.1 and 3.1 of the BPM list and describe the following categories of projects and study requests that must be submitted into the Request Window:

- Reliability transmission upgrades or additions;
- Merchant Transmission Facilities;
- Economic transmission upgrades or additions;
- Location Constrained Interconnection Resource Facilities;
- Projects to preserve Long-term Congestion Revenue Rights;
- Demand Response programs;
- Generation projects submitted as proposed solutions along with study requests under Economic Planning Study;
- Network Upgrades identified through the Small Generator Interconnection Process and Large Generator Interconnection Process; and
- Economic Planning Study requests.

These categories of Request Window submissions also are described generally in proposed revised §§ 24.1.1, 24.1.2, 24.1.3, 24.1.4, 24.2.3.2 (formerly 24.2.2.2) and 24.2.3.3.

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<sup>30</sup> Compliance Order at PP 57-59.

The fundamental modification to the Transmission Planning Process accomplished by these revisions is that *all* projects and study requests must come through the Request Window and will be evaluated during TPP Stage 3. This revision should eliminate any concerns about whether another evaluation process would apply to projects submitted outside the Request Window. Interested parties will have the opportunity to participate in the assessment of all Request Window projects, even those reliability projects with capital costs of less than \$50 million.<sup>31</sup> To further clarify the public participation process, CAISO has substantially revised BPM § 9.1.<sup>32</sup> Among the other items clarified and revised in that section, the CAISO notes that because the modified Transmission Planning Process contemplates that the PTOs will be directed to conduct technical studies of their systems to comply with NERC reliability standards, it is likely that additional public meetings will be held in the PTO service areas in coordination with the CAISO. These local meetings are intended to encourage and facilitate additional public participation as part of the overall Transmission Planning Process and not a separate process. Such local participation meetings may also be scheduled as part of the Large Project study process discussed below.

### (c) CAISO Discretion

In connection with the issue of CAISO discretion, the Commission addressed comments submitted by the Imperial Irrigation District (“IID”) that focused generally on CAISO discretion with respect to 1) the evaluation of projects for which the technical study results might not be completed for inclusion in the Transmission Plan (§ 24.2.5.2(c)); and 2) the meaning of “operational flexibility” in § 24.5 and the extent to which that phrase could be used by the CAISO to limit the inclusion of certain projects in its Transmission Plan.<sup>33</sup>

With respect to the first issue, the Commission directed the CAISO to clarify § 24.2.5.2(c), noting that that BPM § 2.1.2.2 provided additional detail as to the instances in which studies would be conducted outside the TPP, but that such detail should be included in the tariff.<sup>34</sup>

The project study and approval process was a topic of considerable discussion in the stakeholder process. In particular, the PTOs raised concerns regarding the criteria to be used by CAISO to determine when a “large project” would be evaluated in a separate stakeholder proceeding. These parties shared the concerns raised by IID that the tariff language was too vague and that BPM § 2.1.2.2 did not contain sufficient guidance for stakeholders to understand the

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<sup>31</sup> See *id.* at P 58.

<sup>32</sup> The Commission expressed concern about BPM §9.1 containing a possible conflict between the public process for the PTO technical analysis and the process for small reliability projects. *Id.* at P 57, n. 36.

<sup>33</sup> See Compliance Order at PP 70-82. In this section, the Commission also addressed concerns raised by the California Commission but agreed with the CAISO responses to these issues and did not direct CAISO to make any modifications to the tariff or BPM.

<sup>34</sup> *Id.* at PP 79-80.

CAISO evaluation and approval process for projects of varying sizes and capital costs.

In response to the Commission directive to clarify the language of § 24.2.5.2 and the requests by stakeholders to provide even more transparency and clarity with respect to the treatment of large projects, CAISO proposes to modify both § 24.2.5.2 (now renumbered as § 24.2.4) and the BPM sections to address evaluation processes for large and small projects. § 24.2.4(c)-(e) contains new provisions that describe in detail the study and approval process for three project categories: (a) Large Projects, a new defined term that encompasses projects with capital costs of over \$200 million and consisting of transmission or substation facilities of 200 kV or above;<sup>35</sup> (2) projects with more than \$50 million in capital costs that must be presented to the CAISO Governing Board for approval; and (3) small projects with capital costs of less than \$50 million that will be approved by CAISO management. These new provisions clarify that Large Projects will be subject to a separate public participation process that will be coordinated with the Transmission Planning Process and identified in the annual Transmission Plan but for which the study process might extend beyond one planning cycle. All other projects will be evaluated as part of the Transmission Planning Process, and those projects that are approved in the annual Transmission Plan will proceed to CAISO management or Board approval process as described in § 24.2.4(c)-(e) and new BPM § 4.3.1.

Further details are provided in the modified BPM provisions. The explanatory language contained in § 2.1.2.2, cited in CAISO's response to the concerns raised by IID,<sup>36</sup> is now being added to a new § 2.1.5 entitled "Large Project Evaluations" and reorganized to provide greater clarity as to how the study process for Large Projects will be coordinated with the overall Transmission Planning Process.

With respect to the second issue raised by IID, the Commission directed the CAISO to define "operating flexibility" in the context of tariff § 24.5.<sup>37</sup> That section describes the assessment ("operational review") conducted by the CAISO to ensure that the proposed transmission upgrades or additions have been designed in accordance with Good Utility Practice and will not cause inefficient or unreliable operation of the CAISO Controlled Grid during, for example, planned outages or emergency switching operations involving the proposed facilities. Properly designed projects will provide sufficient "operating flexibility" to accommodate planned outages and other system events without causing unintended and undesirable consequences or unduly limiting temporary system reconfiguration options. In compliance with the Commission directive, CAISO has added this definition of Operational Flexibility to its Tariff Appendix A.

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<sup>35</sup> The definition also provides CAISO with the discretion to identify other projects that do not fall within these criteria as Large Projects that will be subject to a separate study process.

<sup>36</sup> *Id.* at P 80.

<sup>37</sup> *Id.* at P 81.



#### **(d) Tariff versus Business Practice Manual**

In response to concerns raised by the Transmission Agency of Northern California, the Commission directed the CAISO to include a greater amount of specificity in the tariff regarding the steps involved in the transmission plan. Among other matters, the Commission noted that it was unclear how “projects proposed before and after projects proposed during the Request Window” would be assimilated into the plan and presented to the Board.<sup>38</sup>

The compliance filing revises a number of tariff provisions to provide additional detail consistent with the Commission’s directive. As discussed above, the CAISO has proposed to revise the Transmission Planning Process such that all projects must be proposed through the Request Window and evaluated during Stage 3 for inclusion in the transmission plan. With respect to the opportunity for participation in the stages of the process, the CAISO has proposed to revise substantially tariff § 24.2.2.1 “Development of Technical Studies” (formerly § 24.2.5.1) to identify the specific steps for posting the results of technical studies conducted by the CAISO and by third parties at the direction of the CAISO. These revisions include the timing of the open meeting and opportunity for comments from interested parties.<sup>39</sup>

In addition, the opportunities for meaningful public participation are set forth in the tariff, describing each phase of the planning cycle. Specifically, § 24.2.1.3 describes the stakeholder meetings that will be held during the development of the study plan, § 24.2.2.1 provides for the meetings and conferences scheduled for discussion of the technical study results, and § 24.2.4(a) describes the public meetings that will be scheduled to address the draft transmission plan. Consistent with the Compliance Order,<sup>40</sup> the approximate dates for these meetings, as well as the posting of the documents and study results, are contained in the BPM.<sup>41</sup> These revisions are consistent with the Commission’s directives.

Finally, the compliance filing also corrects the erroneous references to nonexistent tariff sections in the definitions of “Study Plan” and “Unified Planning Assumptions,” as directed by the Commission.<sup>42</sup>

#### **iv. Comparability<sup>43</sup>**

In discussing the Comparability Principle, the Commission reiterated that projects proposed by PTOs, particularly those proposed outside the Request Window, appeared to be treated differently than those proposed by other parties

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<sup>38</sup> *Id.* at P 83.

<sup>39</sup> See § 24.2.2.1(a).

<sup>40</sup> *Id.* at P 85.

<sup>41</sup> See above discussion at Section III.B.iii.(a) of this transmittal letter.

<sup>42</sup> Compliance Order at P 84, n. 42.

<sup>43</sup> *Id.* at PP 104-106.

through the Request Window in contravention of the Comparability Principle.<sup>44</sup> CAISO believes that this concern has been addressed by the fundamental revisions to its Transmission Planning Process, discussed above, that require all projects to be “funneled” through the Request Window and evaluated during Stage 3 for purposes of inclusion in the transmission plan. Thus, PTO projects will not be treated differently than projects proposed by other entities in this regard.

#### v. **Dispute Resolution**<sup>45</sup>

After reviewing the concerns raised by stakeholders, the Commission generally approved CAISO’s proposals for a dispute resolution process that manages both procedural and substantive disputes arising from the planning process.<sup>46</sup> The Commission directed the CAISO to modify § 24.8.2 to make it clear that an arbitrator’s decision would be binding only on parties who had notice of the arbitration and voluntarily chose to participate. The CAISO is proposing specific clarifying language to comply with that directive in § 24.8.2.

#### vi. **Regional Participation**<sup>47</sup>

In response to concerns expressed by IID, the CAISO proposed in its Answer certain revisions to §§ 24.4 and 24.5. The Commission directed the CAISO to make these revisions.<sup>48</sup> Accordingly, the compliance filing amends § 24.4 to clarify that a PTO with an obligation to build facilities will be directed to coordinate these activities with neighboring Balancing Authority Areas, if applicable. Similarly, the CAISO is modifying § 24.5 to provide that where CAISO has determined that proposed facilities do not provide sufficient operating flexibility or properly integrate with the CAISO Controlled Grid, CAISO will coordinate with, *inter alia*, the operators of neighboring Balancing Authority Areas (if applicable) to reassess and redesign the facilities.

As also directed by the Commission,<sup>49</sup> CAISO has added descriptive language to tariff § 24.8.1 to provide further detail regarding the scope of the CAISO in sub-regional planning activities, and has added language from tariff § 24.8.1 to BPM § 5.1 to describe the scope of the CAISO mandatory regional planning efforts. CAISO also has expanded the list of potential planning entities whose participation in the CAISO Transmission Planning Process will be solicited (BPM § 5.1).<sup>50</sup>

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<sup>44</sup> *Id.* at P 105.  
<sup>45</sup> *Id.* at PP 107-127.  
<sup>46</sup> *Id.* at P 123.  
<sup>47</sup> *Id.* at PP 128-153.  
<sup>48</sup> *Id.* at P 157.  
<sup>49</sup> *See id.* at P 152.  
<sup>50</sup> *See id.* at P 154.

## **vii. Economic Planning Studies**

As directed by the Commission,<sup>51</sup> CAISO proposes to revise § 24.2.3.2 to include the study of upgrades to integrate new generation or load on a regional or integrated basis as a consideration in evaluating requests for Economic Planning Studies received during the Request Window. A similar revision is made to BPM § 3.4.2.

The Commission also directed the CAISO to address how Economic Planning Studies could be batched or clustered.<sup>52</sup> The criteria for clustering such studies is now set forth in § 24.2.3.3(a) and is discussed at BPM § 4.2.2.1. Specifically, CAISO will consider clustering Economic Planning Studies where (1) such studies will address the same patterns of Congestion or anticipated Congestion; (2) such studies will address patterns of Congestion or anticipated Congestion that are in related locations; or (3) such studies seek to integrate new Generation resources or loads that impact the same facilities.

## **IV. Attachments**

Attached hereto as Attachment A are blackline tariff sheets containing the changes described in this transmittal letter. Attachment B contains the requisite clean tariff sheets. Attachment C contains blackline revisions to the BPM. Attachment D contains clean revisions to the BPM.

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<sup>51</sup> *Id.* at P 171.

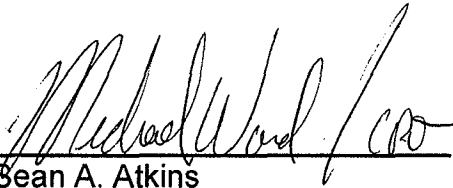
<sup>52</sup> *Id.*

**V. CONCLUSION**

For the reasons state above, the CAISO respectfully requests that the Commission approve this compliance Filing.

Respectfully submitted,

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Operator Corporation

**Attachment A – Current Tariff Blacklines**

**Order 890 Compliance Filing**

**October 31, 2008**

## 20.2 Confidential Information.

The following information provided to the ISO by ~~Scheduling Coordinators~~ shall be treated by the ISO as confidential:

- (a) individual bids for Supplemental Energy;
- (b) individual Adjustment Bids for Congestion Management which are not designated by the Scheduling Coordinator as available;
- (c) individual bids for Ancillary Services;
- (d) transactions between Scheduling Coordinators;
- (e) individual Generator Outage programs unless a Generator makes a change to its Generator Outage program which causes Congestion in the short term (i.e. one month or less), in which case, the ISO may publish the identity of that Generator.
- (f) Demand Forecast and other hourly data provided by Scheduling Coordinators to the ISO pursuant to Sections 4.5.3.7 and 31.1.4.

(g) The following information provided to the ISO by ~~Scheduling Coordinators or Market Participants~~ for purposes of the Interim Reliability Requirements Program shall be treated by the ISO as confidential:

- (1) Annual and monthly Resource Adequacy Plans pursuant to Sections 40.2.1 and 40.2.2, respectively, and Supply Plans pursuant to Section 40.6; however, any Planning Reserve Margin information required by Section 40.4 and any Qualifying Capacity eligibility criteria information required by Section 40.5.1 contained in the Resource Adequacy Plans and/or Supply Plans shall not be treated as confidential.
- (2) Demand Forecast and other hourly data provided pursuant to Section 40.3.
- (3) Information on existing import contracts, and any trades or sales of allocated import capacity, provided pursuant to Section 40.5.2.2.
- (4) Information reported by non-Participating Generators pursuant to Sections 40.6A.3 and 40.7.3.
- (5) Information submitted through the dispute or discrepancy resolution process pursuant to

Section 40.2.3.

- (h) The following information related to the Transmission Planning Process, in accordance with Section 24 of Appendix EE:
- (1) Information received under Sections 24.2.3.2 and 24.2.3.3 of Appendix EE to the extent such information has been designated as confidential in accordance with the Business Practice Manual;
  - (2) Information, the release of which may harm competitive markets, as determined by the CAISO's Department of Market Monitoring;
  - (3) Information received by the CAISO pursuant to agreements and contracts, executed prior to December 21, 2007, that preclude the release of the information;
  - (4) Information that involves proprietary analytical tools, computer codes, or any other material that is protected by intellectual property rights held by the CAISO, Project Sponsor, Market Participant or other third-party; and
  - (5) Critical Energy Infrastructure Information.

However, composite documents, data, and other information that may be developed based on confidential information under this Section shall not be deemed confidential if the composite documents, data, and other information do not disclose any confidential information of any individual Scheduling Coordinator, Market Participant, or other third-party or Critical Energy Infrastructure Information.

\* \* \*

**20.4 Disclosure.**

Notwithstanding anything in this Section 20 to the contrary,

- (a) The ISO: (i) shall publish individual bids for Supplemental Energy, individual bids for Ancillary Services, and individual Adjustment Bids, provided that such data are published no sooner than six (6) months after the Trading Day with respect to which the bid or Adjustment Bid was submitted and in a manner that does not reveal the specific resource or the name of the Scheduling Coordinator submitting the bid or Adjustment Bid, but that allows the bidding behavior of individual, unidentified resources and

Scheduling Coordinators to be tracked over time; and (ii) may publish data sets analyzed in any public report issued by the ISO or by the Market Surveillance Committee, provided that such data sets shall be published no sooner than six (6) months after the latest Trading Day to which data in the data set apply, and in a manner that does not reveal any specific resource or the name of any Scheduling Coordinator submitting bids or Adjustment Bids included in such data sets.

(b) If the ISO is required by applicable laws or regulations, or in the course of administrative or judicial proceedings, to disclose information that is otherwise required to be maintained in confidence pursuant to this Section 20, the ISO may disclose such information; provided, however, that as soon as the ISO learns of the disclosure requirement and prior to making such disclosure, the ISO shall notify any affected Market Participant of the requirement and the terms thereof. The Market Participant may, at its sole discretion and own cost, direct any challenge to or defense against the disclosure requirement and the ISO shall cooperate with such affected Market Participant to the maximum extent practicable to minimize the disclosure of the information consistent with applicable law. The ISO shall cooperate with the affected Market Participant to obtain proprietary or confidential treatment of confidential information by the person to whom such information is disclosed prior to any such disclosure.

(c) The ISO may disclose confidential or commercially sensitive information, without notice to an affected Market Participant, in the following circumstances:

(i) If the FERC, or its staff, during the course of an investigation or otherwise, requests information that is confidential or commercially sensitive. In providing the information to FERC or its staff, the ISO shall take action consistent with 18 C.F.R. §§ 1b.20 and 388.112, and request that the information be treated as confidential and non-public by the FERC and its staff and that the information be withheld from public disclosure. The ISO shall provide the requested information to the FERC or its staff within the time provided for in the request for information. The ISO shall notify an affected Market Participant within a reasonable time after the ISO is notified by FERC or its staff that a request for disclosure of, or decision to disclose, the confidential or commercially sensitive



information has been received, at which time the ISO and the affected Market Participant may respond before such information would be made public; or

(ii) In order to maintain reliable operation of the ISO Control Area, the ISO may share critical operating information, system models, and planning data with ~~other~~ the WECC Reliability Coordinators, who ~~has~~ have executed the Western Electricity Coordinating Council Confidentiality Agreement for Electric System Data, or ~~are~~ is subject to similar confidentiality requirements; or

(iii) In order to maintain reliable operation of the ISO Control Area, the ISO may share individual Generating Unit Outage information with the operations engineering and/or the outage coordination division(s) of other Control Area operators, Participating TOs, MSS Operators and other transmission system operators engaged in the operation and maintenance of the electric supply system whose system is significantly affected by the Generating Unit and who have executed the Western Electricity Coordinating Council Confidentiality Agreement for Electric System Data.

(d) Information submitted through Resource Adequacy Plans pursuant to Sections 40.2.1 and 40.2.2, Supply Plans pursuant to Section 40.6, and the dispute or discrepancy resolution process pursuant to Section 40.2.3 may be provided to:

(i) the Scheduling Coordinator(s) and/or Market Participant(s) involved in the dispute or discrepancy pursuant to Section 40.2.3, only to the limited extent necessary to identify the disputed transaction and relevant counterparty or counterparties.

(ii) the regulatory entity, whether the CPUC or a Local Regulatory Authority, with jurisdiction over a Load Serving Entity involved, pursuant to Section 40.2.3, in a dispute or discrepancy, or otherwise is identified by the ISO as exhibiting a potential deficiency in demonstrating compliance with Resource Adequacy rules adopted by the CPUC or Local Regulatory Authority, as applicable. The information provided shall be limited to the particular dispute, discrepancy or deficiency.

(e) Notwithstanding the provisions of Section 20.2(hf), information submitted through the

Transmission Planning Process ~~shall~~ may be disclosed as follows:

- (i) Critical Energy Infrastructure Information may be provided to a requestor where such person is employed or designated to receive CEII by: (a) a Market Participant; or (b) an electric utility regulatory agency within California; to receive CEII; (c) an Interconnection Customer that has submitted an Interconnection Request to the CAISO under the CAISO's Large Generator Interconnection Procedure or Small Generator Interconnection Procedure (LGIP or SGIP); (d) a developer having a pending or potential proposal for development of a Generating Facility or transmission addition, upgrade or facility and that is performing studies in contemplation of filing an Interconnection Request or submitting a transmission infrastructure project through the ISO Transmission Planning Process; or (e) a not-for-profit organization representing consumer regulatory or environmental interests before Local Regulatory Authority or federal regulatory agency. To obtain Critical Energy Infrastructure Information, the requestor must submit a statement as to the need for the CEII, and must ~~the requestor executes~~ and returns to the CAISO the form of the non-disclosure agreement and non-disclosure statement included as part of the Business Practice Manual. The CAISO may, at its sole discretion, reject a request for CEII and upon such rejection, the requestor will be directed to utilize the FERC procedures for access to the requested CEII.
- (ii) Information that is confidential under Section 20.2(hf)(1i) or 20.2(hf)(2ii) may be disclosed to any individual designated by a Market Participant, electric utility regulatory agency within California, or other stakeholder that signs and returns to the CAISO the form of the non-disclosure agreement, nondisclosure statement and certification -that the individual is ~~or represents~~ a non-Market Participant, which is any person or entity not involved in a marketing, sales, or brokering function as market, sales, or brokering are defined in FERC's Standards of Conduct for Transmission Providers (18 C.F.R. § 358 et seq.), included as part of the Business Practice Manual; provided, however, that information obtained pursuant to 20.2(h)(2) will be provided only in composite form so

that information related to individual Load Serving Entities or Scheduling Coordinators will not be disclosed; and

- (iii) Data base and other transmission planning information obtained from the WECC, or its successor, may be disclosed to individuals designated by a Market Participant, electric utility regulatory agency within California, or other stakeholder in accordance with the procedures set forth in the Business Practice Manual.

\* \* \*

## **CAISO Tariff Appendix A**

### **Master Definitions Supplement**

\* \* \*

#### **Large Project**

A transmission upgrade or addition that exceeds \$200 million in capital costs and consists of a proposed transmission line or substation facilities capable of operating at voltage levels greater than 200 kV. Location Constrained Resource Interconnection Facilities are not included in this definition, regardless of the capital cost or voltage level of the transmission upgrade or addition. A Large Project may also be a project that does not meet the dollar or voltage level requirement, but that the CAISO determines raises significant policy issues warranting a separate planning process.

\* \* \*

#### **Operational Flexibility**

The latitude allowed the CAISO necessary to provide reasonable assurance that the transmission network is designed in such a way that it will be secure considering the inherent uncertainty in system conditions or unforeseen circumstances, based on the current system configuration and available generation.

\* \* \*

**Project Sponsor**

A Market Participant or group of Market Participants, or a Participating TO, or a project developer that is not a Market Participant or Participating TO that proposes the construction of a transmission addition or upgrade in accordance with Section 24 of the ISO Tariff.

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**ISO TARIFF APPENDIX EE**

**Transmission Expansion and Planning Process**

\* \* \*

**PART A. Transmission Expansion and Planning Process**

**24.1 Determination of Need for Proposed Transmission Projects.**

A Participating TO, Project Sponsor, Market Participant, the CAISO, the CPUC, or CEC may propose a transmission system addition or upgrade, and the CAISO will determine, in accordance with this Section 24.1 of this Appendix EE, whether the transmission addition or upgrade is needed, where it will (1) promote economic efficiency, (2) maintain System Reliability, (3) satisfy the requirements of a Location Constrained Resource Interconnection Facility, or (4) maintain the simultaneous feasibility of allocated Long-Term CRRs. CAISO management can determine the need for transmission additions or upgrades with an estimated capital investment of less than \$50 million without CAISO Governing Board approval. The determination of need by CAISO management for transmission additions or upgrades with an estimated capital cost of \$50 million or more must be approved by the CAISO Governing Board.

**24.1.1 Economically Driven Projects.**

The determination that a transmission addition or upgrade is needed to promote economic efficiency shall be made in accordance with this Section 24 of this Appendix EE and the Business Practice Manual in any of the following ways:

- (a) Where a Project Sponsor proposes a Merchant Transmission Facility and demonstrates to the CAISO the financial capability to pay the full cost of construction and operation of the Merchant Transmission Facility. The Merchant

Transmission Facility must mitigate all operational concerns identified under Section 24.5 of this Appendix EE to the satisfaction of the CAISO, in consultation with the Participating TO(s) in whose PTO Service Territory the Merchant Transmission Facility will be located, and ensure the continuing feasibility of allocated Long Term CRRs over the length of their terms. To ensure that the Project Sponsor is financially able to pay the construction and operating costs of the Merchant Transmission Facility, and where the Participating TO is not the Project Sponsor and is to construct the Merchant Transmission Facility under Section 24.1 of this Appendix EE, the CAISO in cooperation with the Participating TO may require (1) a demonstration of creditworthiness (e.g., an appropriate credit rating), or (2) sufficient security in the form of an unconditional and irrevocable letter of credit or other similar security sufficient to meet its responsibilities and obligations for the full costs of the transmission addition or upgrade.

- (b) Where a Participating TO, Market Participant, Project Sponsor, the CPUC, or CEC proposes a transmission addition or upgrade during the Request Window and the project is approved by the CAISO Governing Board or by CAISO management if the proposed transmission addition or upgrade has a capital cost of less than \$50 million in accordance with the Study Plan and the project is included in the CAISO annual Transmission Plan., ~~or a Participating TO proposes a transmission upgrade or addition to an existing transmission facility with an estimated capital cost of less than \$50 million in accordance with the Study Plan and the project is included in the CAISO annual Transmission Plan.~~ In determining whether to approve the project, the CAISO Governing Board or CAISO management, as applicable, shall consider the degree to which, if any, the benefits of the project outweigh the costs, in accordance with the procedures and using the technical studies set forth in the Business Practice Manual. The benefits of the project may include, but need not be limited to, a calculation of

any reduction in production costs, Congestion costs, Transmission Losses, capacity or other electric supply costs resulting from improved access to cost-efficient resources, and environmental costs. The cost of the project must consider any estimated costs identified under Section 24.1.4 of this Appendix EE to maintain the simultaneous feasibility of allocated Long Term CRRs for the length of their term. The CAISO management or CAISO Governing Board, as appropriate, in determining whether to approve or recommend the project, shall also consider the comparative costs and benefits of viable alternatives to the proposed transmission upgrade or addition, including (1) other transmission additions or upgrades, or the effects of other transmission additions or upgrades proposed under Section 24.2 of this Appendix EE during the Transmission Planning Process cycle, (2) Demand-side management, (3) acceleration or expansion of any transmission upgrade or addition already approved by the CAISO Governing Board or included in any CAISO annual Transmission Plan, or (4) Generation.

- (c) Where the CAISO proposes a transmission addition or upgrade during the CAISO's Transmission Planning Process and the project is approved by the CAISO Governing Board or included in the CAISO annual Transmission Plan and approved by CAISO management, as appropriate. In determining whether to approve the CAISO proposed transmission addition or upgrade, the CAISO Governing Board and CAISO management shall apply the same factors set forth in Section 24.1.1(b) of this Appendix EE. If approved by the CAISO Governing Board or CAISO management, as appropriate, the CAISO will designate one or more of the Participating TOs with PTO Service Territories in which the terminus of the transmission addition or upgrade will be located to act as Project Sponsor. Where two or more Participating TOs are designated as Project Sponsors, such CAISO designation will include the proportionate responsibility between or among Participating TOs to own, construct, and finance the transmission addition

or upgrade. If a Participating TO refuses to act as a Project Sponsor under this Section 24.1.1(c) of this Appendix EE, the CAISO will first request other designated Participating TO(s) to assume the remainder or greater proportionate responsibility, and if no other Participating TO had been designated or is willing to increase its proportionate responsibility, the CAISO may solicit bids to finance, own, and construct the transmission addition or upgrade.

#### **24.1.1.1 Information Requirements for Economic Transmission Projects.**

The Project Sponsor, Market Participant ~~or~~ and relevant Participating TOs shall provide any necessary assistance and information to the CAISO to enable the CAISO to determine that a transmission upgrade or addition is needed to promote economic efficiency, and will perform all studies required by the adopted Study Plan in a manner consistent with the Business Practice Manual. A Project Sponsor of an economically driven transmission upgrade or addition to promote economic efficiency under Section 24.1.1 of this Appendix EE shall also provide in its proposal a statement whether the proposed upgrade or addition will be a Merchant Transmission Facility.

#### **24.1.2 Reliability Driven Projects.**

The CAISO in coordination with each Participating TO with a PTO Service Territory will, as part of the Transmission Planning Process and consistent with the procedures set forth in the Business Practice Manual, identify the need for any transmission additions or upgrades required to ensure System Reliability consistent with all Applicable Reliability Criteria and CAISO Planning Standards. In making this determination, the CAISO, in coordination with each Participating TO with a PTO Service Territory and other Market Participants, shall consider lower cost alternatives to the construction of transmission additions or upgrades, such as acceleration or expansion of existing projects, Demand-side management, Remedial Action Schemes, appropriate Generation, interruptible Loads or reactive support. The CAISO shall direct each Participating TO with a PTO Service Area, as a registered Transmission Planner with NERC, to perform the necessary studies, based on the Unified Planning Assumptions and Study Plan as set forth in Section 24.2.13 of this Appendix EE, any applicable Interconnection Study, and in accordance with the Business Practice Manual, to determine the facilities needed to meet all Applicable Reliability Criteria and CAISO Planning Standards. The Participating TO with a PTO Service Area shall provide the

CAISO and other Market Participants with all information relating to the studies performed under this Section, subject to any limitation provided in Section 20.2 of the CAISO Tariff or the applicable LGIP.

Based on the study results, and as part of the Transmission Planning Process described in the Business Practice Manual, the CAISO, CEC, CPUC, Project Sponsors and other Market Participants shall be free to propose any transmission upgrades or additions deemed necessary to ensure System Reliability consistent with Applicable Reliability Criteria and CAISO Planning Standards. The Participating TO with a PTO Service Territory in which the transmission upgrade or addition deemed needed under this Section 24.1.2 of this Appendix EE is to be located shall be the Project Sponsor, with the responsibility to construct, own and finance, and maintain such transmission upgrade or addition.

**24.1.3. Location Constrained Resource Interconnection Facility Projects.**

The CAISO, CPUC, CEC, a Participating TO or any other Market Participant may propose a transmission addition as a Location Constrained Resource Interconnection Facility. A proposal shall include the following information, to the extent available:

- (a) Information showing that the proposal meets the requirements of Section 24.1.3.1 of this Appendix EE; and
- (b) A description of the proposed facility, including the following information:
  - (1) Transmission studies demonstrating that the proposed facility satisfies Applicable Reliability Criteria and CAISO Planning Standards;
  - (2) Identification of the most feasible and cost-effective alternative transmission additions, which may include network upgrades, that would accomplish the objective of the proposal;
  - (3) A planning level cost estimate for the proposed facility and all proposed alternatives;
  - (4) An assessment of the potential for the future connection of further transmission additions that would convert the proposed facility into a network transmission facility, including conceptual plans;
  - (5) The estimated in-service date of the proposed facility; and



- (6) A conceptual plan for connecting potential LCRIGs, if known, to the proposed facility.

**24.1.3.1 Criteria for Qualification as a Location Constrained Resource Interconnection Facility.**

- (a) The CAISO shall conditionally approve a facility as a Location Constrained Resource Interconnection Facility if it determines that the facility is needed and all of the following requirements are met:
  - (1) The facility is to be constructed for the primary purpose of connecting to the CAISO Controlled Grid two or more Location Constrained Resource Interconnection Generators in an Energy Resource Area, and at least one of the Location Constrained Resource Interconnection Generators is to be owned by an entity(ies) that is not an Affiliate of the owner(s) of another Location Constrained Resource Interconnection Generator in that Energy Resource Area;
  - (2) The facility will be a High Voltage Transmission Facility;
  - (3) At the time of its in-service date, the facility will not be a network facility and would not be eligible for inclusion in a Participating TO's TRR other than as an LCRIF; and
  - (4) The facility meets Applicable Reliability Criteria and CAISO Planning Standards.
- (b) The proponent of a facility that has been determined by the CAISO to meet the requirements of Section 24.1.3.1(a) of this Appendix EE shall provide the CAISO with information concerning the requirements of this subsection not less than ninety (90) days prior to the planned commencement of construction, and the facility shall qualify as a Location Constrained Resource Interconnection Facility if the CAISO determines that both of the following requirements are met:
  - (1) The addition of the capital cost of the facility to the High Voltage TRR of a Participating TO will not cause the aggregate of the net investment of all LCRIFs (net of the amount of the capital costs of LCRIFs to be recovered from LCRIGs pursuant to Section 26.6) included in the High Voltage TRRs of all Participating

TOs to exceed fifteen percent (15%) of the aggregate of the net investment of all Participating TOs in all High Voltage Transmission Facilities reflected in their High Voltage TRRs (net of the amount of the capital costs of LCRIFs to be recovered from LCRIGs pursuant to Section 26.6) in effect at the time of the CAISO's evaluation of the facility); and

- (2) Existing or prospective owners of LCRIGs have demonstrated their interest in connecting LCRIGs to the facility consistent with the requirements of Section 24.1.3.2 of this Appendix EE, which establishes the necessary demonstration of interest.
- (c) Each Participating TO shall report annually to the CAISO the amount of its net investment in LCRIFs (net of the amount of the capital costs of LCRIFs to be recovered from LCRIGs pursuant to Section 26.6), the portion of the capital costs of LCRIFs credited to its TRR, and its net investment in High Voltage Transmission Facilities reflected in its High Voltage TRR (net of the amount of the capital costs of LCRIFs to be recovered from LCRIGs pursuant to Section 26.6), to enable the CAISO to make the determination required under Section 24.1.3.1(b)(1) of this Appendix EE.

**24.1.3.2 Demonstration of Interest in a Location Constrained Resource Interconnection Facility.**

A proponent of an LCRIF must demonstrate interest in the LCRIF equal to sixty percent (60%) or more of the capacity of the facility in the following manner:

- (a) the proponent's demonstration must include a showing that LCRIGs that would connect to the facility and would have a combined capacity equal to at least twenty-five percent (25%) of the capacity of the facility have executed Large Generator Interconnection Agreements or Small Generator Interconnection Agreements, as applicable; and
- (b) to the extent the showing pursuant to Section 24.1.3.2(a) of Appendix EE does not constitute sixty percent (60%) of the capacity of the LCRIF, the proponent's demonstration of the remainder of the required minimum level of interest must include a showing that additional LCRIGs:

- (1) in the case of Large Generating Facilities subject to the LGIP set forth in Appendix GG, have obtained Site Exclusivity or paid the Site Exclusivity Deposit in lieu of Site Exclusivity, provided that any Site Exclusivity Deposit paid pursuant to Section 3.5 of the LGIP set forth in Appendix GG shall satisfy this requirement, or, in the case of Large Generating Facilities subject to the LGIP set forth in Appendix U and Small Generating Facilities, have obtained control over their site or paid a deposit to the CAISO in the amount of \$250,000, which deposit shall be refundable if the LCRIF is not approved or is withdrawn by the proponent; and
- (2) have demonstrated interest in the LCRIF by one of the following methods:
  - (i) executing a firm power sales agreement for the output of the LCRIG for a period of five years or longer; or
  - (ii) in the case of Large Generating Facilities subject to the LGIP set forth in Appendix GG, filing an Interconnection Request and paying the Interconnection Study Deposit required by Section 3.5 of the LGIP set forth in Appendix GG; or
  - (iii) in the case of Large Generating Facilities subject to the LGIP set forth in Appendix U and Small Generating Facilities, being in the CAISO's interconnection queue and paying a deposit to the CAISO equal to the sum of the minimum deposits required of an Interconnection Customer for all studies performed in accordance with the Large Generator Interconnection Procedures (Appendix U) or Small Generator Interconnection Procedures (Appendix AA), as applicable to the LCRIG, less the amount of any deposits actually paid by the LCRIG for such studies. The deposit shall be credited toward such study costs. If the LCRIF is not approved or is withdrawn by the proponent, any deposit paid under this provision shall be refundable to the extent it exceeds costs incurred by the CAISO for such studies; or
  - (iv) paying a deposit to the CAISO equal to five percent (5%) of the LCRIG's pro rata share of the capital costs of a proposed LCRIF. The deposit shall be credited

toward costs of Interconnection Studies performed in connection with the Large Generator Interconnection Procedures (Appendix U or Appendix GG, as applicable) or Small Generator Interconnection Procedures (Appendix AA), whichever is applicable. If the LCRIF is not approved or is withdrawn by the proponent, any deposit paid under this provision shall be refundable to the extent it exceeds the costs incurred by the CAISO for such studies.

#### **24.1.3.3 Coordination With Transmission Additions Proposed by Non-Participating TOs.**

In the event that a facility proposed as an LCRIF would connect to LCRIGs in an Energy Resource Area that would also be connected by a transmission facility that is in existence or is proposed to be constructed by an entity that is not a Participating TO and that does not intend to place that facility under the Operational Control of the CAISO, the CAISO shall coordinate with the entity owning or proposing that transmission facility through any regional planning process to avoid the unnecessary construction of duplicative transmission additions to connect the same LCRIGs to the CAISO Controlled Grid.

#### **24.1.3.4 Evaluation of Location Constrained Resource Interconnection Facilities.**

In evaluating whether a proposed LCRIF that meets the requirements of Section 24.1.3.1 of this Appendix EE is needed, and for purposes of ranking and prioritizing LCRIF projects, the CAISO will consider the following factors:

- (a) Whether, and if so, the extent to which, the facility meets or exceeds applicable CAISO Planning Standards, including standards that are Applicable Reliability Criteria.
- (b) Whether, and if so, the extent to which, the facility has the capability and flexibility both to interconnect potential LCRIGs in the Energy Resource Area and to be converted in the future to a network transmission facility.
- (c) Whether the projected cost of the facility is reasonable in light of its projected benefits, in comparison to the costs and benefits of other alternatives for connecting Generating Units or otherwise meeting a need identified in the CAISO Transmission Planning Process, including alternatives that are not LCRIFs. In making this determination, the CAISO shall take into account, among other factors, the following:

- (1) The potential capacity of LCRIGs and the potential Energy that could be produced by LCRIGs in each Energy Resource Area;
- (2) The capacity of LCRIGs in the CAISO's interconnection process for each Energy Resource Area;
- (3) The projected cost and in-service date of the facility in comparison with other transmission facilities that could connect LCRIGs to the CAISO Controlled Grid;
- (4) Whether, and if so, the extent to which, the facility would provide additional reliability or economic benefits to the CAISO Controlled Grid; and
- (5) Whether, and if so, the extent to which, the facility would create a risk of stranded costs.

#### **24.1.4 Maintaining the Feasibility of Allocated Long Term CRRs.**

The CAISO is obligated to ensure the continuing feasibility of Long Term CRRs that are allocated by the CAISO over the length of their terms. In furtherance of this requirement the CAISO shall, as part of its annual Transmission Planning Process cycle, test and evaluate the simultaneous feasibility of allocated Long Term CRRs, including, but not limited to, when acting on the following types of projects: (a) planned or proposed transmission projects; (b) Generating Unit or transmission retirements; (c) Generating Unit interconnections; and (d) the interconnection of new Load. Pursuant to such evaluations, the CAISO shall identify the need for any transmission additions or upgrades required to ensure the continuing feasibility of allocated Long Term CRRs over the length of their terms and shall publish Congestion Data Summary along with the results of the CAISO technical studies. In assessing the need for transmission additions or upgrades to maintain the feasibility of allocated Long Term CRRs, the CAISO, in coordination with the Participating TOs and other Market Participants, shall consider lower cost alternatives to the construction of transmission additions or upgrades, such as acceleration or expansion of existing projects; Demand-side management; Remedial Action Schemes; constrained-on Generation; interruptible Loads; reactive support; or in cases where the infeasible Long Term CRRs involve a small magnitude of megawatts, ensuring against the risk of any potential revenue shortfall using the CRR Balancing Account and uplift mechanism in Section 11.2.4 of the CAISO Tariff. As part of the CAISO's Transmission

Planning Process, the Participating TOs and Market Participants shall provide the necessary assistance and information to the CAISO to allow it to assess and identify transmission additions or upgrades that may be necessary under Section 24.1.4 of this Appendix EE. To the extent a transmission upgrade or addition is deemed needed to maintain the feasibility of allocated Long Term CRRs in accordance with this Section and included in the CAISO's annual Transmission Plan, the CAISO will designate the Participating TO(s) with a PTO Service Territory in which the transmission upgrade or addition is to be located as the Project Sponsor(s), responsible to construct, own and/or finance, and maintain such transmission upgrade or addition.

**24.2            Transmission Planning Process and Coordination of Technical Studies.**

The CAISO shall perform the CAISO's Transmission Planning Process on an annual cycle in accordance with the terms of this CAISO Tariff, the Transmission Control Agreement, and the Business Practice Manual. The Transmission Planning Process shall, at a minimum:

- (a)     Coordinate and consolidate the transmission needs of the CAISO Control Area into a single plan, which will be assessed on the basis of maintaining the reliability of the CAISO Controlled Grid in accordance with Applicable Reliability Criteria and CAISO Planning Standards, in a manner that promotes the economic efficiency of the CAISO Controlled Grid and considers federal and state environmental and other policies affecting the provision of Energy.
- (b)     Reflect a planning horizon covering a minimum of ten (10) years that considers transmission enhancements and expansions, Demand Forecasts, Demand-side management, and capacity forecasts relating to generation technology type, additions and retirements, and such other factors as the CAISO determines are relevant.
- (c)     Seek to avoid unnecessary duplication of facilities and ensure the simultaneous feasibility of the CAISO Transmission Plan and the transmission plans of interconnected Control Areas, and otherwise coordinate with regional and sub-regional transmission planning processes and entities in accordance with Section 24.8 of this Appendix EE.

- (d) Identify existing and projected limitations of the CAISO Controlled Grid's physical, economic or operational capability or performance and identify transmission upgrades and additions, including alternatives thereto, deemed needed in accordance with Section 24.1 of this Appendix EE to address the existing and projected limitations.
- (e) Account for any effects on the CAISO Controlled Grid of the interconnection of Generating Units on the Distribution System under the Wholesale Distribution Access Tariffs of the Participating TOs, including an assessment of the deliverability of such Generating Units on a basis comparable to the Deliverability Assessment performed under Appendix U or Appendix GG, as applicable.

**24.2.1 ~~CAISO Planning Standards Committee~~ Unified Planning Assumptions and Study Plan.**

~~The CAISO shall maintain a Planning Standards Committee, which shall be open to participation by all Market Participants, electric utility regulatory agencies within California, and other interested parties, to review, provide advice on, and propose modifications to CAISO Planning Standards for consideration by CAISO management and the CAISO Governing Board. The Planning Standards Committee shall meet, at a minimum, on an annual basis prior to publication of the draft Unified Planning Assumptions and Study Plan under Section 24.2.3 of this Appendix EE; however, additional meetings, web conferences, teleconferences may be scheduled as needed. Meetings of the Planning Standards Committee shall be noticed by Market Notice and such notice shall be posted to the CAISO Website. Teleconference capability will be made available for all meetings of the Planning Standards Committee. The CAISO Vice President of Planning and Infrastructure Development or his or her designee shall serve as chair of the Planning Standards Committee. All materials addressed at or relating to such meetings, including agendas, presentations, background papers, party comments, and minutes shall be posted to the CAISO Website. The chair of the Planning Standards Committee shall seek approval by the CAISO Governing Board of any modifications to the CAISO Planning Standards, as those CAISO Planning Standards exist as of the effective date of Section 24.2 of this Appendix EE, and must include in the report to the CAISO Governing Board a summary of the positions of parties with respect to the proposed modifications to the~~

~~CAISO Planning Standards and the ground(s) for rejecting modifications, if any, proposed by Market Participants or other interested parties.~~

**24.2.1.1 Additional Projects and Data for Development of the Unified Planning Assumptions and Study Plan.**

The CAISO will develop Unified Planning Assumptions and Study Plan using information and data received during the Request Window in the previous planning cycle and under Section 24.2.3 of this Appendix EE. The CAISO will also use the following in the development of the Unified Planning Assumptions and Study Plan:

- (1) WECC base cases for the relevant planning horizon;
- (2) Transmission upgrades and additions approved by the CAISO in past Transmission Planning Process cycles and scheduled to be energized within the planning horizon;
- (3) Location Constrained Resource Interconnection Facilities conditionally approved under Section 24.1.3.1(a) of this Appendix EE;
- (4) Network Upgrades identified pursuant to Section 25, Appendix U, Appendix GG, or Appendix W relating to the CAISO's Large Generator Interconnection Procedures and Appendix AA relating to the CAISO's Small Generator Interconnection Procedures;
- (5) Operational solutions validated by the CAISO to address Local Capacity Area Resource requirements;
- (6) Regulatory initiatives, as appropriate, including state regulatory agency initiated programs;
- (7) Energy Resource Areas or similar resource areas identified as high priority by the CPUC or CEC; and
- (8) Results and analyses from Economic Planning Studies or other assessments that may have identified potentially needed transmission upgrades or additions performed in past CAISO Transmission Planning Process cycles.



**24.2.1.2 General Scope of Unified Planning Assumptions and Study Plan.**

The Unified Planning Assumptions and Study Plan shall, at a minimum, describe:

- (a) The planning data and assumptions to be used, to the maximum extent possible, as a base case for each technical study to be performed in the Transmission Planning Process cycle, including, but not limited to, those related to Demand Forecasts and distribution, generation capacity additions and retirements, and transmission system modifications;
- (b) A list of each technical study to be performed in the Transmission Planning Process cycle and a summary of the technical study's objective or purpose;
- (c) A description of any modifications to the planning data and assumptions developed as the general base case in Section 24.2.14.2(a) of this Appendix EE made in each technical study performed in the Transmission Planning Process cycle;
- (d) A description of the software tools, methodology and other criteria used in each technical study performed in the Transmission Planning Process cycle;
- (e) The identification of any entities directed to perform a particular technical study or portions of a technical study;
- (f) A proposed schedule for all stakeholder meetings to be held as part of the Transmission Planning Process cycle, and means for notification of any changes thereto, the location on the CAISO Website of information relating to the technical studies performed in the Transmission Planning Process cycle, and the name of a contact person at the CAISO for each technical study performed in the Transmission Planning Process cycle;
- (g) A list and description of each Economic Planning Study studied by the CAISO as a High Priority Economic Planning Study under Section 24.9 of this Appendix EE identified in the past Transmission Planning Process; and

(h) To the maximum extent practicable, and where applicable, appropriate sensitivity analyses, including project or solution alternatives, to be performed as part of technical studies.

**24.2.1.3 Preparation of Draft and Final Unified Planning Assumptions and Study Plan.**

(a) Following review of relevant information, the CAISO will prepare and post on the CAISO Website a draft Unified Planning Assumptions and Study Plan. The CAISO will issue a Market Notice announcing the availability such draft, soliciting comments, and scheduling a public conference(s) as required by Section 24.2.14.3(c) of this Appendix EE.

(b) All comments on the draft Unified Planning Assumptions and Study Plan will be posted by the CAISO to the CAISO Website.

(c) Subsequent to the posting of the draft Unified Planning Assumptions and Study Plan, the CAISO will conduct a minimum of one public meeting open to Market Participants, electric utility regulatory agencies, and other interested parties to review, discuss, and recommend modifications to the draft Unified Planning Assumptions and Study Plan. Additional meetings, web conferences, or teleconferences may be scheduled as needed. All stakeholder meetings, web conferences, or teleconferences shall be noticed by Market Notice and such notice shall be posted to the CAISO Website.

(d) Following the public conference(s) required by Section 24.2.1.32.2(c) of this Appendix EE, and under the schedule set forth in the Business Practice Manual, the CAISO will determine and publish to the CAISO Website the final Unified Planning Assumptions and Study Plan in accordance with the procedures set forth in the Business Practice Manual.

**24.2.2 Technical Studies.**

**24.2.2.1 Performance of Technical Studies**

- (a) In accordance with the Unified Planning Assumptions and Study Plan, and the procedures and deadlines in the Business Practice Manual, the CAISO will perform, or direct the performance by third parties of, technical studies and other assessments necessary for the Transmission Plan and Transmission Planning Process. The CAISO technical studies will include a Congestion Data Summary, as further described in the Business Practice Manual. According to the detailed schedule set forth in the Business Practice Manual, the CAISO will post the preliminary results of its technical studies and proposed mitigation solutions on the CAISO Website. Within one month after the posting of these results, Participating TOs or other third parties will submit the results of the technical assessments conducted at the direction of- the CAISO to be posted to the CAISO Wwebsite. Subsequently, the CAISO will conduct a minimum of one public conference that provides an opportunity for comments on the preliminary results and mitigation proposals. Additional public meetings, web conferences, or teleconferences may be scheduled as needed. All meetings, web conferences, or teleconferences shall be noticed by Market Notice and shall be posted to the CAISO Website.
- (b) All technical studies, whether performed by the CAISO, the Participating TOs or other third parties under the direction of the CAISO, must utilize the Unified Planning Assumptions for the particular technical study to the maximum extent practical, and deviations from the Unified Planning Assumptions for the particular technical study must be documented in the preliminary and final results of each technical study. The CAISO will measure the results of the studies against NERC planning standards, WECC planning standards, and the CAISO Planning Standards, and other criteria established by the Business Practice Manual. After consideration of the comments received on the preliminary results, the CAISO will complete, or direct the completion of, the technical studies and post the final study results on the CAISO Website.

- (c) The CAISO technical study results will identify needs and proposed solutions to meet applicable WECC planning standards, NERC planning standards and other applicable planning standards. Pursuant to the schedule described in the Business Practice Manual, Participating TOs will submit transmission projects and alternative solutions through the Request Window in response to needs and proposed solutions identified by CAISO, as well as projects and solutions to reliability needs identified by the Participating TOs.
- (d) The CAISO and Participating TOs shall coordinate their respective transmission planning responsibilities required for compliance with the NERC Reliability Standards and for the purposes of developing the annual Transmission Plan according to the requirements and time schedules set forth in the Business Practice Manual.

#### **24.2.32 Request Window.**

~~Market Participants may propose Economic Planning Studies and transmission upgrades or additions for inclusion in the annual Transmission Plan during a Request Window. All requests for Economic Planning Studies and transmission upgrades or additions must be submitted by Market Participants, CPUC, CEC, or Project Sponsors through the Request Window, in accordance with Section 24 of Appendix EE and the Business Practice Manual, to be considered for inclusion in the annual Transmission Plan.~~ The duration of the Request Window will be set forth in the Business Practice Manual and will occur in the year prior to the year in which the Transmission Plan is prepared. All Pproposals for Economic Planning Studies and transmission upgrades or additions submitted through the Request Window must use the forms and satisfy the information and technical requirements set forth in the Business Practice Manual. Proposals for transmission additions or upgrades must be within or connect to the CAISO Control Area or CAISO Controlled Grid and proposals for Economic Planning Studies must be intended to promote competition or economic efficiency of serving Load within the CAISO Control Area, but may relate to Congestion relief or transmission capacity expansion outside the CAISO Control Area. The following proposals will only be considered for inclusion in the Transmission Plan if proposed during the Request Window:

- (a) Economic transmission upgrades or additions proposed under Section 24.1.1 of

this Appendix EE, ~~except for projects costing less than \$50 million that are identified through Participating TO proposals provided pursuant to the Study Plan;~~

- (b) Location Constrained Resource Interconnection Facilities under Section 24.1.3 of this Appendix EE not identified by the CAISO as part of Interconnection Studies performed under the LGIP set forth in Appendix U or Appendix GG;
- (c) Demand response programs that are proposed for inclusion in the base case or assumptions for the Transmission Plan or as alternatives to transmission additions or upgrades;
- (d) Generation projects that are proposed as solutions to Congestion identified in previously published Economic Planning Studies, for inclusion in long-term planning studies, or as alternatives to transmission additions or upgrades; and
- (e) Requests for Economic Planning Studies; and.
- (f) Reliability-driven projects described in Section 24.1.2.

#### **24.2.32.1 CAISO Assessment of Request Window Proposals.**

Following the submittal of a proposal for a transmission addition or upgrade, Demand response program, or generation project during the Request Window in accordance with Section 24.2.32 of this Appendix EE, the CAISO will determine whether the proposal will be included in the Unified Planning Assumptions or Study Plan as appropriate. A proposal can only be included in the Unified Planning Assumptions or Study Plan upon the determination by the CAISO that:

- (a) the proposal satisfies the information requirements for the particular type of project submitted as set forth in templates included in the Business Practice Manual;
- (b) the proposal is not functionally duplicative of transmission upgrades or additions that have previously been approved by the CAISO; and
- (c) the proposal, if a sub-regional or regional project that affects other interconnected Control Areas, has been reviewed by the appropriate sub-

regional or regional planning entity, is not inconsistent with such sub-regional or regional planning entity's preferred solution or project, and has been determined to be appropriate for inclusion in the CAISO Study Plan, rather than, or in addition to, being included in or deferred to the planning process of the sub-regional or regional planning entity.

In accordance with the schedule and procedures set forth in the Business Practice Manual, the CAISO will notify the Participating TO, Market Participant, Project Sponsor, the CEC or CPUC submitting the proposal of any deficiencies in the proposal and provide the Market Participant an opportunity to correct the deficiencies. The failure to correct the deficiency precludes the proposal from inclusion in the Study Plan. The CAISO will notify the party ~~Market Participant~~ submitting the proposal whether or not the proposal will be included in the Study Plan.

**24.2.32.2 CAISO Assessment of Requests for Economic Planning Studies Received During the Request Window.**

Following the submittal of a request for an Economic Planning Study during the Request Window in accordance with Section 24.2.32 of this Appendix EE, the CAISO will determine whether the request shall be designated as a High Priority Economic Planning Study for inclusion in the Unified Planning Assumptions and Study Plan. In making the determination, the CAISO will consider:

- (a) Whether the requested Economic Planning Study seeks to address Congestion identified by the CAISO in the Congestion Data Summary published for the applicable Transmission Planning Process cycle and the magnitude, duration, and frequency of that Congestion;
- (b) Whether the requested Economic Planning Study addresses delivery of Generation from Location Constrained Resource Interconnection Generators or network transmission facilities intended to access Generation from an Energy Resource Area (ERA) or similar resource area assigned a high priority by the CPUC or CEC;
- (c) Whether the requested Economic Planning Study is intended to address Local Capacity Area Resource requirements; or

- (d) Whether resource and Demand information indicates that Congestion described in the Economic Planning Study request is projected to increase over the planning horizon used in the Transmission Planning Process and the magnitude of that Congestion.
- (e) Whether the Economic Planning Study is intended to encompass the upgrades necessary to integrate new generation resources or loads on an aggregated or regional basis.

### **24.2.3.3 High Priority Economic Planning Studies**

- (a) In accordance with the schedule and procedures set forth in the Business Practice Manual, the CAISO will post to the CAISO Website the list of selected High Priority Economic Planning Studies to be included in the draft Unified Planning Assumptions and Study Plan. The CAISO may assess requests for Economic Planning Studies individually or in combination where such requests may have common or complementary effects on the CAISO Controlled Grid. The CAISO will perform a maximum of five High Priority Economic Planning Studies; however, the CAISO retains discretion to perform greater than five High Priority Economic Planning Studies should stakeholder requests or patterns of Congestion or anticipated Congestion so warrant. In performing High Priority Economic Planning Studies, the CAISO will batch or cluster proposed Economic Planning Studies where (1) such studies will address the same patterns of Congestion or anticipated Congestion; (2) such studies will address patterns of Congestion or anticipated Congestion that are in related locations; or (3) such studies seek to integrate new generation resources or loads that impact the same facilities.
- (b) High Priority Economic Planning Studies shall be performed in accordance with the standards and procedures established in the Business Planning Manual. Market Participants may conduct Economic Planning Studies that have not been designated as High Priority Economic Planning Studies at their own expense and

may submit such studies for consideration in the development of the Transmission Plan when the CAISO provides notice of the public- meeting regarding technical study results pursuant to Section 24.2.24.2.1(a) of this Appendix EE.

#### **24.2.4 Development and Approval of Transmission Plan.**

- (a) In accordance with the schedule and procedures in the Business Practice Manual, the CAISO will post a draft Transmission Plan. The CAISO will subsequently conduct a public conference regarding the draft Transmission Plan and solicit comments, consistent with the timelines and procedures set forth in the Business Practice Manual. Additional meetings, web conferences, or teleconferences may be scheduled as needed. All stakeholder meetings, web conferences, or teleconferences shall be noticed by Market Notice and such notice shall be posted to the CAISO Website. After consideration of comments, the CAISO will post a final Transmission Plan to the CAISO Website.
- (b) The draft and final Transmission Plan may include, but is not limited to: (1) the results of technical studies performed under the Study Plan; (2) determinations, recommendations, and justifications for the need, according to Section 24.1 of this Appendix EE, for identified transmission upgrades and additions; (3) assessments of transmission upgrades and additions submitted as alternatives to the potential solutions to transmission needs identified by the CAISO and studied during the Transmission Planning Process cycle; (4) results of Economic Planning Studies performed during the Transmission Planning Process cycle; (5) an update on the status of transmission upgrades or additions previously approved by the CAISO, including identification of mitigation plans, if necessary, to address any potential delay in the anticipated completion of an approved transmission upgrade or addition; and (6) to the extent available, the results of Interconnection Studies.



- (c) Transmission upgrades or additions that are Large Projects will be subject to a separate study and public participation process. The study and public participation process for Large Projects may encompass more than one Transmission Planning Process cycle. Large Projects will be identified in the Transmission Plan for each cycle but will be presented to the CAISO Governing Board for approval in accordance with the study and public participation schedule established for that project.
- (d) Transmission upgrades or additions with capital costs of less than \$50 million that do not require approval by the CAISO Governing Board will be identified in the Transmission Plan but will be separately approved by CAISO management according to the procedures in the Business Practice Manual.
- (e) Other projects requiring CAISO Governing Board approval will be identified in the Transmission Plan but will be submitted for approval in accordance with the project timeline in accordance with the procedures in the Business Practice Manual.

#### **24.2.4.1 Presentation to the CAISO Governing Board.**

The CAISO will present the Transmission Plan to the CAISO Governing Board in accordance with the schedule set forth in the Business Practice Manual. The Transmission Plan will be considered final once it has been presented to the CAISO Governing Board and will be posted on the CAISO Website.

#### **24.2.4.2 Obligation to Construct Transmission Projects Included in Transmission Plan.**

A Participating TO that has a PTO Service Territory shall be obligated to construct all transmission additions and upgrades that are determined by the CAISO Governing Board or management, as applicable, to be needed in accordance with the requirements of Section 24 of this Appendix EE, not including conditional approvals and determinations of need under Section 24.1.3.1(a), and which: (1) are additions or upgrades to transmission facilities that are located within its PTO Service Territory, unless (a) it does not own the facility being upgraded or added and neither terminus of such facility is located within its PTO Service Territory or (b) it does not own the facility being upgraded or added and the Project

Sponsor is a Participating TO that elects to construct the transmission upgrade; or (2) are additions to existing transmission facilities or upgrades to existing transmission facilities that it owns, that are part of the CAISO Controlled Grid, and that are located outside of its PTO Service Territory, unless the joint-ownership arrangement, if any, does not permit. A Participating TO's obligation to construct such transmission additions and upgrades shall be subject to: (1) its ability, after making a good faith effort, to obtain all necessary approvals and property rights under applicable federal, state, and local laws and (2) the presence of a cost recovery mechanism with cost responsibility assigned in accordance with Section 24.7 of the CAISO Tariff. The obligations of the Participating TO to construct such transmission additions or upgrades will not alter the rights of any entity to construct and expand transmission facilities as those rights would exist in the absence of a TO's obligations under this CAISO Tariff or as those rights may be conferred by the CAISO or may arise or exist pursuant to this CAISO Tariff.

#### **24.2.4.3 Documentation of Compliance with NERC Reliability Standards**

The Transmission Plan and underlying studies, assessments, information and analysis developed during the Transmission Planning Process, regardless of whether performed by CAISO or by Participating TOs or other third parties at the direction of CAISO, shall be used by the CAISO as part of its documentation of compliance with NERC Reliability Standards.

#### **24.2.3 Additional Planning Information.**

##### **24.2.3.1 Information Provided by Participating TOs.**

In addition to any information that must be provided to the CAISO under the NERC Reliability Standards for ~~Modeling, Data and Analysis (NERC MOD Standards)~~, Participating TOs shall provide the CAISO on an annual or periodic basis in accordance with the schedule and procedures and in the form required by the Business Practice Manual any information and data reasonably required by the CAISO to perform the Transmission Planning Process, including, but not limited to: (1) modeling data for power flow, including reactive power, short-circuit and stability analysis; (2) a description of the total Demand to be served from each substation, including a description of any Energy efficiency programs reflected in the total Demand; (3) the amount of any interruptible Loads included in the total Demand (including conditions under which an interruption can be implemented and any limitations on the duration and frequency of interruptions);

(4), a description of Generating Units to be interconnected to the Distribution System of the Participating TO, including generation type and anticipated Commercial Operation Date; (5) detailed power system models of their transmission systems that reflect transmission system changes, including equipment replacement not requiring approval by the CAISO; (6) Distribution System modifications; (7) transmission network information, including line ratings, line length, conductor sizes and lengths, substation equipment ratings, circuits on common towers and with common rights-of-ways and cross-overs, special protection schemes, and protection setting information; and (8) Contingency lists.

#### **24.2.3.2 Information Provided by Participating Generators.**

In addition to any information that must be provided to the CAISO under the NERC Reliability Standards ~~for Modeling, Data and Analysis (NERC MOD Standards)~~, Participating Generators shall provide the CAISO on an annual or periodic basis in accordance with the schedule, procedures and in the form required by the Business Practice Manual any information and data reasonably required by the CAISO to perform the Transmission Planning Process, including, but not limited to (1) modeling data for short-circuit and stability analysis and (2) data, such as term, and status of any environmental or land use permits or agreements the expiration of which may affect that the operation of the Generating Unit.

#### **24.2.3.3 Information Requested from Load Serving Entities.**

In addition to any information that must be provided to the CAISO under the NERC Reliability Standards ~~for Modeling, Data and Analysis (NERC MOD Standards)~~, the CAISO shall solicit from Load Serving Entities through their Scheduling Coordinators information required by, or anticipated to be useful to, the CAISO in its performance of the Transmission Planning Process, including, but not limited to (1) long-term resource plans; (2) existing long-term contracts for resources and transmission service outside the CAISO Control Area; ~~(3) resource capacity and Energy bid information received through requests for offers or similar solicitations;~~ and (3) Demand Forecasts, including forecasted effect of Energy efficiency and Demand response programs.

#### **24.2.3.4 Information Requested from Interconnected Control Areas, Sub-Regional Planning Groups and Electric Utility Regulatory Agencies.**

In accordance with Section 24.8 of this Appendix EE, the CAISO shall obtain or solicit from interconnected Control Areas, regional and sub-regional planning groups within the WECC, the CPUC,

the CEC, and Local Regulatory Authorities information required by, or anticipated to be useful to, the CAISO in its performance of the Transmission Planning Process, including, but not limited to (1) long-term transmission system plans; (2) long-term resource plans; (3) generation interconnection process information; (4) Demand forecasts; and (5) any other data necessary for the development of power flow, short-circuit, and stability cases over the planning horizon of the CAISO Transmission Planning Process.

#### **24.2.3.5 Obligation to Provide Updated Information.**

If material changes to the information provided under Sections 24.2.3.1 and 24.2.3.2 of this Appendix EE occur during the annual Transmission Planning Process, the providers of the information must provide notice to the CAISO of the changes.

#### **24.2.4 Unified Planning Assumptions and Study Plan.**

##### **24.2.4.1 Additional Projects and Data for Development of the Unified Planning Assumptions and Study Plan.**

The CAISO will develop Unified Planning Assumptions and Study Plan using information and data received during the Request Window and under Section 24.2.3 of this Appendix EE. The CAISO will also use the following in the development of the Unified Planning Assumptions and Study Plan:

- (1) WECC base cases for the relevant planning horizon;
- (2) transmission upgrades and additions approved by the CAISO and scheduled to be energized within the planning horizon;
- (3) Location Constrained Resource Interconnection Facilities conditionally approved under Section 24.1.3.1(a) of this Appendix EE;
- (4) Network Upgrades identified pursuant to Section 25, Appendix U, Appendix GG, or Appendix W relating to the CAISO's Large Generator Interconnection Procedures and Appendix AA relating to the CAISO's Small Generator Interconnection Procedures;
- (5) operational solutions validated by the CAISO to address Local Capacity Area Resource requirements;

- (6) ~~regulatory initiatives, as appropriate, including state regulatory agency initiated programs;~~
- (7) ~~Energy Resource Areas or similar resource areas identified as high priority by the CPUC or CEC; and~~
- (8) ~~results and analyses from Economic Planning Studies or other assessments that may have identified potentially needed transmission upgrades or additions performed in past CAISO Transmission Planning Process cycles.~~

#### **~~24.2.4.2 General Scope of Unified Planning Assumptions and Study Plan.~~**

~~The Unified Planning Assumptions and Study Plan shall, at a minimum, describe:~~

- (a) ~~the planning data and assumptions to be used, to the maximum extent possible, as a base case for each technical study to be performed in the Transmission Planning Process cycle, including, but not limited to, those related to Demand Forecasts and distribution, generation capacity additions and retirements, and transmission system modifications;~~
- (b) ~~a list of each technical study to be performed in the Transmission Planning Process cycle and a summary of the technical study's objective or purpose;~~
- (c) ~~a description of any modifications to the planning data and assumptions developed as the general base case in Section 24.2.4.2(a) of this Appendix EE made in each technical study performed in the Transmission Planning Process cycle;~~
- (d) ~~a description of the software tools, methodology and other criteria used in each technical study performed in the Transmission Planning Process cycle;~~
- (e) ~~the identification of any entities directed to perform a particular technical study or portions of a technical study;~~
- (f) ~~a proposed schedule for all stakeholder meetings to be held as part of the Transmission Planning Process cycle, and means for notification of any changes thereto, the location on the CAISO Website of information relating to the~~

~~technical studies performed in the Transmission Planning Process cycle, and the name of a contact person at the CAISO for each technical study performed in the Transmission Planning Process cycle;~~

~~(g) a list and description of each Economic Planning Study studied by the CAISO as a High Priority Economic Planning Study under Section 24.9 of this Appendix EE; and~~

~~(h) to the maximum extent practicable, and where applicable, identify appropriate sensitivity analyses, including project or solution alternatives, to be performed as part of technical studies.~~

#### ~~24.2.4.3 Preparation of Draft and Final Unified Planning Assumptions and Study Plan.~~

~~(a) Following review of relevant information, the CAISO will prepare and post on the CAISO Website a draft Unified Planning Assumptions and Study Plan. The CAISO will issue a Market Notice announcing the availability such draft, soliciting comments, and scheduling a stakeholder conference(s) as required by Section 24.2.4.3(c) of this Appendix EE.~~

~~(b) All comments from stakeholders on the draft Unified Planning Assumptions and Study Plan will be posted by the CAISO to the CAISO Website.~~

~~(c) Subsequent to the posting of the draft Unified Planning Assumptions and Study Plan, the CAISO will conduct a minimum of one stakeholder meeting open to Market Participants, electric utility regulatory agencies, and other interested parties to review, discuss, and recommend modifications to the draft Unified Planning Assumptions and Study Plan. Additional stakeholder meetings, web conferences, or teleconferences may be scheduled as needed. All stakeholder meetings, web conferences, or teleconferences shall be noticed by Market Notice and such notice shall be posted to the CAISO Website.~~

~~(d) Following the stakeholder conference(s) required by Section 24.2.4.2(c) of this Appendix EE, and under the schedule set forth in the Business Practice Manual,~~

~~the CAISO will determine and publish to the CAISO Website the final Unified Planning Assumptions and Study Plan in accordance with the procedures set forth in the Business Practice Manual.~~

~~24.2.5 Development and Approval of Transmission Plan.~~

~~24.2.5.1 Technical Studies.~~

- ~~(a) In accordance with the Unified Planning Assumptions and Study Plan and the procedures and deadlines in the Business Practice Manual, the CAISO will perform, or direct the performance by third parties of, technical studies and other assessments necessary for the Transmission Plan and Transmission Planning Process, post the preliminary results on the CAISO Website, conduct a minimum of one stakeholder conference, and provide an opportunity for comments of the preliminary results. Additional stakeholder meetings, web conferences, or teleconferences may be scheduled as needed. All stakeholder meetings, web conferences, or teleconferences shall be noticed by Market Notice and such notice shall be posted to the CAISO Website.~~
- ~~(b) All technical studies, whether performed by the CAISO or third party under the direction of the CAISO, must utilize the Unified Planning Assumptions for the particular technical study to the maximum extent practical, and deviations from the Unified Planning Assumptions for the particular technical study must be documented in the preliminary and final results of each technical study. The CAISO will measure the results of the studies against NERC planning standards, WECC planning standards, and the CAISO Planning Standards, and other criteria established by the Business Practice Manual. After consideration of the comments received on the preliminary results, the CAISO will complete, or direct the completion of, the technical studies and post the final study results on the CAISO Website.~~

~~24.2.5.2 Development of Transmission Plan.~~

- ~~(a) In accordance with the schedule and procedures in the Business Practice Manual, the CAISO will post a draft Transmission Plan. The CAISO will subsequently conduct a stakeholder conference regarding the draft Transmission Plan and solicit comments, consistent with the timelines and procedures set forth in the Business Practice Manual. Additional stakeholder meetings, web conferences, or teleconferences may be scheduled as needed. All stakeholder meetings, web conferences, or teleconferences shall be noticed by Market Notice and such notice shall be posted to the CAISO Website. After consideration of comments, the CAISO will post a final Transmission Plan to the CAISO Website.~~
- ~~(b) The draft and final Transmission Plan may include, but is not limited to: (1) the results of technical studies performed under the Study Plan; (2) determinations, recommendations, and justifications for the need, according to Section 24.1 of this Appendix EE, for identified transmission upgrades and additions; (3) assessments of transmission upgrades and additions not proposed under Section 24.1 of this Appendix EE and for which need has not been formally determined by the CAISO Governing Board or management, as applicable, under Section 24.1 of this Appendix EE, but which have been identified by the CAISO as potential solutions to transmission needs studied during the Transmission Planning Process cycle; (4) results of Economic Planning Studies performed during the Transmission Planning Process cycle; (5) an update on the status of transmission upgrades or additions previously approved by the CAISO, including identification of mitigation plans, if necessary, to address any potential delay in the anticipated completion of an approved transmission upgrade or addition; and (6) to the extent available, the results of Interconnection Studies.~~
- ~~(c) The Transmission Plan may not include the results of certain technical studies performed as part of the Transmission Planning Process cycle identified in the Unified Planning Assumptions and Study Plan that were scheduled for~~



~~completion after publication of the Transmission Plan for the Transmission Planning Process cycle.~~

**~~24.2.5.3 Approval by the CAISO Governing Board.~~**

~~The CAISO will present the Transmission Plan to the CAISO Governing Board at the first meeting of the year following the year in which the Transmission Plan is prepared. The Transmission Plan will be considered final once it has been presented to the CAISO Governing Board and will be posted on the CAISO Website. Transmission upgrades and additions for which CAISO Governing Board approval is required may be presented to the CAISO Governing Board for approval separate from presentation of the Transmission Plan.~~

**~~24.3 Obligation to Construct Transmission Projects Included in Transmission Plan.~~**

~~A Participating TO that has a PTO Service Territory shall be obligated to construct all transmission additions and upgrades that are determined by the CAISO Governing Board or management, as applicable, to be needed in accordance with the requirements of Section 24 of this Appendix EE, not including conditional approvals and determinations of need under Section 24.1.3.1(a), and which: (1) are additions or upgrades to transmission facilities that are located within its PTO Service Territory, unless (a) it does not own the facility being upgraded or added and neither terminus of such facility is located within its PTO Service Territory or (b) it does not own the facility being upgraded or added and the Project Sponsor is a Participating TO that elects to construct the transmission upgrade; or (2) are additions to existing transmission facilities or upgrades to existing transmission facilities that it owns, that are part of the CAISO Controlled Grid, and that are located outside of its PTO Service Territory, unless the joint-ownership arrangement, if any, does not permit. A Participating TO's obligation to construct such transmission additions and upgrades shall be subject to: (1) its ability, after making a good faith effort, to obtain all necessary approvals and property rights under applicable federal, state, and local laws and (2) the presence of a cost recovery mechanism with cost responsibility assigned in accordance with Section 24.7 of the CAISO Tariff. The obligations of the Participating TO to construct such transmission additions or upgrades will not alter the rights of any entity to construct and expand transmission facilities as those rights would exist in the absence of a TO's obligations under this CAISO Tariff or as those rights may be conferred by the CAISO or may arise or exist pursuant to this CAISO Tariff.~~

#### **24.4 Participating TO Study Obligation.**

The Participating TO constructing or expanding facilities in accordance with Section 24.2.4.23 of this Appendix, will be directed by the CAISO to coordinate with the Project Sponsor or Participating TO(s) with PTO Service Territories in which the transmission upgrade or addition will be located, neighboring balancing authority areas, as appropriate, and other Market Participants to perform any study or studies necessary, including a Facility Study, to determine the appropriate facilities to be constructed in accordance with the CAISO Transmission Planning Process and the terms set forth in the TO Tariff.

#### **24.5 Operational Review.**

The CAISO will perform an operational review of all facilities studied as part of the CAISO Transmission Planning Process that are proposed to be connected to, or made part of, the CAISO Controlled Grid to ensure that the proposed facilities provide for acceptable Operating Eflexibility and meet all its requirements for proper integration with the CAISO Controlled Grid. If the CAISO finds that such facilities do not provide for acceptable operating flexibility or do not adequately integrate with the CAISO Controlled Grid, the CAISO shall coordinate with the Project Sponsor and, if different, the Participating TO with the PTO Service Territory, or the operators of neighboring balancing authority areas, if applicable, in which the facilities will be located to reassess and redesign the facilities required to be constructed. Transmission upgrades or additions that do not provide acceptable operating flexibility or do not adequately integrate with the CAISO Controlled Grid cannot be included in the CAISO Transmission Plan or approved by CAISO management or the CAISO Governing Board, as applicable.

#### **24.6 State and Local Approval and Property Rights.**

**24.6.1** The Participating TO obligated to construct facilities under this Section 24 must make a good faith effort to obtain all approvals and property rights under applicable federal, state and local laws that are necessary to complete the construction of the required transmission additions or upgrades. This obligation includes the Participating TO's use of eminent domain authority, where provided by state law.

**24.6.2** If the Participating TO cannot secure any such necessary approvals or property rights and consequently is unable to construct a transmission addition or upgrade found to be needed in accordance with Section 24.1 of this Appendix, it shall promptly notify the CAISO and the Project

Sponsor, if any, and shall comply with its obligations under the TO Tariff to convene a technical meeting to evaluate alternative proposals. The CAISO shall take such action as it reasonably considers appropriate, in coordination with the Participating TO, the Project Sponsor, if any, and other affected Market Participants, to facilitate the development and evaluation of alternative proposals including, where possible, conferring on a third party the right to build the transmission addition or upgrade as set forth in Section 24.6.3 of this Appendix.

**24.6.3** Where the conditions of Section 24.6.2 of this Appendix have been satisfied and it is possible for a third party to obtain all approvals and property rights under applicable federal, state and local laws that are necessary to complete the construction of transmission additions or upgrades required to be constructed in accordance with this CAISO Tariff (including the use of eminent domain authority, where provided by state law), the CAISO may confer on a third party the right to build the transmission addition or upgrade, which third party shall enter into the Transmission Control Agreement in relation to such transmission addition or upgrade.

**24.7 WECC and Regional Coordination.**

The Project Sponsor will have responsibility for completing any applicable WECC requirements and rating study requirements to ensure that a proposed transmission addition or upgrade meets regional planning requirements. The Project Sponsor may request the Participating TO to perform this coordination on behalf of the Project Sponsor at the Project Sponsor's expense.

**24.8 Regional and Sub-Regional Planning Process.**

The CAISO will be a member of the WECC and other applicable regional or sub-regional organizations and participate in WECC's operation and planning committees, and in other applicable regional and sub-regional coordinated planning processes.

**24.8.1 Scope of Regional or Sub-Regional Planning Participation.**

The CAISO will collaborate with adjacent transmission providers and existing sub-regional planning organizations through existing processes. This collaboration involves a reciprocal exchange of information, to the maximum extent possible and subject to applicable confidentiality restrictions, in order to ensure the simultaneous feasibility of respective Transmission Plans, the identification of potential

areas for increased efficiency, and the consistent use of common assumptions whenever possible. The details of the CAISO's participation in regional and sub-regional planning processes are set forth in the Business Practice Manual. At a minimum, the CAISO shall be required to:

- (a) solicit the participation, whether through sub-regional planning groups or individually, of all interconnected Control Areas in the development of the Unified Planning Assumptions and Study Plan and in reviewing the results of technical studies performed as part of the CAISO's Transmission Planning Process in order to:
  - (1) coordinate, to the maximum extent practicable, planning assumptions, data and methodologies utilized by the CAISO, regional and sub-regional planning groups or interconnected Control Areas;
  - (2) ensure transmission expansion plans of the CAISO, regional and sub-regional planning groups or interconnected Control Areas are simultaneously feasible and seek to avoid duplication of facilities.
- (b) coordinate with regional and sub-regional planning groups regarding the entity to perform requests for Economic Planning Studies or other Congestion related studies;
- (c) transmit to applicable regional and sub-regional planning groups or interconnected Control Areas information on technical studies performed as part of the CAISO Transmission Planning Process;
- (d) post on the CAISO Website links to the planning activities of applicable regional and sub-regional planning groups or interconnected Control Areas.

#### **24.8.2 Limitation on Regional Activities.**

Neither the CAISO nor any Participating TO nor any Market Participant shall take any position before the WECC or a regional organization that is inconsistent with a binding decision reached through an arbitration proceeding pursuant to Section 13 of the CAISO Tariff, in which the Participating TO or Market Participant voluntarily participated.

## ~~24.9 Economic Planning Studies.~~

### ~~24.9.1 Congestion Data Summary.~~

~~In accordance with the schedule and procedures set forth in the Business Practice Manual, the CAISO shall post on the CAISO Website a Congestion Data Summary.~~

### ~~24.9.2 High Priority Economic Planning Studies.~~

~~High Priority Economic Planning Studies shall be performed in accordance with the standards and procedures established in the Business Planning Manual. Market Participants may conduct Economic Planning Studies that have not been designated as High Priority Economic Planning Studies at their own expense and may submit such studies for consideration in the development of the Transmission Plan when the CAISO provides notice of the stakeholder meeting regarding technical study results pursuant to Section 24.2.5.2 of this Appendix EE.~~

## **24.9 CAISO Planning Standards Committee.**

The CAISO shall maintain a Planning Standards Committee, which shall be open to participation by all Market Participants, electric utility regulatory agencies within California, and other interested parties, to review, provide advice on, and propose modifications to CAISO Planning Standards for consideration by CAISO management and the CAISO Governing Board. The Planning Standards Committee shall meet, at a minimum, on an annual basis prior to publication of the draft Unified Planning Assumptions and Study Plan under Section 24.2.1.3 of this Appendix EE; however, additional meetings, web conferences, teleconferences may be scheduled as needed. Meetings of the Planning Standards Committee shall be noticed by Market Notice and such notice shall be posted to the CAISO Website. Teleconference capability will be made available for all meetings of the Planning Standards Committee. The CAISO Vice President of Market and Infrastructure Development or his or her designee shall serve as chair of the Planning Standards Committee. All materials addressed at or relating to such meetings, including agendas, presentations, background papers, party comments, and minutes shall be posted to the CAISO Website. The chair of the Planning Standards Committee shall seek approval by the CAISO Governing Board of any modifications to the CAISO Planning Standards, as those CAISO Planning Standards exist as of the effective date of Section 24.2 of this Appendix EE, and must include in the report to the CAISO

Governing Board a summary of the positions of parties with respect to the proposed modifications to the CAISO Planning Standards and the ground(s) for rejecting modifications, if any, proposed by Market Participants or other interested parties.

\* \* \*

## **PART B. – DEFINITIONS**

\* \* \*

### **Request Window**

The period of time as set forth in the Business Practice Manual during which transmission additions or upgrades, requests for Economic Planning Studies, and other transmission related information is submitted to the CAISO in accordance with Section 24.2.324.2.2 of Appendix EE.

### **Study Plan**

The plan to be developed pursuant to Section 24.2.124.4.3 of Appendix EE, which sets forth the technical studies to be performed during the annual Transmission Planning Process.

\* \* \*

### **Unified Planning Assumptions**

The assumptions to be developed pursuant to Section 24.2.124.4.3 of Appendix EE and used, to the maximum extent possible, in performing technical studies identified in the Study Plan as part of the annual Transmission Planning Process.

\* \* \*

**Attachment B – Current Tariff Clean Sheets**

**Order 890 Compliance Filing**

**October 31, 2008**



**20 CONFIDENTIALITY.**

**20.1 ISO.**

The ISO shall maintain the confidentiality of all of the documents, data and information provided to it by any Market Participant that are treated as confidential or commercially sensitive under Section 20.2; provided, however, that the ISO need not keep confidential: (1) information that is explicitly subject to data exchange through WEnet pursuant to Section 6 of this ISO Tariff; (2) information that the ISO or the Market Participant providing the information is required to disclose pursuant to this ISO Tariff, or applicable regulatory requirements (provided that the ISO shall comply with any applicable limits on such disclosure); or (3) information that becomes available to the public on a non-confidential basis (other than as a result of the ISO's breach of this ISO Tariff).

**20.2 Confidential Information.**

The following information provided to the ISO shall be treated by the ISO as confidential:

- (a) individual bids for Supplemental Energy;
- (b) individual Adjustment Bids for Congestion Management which are not designated by the Scheduling Coordinator as available;
- (c) individual bids for Ancillary Services;

- (d) transactions between Scheduling Coordinators;
- (e) individual Generator Outage programs unless a Generator makes a change to its Generator Outage program which causes Congestion in the short term (i.e. one month or less), in which case, the ISO may publish the identity of that Generator.
- (f) Demand Forecast and other hourly data provided by Scheduling Coordinators to the ISO pursuant to Sections 4.5.3.7 and 31.1.4.
- (g) The following information provided to the ISO for purposes of the Interim Reliability Requirements Program:
  - (1) Annual and monthly Resource Adequacy Plans pursuant to Sections 40.2.1 and 40.2.2, respectively, and Supply Plans pursuant to Section 40.6; however, any Planning Reserve Margin information required by Section 40.4 and any Qualifying Capacity eligibility criteria information required by Section 40.5.1 contained in the Resource Adequacy Plans and/or Supply Plans shall not be treated as confidential.
  - (2) Demand Forecast and other hourly data provided pursuant to Section 40.3.
  - (3) Information on existing import contracts, and any trades or sales of allocated import capacity, provided pursuant to Section 40.5.2.2.
  - (4) Information reported by non-Participating Generators pursuant to Sections 40.6A.3 and 40.7.3.
  - (5) Information submitted through the dispute or discrepancy resolution process pursuant to Section 40.2.3.

(b) If the ISO is required by applicable laws or regulations, or in the course of administrative or judicial proceedings, to disclose information that is otherwise required to be maintained in confidence pursuant to this Section 20, the ISO may disclose such information; provided, however, that as soon as the ISO learns of the disclosure requirement and prior to making such disclosure, the ISO shall notify any affected Market Participant of the requirement and the terms thereof. The Market Participant may, at its sole discretion and own cost, direct any challenge to or defense against the disclosure requirement and the ISO shall cooperate with such affected Market Participant to the maximum extent practicable to minimize the disclosure of the information consistent with applicable law. The ISO shall cooperate with the affected Market Participant to obtain proprietary or confidential treatment of confidential information by the person to whom such information is disclosed prior to any such disclosure.

(c) The ISO may disclose confidential or commercially sensitive information, without notice to an affected Market Participant, in the following circumstances:

- (i) If the FERC, or its staff, during the course of an investigation or otherwise, requests information that is confidential or commercially sensitive. In providing the information to FERC or its staff, the ISO shall take action consistent with 18 C.F.R. §§ 1b.20 and 388.112, and request that the information be treated as confidential and non-public by the FERC and its staff and that the information be withheld from public disclosure. The ISO shall provide the requested information to the FERC or its staff within the time provided for in the request for information. The ISO shall notify an affected Market Participant within a reasonable time after the ISO is notified by FERC or its staff that a request for disclosure of, or decision to disclose, the confidential or commercially sensitive information has been received, at which time the ISO and the affected Market Participant may respond before such information would be made public; or
- (ii) In order to maintain reliable operation of the ISO Control Area, the ISO may share critical operating information, system models, and planning data with the WECC Reliability Coordinator, who has executed the Western Electricity Coordinating Council

Confidentiality Agreement for Electric System Data, or is subject to similar confidentiality requirements; or

(iii) In order to maintain reliable operation of the ISO Control Area, the ISO may share individual Generating Unit Outage information with the operations engineering and/or the outage coordination division(s) of other Control Area operators, Participating TOs, MSS Operators and other transmission system operators engaged in the operation and maintenance of the electric supply system whose system is significantly affected by the Generating Unit and who have executed the Western Electricity Coordinating Council Confidentiality Agreement for Electric System Data.

(d) Information submitted through Resource Adequacy Plans pursuant to Sections 40.2.1 and 40.2.2, Supply Plans pursuant to Section 40.6, and the dispute or discrepancy resolution process pursuant to Section 40.2.3 may be provided to:

- (i) the Scheduling Coordinator(s) and/or Market Participant(s) involved in the dispute or discrepancy pursuant to Section 40.2.3, only to the limited extent necessary to identify the disputed transaction and relevant counterparty or counterparties.
- (ii) the regulatory entity, whether the CPUC or a Local Regulatory Authority, with jurisdiction over a Load Serving Entity involved, pursuant to Section 40.2.3, in a dispute or discrepancy, or otherwise is identified by the ISO as exhibiting a potential deficiency in demonstrating compliance with Resource Adequacy rules adopted by the CPUC or Local Regulatory Authority, as applicable. The information provided shall be limited to the particular dispute, discrepancy or deficiency.

(e) Notwithstanding the provisions of Section 20.2(h), information submitted through the Transmission Planning Process shall be disclosed as follows:

- (i) Critical Energy Infrastructure Information may be provided to a requestor where such person is employed or designated to receive CEII by: (a) a Market Participant; (b) an electric utility regulatory agency within California; (c) an Interconnection Customer that has submitted an Interconnection Request to the CAISO under the CAISO's Large Generator Interconnection Procedure or Small Generator Interconnection Procedure (LGIP or SGIP); (d) a developer having a pending or potential proposal for development of a Generating Facility or transmission addition, upgrade of facility and that is performing studies in contemplation of filing an Interconnection Request or submitting a transmission infrastructure project through the ISO Transmission Planning Process; or (e) a not-for-profit organization representing consumer regulatory or environmental interests before Local Regulatory Authority or federal regulatory agency. To obtain Critical Energy Infrastructure Information, the requestor must submit a statement as to the need for the CEII, and must execute and return to the CAISO the form of the non-disclosure agreement and non-disclosure statement included as part of the Business Practice Manual. The CAISO may, at its sole discretion, reject a request for CEII and upon such rejection, the requestor will be directed to utilize the FERC procedures for access to the requested CEII.
- (ii) Information that is confidential under Section 20.2(h)(1) or 20.2.(h)(2) may be disclosed to any individual designated by a Market Participant, electric utility regulatory agency within California, or other stakeholder that signs and returns to the CAISO the form of the non-disclosure agreement, nondisclosure statement and certification that the individual is a non-Market Participant, which is any person or entity not involved in a marketing, sales, or brokering function as market, sales, or brokering are defined in FERC's Standards of Conduct for Transmission Providers (18 C.F.R. § 358 et seq.), included as part of the Business Practice Manual; provided, however, that information obtained pursuant to 20.2(h)(2) will be provided only in composite form so that information related to individual Load Serving Entities or Scheduling Coordinators will not be disclosed; and

**PART A. Transmission Expansion and Planning Process**

**24.1 Determination of Need for Proposed Transmission Projects.**

A Participating TO, Project Sponsor, Market Participant, the CAISO, the CPUC, or CEC may propose a transmission system addition or upgrade, and the CAISO will determine, in accordance with this Section 24.1 of this Appendix EE, whether the transmission addition or upgrade is needed, where it will (1) promote economic efficiency, (2) maintain System Reliability, (3) satisfy the requirements of a Location Constrained Resource Interconnection Facility, or (4) maintain the simultaneous feasibility of allocated Long-Term CRRs. CAISO management can determine the need for transmission additions or upgrades with an estimated capital investment of less than \$50 million without CAISO Governing Board approval. The determination of need by CAISO management for transmission additions or upgrades with an estimated capital cost of \$50 million or more must be approved by the CAISO Governing Board.

**24.1.1 Economically Driven Projects.**

The determination that a transmission addition or upgrade is needed to promote economic efficiency shall be made in accordance with this Section 24 of this Appendix EE and the Business Practice Manual in any of the following ways:

- (a) Where a Project Sponsor proposes a Merchant Transmission Facility and demonstrates to the CAISO the financial capability to pay the full cost of construction and operation of the Merchant Transmission Facility. The Merchant Transmission Facility must mitigate all operational concerns identified under Section 24.5 of this Appendix EE to the satisfaction of the CAISO, in consultation with the Participating TO(s) in whose PTO Service Territory the Merchant Transmission Facility will be located, and ensure the continuing feasibility of

allocated Long Term CRRs over the length of their terms. To ensure that the Project Sponsor is financially able to pay the construction and operating costs of the Merchant Transmission Facility, and where the Participating TO is not the Project Sponsor and is to construct the Merchant Transmission Facility under Section 24.1 of this Appendix EE, the CAISO in cooperation with the Participating TO may require (1) a demonstration of creditworthiness (e.g., an appropriate credit rating), or (2) sufficient security in the form of an unconditional and irrevocable letter of credit or other similar security sufficient to meet its responsibilities and obligations for the full costs of the transmission addition or upgrade.

- (b) Where a Participating To, Market Participant, Project Sponsor, the CPUC, or CEC proposes a transmission addition or upgrade during the Request Window and the project is approved by the CAISO Governing Board or by CAISO management if the proposed transmission addition or upgrade has a capital cost of less than \$50 million in accordance with the Study Plan and the project is included in the CAISO annual Transmission Plan. In determining whether to approve the project, the CAISO Governing Board or CAISO management, as applicable, shall consider the degree to which, if any, the benefits of the project outweigh the costs, in accordance with the procedures and using the technical studies set forth in the Business Practice Manual. The benefits of the project may include, but need not be limited to, a calculation of any reduction in production costs, Congestion costs, Transmission Losses, capacity or other

electric supply costs resulting from improved access to cost-efficient resources, and environmental costs. The cost of the project must consider any estimated costs identified under Section 24.1.4 of this Appendix EE to maintain the simultaneous feasibility of allocated Long Term CRRs for the length of their term. The CAISO management or CAISO Governing Board, as appropriate, in determining whether to approve or recommend the project, shall also consider the comparative costs and benefits of viable alternatives to the proposed transmission upgrade or addition, including (1) other transmission additions or upgrades, or the effects of other transmission additions or upgrades proposed under Section 24.2 of this Appendix EE during the Transmission Planning Process cycle, (2) Demand-side management, (3) acceleration or expansion of any transmission upgrade or addition already approved by the CAISO Governing Board or included in any CAISO annual Transmission Plan, or (4) Generation.

- (c) Where the CAISO proposes a transmission addition or upgrade during the CAISO's Transmission Planning Process and the project is approved by the CAISO Governing Board or included in the CAISO annual Transmission Plan and approved by CAISO management, as appropriate. In determining whether to approve the CAISO proposed transmission addition or upgrade, the CAISO Governing Board and CAISO management shall apply the same factors set forth in Section 24.1.1(b) of this Appendix EE. If approved by the CAISO Governing Board or CAISO management, as appropriate, the CAISO will designate one or more of the Participating TOs with PTO Service Territories in which the terminus of the transmission addition or upgrade will be located to act as Project Sponsor.



Where two or more Participating TOs are designated as Project Sponsors, such CAISO designation will include the proportionate responsibility between or among Participating TOs to own, construct, and finance the transmission addition or upgrade. If a Participating TO refuses to act as a Project Sponsor under this Section 24.1.1(c) of this Appendix EE, the CAISO will first request other designated Participating TO(s) to assume the remainder or greater proportionate responsibility, and if no other Participating TO had been designated or is willing to increase its proportionate responsibility, the CAISO may solicit bids to finance, own, and construct the transmission addition or upgrade.

**24.1.1.1 Information Requirements for Economic Transmission Projects.**

The Project Sponsor, Market Participant or relevant Participating TOs shall provide any necessary assistance and information to the CAISO to enable the CAISO to determine that a transmission upgrade or addition is needed to promote economic efficiency, and will perform all studies required by the adopted Study Plan in a manner consistent with the Business Practice Manual. A Project Sponsor of an economically driven transmission upgrade or addition to promote economic efficiency under Section 24.1.1 of this Appendix EE shall also provide in its proposal a statement whether the proposed upgrade or addition will be a Merchant Transmission Facility.

**24.1.2 Reliability Driven Projects.**

The CAISO in coordination with each Participating TO with a PTO Service Territory will, as part of the Transmission Planning Process and consistent with the procedures set forth in the Business Practice Manual, identify the need for any transmission additions or upgrades required to ensure System Reliability consistent with all Applicable Reliability Criteria and CAISO Planning Standards. In making this determination, the CAISO, in coordination with each Participating TO with a PTO Service Territory and other Market Participants, shall consider lower cost

alternatives to the construction of transmission additions or upgrades, such as acceleration or expansion of existing projects, Demand-side management, Remedial Action Schemes, appropriate Generation, interruptible Loads or reactive support. The CAISO shall direct each Participating TO with a PTO Service Area, as a registered Transmission Planner with NERC, to perform the necessary studies, based on the Unified Planning Assumptions and Study Plan as set forth in Section 24.2.1 of this Appendix EE, any applicable Interconnection Study, and in accordance with the Business Practice Manual, to determine the facilities needed to meet all Applicable Reliability Criteria and CAISO Planning Standards. The Participating TO with a PTO Service Area shall provide the CAISO and other Market Participants with all information relating to the studies performed under this Section, subject to any limitation provided in Section 20.2 of the CAISO Tariff or the applicable LGIP. Based on the study results, and as part of the Transmission Planning Process described in the Business Practice Manual, the CAISO, CEC, CPUC, Project Sponsors and other Market Participants shall be free to propose any transmission upgrades or additions deemed necessary to ensure System Reliability consistent with Applicable Reliability Criteria and CAISO Planning Standards. The Participating TO with a PTO Service Territory in which the transmission upgrade or addition deemed needed under this Section 24.1.2 of this Appendix EE is to be located shall be the Project Sponsor, with the responsibility to construct, own and finance, and maintain such transmission upgrade or addition.

**24.1.3. Location Constrained Resource Interconnection Facility Projects.**

The CAISO, CPUC, CEC, a Participating TO or any other Market Participant may propose a transmission addition as a Location Constrained Resource Interconnection Facility. A proposal shall include the following information, to the extent available:

- (a) Information showing that the proposal meets the requirements of Section 24.1.3.1 of this Appendix EE; and
- (b) A description of the proposed facility, including the following information:
  - (1) Transmission studies demonstrating that the proposed facility satisfies Applicable Reliability Criteria and CAISO Planning Standards;

**24.1.4 Maintaining the Feasibility of Allocated Long Term CRRs.**

The CAISO is obligated to ensure the continuing feasibility of Long Term CRRs that are allocated by the CAISO over the length of their terms. In furtherance of this requirement the CAISO shall, as part of its annual Transmission Planning Process cycle, test and evaluate the simultaneous feasibility of allocated Long Term CRRs, including, but not limited to, when acting on the following types of projects: (a) planned or proposed transmission projects; (b) Generating Unit or transmission retirements; (c) Generating Unit interconnections; and (d) the interconnection of new Load. Pursuant to such evaluations, the CAISO shall identify the need for any transmission additions or upgrades required to ensure the continuing feasibility of allocated Long Term CRRs over the length of their terms and shall publish Congestion Data Summary along with the results of the CAISO technical studies. In assessing the need for transmission additions or upgrades to maintain the feasibility of allocated Long Term CRRs, the CAISO, in coordination with the Participating TOs and other Market Participants, shall consider lower cost alternatives to the construction of transmission additions or upgrades, such as acceleration or expansion of existing projects; Demand-side management; Remedial Action Schemes; constrained-on Generation; interruptible Loads; reactive support; or in cases where the infeasible Long Term CRRs involve a small magnitude of megawatts, ensuring against the risk of any potential revenue shortfall using the CRR Balancing Account and uplift mechanism in Section 11.2.4 of the CAISO Tariff. As part of the CAISO's Transmission Planning Process, the Participating TOs and Market Participants shall provide the necessary assistance and information to the CAISO to allow it to assess and identify transmission additions or upgrades that may be necessary under Section 24.1.4 of this Appendix EE. To the extent a transmission upgrade or addition is deemed needed to maintain the feasibility of allocated Long Term CRRs in accordance with this Section and included in the CAISO's annual Transmission Plan, the CAISO will designate the Participating TO(s) with a PTO Service Territory in which the transmission upgrade or addition is to be located as the Project Sponsor(s), responsible to construct, own and/or finance, and maintain such transmission upgrade or addition.

**24.2 Transmission Planning Process and Coordination of Technical Studies.**

The CAISO shall perform the CAISO's Transmission Planning Process on an annual cycle in accordance with the terms of this CAISO Tariff, the Transmission Control Agreement, and the Business Practice Manual. The Transmission Planning Process shall, at a minimum:

- (a) Coordinate and consolidate the transmission needs of the CAISO Control Area into a single plan, which will be assessed on the basis of maintaining the reliability of the CAISO Controlled Grid in accordance with Applicable Reliability Criteria and CAISO Planning Standards, in a manner that promotes the economic efficiency of the CAISO Controlled Grid and considers federal and state environmental and other policies affecting the provision of Energy.
- (b) Reflect a planning horizon covering a minimum of ten (10) years that considers transmission enhancements and expansions, Demand Forecasts, Demand-side management, and capacity forecasts relating to generation technology type, additions and retirements, and such other factors as the CAISO determines are relevant.
- (c) Seek to avoid unnecessary duplication of facilities and ensure the simultaneous feasibility of the CAISO Transmission Plan and the transmission plans of interconnected Control Areas, and otherwise coordinate with regional and sub-regional transmission planning processes and entities in accordance with Section 24.8 of this Appendix EE.
- (d) Identify existing and projected limitations of the CAISO Controlled Grid's physical, economic or operational capability or performance and identify transmission upgrades and additions, including alternatives thereto, deemed needed in accordance with Section 24.1 of this Appendix EE to address the existing and projected limitations.

- (e) Account for any effects on the CAISO Controlled Grid of the interconnection of Generating Units on the Distribution System under the Wholesale Distribution Access Tariffs of the Participating TOs, including an assessment of the deliverability of such Generating Units on a basis comparable to the Deliverability Assessment performed under Appendix U or Appendix GG, as applicable.

**24.2.1 Unified Planning Assumptions and Study Plan.**

**24.2.1.1 Additional Projects and Data for Development of the Unified Planning Assumptions and Study Plan.**

The CAISO will develop Unified Planning Assumptions and Study Plan using information and data received during the Request Window in the previous planning cycle and under Section 24.2.3 of this Appendix EE. The CAISO will also use the following in the development of the Unified Planning Assumptions and Study Plan:

- (1) WECC base cases for the relevant planning horizon;
- (2) Transmission upgrades and additions approved by the CAISO in past Transmission Planning Process cycles and scheduled to be energized within the planning horizon;
- (3) Location Constrained Resource Interconnection Facilities conditionally approved under Section 24.1.3.1(a) of this Appendix EE;
- (4) Network Upgrades identified pursuant to Section 25, Appendix U, Appendix GG, or Appendix W relating to the CAISO's Large Generator Interconnection Procedures and Appendix AA relating to the CAISO's Small Generator Interconnection Procedures;
- (5) Operational solutions validated by the CAISO to address Local Capacity Area Resource requirements;
- (6) Regulatory initiatives, as appropriate, including state regulatory agency initiated programs;

- (7) Energy Resource Areas or similar resource areas identified as high priority by the CPUC or CEC; and
- (8) Results and analyses from Economic Planning Studies or other assessments that may have identified potentially needed transmission upgrades or additions performed in past CAISO Transmission Planning Process cycles.

**24.2.1.2 General Scope of Unified Planning Assumptions and Study Plan.**

The Unified Planning Assumptions and Study Plan shall, at a minimum, describe:

- (a) The planning data and assumptions to be used, to the maximum extent possible, as a base case for each technical study to be performed in the Transmission Planning Process cycle, including, but not limited to, those related to Demand Forecasts and distribution, generation capacity additions and retirements, and transmission system modifications;
- (b) A list of each technical study to be performed in the Transmission Planning Process cycle and a summary of the technical study's objective or purpose;
- (c) A description of any modifications to the planning data and assumptions developed as the general base case in Section 24.2.1.2(a) of this Appendix EE made in each technical study performed in the Transmission Planning Process cycle;
- (d) A description of the software tools, methodology and other criteria used in each technical study performed in the Transmission Planning Process cycle;
- (e) The identification of any entities directed to perform a particular technical study or portions of a technical study;
- (f) A proposed schedule for all stakeholder meetings to be held as part of the Transmission Planning Process cycle, and means for notification of any changes thereto, the location on the CAISO Website of information relating to the

technical studies performed in the Transmission Planning Process cycle, and the name of a contact person at the CAISO for each technical study performed in the Transmission Planning Process cycle;

- (g) A list and description of each Economic Planning Study studied by the CAISO as a High Priority Economic Planning Study under Section 24.9 of this Appendix EE identified in the past Transmission Planning Process; and
- (h) To the maximum extent practicable, and where applicable, appropriate sensitivity analyses, including project or solution alternatives, to be performed as part of technical studies.

**24.2.1.3 Preparation of Draft and Final Unified Planning Assumptions and Study Plan.**

- (a) Following review of relevant information, the CAISO will prepare and post on the CAISO Website a draft Unified Planning Assumptions and Study Plan. The CAISO will issue a Market Notice announcing the availability such draft, soliciting comments, and scheduling a public conference(s) as required by Section 24.2.1.3(c) of this Appendix EE.
- (b) All comments on the draft Unified Planning Assumptions and Study Plan will be posted by the CAISO to the CAISO Website.
- (c) Subsequent to the posting of the draft Unified Planning Assumptions and Study Plan, the CAISO will conduct a minimum of one public meeting open to Market Participants, electric utility regulatory agencies, and other interested parties to review, discuss, and recommend modifications to the draft Unified Planning Assumptions and Study Plan. Additional meetings, web conferences, or teleconferences may be scheduled as needed. All stakeholder meetings, web conferences, or teleconferences shall be noticed by Market Notice and such notice shall be posted to the CAISO Website.

- (d) Following the public conference(s) required by Section 24.2.1.3(c) of this Appendix EE, and under the schedule set forth in the Business Practice Manual, the CAISO will determine and publish to the CAISO Website the final Unified Planning Assumptions and Study Plan in accordance with the procedures set forth in the Business Practice Manual.

**24.2.2 Technical Studies.**

**24.2.2.1 Performance of Technical Studies**

- (a) In accordance with the Unified Planning Assumptions and Study Plan, and the procedures and deadlines in the Business Practice Manual, the CAISO will perform, or direct the performance by third parties of, technical studies and other assessments necessary for the Transmission Plan and Transmission Planning Process. The CAISO technical studies will include a Congestion Data Summary, as further described in the Business Practice Manual. According to the detailed schedule set forth in the Business Practice Manual, the CAISO will post the preliminary results of its technical studies and proposed mitigation solutions on the CAISO Website. Within one month after the posting of these results, Participating TOs or other third parties will submit the results of the technical assessments conducted at the direction of the CAISO to be posted to the CAISO Website. Subsequently, the CAISO will conduct a minimum of one public conference that provides an opportunity for comments on the preliminary results and mitigation proposals. Additional public meetings, web conferences, or teleconferences may be scheduled as needed. All meetings, web conferences, or teleconferences shall be noticed by Market Notice and shall be posted to the CAISO Website.



- (b) All technical studies, whether performed by the CAISO, the Participating TOs or other third parties under the direction of the CAISO, must utilize the Unified Planning Assumptions for the particular technical study to the maximum extent practical, and deviations from the Unified Planning Assumptions for the particular technical study must be documented in the preliminary and final results of each technical study. The CAISO will measure the results of the studies against NERC planning standards, WECC planning standards, and the CAISO Planning Standards, and other criteria established by the Business Practice Manual. After consideration of the comments received on the preliminary results, the CAISO will complete, or direct the completion of, the technical studies and post the final study results on the CAISO Website.
- (c) The CAISO technical study results will identify needs and proposed solutions to meet applicable WECC planning standards, NERC planning standards and other applicable planning standards. Pursuant to the schedule described in the Business Practice Manual, Participating TOs will submit transmission projects and alternative solutions through the Request Window in response to needs and proposed solutions identified by CAISO, as well as projects and solutions to reliability needs identified by the Participating TOs.
- (d) The CAISO and Participating TOs shall coordinate their respective transmission planning responsibilities required for compliance with the NERC Reliability Standards and for the purposes of developing the annual Transmission Plan according to the requirements and time schedules set forth in the Business Practice Manual.

**24.2.3 Request Window.**

All requests for Economic Planning Studies and transmission upgrades or additions must be submitted by Market Participants, CPUC, CEC, or Project Sponsors through the Request Window, in accordance with Section 24 of Appendix EE and the Business Practice Manual, to be considered for inclusion in the annual Transmission Plan. The duration of the Request Window will be set forth in the Business Practice Manual and will occur in the year prior to the year in which the Transmission Plan is prepared. All proposals submitted through the Request Window must use the forms and satisfy the information and technical requirements set forth in the Business Practice Manual. Proposals for transmission additions or upgrades must be within or connect to the CAISO Control Area or CAISO Controlled Grid and proposals for Economic Planning Studies must be intended to promote competition or economic efficiency of serving Load within the CAISO Control Area, but may relate to Congestion relief or transmission capacity expansion outside the CAISO Control Area. The following proposals will only be considered for inclusion in the Transmission Plan if proposed during the Request Window:

- (a) Economic transmission upgrades or additions proposed under Section 24.1.1 of this Appendix EE;
- (b) Location Constrained Resource Interconnection Facilities under Section 24.1.3 of this Appendix EE not identified by the CAISO as part of Interconnection Studies performed under the LGIP set forth in Appendix U or Appendix GG;
- (c) Demand response programs that are proposed for inclusion in the base case or assumptions for the Transmission Plan or as alternatives to transmission additions or upgrades;
- (d) Generation projects that are proposed as solutions to Congestion identified in previously published Economic Planning Studies, for inclusion in long-term planning studies, or as alternatives to transmission additions or upgrades; and
- (e) Requests for Economic Planning Studies; and
- (f) Reliability-driven projects described in Section 24.1.2

**24.2.3.1 CAISO Assessment of Request Window Proposals.**

Following the submittal of a proposal for a transmission addition or upgrade, Demand response program, or generation project during the Request Window in accordance with Section 24.2.3 of this Appendix EE, the CAISO will determine whether the proposal will be included in the Unified Planning Assumptions or Study Plan as appropriate. A proposal can only be included in the Unified Planning Assumptions or Study Plan upon the determination by the CAISO that:

- (a) the proposal satisfies the information requirements for the particular type of project submitted as set forth in templates included in the Business Practice Manual;
- (b) the proposal is not functionally duplicative of transmission upgrades or additions that have previously been approved by the CAISO; and
- (c) the proposal, if a sub-regional or regional project that affects other interconnected Control Areas, has been reviewed by the appropriate sub-regional or regional planning entity, is not inconsistent with such sub-regional or regional planning entity's preferred solution or project, and has been determined to be appropriate for inclusion in the CAISO Study Plan, rather than, or in addition to, being included in or deferred to the planning process of the sub-regional or regional planning entity.

In accordance with the schedule and procedures set forth in the Business Practice Manual, the CAISO will notify the Participating TO, Market Participant, Project Sponsor, the CEC or CPUC submitting the proposal of any deficiencies in the proposal and provide the Market Participant an opportunity to correct the deficiencies. The failure to correct the deficiency precludes the proposal from inclusion in the Study Plan. The CAISO will notify the party submitting the proposal whether or not the proposal will be included in the Study Plan.

**24.2.3.2 CAISO Assessment of Requests for Economic Planning Studies Received During the Request Window.**

Following the submittal of a request for an Economic Planning Study during the Request Window in accordance with Section 24.2.3 of this Appendix EE, the CAISO will determine whether the request shall be designated as a High Priority Economic Planning Study for inclusion in the Unified Planning Assumptions and Study Plan. In making the determination, the CAISO will consider:

- (a) Whether the requested Economic Planning Study seeks to address Congestion identified by the CAISO in the Congestion Data Summary published for the applicable Transmission Planning Process cycle and the magnitude, duration, and frequency of that Congestion;
- (b) Whether the requested Economic Planning Study addresses delivery of Generation from Location Constrained Resource Interconnection Generators or network transmission facilities intended to access Generation from an Energy Resource Area (ERA) or similar resource area assigned a high priority by the CPUC or CEC;
- (c) Whether the requested Economic Planning Study is intended to address Local Capacity Area Resource requirements; or
- (d) Whether resource and Demand information indicates that Congestion described in the Economic Planning Study request is projected to increase over the planning horizon used in the Transmission Planning Process and the magnitude of that Congestion.
- (e) Whether the Economic Planning Study is intended to encompass the upgrades necessary to integrate new generation resources or loads on an aggregated or regional basis.

**24.2.3.3 High Priority Economic Planning Studies**

- (a) In accordance with the schedule and procedures set forth in the Business Practice Manual, the CAISO will post to the CAISO Website the list of selected High Priority Economic Planning Studies to be included in the draft Unified Planning Assumptions and Study Plan. The CAISO may assess requests for Economic Planning Studies individually or in combination where such requests may have common or complementary effects on the CAISO Controlled Grid. The CAISO will perform a maximum of five High Priority Economic Planning Studies; however, the CAISO retains discretion to perform greater than five High Priority Economic Planning Studies should stakeholder requests or patterns of Congestion or anticipated Congestion so warrant. In performing High Priority Economic Planning Studies, the CAISO will batch or cluster proposed Economic Planning Studies where (1) such studies will address the same patterns of Congestion or anticipated Congestion; (2) such studies will address patterns of Congestion or anticipated Congestion that are in related locations; or (3) such studies seek to integrate new generation resources or loads that impact the same facilities.
- (b) High Priority Economic Planning Studies shall be performed in accordance with the standards and procedures established in the Business Planning Manual. Market Participants may conduct Economic Planning Studies that have not been designated as High Priority Economic Planning Studies at their own expense and may submit such studies for consideration in the development of the Transmission Plan when the CAISO provides notice of the public meeting regarding technical study results pursuant to Section 24.2.2.2.1(a) of this Appendix EE.

**24.2.4 Development and Approval of Transmission Plan.**

- (a) In accordance with the schedule and procedures in the Business Practice Manual, the CAISO will post a draft Transmission Plan. The CAISO will subsequently conduct a public conference regarding the draft Transmission Plan and solicit comments, consistent with the timelines and procedures set forth in the Business Practice Manual. Additional meetings, web conferences, or teleconferences may be scheduled as needed. All stakeholder meetings, web conferences, or teleconferences shall be noticed by Market Notice and such notice shall be posted to the CAISO Website. After consideration of comments, the CAISO will post a final Transmission Plan to the CAISO Website.
  
- (b) The draft and final Transmission Plan may include, but is not limited to: (1) the results of technical studies performed under the Study Plan; (2) determinations, recommendations, and justifications for the need, according to Section 24.1 of this Appendix EE, for identified transmission upgrades and additions; (3) assessments of transmission upgrades and additions submitted as alternatives to the potential solutions to transmission needs identified by the CAISO and studied during the Transmission Planning Process cycle; (4) results of Economic Planning Studies performed during the Transmission Planning Process cycle; (5) an update on the status of transmission upgrades or additions previously approved by the CAISO, including identification of mitigation plans, if necessary, to address any potential delay in the anticipated completion of an approved transmission upgrade or addition; and (6) to the extent available, the results of Interconnection Studies.

- (c) Transmission upgrades or additions that are Large Projects will be subject to a separate study and public participation process. The study and public participation process for Large Projects may encompass more than one Transmission Planning Process cycle. Large Projects will be identified in the Transmission Plan for each cycle but will be presented to the CAISO Governing Board for approval in accordance with the study and public participation schedule established for that project.
- (d) Transmission upgrades or additions with capital costs of less than \$50 million that do not require approval by the CAISO Governing Board will be identified in the Transmission Plan but will be separately approved by CAISO management according to the procedures in the Business Practice Manual.
- (e) Other projects requiring CAISO Governing Board approval will be identified in the Transmission Plan but will be submitted for approval in accordance with the project timeline in accordance with the procedures in the Business Practice Manual.

#### **24.2.4.1 Presentation to the CAISO Governing Board.**

The CAISO will present the Transmission Plan to the CAISO Governing Board in accordance with the schedule set forth in the Business Practice Manual. The Transmission Plan will be considered final once it has been presented to the CAISO Governing Board and will be posted on the CAISO Website.

#### **24.2.4.2 Obligation to Construct Transmission Projects Included in Transmission Plan.**

A Participating TO that has a PTO Service Territory shall be obligated to construct all transmission additions and upgrades that are determined by the CAISO Governing Board or management, as applicable, to be needed in accordance with the requirements of Section 24 of this Appendix EE, not

including conditional approvals and determinations of need under Section 24.1.3.1(a), and which: (1) are additions or upgrades to transmission facilities that are located within its PTO Service Territory, unless (a) it does not own the facility being upgraded or added and neither terminus of such facility is located within its PTO Service Territory or (b) it does not own the facility being upgraded or added and the Project Sponsor is a Participating TO that elects to construct the transmission upgrade; or (2) are additions to existing transmission facilities or upgrades to existing transmission facilities that it owns, that are part of the CAISO Controlled Grid, and that are located outside of its PTO Service Territory, unless the joint-ownership arrangement, if any, does not permit. A Participating TO's obligation to construct such transmission additions and upgrades shall be subject to: (1) its ability, after making a good faith effort, to obtain all necessary approvals and property rights under applicable federal, state, and local laws and (2) the presence of a cost recovery mechanism with cost responsibility assigned in accordance with Section 24.7 of the CAISO Tariff. The obligations of the Participating TO to construct such transmission additions or upgrades will not alter the rights of any entity to construct and expand transmission facilities as those rights would exist in the absence of a TO's obligations under this CAISO Tariff or as those rights may be conferred by the CAISO or may arise or exist pursuant to this CAISO Tariff.

**24.2.4.3 Documentation of Compliance with NERC Reliability Standards**

The Transmission Plan and underlying studies, assessments, information and analysis developed during the Transmission Planning Process, regardless of whether performed by CAISO or by Participating TOs or other third parties at the direction of CAISO, shall be used by the CAISO as part of its documentation of compliance with NERC Reliability Standards.



**24.3 Additional Planning Information.**

**24.3.1 Information Provided by Participating TOs.**

In addition to any information that must be provided to the CAISO under the NERC Reliability Standards, Participating TOs shall provide the CAISO on an annual or periodic basis in accordance with the schedule and procedures and in the form required by the Business Practice Manual any information and data reasonably required by the CAISO to perform the Transmission Planning Process, including, but not limited to: (1) modeling data for power flow, including reactive power, short-circuit and stability analysis; (2) a description of the total Demand to be served from each substation, including a description of any Energy efficiency programs reflected in the total Demand; (3) the amount of any interruptible Loads included in the total Demand (including conditions under which an interruption can be implemented and any limitations on the duration and frequency of interruptions); (4), a description of Generating Units to be interconnected to the Distribution System of the Participating TO, including generation type and anticipated Commercial Operation Date; (5) detailed power system models of their transmission systems that reflect transmission system changes, including equipment replacement not requiring approval by the CAISO; (6) Distribution System modifications; (7) transmission

network information, including line ratings, line length, conductor sizes and lengths, substation equipment ratings, circuits on common towers and with common rights-of-ways and cross-overs, special protection schemes, and protection setting information; and (8) Contingency lists.

**24.3.2 Information Provided by Participating Generators.**

In addition to any information that must be provided to the CAISO under the NERC Reliability Standards, Participating Generators shall provide the CAISO on an annual or periodic basis in accordance with the schedule, procedures and in the form required by the Business Practice Manual any information and data reasonably required by the CAISO to perform the Transmission Planning Process, including, but not limited to (1) modeling data for short-circuit and stability analysis and (2) data, such as term, and status of any environmental or land use permits or agreements the expiration of which may affect that the operation of the Generating Unit.

**24.3.3 Information Requested from Load Serving Entities.**

In addition to any information that must be provided to the CAISO under the NERC Reliability Standards, the CAISO shall solicit from Load Serving Entities through their Scheduling Coordinators information required by, or anticipated to be useful to, the CAISO in its performance of the Transmission Planning Process, including, but not limited to (1) long-term resource plans; (2) existing long-term contracts for resources and transmission service outside the CAISO Control Area; and (3) Demand Forecasts, including forecasted effect of Energy efficiency and Demand response programs.

**24.3.4 Information Requested from Interconnected Control Areas, Sub-Regional Planning Groups and Electric Utility Regulatory Agencies.**

In accordance with Section 24.8 of this Appendix EE, the CAISO shall obtain or solicit from interconnected Control Areas, regional and sub-regional planning groups within the WECC, the CPUC, the CEC, and Local Regulatory Authorities information required by, or anticipated to be useful to, the CAISO in its performance of the Transmission Planning Process, including, but not limited to (1) long-term transmission system plans; (2) long-term resource plans; (3) generation interconnection process information; (4) Demand forecasts; and (5) any other data necessary for the development of power flow, short-circuit, and stability cases over the planning horizon of the CAISO Transmission Planning Process.

**24.3.5 Obligation to Provide Updated Information.**

If material changes to the information provided under Sections 24.2.3.1 and 24.2.3.2 of this Appendix EE occur during the annual Transmission Planning Process, the providers of the information must provide notice to the CAISO of the changes.

**[NOT USED]**

**[NOT USED]**

**[NOT USED]**

**[NOT USED]**

**[NOT USED]**



**[NOT USED]**

**24.4 Participating TO Study Obligation.**

The Participating TO constructing or expanding facilities in accordance with Section 24.2.4.2 of this Appendix, will be directed by the CAISO to coordinate with the Project Sponsor or Participating TO(s) with PTO Service Territories in which the transmission upgrade or addition will be located, neighboring balancing authority areas, as appropriate, and other Market Participants to perform any study or studies necessary, including a Facility Study, to determine the appropriate facilities to be constructed in accordance with the CAISO Transmission Planning Process and the terms set forth in the TO Tariff.

**24.5 Operational Review.**

The CAISO will perform an operational review of all facilities studied as part of the CAISO Transmission Planning Process that are proposed to be connected to, or made part of, the CAISO Controlled Grid to ensure that the proposed facilities provide for acceptable Operating Flexibility and meet all its requirements for proper integration with the CAISO Controlled Grid. If the CAISO finds that such facilities do not provide for acceptable operating flexibility or do not adequately integrate with the CAISO Controlled Grid, the CAISO shall coordinate with the Project Sponsor and, if different, the Participating TO with the PTO Service Territory, or the operators of neighboring balancing authority areas, if applicable, in which the facilities will be located to reassess and redesign the facilities required to be constructed. Transmission upgrades or additions that do not provide acceptable operating flexibility or do not adequately integrate with the CAISO Controlled Grid cannot be included in the CAISO Transmission Plan or approved by CAISO management or the CAISO Governing Board, as applicable.

**24.8 Regional and Sub-Regional Planning Process.**

The CAISO will be a member of the WECC and other applicable regional or sub-regional organizations and participate in WECC's operation and planning committees, and in other applicable regional and sub-regional coordinated planning processes.

**24.8.1 Scope of Regional or Sub-Regional Planning Participation.**

The CAISO will collaborate with adjacent transmission providers and existing sub-regional planning organizations through existing processes. This collaboration involves a reciprocal exchange of information, to the maximum extent possible and subject to applicable confidentiality restrictions, in order to ensure the simultaneous feasibility of respective Transmission Plans, the identification of potential areas for increased efficiency, and the consistent use of common assumptions whenever possible. The details of the CAISO's participation in regional and sub-regional planning processes are set forth in the Business Practice Manual. At a minimum, the CAISO shall be required to:

- (a) solicit the participation, whether through sub-regional planning groups or individually, of all interconnected Control Areas in the development of the Unified Planning Assumptions and Study Plan and in reviewing the results of technical studies performed as part of the CAISO's Transmission Planning Process in order to:
  - (1) coordinate, to the maximum extent practicable, planning assumptions, data and methodologies utilized by the CAISO, regional and sub-regional planning groups or interconnected Control Areas;
  - (2) ensure transmission expansion plans of the CAISO, regional and sub-regional planning groups or interconnected Control Areas are simultaneously feasible and seek to avoid duplication of facilities.
- (b) coordinate with regional and sub-regional planning groups regarding the entity to perform requests for Economic Planning Studies or other Congestion related studies;

- (c) transmit to applicable regional and sub-regional planning groups or interconnected Control Areas information on technical studies performed as part of the CAISO Transmission Planning Process;

- (d) post on the CAISO Website links to the planning activities of applicable regional and sub-regional planning groups or interconnected Control Areas.

**24.8.2 Limitation on Regional Activities.**

Neither the CAISO nor any Participating TO nor any Market Participant shall take any position before the WECC or a regional organization that is inconsistent with a binding decision reached through an arbitration proceeding pursuant to Section 13 of the CAISO Tariff, in which the Participating TO or Market Participant voluntarily participated.

**24.9 CAISO Planning Standards Committee.**

The CAISO shall maintain a Planning Standards Committee, which shall be open to participation by all Market Participants, electric utility regulatory agencies within California, and other interested parties, to review, provide advice on, and propose modifications to CAISO Planning Standards for consideration by CAISO management and the CAISO Governing Board. The Planning Standards Committee shall meet, at a minimum, on an annual basis prior to publication of the draft Unified Planning Assumptions and Study Plan under Section 24.2.1.3 of this Appendix EE; however, additional meetings, web conferences, teleconferences may be scheduled as needed. Meetings of the Planning Standards Committee shall be noticed by Market Notice and such notice shall be posted to the CAISO Website. Teleconference capability will be made available for all meetings of the Planning Standards Committee. The CAISO Vice President of Market and Infrastructure Development or his or her designee shall serve as chair of the Planning Standards Committee. All materials addressed at or relating to such meetings, including agendas, presentations, background papers, party comments, and minutes shall be posted to the CAISO Website. The chair of the Planning Standards Committee shall seek approval by the CAISO Governing Board of any modifications to the CAISO Planning Standards, as those CAISO Planning Standards exist as of the effective date of Section 24.2 of this Appendix EE, and must include in the report to the CAISO Governing Board a summary of the positions of parties with respect to the proposed modifications to the CAISO Planning Standards and the ground(s) for rejecting modifications, if any, proposed by Market Participants or other interested parties.

<b>NERC Reliability Standards for Modeling, Data and Analysis (NERC MOD Standards)</b>	A set of NERC Reliability Standards applicable to the transmission planning process.
<b>Planning Standards Committee</b>	The committee appointed under Section 24.2.1.
<b>Request Window</b>	The period of time as set forth in the Business Practice Manual during which transmission additions or upgrades, requests for Economic Planning Studies, and other transmission related information is submitted to the CAISO in accordance with Section 24.2.3 of Appendix EE.
<b>Study Plan</b>	The plan to be developed pursuant to Section 24.2.1 of Appendix EE, which sets forth the technical studies to be performed during the annual Transmission Planning Process.
<b>Transmission Plan</b>	The report prepared by the CAISO on annual basis pursuant to Section 24 of Appendix EE, which documents the outcome of the Transmission Planning Process as defined in the Study Plan.
<b>Transmission Planner</b>	A designation by NERC regarding responsibility to perform specified transmission planning functions in accordance with the NERC Reliability Standards.
<b>Transmission Planning Process</b>	The process by which the CAISO assesses the CAISO Controlled Grid as set forth in Section 24 of Appendix EE.
<b>Unified Planning Assumptions</b>	The assumptions to be developed pursuant to Section 24.2.1 of Appendix EE and used, to the maximum extent possible, in performing technical studies identified in the Study Plan as part of the annual Transmission Planning Process.

**Attachment C –MRTU Tariff Blacklines**

**Order 890 Compliance Filing**

**October 31, 2008**

## 20.2 Confidential Information.

The following information provided to the CAISO by ~~Scheduling Coordinators~~ shall be treated by the CAISO as confidential:

- (a) individual Bids;
- (b) CRR bids and other CRR Allocation nomination information;
- (c) transactions between Scheduling Coordinators, including Inter-SC Trades;
- (d) individual Generator Outage programs unless a Generator makes a change to its Generator Outage program which causes Congestion in the short term (i.e. one month or less), in which case, the CAISO may publish the identity of that Generator; and
- (e) The following information related to the resource adequacy program in accordance with Section 40:
  - (i) Annual and monthly Resource Adequacy Plans and Supply Plans;
  - (ii) Demand Forecasts; and
  - (iii) Information on existing import contracts.
- (f) The following information related to the Transmission Planning Process in accordance with Section 24:
  - (1) Information received under Sections 24.2.3.2 and 24.2.3.3 to the extent such information has been designated as confidential in accordance with the Business Practice Manual;
  - (2) Information, the release of which may harm competitive markets, as determined by the CAISO's Department of Market Monitoring;
  - (3) Information received by the CAISO pursuant to agreements and contracts, executed prior to December 21, 2007, that preclude the release of the information;



- (4) Information that involves proprietary analytical tools, computer codes, or any other material that is protected by intellectual property rights held by the CAISO, Project Sponsor, Market Participant or other third-party; and
- (5) Critical Energy Infrastructure Information.

However, composite documents, data, and other information that may be developed based on confidential information under this Section shall not be deemed confidential if the composite documents, data, and other information do not disclose any confidential information of any individual Scheduling Coordinator, Market Participant, or other third-party or Critical Energy Infrastructure Information.

\* \* \*

#### **20.4 Disclosure.**

Notwithstanding anything in this Section 20 to the contrary,

- (a) The CAISO: (i) shall publish individual Bids, provided that such data are published no sooner than six (6) months after the Trading Day with respect to which the Bid was submitted and in a manner that does not reveal the specific resource or the name of the Scheduling Coordinator submitting the Bid, but that allows the bidding behavior of individual, unidentified resources and Scheduling Coordinators to be tracked over time; and (ii) may publish data sets analyzed in any public report issued by the CAISO or by the Market Surveillance Committee, provided that such data sets shall be published no sooner than six (6) months after the latest Trading Day to which data in the data set apply, and in a manner that does not reveal any specific resource or the name of any Scheduling Coordinator submitting Bids included in such data sets.
- (b) If the CAISO is required by applicable laws or regulations, or in the course of administrative or judicial proceedings, to disclose information that is otherwise required to be maintained in confidence pursuant to this Section 20, the CAISO may disclose such information; provided, however, that as soon as the CAISO learns of the disclosure requirement and prior to making such disclosure, the

CAISO shall notify any affected Market Participant of the requirement and the terms thereof. The Market Participant may, at its sole discretion and own cost, direct any challenge to or defense against the disclosure requirement and the CAISO shall cooperate with such affected Market Participant to the maximum extent practicable to minimize the disclosure of the information consistent with applicable law. The CAISO shall cooperate with the affected Market Participant to obtain proprietary or confidential treatment of confidential information by the person to whom such information is disclosed prior to any such disclosure.

- (c) The CAISO may disclose confidential or commercially sensitive information, without notice to an affected Market Participant, in the following circumstances:
- (i) If the FERC, or its staff, during the course of an investigation or otherwise, requests information that is confidential or commercially sensitive. In providing the information to FERC or its staff, the CAISO shall take action consistent with 18 C.F.R. §§ 1b.20 and 388.112, and request that the information be treated as confidential and non-public by the FERC and its staff and that the information be withheld from public disclosure. The CAISO shall provide the requested information to the FERC or its staff within the time provided for in the request for information. The CAISO shall notify an affected Market Participant within a reasonable time after the CAISO is notified by FERC or its staff that a request for disclosure of, or decision to disclose, the confidential or commercially sensitive information has been received, at which time the CAISO and the affected Market Participant may respond before such information would be made public; or
  - (ii) In order to maintain reliable operation of the CAISO Control Area, the CAISO may share critical operating information, system models, and planning data with ~~other~~ the WECC Reliability Coordinators, who ~~has~~ have executed the Western Electricity Coordinating Council

Confidentiality Agreement for Electric System Data, or are is subject to similar confidentiality requirements; or

- (iii) In order to maintain reliable operation of the CAISO Control Area, the CAISO may share individual Generating Unit Outage information with the operations engineering and the outage coordination division(s) of other Balancing Authorities, Participating TOs, MSS Operators and other transmission system operators engaged in the operation and maintenance of the electric supply system whose system is significantly affected by the Generating Unit and who have executed the Western Electricity Coordinating Council Confidentiality Agreement for Electric System Data.
- (d) Notwithstanding the provisions of Section 20.2(e), information submitted through Resource Adequacy Plans and Supply Plans in accordance with Section 40 may be provided to:
  - (i) the Scheduling Coordinator(s) and/or Market Participant(s) involved in a dispute or discrepancy as to whether a resource is properly identified in a Resource Adequacy Plan or a Supply Plan only to the limited extent necessary to identify the disputed transaction and the relevant counterparty or counterparties.
  - (ii) the regulatory entity, whether the CPUC, other Local Regulatory Authority, or federal agency, with jurisdiction over a Load Serving Entity involved in a dispute or discrepancy as to whether a resource is properly identified in a Resource Adequacy Plan or the Supply Plan, or otherwise identified by the CAISO as exhibiting a potential deficiency in demonstrating compliance with resource adequacy requirements adopted by the CPUC, other Local Regulatory Authority, or federal agency, as applicable. The information provided shall be limited to the particular dispute, discrepancy, or deficiency.

- (iii) the California Energy Commission with respect to Demand Forecast information provided to the CAISO under Sections 40.2.2.3 and 40.2.3.3(b) to the extent the CAISO seeks, and the California Energy Commission grants, confidential treatment of such information pursuant to California Public Resources Code Section 25322 and related regulations.
- (e) Notwithstanding the provisions of Section 20.2(f), information submitted through the Transmission Planning Process may be disclosed as follows:
  - (i) Critical Energy Infrastructure Information may be provided to a requestor where such person is employed or designated to receive CEII by: (a) a Market Participant; or (b) an electric utility regulatory agency within California; to receive CEII (c) an Interconnection Customer that has submitted an Interconnection Request to the CAISO under the CAISO's Large Generator Interconnection Procedure or Small Generator Interconnection Procedure (LGIP or SGIP); (d) a developer having a pending or potential proposal for development of a Generating Facility on Unit or transmission additions, upgrades or facilities and that is performing studies in contemplation of filing an Interconnection Request or submitting a transmission infrastructure project through the ISO Transmission Planning Process; or (e) a not-for-profit organization representing consumer regulatory or environmental interests before Local Regulatory Authority agencies or federal regulatory agencies. To obtain Critical Energy Infrastructure Information, the requestor must submit a statement as to the need for the CEII, and must the requestor executes and returns to the CAISO the form of the non-disclosure agreement and non-disclosure statement included as part of the Business Practice Manual. The CAISO may, at its sole discretion, reject

a request for CEII and upon such rejection, the requestor will be directed to utilize the FERC procedures for access to the requested CEII.

- (ii) Information that is confidential under Section 20.2(f)(i) or 20.2.(f)(ii) may be disclosed to any individual designated by a Market Participant, electric utility regulatory agency within California, or other stakeholder that signs and returns to the CAISO the form of the non-disclosure agreement, nondisclosure statement and certification -that the individual is ~~or represents~~ a non-Market Participant, which is any person or entity not involved in a marketing, sales, or brokering function as market, sales, or brokering are defined in FERC's Standards of Conduct for Transmission Providers (18 C.F.R. § 358 et seq.), included as part of the Business Practice Manual; provided, however, that information obtained pursuant to 20.2(f)(ii) will be provided only in composite form so that information related to individual Load Serving Entities or Scheduling Coordinators will not be disclosed; and
- (iii) Data base and other transmission planning information obtained from the WECC, or its successor, may be disclosed to individuals designated by a Market Participant, electric utility regulatory agency within California, or other stakeholder in accordance with the procedures set forth in the Business Practice Manual.

Nothing in this Section 20 shall limit the ability of the CAISO to aggregate data for public release about the adequacy of supply.

\* \* \*

### **CAISO Tariff Appendix A**

#### **Master Definitions Supplement**

\* \* \*

**Large Project**

A transmission upgrade or addition that exceeds \$200 million in capital

costs and consists of a proposed transmission line or substation facilities capable of operating at voltage levels greater than 200 kV. Location Constrained Resource Interconnection Facilities are not included in this definition, regardless of the capital cost or voltage level of the transmission upgrade or addition. A Large Project may also be a project that does not meet the dollar or voltage level requirement, but that the CAISO determines raises significant policy issues warranting a separate planning process.

\* \* \*

**Project Sponsor**

A Market Participant, or-group of Market Participants, or-a Participating TO or a project developer who is not a Market Participant or Participating TO that proposes the construction of a transmission addition or upgrade in accordance with Section 24.

**Operational Flexibility**

The latitude allowed the CAISO necessary to provide reasonable assurance that the transmission network is designed in such a way that it will be secure considering the inherent uncertainty in system conditions or unforeseen circumstances, based on the current system configuration and available generation.

\* \* \*

**Study Plan**

The plan to be developed pursuant to Section 24.2.124.4.3, which sets forth the technical studies to be performed during the annual Transmission Planning Process.

\* \* \*

**Unified Planning Assumptions**

The assumptions to be developed pursuant to Section 24.2.124.4.3 and used, to the maximum extent possible, in performing technical studies identified in the Study Plan as part of the annual Transmission Planning Process.

## **24 TRANSMISSION EXPANSION.**

### **24.1 Determination of Need for Proposed Transmission Projects.**

A Participating TO, Project Sponsor, Market Participant, the CAISO, the CPUC, or CEC may propose a transmission system addition or upgrade, and the CAISO will determine, in accordance with this Section 24.1, whether the transmission addition or upgrade is needed, where it will (1) promote economic efficiency, (2) maintain System Reliability, (3) satisfy the requirements of a Location Constrained Resource Interconnection Facility, or (4) maintain the simultaneous feasibility of allocated Long-Term CRRs. CAISO management can determine the need for transmission additions or upgrades with an estimated capital investment of less than \$50 million without CAISO Governing Board approval. The determination of need by CAISO management for transmission additions or upgrades with an estimated capital cost of \$50 million or more must be approved by the CAISO Governing Board.

#### **24.1.1 Economically Driven Projects.**

The determination that a transmission addition or upgrade is needed to promote economic efficiency shall be made in accordance with this Section 24 and the Business Practice Manual in any of the following ways:

- (a) Where a Project Sponsor proposes a Merchant Transmission Facility and demonstrates to the CAISO the financial capability to pay the full cost of construction and operation of the Merchant Transmission Facility. The Merchant Transmission Facility must mitigate all operational concerns identified under Section 24.5 to the satisfaction of the CAISO, in consultation with the Participating TO(s) in whose PTO Service Territory the Merchant Transmission Facility will be located, and ensure the continuing feasibility of allocated Long Term CRRs over the length of their terms. To ensure that the Project Sponsor is financially able to pay the construction and operating costs of the Merchant Transmission Facility, and where the Participating TO is not the Project Sponsor and is to construct the Merchant Transmission Facility under Section 24.1, the

CAISO in cooperation with the Participating TO may require (1) a demonstration of creditworthiness (e.g., an appropriate credit rating), or (2) sufficient security in the form of an unconditional and irrevocable letter of credit or other similar security sufficient to meet its responsibilities and obligations for the full costs of the transmission addition or upgrade.

- (b) ~~Where a Participating TO, Market Participant, Project Sponsor, the CPUC, or CEC proposes a transmission addition or upgrade during the Request Window and the project is approved by the CAISO Governing Board or by CAISO management if the proposed transmission addition or upgrade has a capital cost of less than \$50 million in accordance with the Study Plan and the project is included in the CAISO annual Transmission Plan. , or a Participating TO proposes a transmission upgrade or addition to an existing transmission facility with an estimated capital cost of less than \$50 million in accordance with the Study Plan and the project is included in the CAISO annual Transmission Plan.~~ In determining whether to approve the project, the CAISO Governing Board or CAISO management, as applicable, shall consider the degree to which, if any, the benefits of the project outweigh the costs, in accordance with the procedures and using the technical studies set forth in the Business Practice Manual. The benefits of the project may include, but need not be limited to, a calculation of any reduction in production costs, Congestion costs, Transmission Losses, capacity or other electric supply costs resulting from improved access to cost-efficient resources, and environmental costs. The cost of the project must consider any estimated costs identified under Section 24.1.4 to maintain the simultaneous feasibility of allocated Long Term CRRs for the length of their term. The CAISO management or CAISO Governing Board, as appropriate, in determining whether to approve or recommend the project, shall also consider the comparative costs and benefits of viable alternatives to the proposed transmission upgrade or addition, including (1) other transmission additions or



upgrades, or the effects of other transmission additions or upgrades proposed under Section 24.2 during the Transmission Planning Process cycle, (2) Demand-side management, (3) acceleration or expansion of any transmission upgrade or addition already approved by the CAISO Governing Board or included in any CAISO annual Transmission Plan, or (4) Generation.

- (c) Where the CAISO proposes a transmission addition or upgrade during the CAISO's Transmission Planning Process and the project is approved by the CAISO Governing Board or included in the CAISO annual Transmission Plan and approved by CAISO management, as appropriate. In determining whether to approve the CAISO proposed transmission addition or upgrade, the CAISO Governing Board and CAISO management shall apply the same factors set forth in Section 24.1.1(b). If approved by the CAISO Governing Board or CAISO management, as appropriate, the CAISO will designate one or more of the Participating TOs with PTO Service Territories in which the terminus of the transmission addition or upgrade will be located to act as Project Sponsor. Where two or more Participating TOs are designated as Project Sponsors, such CAISO designation will include the proportionate responsibility between or among Participating TOs to own, construct, and finance the transmission addition or upgrade. If a Participating TO refuses to act as a Project Sponsor under this Section 24.1.1(c), the CAISO will first request other designated Participating TO(s) to assume the remainder or greater proportionate responsibility, and if no other Participating TO had been designated or is willing to increase its proportionate responsibility, the CAISO may solicit bids to finance, own, and construct the transmission addition or upgrade.

#### **24.1.1.1 Information Requirements for Economic Transmission Projects.**

The Project Sponsor, Market Participant or ~~and~~ relevant Participating TOs shall provide any necessary assistance and information to the CAISO to enable the CAISO to determine that a transmission upgrade

or addition is needed to promote economic efficiency, and will perform all studies required by the adopted Study Plan in a manner consistent with the Business Practice Manual. A Project Sponsor of an economically driven transmission upgrade or addition to promote economic efficiency under Section 24.1.1 shall also provide in its proposal a statement whether the proposed upgrade or addition will be a Merchant Transmission Facility.

#### **24.1.2 Reliability Driven Projects.**

The CAISO, in coordination with each Participating TO with a PTO Service Territory will, as part of the Transmission Planning Process and consistent with the procedures set forth in the Business Practice Manual, identify the need for any transmission additions or upgrades required to ensure System Reliability consistent with all Applicable Reliability Criteria and CAISO Planning Standards. In making this determination, the CAISO, in coordination with each Participating TO with a PTO Service Territory and other Market Participants, shall consider lower cost alternatives to the construction of transmission additions or upgrades, such as acceleration or expansion of existing projects, Demand-side management, Remedial Action Schemes, appropriate Generation, interruptible Loads or reactive support. The CAISO shall direct each Participating TO with a PTO Service Area, as a registered Transmission Planner with NERC, to perform the necessary studies, based on the Unified Planning Assumptions and Study Plan as set forth in Section 24.2.13, any applicable Interconnection Study, and in accordance with the Business Practice Manual, to determine the facilities needed to meet all Applicable Reliability Criteria and CAISO Planning Standards. The Participating TO with a PTO Service Area shall provide the CAISO and other Market Participants with all information relating to the studies performed under this Section, subject to any limitation provided in Section 20.2 or the applicable LGIP. Based on the study results, and as part of the Transmission Planning Process described in the Business Practice Manual, the CAISO, CEC, CPUC, Project Sponsors and other Market Participants shall be free to propose any transmission upgrades or additions ~~it deems~~ necessary to ensure System Reliability consistent with Applicable Reliability Criteria and CAISO Planning Standards. The Participating TO with a PTO Service Territory in which the transmission upgrade or addition deemed needed under this Section 24.1.2 is to be located shall be the Project Sponsor, with the responsibility to construct, own and finance, and maintain such transmission upgrade or addition.

### **24.1.3 Location Constrained Resource Interconnection Facility Projects.**

The CAISO, CPUC, CEC, a Participating TO or any other Market Participant may propose a transmission addition as a Location Constrained Resource Interconnection Facility. A proposal shall include the following information, to the extent available:

- (a) Information showing that the proposal meets the requirements of Section 24.1.3.1; and
- (b) A description of the proposed facility, including the following information:
  - (1) Transmission studies demonstrating that the proposed facility satisfies Applicable Reliability Criteria and CAISO Planning Standards;
  - (2) Identification of the most feasible and cost-effective alternative transmission additions, which may include network upgrades, that would accomplish the objective of the proposal;
  - (3) A planning level cost estimate for the proposed facility and all proposed alternatives;
  - (4) An assessment of the potential for the future connection of further transmission additions that would convert the proposed facility into a network transmission facility, including conceptual plans;
  - (5) The estimated in-service date of the proposed facility; and
  - (6) A conceptual plan for connecting potential LCRIGs, if known, to the proposed facility.

#### **24.1.3.1 Criteria for Qualification as a Location Constrained Resource Interconnection Facility.**

- (a) The CAISO shall conditionally approve a facility as a Location Constrained Resource Interconnection Facility if it determines that the facility is needed and all of the following requirements are met:
  - (1) The facility is to be constructed for the primary purpose of connecting to the CAISO Controlled Grid two or more Location Constrained Resource

Interconnection Generators in an Energy Resource Area, and at least one of the Location Constrained Resource Interconnection Generators is to be owned by an entity(ies) that is not an Affiliate of the owner(s) of another Location Constrained Resource Interconnection Generator in that Energy Resource Area;

- (2) The facility will be a High Voltage Transmission Facility;
- (3) At the time of its in-service date, the facility will not be a network facility and would not be eligible for inclusion in a Participating TO's TRR other than as an LCRIF; and
- (4) The facility meets Applicable Reliability Criteria and CAISO Planning Standards.

(b) The proponent of a facility that has been determined by the CAISO to meet the requirements of Section 24.1.3.1(a) shall provide the CAISO with information concerning the requirements of this subsection not less than ninety (90) days prior to the planned commencement of construction, and the facility shall qualify as a Location Constrained Resource Interconnection Facility if the CAISO determines that both of the following requirements are met:

- (1) The addition of the capital cost of the facility to the High Voltage TRR of a Participating TO will not cause the aggregate of the net investment of all LCRIFs (net of the amount of the capital costs of LCRIFs to be recovered from LCRIGs pursuant to Section 26.6) included in the High Voltage TRRs of all Participating TOs to exceed fifteen percent (15%) of the aggregate of the net investment of all Participating TOs in all High Voltage Transmission Facilities reflected in their High Voltage TRRs (net of the amount of the capital costs of LCRIFs to be recovered from LCRIGs pursuant to Section 26.6) in effect at the time of the CAISO's evaluation of the facility; and

- (2) Existing or prospective owners of LCRIGs have demonstrated their interest in connecting LCRIGs to the facility consistent with the requirements of Section 24.1.3.2, which establishes the necessary demonstration of interest.
- (c) Each Participating TO shall report annually to the CAISO the amount of its net investment in LCRIFs (net of the amount of the capital costs of LCRIFs to be recovered from LCRIGs pursuant to Section 26.6), and its net investment in High Voltage Transmission Facilities reflected in its High Voltage TRR (net of the amount of the capital costs of LCRIFs to be recovered from LCRIGs pursuant to Section 26.6), to enable the CAISO to make the determination required under Section 24.1.3.1(b)(1).

**24.1.3.2 Demonstration of Interest in a Location Constrained Resource Interconnection Facility.**

A proponent of an LCRIF must demonstrate interest in the LCRIF equal to sixty percent (60%) or more of the capacity of the facility in the following manner:

- (a) the proponent's demonstration must include a showing that LCRIGs that would connect to the facility and would have a combined capacity equal to at least twenty-five percent (25%) of the capacity of the facility have executed Large Generator Interconnection Agreements or Small Generator Interconnection Agreements, as applicable; and
- (b) to the extent the showing pursuant to Section 24.1.3.2(a) does not constitute sixty percent (60%) of the capacity of the LCRIF, the proponent's demonstration of the remainder of the required minimum level of interest must include a showing that additional LCRIGs:
  - (1) in the case of Large Generating Facilities subject to the LGIP set forth in Appendix Y, have obtained Site Exclusivity or paid the Site Exclusivity Deposit in lieu of Site Exclusivity, provided that any Site Exclusivity Deposit paid pursuant to Section 3.5 of the LGIP set forth in Appendix Y

shall satisfy this requirement, or, in the case of Large Generating Facilities subject to the LGIP set forth in Appendix U and Small Generating Facilities, have obtained control over their site or paid a deposit to the CAISO in the amount of \$250,000, which deposit shall be refundable if the LCRIF is not approved or is withdrawn by the proponent; and

- (2) have demonstrated interest in the LCRIF by one of the following methods:
  - (i) executing a firm power sales agreement for the output of the LCRIF for a period of five years or longer; or
  - (ii) in the case of Large Generating Facilities subject to the LGIP set forth in Appendix Y, filing an Interconnection Request and paying the Interconnection Study Deposit required by Section 3.5 of the LGIP set forth in Appendix Y; or
  - (iii) in the case of Large Generating Facilities subject to the LGIP set forth in Appendix U and Small Generating Facilities, being in the CAISO's interconnection queue and paying a deposit to the CAISO equal to the sum of the minimum deposits required of an Interconnection Customer for all studies performed in accordance with the Large Generator Interconnection Procedures (Appendix U) or Small Generator Interconnection Procedures (Appendix S), as applicable to the LCRIF, less the amount of any deposits actually paid by the LCRIF for such studies. The deposit shall be credited toward such study costs. If the LCRIF is not approved or is withdrawn by the proponent, any deposit paid under this provision shall be refundable to the extent it exceeds costs incurred by the CAISO for such studies;  
or

- (iv) paying a deposit to the CAISO equal to five percent (5%) of the LCRIG's pro rata share of the capital costs of a proposed LCRIF. The deposit shall be credited toward costs of Interconnection Studies performed in connection with the Large Generator Interconnection Procedures (Appendix U or Appendix Y, as applicable) or Small Generator Interconnection Procedures (Appendix S), whichever is applicable. If the LCRIF is not approved or is withdrawn by the proponent, any deposit paid under this provision shall be refundable to the extent it exceeds the costs incurred by the CAISO for such studies.

#### **24.1.3.3 Coordination With Transmission Additions Proposed by Non-Participating TOs.**

In the event that a facility proposed as an LCRIF would connect to LCRIGs in an Energy Resource Area that would also be connected by a transmission facility that is in existence or is proposed to be constructed by an entity that is not a Participating TO and that does not intend to place that facility under the Operational Control of the CAISO, the CAISO shall coordinate with the entity owning or proposing that transmission facility through any regional planning process to avoid the unnecessary construction of duplicative transmission additions to connect the same LCRIGs to the CAISO Controlled Grid.

#### **24.1.3.4 Evaluation of Location Constrained Resource Interconnection Facilities.**

In evaluating whether a proposed LCRIF that meets the requirements of Section 24.1.3.1 is needed, and for purposes of ranking and prioritizing LCRIF projects, the CAISO will consider the following factors:

- (a) Whether, and if so, the extent to which, the facility meets or exceeds applicable CAISO Planning Standards, including standards that are Applicable Reliability Criteria.
- (b) Whether, and if so, the extent to which, the facility has the capability and flexibility both to interconnect potential LCRIGs in the Energy Resource Area and to be converted in the future to a network transmission facility.
- (c) Whether the projected cost of the facility is reasonable in light of its projected benefits, in comparison to the costs and benefits of other alternatives for

connecting Generating Units or otherwise meeting a need identified in the CAISO Transmission Planning Process, including alternatives that are not LCRIFs. In making this determination, the CAISO shall take into account, among other factors, the following:

- (1) The potential capacity of LCRIGs and the potential Energy that could be produced by LCRIGs in each Energy Resource Area;
- (2) The capacity of LCRIGs in the CAISO's interconnection process for each Energy Resource Area;
- (3) The projected cost and in-service date of the facility in comparison with other transmission facilities that could connect LCRIGs to the CAISO Controlled Grid;
- (4) Whether, and if so, the extent to which, the facility would provide additional reliability or economic benefits to the CAISO Controlled Grid; and
- (5) Whether, and if so, the extent to which, the facility would create a risk of stranded costs.

#### **24.1.4 Maintaining the Feasibility of Allocated Long Term CRRs.**

The CAISO is obligated to ensure the continuing feasibility of Long Term CRRs that are allocated by the CAISO over the length of their terms. In furtherance of this requirement the CAISO shall, as part of its annual Transmission Planning Process cycle, test and evaluate the simultaneous feasibility of allocated Long Term CRRs, including, but not limited to, when acting on the following types of projects: (a) planned or proposed transmission projects; (b) Generating Unit or transmission retirements; (c) Generating Unit interconnections; and (d) the interconnection of new Load. Pursuant to such evaluations, the CAISO shall identify the need for any transmission additions or upgrades required to ensure the continuing feasibility of allocated Long Term CRRs over the length of their terms and shall publish Congestion Data Summary along with the results of the CAISO technical studies. In assessing the need for transmission additions or upgrades to maintain the feasibility of allocated Long Term CRRs, the CAISO, in coordination



with the Participating TOs and other Market Participants, shall consider lower cost alternatives to the construction of transmission additions or upgrades, such as acceleration or expansion of existing projects; Demand-side management; Remedial Action Schemes; constrained-on Generation; interruptible Loads; reactive support; or in cases where the infeasible Long Term CRRs involve a small magnitude of megawatts, ensuring against the risk of any potential revenue shortfall using the CRR Balancing Account and uplift mechanism in Section 11.2.4. As part of the CAISO's Transmission Planning Process, the Participating TOs and Market Participants shall provide the necessary assistance and information to the CAISO to allow it to assess and identify transmission additions or upgrades that may be necessary under Section 24.1.4. To the extent a transmission upgrade or addition is deemed needed to maintain the feasibility of allocated Long Term CRRs in accordance with this Section and included in the CAISO's annual Transmission Plan, the CAISO will designate the Participating TO(s) with a PTO Service Territory in which the transmission upgrade or addition is to be located as the Project Sponsor(s), responsible to construct, own and/or finance, and maintain such transmission upgrade or addition.

#### **24.2 Transmission Planning Process and Coordination of Technical Studies.**

The CAISO shall perform the CAISO's Transmission Planning Process on an annual cycle in accordance with the terms of this CAISO Tariff, the Transmission Control Agreement, and the Business Practice Manual. The Transmission Planning Process shall, at a minimum:

- (a) Coordinate and consolidate the transmission needs of the CAISO Balancing Authority Area into a single plan, which will be assessed on the basis of maintaining the reliability of the CAISO Controlled Grid in accordance with Applicable Reliability Criteria and CAISO Planning Standards, in a manner that promotes the economic efficiency of the CAISO Controlled Grid and considers federal and state environmental and other policies affecting the provision of Energy.
- (b) Reflect a planning horizon covering a minimum of ten (10) years that considers transmission enhancements and expansions, Demand Forecasts, Demand-side management, and capacity forecasts relating to generation technology type,

additions and retirements, and such other factors as the CAISO determines are relevant.

- (c) Seek to avoid unnecessary duplication of facilities and ensure the simultaneous feasibility of the CAISO Transmission Plan and the transmission plans of interconnected Balancing Authority Areas, and otherwise coordinate with regional and sub-regional transmission planning processes and entities in accordance with Section 24.8.
- (d) Identify existing and projected limitations of the CAISO Controlled Grid's physical, economic or operational capability or performance and identify transmission upgrades and additions, including alternatives thereto, deemed needed in accordance with Section 24.1 to address the existing and projected limitations.
- (e) Account for any effects on the CAISO Controlled Grid of the interconnection of Generating Units on the Distribution System under the Wholesale Distribution Access Tariffs of the Participating TOs, including an assessment of the deliverability of such Generating Units on a basis comparable to the Deliverability Assessment performed under Appendix U or Appendix Y, as applicable.

**24.2.1 ~~CAISO Planning Standards Committee~~ Unified Planning Assumptions and Study Plan.**

~~The CAISO shall maintain a Planning Standards Committee, which shall be open to participation by all Market Participants, electric utility regulatory agencies within California, and other interested parties, to review, provide advice on, and propose modifications to CAISO Planning Standards for consideration by CAISO management and the CAISO Governing Board. The Planning Standards Committee shall meet, at a minimum, on an annual basis prior to publication of the draft Unified Planning Assumptions and Study Plan under Section 24.2.3; however, additional meetings, web conferences, teleconferences may be scheduled as needed. Meetings of the Planning Standards Committee shall be noticed by Market Notice and such notice shall be posted to the CAISO Website. Teleconference capability will be made available for all meetings of the Planning Standards Committee. The CAISO Vice President of Planning~~

~~and Infrastructure Development or his or her designee shall serve as chair of the Planning Standards Committee. All materials addressed at or relating to such meetings, including agendas, presentations, background papers, party comments, and minutes shall be posted to the CAISO Website. The chair of the Planning Standards Committee shall seek approval by the CAISO Governing Board of any modifications to the CAISO Planning Standards, as those CAISO Planning Standards exist as of the effective date of Section 24.2, and must include in the report to the CAISO Governing Board a summary of the positions of parties with respect to the proposed modifications to the CAISO Planning Standards and the ground(s) for rejecting modifications, if any, proposed by Market Participants or other interested parties.~~

**24.2.1.1 Additional Projects and Data for Development of the Unified Planning Assumptions and Study Plan.**

The CAISO will develop Unified Planning Assumptions and Study Plan using information and data received during the Request Window in the previous planning cycle and under Section 24.2.3. The CAISO will also use the following in the development of the Unified Planning Assumptions and Study Plan:

- (1) WECC base cases for the relevant planning horizon;
- (2) Transmission upgrades and additions approved by the CAISO in past Transmission Planning Process cycles and scheduled to be energized within the planning horizon;
- (3) Location Constrained Resource Interconnection Facilities conditionally approved under Section 24.1.3.1(a);
- (4) Network Upgrades identified pursuant to Section 25, Appendix U, Appendix GG, or Appendix W relating to the CAISO's Large Generator Interconnection Procedures and Appendix AA relating to the CAISO's Small Generator Interconnection Procedures;
- (5) Operational solutions validated by the CAISO to address Local Capacity Area Resource requirements;

- (6) Regulatory initiatives, as appropriate, including state regulatory agency initiated programs;
- (7) Energy Resource Areas or similar resource areas identified as high priority by the CPUC or CEC; and
- (8) Results and analyses from Economic Planning Studies or other assessments that may have identified potentially needed transmission upgrades or additions performed in past CAISO Transmission Planning Process cycles.

**24.2.1.2 General Scope of Unified Planning Assumptions and Study Plan.**

The Unified Planning Assumptions and Study Plan shall, at a minimum, describe:

- (a) The planning data and assumptions to be used, to the maximum extent possible, as a base case for each technical study to be performed in the Transmission Planning Process cycle, including, but not limited to, those related to Demand Forecasts and distribution, generation capacity additions and retirements, and transmission system modifications;
- (b) A list of each technical study to be performed in the Transmission Planning Process cycle and a summary of the technical study's objective or purpose;
- (c) A description of any modifications to the planning data and assumptions developed as the general base case in Section 24.2.14.2(a) made in each technical study performed in the Transmission Planning Process cycle;
- (d) A description of the software tools, methodology and other criteria used in each technical study performed in the Transmission Planning Process cycle;
- (e) The identification of any entities directed to perform a particular technical study or portions of a technical study;
- (f) A proposed schedule for all stakeholder meetings to be held as part of the Transmission Planning Process cycle, and means for notification of any changes thereto, the location on the CAISO Website of information relating to the technical studies performed in the Transmission Planning Process cycle, and the

name of a contact person at the CAISO for each technical study performed in the Transmission Planning Process cycle;

- (g) A list and description of each Economic Planning Study studied by the CAISO as a High Priority Economic Planning Study under Section 24.9 identified in the past Transmission Planning Process; and
- (h) To the maximum extent practicable, and where applicable, appropriate sensitivity analyses, including project or solution alternatives, to be performed as part of technical studies.

**24.2.1.3 Preparation of Draft and Final Unified Planning Assumptions and Study Plan.**

- (a) Following review of relevant information, the CAISO will prepare and post on the CAISO Website a draft Unified Planning Assumptions and Study Plan. The CAISO will issue a Market Notice announcing the availability such draft, soliciting comments, and scheduling a public conference(s) as required by Section 24.2.14.3(c).
- (b) All comments on the draft Unified Planning Assumptions and Study Plan will be posted by the CAISO to the CAISO Website.
- (c) Subsequent to the posting of the draft Unified Planning Assumptions and Study Plan, the CAISO will conduct a minimum of one public meeting open to Market Participants, electric utility regulatory agencies, and other interested parties to review, discuss, and recommend modifications to the draft Unified Planning Assumptions and Study Plan. Additional meetings, web conferences, or teleconferences may be scheduled as needed. All stakeholder meetings, web conferences, or teleconferences shall be noticed by Market Notice and such notice shall be posted to the CAISO Website.
- (d) Following the public conference(s) required by Section 24.2.1.32.2(c), and under the schedule set forth in the Business Practice Manual, the CAISO will determine and publish to the CAISO Website the final Unified Planning Assumptions and

Study Plan in accordance with the procedures set forth in the Business Practice Manual.

**24.2.2 Technical Studies.**

**24.2.2.1 Performance of Technical Studies**

- (a) In accordance with the Unified Planning Assumptions and Study Plan, and the procedures and deadlines in the Business Practice Manual, the CAISO will perform, or direct the performance by third parties of, technical studies and other assessments necessary for the Transmission Plan and Transmission Planning Process. The CAISO technical studies will include a Congestion Data Summary, as further described in the Business Practice Manual. According to the detailed schedule set forth in the Business Practice Manual, the CAISO will post the preliminary results of its technical studies and proposed mitigation solutions on the CAISO Website. Within one month after the posting of these results, Participating TOs or other third parties will submit the results of the technical assessments conducted at the direction of the CAISO to be posted to the CAISO Wwebsite. Subsequently, the CAISO will conduct a minimum of one public conference that provides an opportunity for comments on the preliminary results and mitigation proposals. Additional public meetings, web conferences, or teleconferences may be scheduled as needed. All meetings, web conferences, or teleconferences shall be noticed by Market Notice and shall be posted to the CAISO Website.
- (b) All technical studies, whether performed by the CAISO, the Participating TOs or other third parties under the direction of the CAISO, must utilize the Unified Planning Assumptions for the particular technical study to the maximum extent practical, and deviations from the Unified Planning Assumptions for the particular technical study must be documented in the preliminary and final results of each technical study. The CAISO will measure the results of the studies against NERC planning standards, WECC planning standards, and the CAISO Planning

Standards, and other criteria established by the Business Practice Manual. After consideration of the comments received on the preliminary results, the CAISO will complete, or direct the completion of, the technical studies and post the final study results on the CAISO Website.

(c) The CAISO technical study results will identify needs and proposed solutions to meet applicable- WECC planning standards, NERC planning standards and other applicable planning standards. Pursuant to the schedule described in the Business Practice Manual, Participating TOs will submit transmission projects and alternative solutions through the Request Window in response to needs and proposed solutions identified by CAISO, as well as projects and solutions to reliability needs identified by the Participating TOs.

(d) The CAISO and Participating TOs shall coordinate their respective transmission planning responsibilities required for compliance with the NERC Reliability Standards and for the purposes of developing the annual Transmission Plan according to the requirements and time schedules- set forth in the Business Practice Manual.

#### **24.2.32 Request Window.**

~~Market Participants may propose Economic Planning Studies and transmission upgrades or additions for inclusion in the annual Transmission Plan during a Request Window. All requests for Economic Planning Studies and transmission upgrades or additions must be submitted by Market Participants, CPUC, CEC, or Project Sponsors through the Request Window, in accordance with Section 24 and the Business Practice Manual, to be considered for inclusion in the annual Transmission Plan.~~ The duration of the Request Window will be set forth in the Business Practice Manual and will occur in the year prior to the year in which the Transmission Plan is prepared. ~~All Pproposals for Economic Planning Studies and transmission upgrades or additions~~submitted through the Request Window must use the forms and satisfy the information and technical requirements set forth in the Business Practice Manual. Proposals for transmission additions or upgrades must be within or connect to the CAISO Balancing Authority Area or CAISO Controlled Grid and proposals for Economic Planning Studies must be intended to promote

competition or economic efficiency of serving Load within the CAISO Balancing Authority Area, but may relate to Congestion relief or transmission capacity expansion outside the CAISO Balancing Authority Area. The following proposals will only be considered for inclusion in the Transmission Plan if proposed during the Request Window:

- (a) Economic transmission upgrades or additions proposed under Section 24.1.1, ~~except for projects costing less than \$50 million that are identified through Participating TO proposals provided pursuant to the Study Plan;~~
- (b) Location Constrained Resource Interconnection Facilities under Section 24.1.3 not identified by the CAISO as part of Interconnection Studies performed under the LGIP set forth in Appendix U or Appendix Y;
- (c) Demand response programs that are proposed for inclusion in the base case or assumptions for the Transmission Plan or as alternatives to transmission additions or upgrades;
- (d) Generation projects that are proposed as solutions to Congestion identified in previously published Economic Planning Studies, for inclusion in long-term planning studies, or as alternatives to transmission additions or upgrades; and
- (e) Requests for Economic Planning Studies; and
- (f) Reliability-driven projects described in Section 24.1.2.

#### **24.2.32.1 CAISO Assessment of Request Window Proposals.**

Following the submittal of a proposal for a transmission addition or upgrade, Demand response program, or generation project during the Request Window in accordance with Section 24.2.32, the CAISO will determine whether the proposal will be included in the Unified Planning Assumptions or Study Plan as appropriate. A proposal can only be included in the Unified Planning Assumptions or Study Plan upon the determination by the CAISO that:

- (a) the proposal satisfies the information requirements for the particular type of project submitted as set forth in templates included in the Business Practice Manual;



- (b) the proposal is not functionally duplicative of transmission upgrades or additions that have previously been approved by the CAISO; and
- (c) the proposal, if a sub-regional or regional project that affects other interconnected Balancing Authority Areas has been reviewed by the appropriate sub-regional or regional planning entity, is not inconsistent with such sub-regional or regional planning entity's preferred solution or project, and has been determined to be appropriate for inclusion in the CAISO Study Plan, rather than, or in addition to, being included in or deferred to the planning process of the sub-regional or regional planning entity.

In accordance with the schedule and procedures set forth in the Business Practice Manual, the CAISO will notify the Participating TO, Market Participant, Project Sponsor, the CEC or CPUC submitting the proposal of any deficiencies in the proposal and provide the Market Participant an opportunity to correct the deficiencies. The failure to correct the deficiency precludes the proposal from inclusion in the Study Plan. The CAISO will notify the partyMarket Participant submitting the proposal whether or not the proposal will be included in the Study Plan.

**24.2.32.2 CAISO Assessment of Requests for Economic Planning Studies Received During the Request Window.**

Following the submittal of a request for an Economic Planning Study during the Request Window in accordance with Section 24.2.32, the CAISO will determine whether the request shall be designated as a High Priority Economic Planning Study for inclusion in the Unified Planning Assumptions and Study Plan.

In making the determination, the CAISO will consider:

- (a) Whether the requested Economic Planning Study seeks to address Congestion identified by the CAISO in the Congestion Data Summary published for the applicable Transmission Planning Process cycle and the magnitude, duration, and frequency of that Congestion;
- (b) Whether the requested Economic Planning Study addresses delivery of Generation from Location Constrained Resource Interconnection Generators or network transmission facilities intended to access Generation from an Energy

Resource Area (ERA) or similar resource area assigned a high priority by the CPUC or CEC;

- (c) Whether the requested Economic Planning Study is intended to address Local Capacity Area Resource requirements; or
- (d) Whether resource and Demand information indicates that Congestion described in the Economic Planning Study request is projected to increase over the planning horizon used in the Transmission Planning Process and the magnitude of that Congestion.
- (e) Whether the Economic Planning Study is intended to encompass the upgrades necessary to integrate new generation resources or loads on an aggregated or regional basis.

#### **24.2.3.3 High Priority Economic Planning Studies**

- (a) In accordance with the schedule and procedures set forth in the Business Practice Manual, the CAISO will post to the CAISO Website the list of selected High Priority Economic Planning Studies to be included in the draft Unified Planning Assumptions and Study Plan. The CAISO may assess requests for Economic Planning Studies individually or in combination where such requests may have common or complementary effects on the CAISO Controlled Grid. The CAISO will perform a maximum of five High Priority Economic Planning Studies; however, the CAISO retains discretion to perform greater than five High Priority Economic Planning Studies should stakeholder requests or patterns of Congestion or anticipated Congestion so warrant. In performing High Priority Economic Planning Studies, the CAISO will batch or cluster proposed Economic Planning Studies where (1) such studies will address the same patterns of Congestion or anticipated Congestion; (2) such studies will address patterns of Congestion or anticipated Congestion that are in related locations; or (3) such studies seek to integrate new generation resources or loads that impact the same facilities.

(b) High Priority Economic Planning Studies shall be performed in accordance with the standards and procedures established in the Business Planning Manual. Market Participants may conduct Economic Planning Studies that have not been designated as High Priority Economic Planning Studies at their own expense and may submit such studies for consideration in the development of the Transmission Plan when the CAISO provides notice of the public meeting regarding technical study results pursuant to Section 24.2.4.2.1.(a).

**24.2.4 Development and Approval of Transmission Plan.**

(a) In accordance with the schedule and procedures in the Business Practice Manual, the CAISO will post a draft Transmission Plan. The CAISO will subsequently conduct a public conference regarding the draft Transmission Plan and solicit comments, consistent with the timelines and procedures set forth in the Business Practice Manual. Additional meetings, web conferences, or teleconferences may be scheduled as needed. All stakeholder meetings, web conferences, or teleconferences shall be noticed by Market Notice and such notice shall be posted to the CAISO Website. After consideration of comments, the CAISO will post a final Transmission Plan to the CAISO Website.

(b) The draft and final Transmission Plan may include, but is not limited to: (1) the results of technical studies performed under the Study Plan; (2) determinations, recommendations, and justifications for the need, according to Section 24.1, for identified transmission upgrades and additions; (3) assessments of transmission upgrades and additions submitted as alternatives to the potential solutions to transmission needs identified by the CAISO and studied during the Transmission Planning Process cycle; (4) results of Economic Planning Studies performed during the Transmission Planning Process cycle; (5) an update on the status of transmission upgrades or additions previously approved by the CAISO, including identification of mitigation plans, if necessary, to address any potential delay in

the anticipated completion of an approved transmission upgrade or addition; and (6) to the extent available, the results of Interconnection Studies.

- (c) Transmission upgrades or additions that are Large Projects will be subject to a separate study and public participation process. The study and public participation process for Large Projects may encompass more than one Transmission Planning Process cycle. Large Projects will be identified in the Transmission Plan for each cycle but will be presented to the CAISO Governing Board for approval in accordance with the study and public participation schedule established for that project.
- (d) Transmission upgrades or additions with capital costs of less than \$50 million that do not require approval by the CAISO Governing Board will be identified in the Transmission Plan but will be separately approved by CAISO management according to the procedures in the Business Practice Manual.
- (e) Other projects requiring CAISO Governing Board approval will be identified in the Transmission Plan but will be submitted for approval in accordance with the project timeline in accordance with the procedures in the Business Practice Manual.

#### **24.2.4.1 Presentation to the CAISO Governing Board.**

The CAISO will present the Transmission Plan to the CAISO Governing Board in accordance with the schedule set forth in the Business Practice Manual. The Transmission Plan will be considered final once it has been presented to the CAISO Governing Board and will be posted on the CAISO Website.

#### **24.2.4.2 Obligation to Construct Transmission Projects Included in Transmission Plan.**

A Participating TO that has a PTO Service Territory shall be obligated to construct all transmission additions and upgrades that are determined by the CAISO Governing Board or management, as applicable, to be needed in accordance with the requirements of Section 24, not including conditional approvals and determinations of need under Section 24.1.3.1(a), and which: (1) are additions or upgrades to transmission facilities that are located within its PTO Service Territory, unless (a) it does not own the

facility being upgraded or added and neither terminus of such facility is located within its PTO Service Territory or (b) it does not own the facility being upgraded or added and the Project Sponsor is a Participating TO that elects to construct the transmission upgrade; or (2) are additions to existing transmission facilities or upgrades to existing transmission facilities that it owns, that are part of the CAISO Controlled Grid, and that are located outside of its PTO Service Territory, unless the joint-ownership arrangement, if any, does not permit. A Participating TO's obligation to construct such transmission additions and upgrades shall be subject to: (1) its ability, after making a good faith effort, to obtain all necessary approvals and property rights under applicable federal, state, and local laws and (2) the presence of a cost recovery mechanism with cost responsibility assigned in accordance with Section 24.107 of the CAISO Tariff. The obligations of the Participating TO to construct such transmission additions or upgrades will not alter the rights of any entity to construct and expand transmission facilities as those rights would exist in the absence of a TO's obligations under this CAISO Tariff or as those rights may be conferred by the CAISO or may arise or exist pursuant to this CAISO Tariff.

#### **24.2.4.3 Documentation of Compliance with NERC Reliability Standards**

The Transmission Plan and underlying studies, assessments, information and analysis developed during the Transmission Planning Process, regardless of whether performed by CAISO or by Participating TOs or other third parties at the direction of CAISO, shall be used by the CAISO as part of its documentation of compliance with NERC Reliability Standards.

### **24.2.3 Additional Planning Information.**

#### **24.2.3.1 Information Provided by Participating TOs.**

In addition to any information that must be provided to the CAISO under the NERC Reliability Standards for ~~Modeling, Data and Analysis (NERC MOD Standards)~~, Participating TOs shall provide the CAISO on an annual or periodic basis in accordance with the schedule and procedures and in the form required by the Business Practice Manual any information and data reasonably required by the CAISO to perform the Transmission Planning Process, including, but not limited to: (1) modeling data for power flow, including reactive power, short-circuit and stability analysis; (2) a description of the total Demand to be served from each substation, including a description of any Energy efficiency programs reflected in the total Demand;

(3) the amount of any interruptible Loads included in the total Demand (including conditions under which an interruption can be implemented and any limitations on the duration and frequency of interruptions); (4), a description of Generating Units to be interconnected to the Distribution System of the Participating TO, including generation type and anticipated Commercial Operation Date; (5) detailed power system models of their transmission systems that reflect transmission system changes, including equipment replacement not requiring approval by the CAISO; (6) Distribution System modifications; (7) transmission network information, including line ratings, line length, conductor sizes and lengths, substation equipment ratings, circuits on common towers and with common rights-of-ways and cross-overs, special protection schemes, and protection setting information; and (8) Contingency lists.

#### **24.2.3.2 Information Provided by Participating Generators.**

In addition to any information that must be provided to the CAISO under the NERC Reliability Standards ~~for Modeling, Data and Analysis (NERC MOD Standards)~~, Participating Generators shall provide the CAISO on an annual or periodic basis in accordance with the schedule, procedures and in the form required by the Business Practice Manual any information and data reasonably required by the CAISO to perform the Transmission Planning Process, including, but not limited to (1) modeling data for short-circuit and stability analysis and (2) data, such as term, and status of any environmental or land use permits or agreements the expiration of which may affect that the operation of the Generating Unit.

#### **24.2.3.3 Information Requested from Load Serving Entities.**

In addition to any information that must be provided to the CAISO under the NERC Reliability Standards ~~for Modeling, Data and Analysis (NERC MOD Standards)~~, the CAISO shall solicit from Load Serving Entities through their Scheduling Coordinators information required by, or anticipated to be useful to, the CAISO in its performance of the Transmission Planning Process, including, but not limited to (1) long-term resource plans; (2) existing long-term contracts for resources and transmission service outside the CAISO Balancing Authority Area; ~~(3) resource capacity and Energy Bid information received through requests for offers or similar solicitations;~~ and (34) Demand Forecasts, including forecasted effect of Energy efficiency and Demand response programs.

#### **24.2.3.4 Information Requested from Interconnected Balancing Authority Areas, Sub-Regional Planning Groups and Electric Utility Regulatory Agencies.**

In accordance with Section 24.8 , the CAISO shall obtain or solicit from interconnected Balancing Authority Areas, regional and sub-regional planning groups within the WECC, the CPUC, the CEC, and Local Regulatory Authorities information required by, or anticipated to be useful to, the CAISO in its performance of the Transmission Planning Process, including, but not limited to (1) long-term transmission system plans; (2) long-term resource plans; (3) generation interconnection process information; (4) Demand Forecasts; and (5) any other data necessary for the development of power flow, short-circuit, and stability cases over the planning horizon of the CAISO Transmission Planning Process.

#### **24.2.3.5      Obligation to Provide Updated Information.**

If material changes to the information provided under Sections 24.2.3.1 and 24.2.3.2 occur during the annual Transmission Planning Process, the providers of the information must provide notice to the CAISO of the changes.

#### ~~24.2.4      Unified Planning Assumptions and Study Plan.~~

##### ~~24.2.4.1      Additional Projects and Data for Development of the Unified Planning Assumptions and Study Plan.~~

~~The CAISO will develop Unified Planning Assumptions and Study Plan using information and data received during the Request Window and under Section 24.2.3. The CAISO will also use the following in the development of the Unified Planning Assumptions and Study Plan:~~

- ~~(1)      WECC base cases for the relevant planning horizon;~~
- ~~(2)      transmission upgrades and additions approved by the CAISO and scheduled to be energized within the planning horizon;~~
- ~~(3)      Location Constrained Resource Interconnection Facilities conditionally approved under Section 24.1.3.1(a);~~
- ~~(4)      Network Upgrades identified pursuant to Section 25, Appendix U , Appendix Y, or Appendix W relating to the CAISO's Large Generator Interconnection Procedures and Appendix S relating to the CAISO's Small Generator Interconnection Procedures;~~
- ~~(5)      operational solutions validated by the CAISO to address Local Capacity Area Resource requirements;~~

- (6) ~~regulatory initiatives, as appropriate, including state regulatory agency initiated programs;~~
- (7) ~~Energy Resource Areas or similar resource areas identified as high priority by the CPUC or CEC; and~~
- (8) ~~results and analyses from Economic Planning Studies or other assessments that may have identified potentially needed transmission upgrades or additions performed in past CAISO Transmission Planning Process cycles.~~

#### **~~24.2.4.2 General Scope of Unified Planning Assumptions and Study Plan.~~**

~~The Unified Planning Assumptions and Study Plan shall, at a minimum, describe:~~

- (a) ~~the planning data and assumptions to be used, to the maximum extent possible, as a base case for each technical study to be performed in the Transmission Planning Process cycle, including, but not limited, to those related to Demand Forecasts and distribution, generation capacity additions and retirements, and transmission system modifications;~~
- (b) ~~a list of each technical study to be performed in the Transmission Planning Process cycle and a summary of the technical study's objective or purpose;~~
- (c) ~~a description of any modifications to the planning data and assumptions developed as the general base case in Section 24.2.4.2(a) made in each technical study performed in the Transmission Planning Process cycle;~~
- (d) ~~a description of the software tools, methodology and other criteria used in each technical study performed in the Transmission Planning Process cycle;~~
- (e) ~~the identification of any entities directed to perform a particular technical study or portions of a technical study;~~
- (f) ~~a proposed schedule for all stakeholder meetings to be held as part of the Transmission Planning Process cycle, and means for notification of any changes thereto, the location on the CAISO Website of information relating to the technical studies performed in the Transmission Planning Process cycle, and the~~



~~name of a contact person at the CAISO for each technical study performed in the Transmission Planning Process cycle;~~

- ~~(g) a list and description of each Economic Planning Study studied by the CAISO as a High Priority Economic Planning Study under Section 24.9; and~~
- ~~(h) to the maximum extent practicable, and where applicable, identify appropriate sensitivity analyses, including project or solution alternatives, to be performed as part of technical studies.~~

~~**24.2.4.3 Preparation of Draft and Final Unified Planning Assumptions and Study Plan.**~~

- ~~(a) Following review of relevant information, the CAISO will prepare and post on the CAISO Website a draft Unified Planning Assumptions and Study Plan. The CAISO will issue a Market Notice announcing the availability such draft, soliciting comments, and scheduling a stakeholder conference(s) as required by Section 24.2.4.3(c).~~
- ~~(b) All comments from stakeholders on the draft Unified Planning Assumptions and Study Plan will be posted by the CAISO to the CAISO Website.~~
- ~~(c) Subsequent to the posting of the draft Unified Planning Assumptions and Study Plan, the CAISO will conduct a minimum of one stakeholder meeting open to Market Participants, electric utility regulatory agencies, and other interested parties to review, discuss, and recommend modifications to the draft Unified Planning Assumptions and Study Plan. Additional stakeholder meetings, web conferences, or teleconferences may be scheduled as needed. All stakeholder meetings, web conferences, or teleconferences shall be noticed by Market Notice and such notice shall be posted to the CAISO Website.~~
- ~~(d) Following the stakeholder conference(s) required by Section 24.2.4.2(c), and under the schedule set forth in the Business Practice Manual, the CAISO will determine and publish to the CAISO Website the final Unified Planning~~

~~Assumptions and Study Plan in accordance with the procedures set forth in the Business Practice Manual.~~

**24.2.5 Development and Approval of Transmission Plan.**

**24.2.5.1 Technical Studies.**

- (a) ~~In accordance with the Unified Planning Assumptions and Study Plan and the procedures and deadlines in the Business Practice Manual, the CAISO will perform, or direct the performance by third parties of, technical studies and other assessments necessary for the Transmission Plan and Transmission Planning Process, post the preliminary results on the CAISO Website, conduct a minimum of one stakeholder conference, and provide an opportunity for comments of the preliminary results. Additional stakeholder meetings, web conferences, or teleconferences may be scheduled as needed. All stakeholder meetings, web conferences, or teleconferences shall be noticed by Market Notice and such notice shall be posted to the CAISO Website.~~
- (b) ~~All technical studies, whether performed by the CAISO or third party under the direction of the CAISO, must utilize the Unified Planning Assumptions for the particular technical study to the maximum extent practical, and deviations from the Unified Planning Assumptions for the particular technical study must be documented in the preliminary and final results of each technical study. The CAISO will measure the results of the studies against NERC planning standards, WECC planning standards, and the CAISO Planning Standards, and other criteria established by the Business Practice Manual. After consideration of the comments received on the preliminary results, the CAISO will complete, or direct the completion of, the technical studies and post the final study results on the CAISO Website.~~

**24.2.5.2 Development of Transmission Plan.**

- (a) ~~In accordance with the schedule and procedures in the Business Practice Manual, the CAISO will post a draft Transmission Plan. The CAISO will subsequently conduct a stakeholder conference regarding the draft Transmission Plan and solicit comments, consistent with the timelines and procedures set forth in the Business Practice Manual. Additional stakeholder meetings, web conferences, or teleconferences may be scheduled as needed. All stakeholder meetings, web conferences, or teleconferences shall be noticed by Market Notice and such notice shall be posted to the CAISO Website. After consideration of comments, the CAISO will post a final Transmission Plan to the CAISO Website.~~
- (b) ~~The draft and final Transmission Plan may include, but is not limited to: (1) the results of technical studies performed under the Study Plan; (2) determinations, recommendations, and justifications for the need, according to Section 24.1 for identified transmission upgrades and additions; (3) assessments of transmission upgrades and additions not proposed under Section 24.1 and for which need has not been formally determined by the CAISO Governing Board or management, as applicable, under Section 24.1, but which have been identified by the CAISO as potential solutions to transmission needs studied during the Transmission Planning Process cycle; (4) results of Economic Planning Studies performed during the Transmission Planning Process cycle; (5) an update on the status of transmission upgrades or additions previously approved by the CAISO, including identification of mitigation plans, if necessary, to address any potential delay in the anticipated completion of an approved transmission upgrade or addition; and (6) to the extent available, the results of Interconnection Studies.~~
- (c) ~~The Transmission Plan may not include the results of certain technical studies performed as part of the Transmission Planning Process cycle identified in the Unified Planning Assumptions and Study Plan that were scheduled for completion after publication of the Transmission Plan for the Transmission Planning Process cycle.~~

### ~~24.2.5.3~~ **Approval by the CAISO Governing Board.**

~~The CAISO will present the Transmission Plan to the CAISO Governing Board at the first meeting of the year following the year in which the Transmission Plan is prepared. The Transmission Plan will be considered final once it has been presented to the CAISO Governing Board and will be posted on the CAISO Website. Transmission upgrades and additions for which CAISO Governing Board approval is required may be presented to the CAISO Governing Board for approval separate from presentation of the Transmission Plan.~~

### ~~24.3~~ **Obligation to Construct Transmission Projects Included in Transmission Plan.**

~~A Participating TO that has a PTO Service Territory shall be obligated to construct all transmission additions and upgrades that are determined by the CAISO Governing Board or management, as applicable, to be needed in accordance with the requirements of Section 24, not including conditional approvals and determinations of need under Section 24.1.3.1(a), and which: (1) are additions or upgrades to transmission facilities that are located within its PTO Service Territory, unless (a) it does not own the facility being upgraded or added and neither terminus of such facility is located within its PTO Service Territory or (b) it does not own the facility being upgraded or added and the Project Sponsor is a Participating TO that elects to construct the transmission upgrade; or (2) are additions to existing transmission facilities or upgrades to existing transmission facilities that it owns, that are part of the CAISO Controlled Grid, and that are located outside of its PTO Service Territory, unless the joint-ownership arrangement, if any, does not permit. A Participating TO's obligation to construct such transmission additions and upgrades shall be subject to: (1) its ability, after making a good faith effort, to obtain all necessary approvals and property rights under applicable federal, state, and local laws and (2) the presence of a cost recovery mechanism with cost responsibility assigned in accordance with Section 24.7. The obligations of the Participating TO to construct such transmission additions or upgrades will not alter the rights of any entity to construct and expand transmission facilities as those rights would exist in the absence of a TO's obligations under this CAISO Tariff or as those rights may be conferred by the CAISO or may arise or exist pursuant to this CAISO Tariff.~~

### **24.4 Participating TO Study Obligation.**

The Participating TO constructing or expanding facilities in accordance with Section 24.2.43, will be

directed by the CAISO to coordinate with the Project Sponsor or Participating TO(s) with PTO Service Territories in which the transmission upgrade or addition will be located, neighboring Balancing Authority Areas, as appropriate, and other Market Participants to perform any study or studies necessary, including a Facility Study, to determine the appropriate facilities to be constructed in accordance with the CAISO Transmission Planning Process and the terms set forth in the TO Tariff.

#### **24.5 Operational Review.**

The CAISO will perform an operational review of all facilities studied as part of the CAISO Transmission Planning Process that are proposed to be connected to, or made part of, the CAISO Controlled Grid to ensure that the proposed facilities provide for acceptable Operating Flexibility and meet all its requirements for proper integration with the CAISO Controlled Grid. If the CAISO finds that such facilities do not provide for acceptable operating flexibility or do not adequately integrate with the CAISO Controlled Grid, the CAISO shall coordinate with the Project Sponsor and, if different, the Participating TO with the PTO Service Territory, or the operators of neighboring Balancing Authority Areas, if applicable, in which the facilities will be located to reassess and redesign the facilities required to be constructed. Transmission upgrades or additions that do not provide acceptable operating flexibility or do not adequately integrate with the CAISO Controlled Grid cannot be included in the CAISO Transmission Plan or approved by CAISO management or the CAISO Governing Board, as applicable.

#### **24.6 State and Local Approval and Property Rights.**

**24.6.1** The Participating TO obligated to construct facilities under this Section 24 must make a good faith effort to obtain all approvals and property rights under applicable federal, state and local laws that are necessary to complete the construction of the required transmission additions or upgrades. This obligation includes the Participating TO's use of eminent domain authority, where provided by state law.

**24.6.2** If the Participating TO cannot secure any such necessary approvals or property rights and consequently is unable to construct a transmission addition or upgrade found to be needed in accordance with Section 24.1, it shall promptly notify the CAISO and the Project Sponsor, if any, and shall comply with its obligations under the TO Tariff to convene a technical meeting to evaluate alternative proposals. The CAISO shall take such action as it reasonably considers appropriate, in coordination with the Participating TO, the Project Sponsor, if any, and other affected Market Participants, to facilitate the

development and evaluation of alternative proposals including, where possible, conferring on a third party the right to build the transmission addition or upgrade as set forth in Section 24.6.3.

**24.6.3** Where the conditions of Section 24.6.2 have been satisfied and it is possible for a third party to obtain all approvals and property rights under applicable federal, state and local laws that are necessary to complete the construction of transmission additions or upgrades required to be constructed in accordance with this CAISO Tariff (including the use of eminent domain authority, where provided by state law), the CAISO may confer on a third party the right to build the transmission addition or upgrade, which third party shall enter into the Transmission Control Agreement in relation to such transmission addition or upgrade.

**24.7 WECC and Regional Coordination.**

The Project Sponsor will have responsibility for completing any applicable WECC requirements and rating study requirements to ensure that a proposed transmission addition or upgrade meets regional planning requirements. The Project Sponsor may request the Participating TO to perform this coordination on behalf of the Project Sponsor at the Project Sponsor's expense.

**24.8 Regional and Sub-Regional Planning Process.**

The CAISO will be a member of the WECC and other applicable regional or sub-regional organizations and participate in WECC's operation and planning committees, and in other applicable regional and sub-regional coordinated planning processes.

**24.8.1 Scope of Regional or Sub-Regional Planning Participation.**

The CAISO will collaborate with adjacent transmission providers and existing sub-regional planning organizations through existing processes. This collaboration involves a reciprocal exchange of information, to the maximum extent possible and subject to applicable confidentiality restrictions, in order to ensure the simultaneous feasibility of respective Transmission Plans, the identification of potential areas for increased efficiency, and the consistent use of common assumptions whenever possible. The details of the CAISO's participation in regional and sub-regional planning processes are set forth in the Business Practice Manual. At a minimum, the CAISO shall be required to:

- (a) solicit the participation, whether through sub-regional planning groups or

individually, of all interconnected Balancing Authority Areas in the development of the Unified Planning Assumptions and Study Plan and in reviewing the results of technical studies performed as part of the CAISO's Transmission Planning Process in order to:

- (1) coordinate, to the maximum extent practicable, planning assumptions, data and methodologies utilized by the CAISO, regional and sub-regional planning groups or interconnected Balancing Authority Areas;
  - (2) ensure transmission expansion plans of the CAISO, regional and sub-regional planning groups or interconnected Balancing Authority Areas are simultaneously feasible and seek to avoid duplication of facilities.
- (b) coordinate with regional and sub-regional planning groups regarding the entity to perform requests for Economic Planning Studies or other Congestion related studies;
  - (c) transmit to applicable regional and sub-regional planning groups or interconnected Balancing Authority Areas information on technical studies performed as part of the CAISO Transmission Planning Process;
  - (d) post on the CAISO Website links to the planning activities of applicable regional and sub-regional planning groups or interconnected Balancing Authority Areas.

#### **24.8.2 Limitation on Regional Activities.**

Neither the CAISO nor any Participating TO nor any Market Participant shall take any position before the WECC or a regional organization that is inconsistent with a binding decision reached through an arbitration proceeding pursuant to Section 13, in which the Participating TO or Market Participant voluntarily participated.

~~24.9 Economic Planning Studies.~~

~~24.9.1 Congestion Data Summary.~~

~~In accordance with the schedule and procedures set forth in the Business Practice Manual, the CAISO shall post on the CAISO Website a Congestion Data Summary.~~

~~24.9.2 High Priority Economic Planning Studies.~~

~~High Priority Economic Planning Studies shall be performed in accordance with the standards and procedures established in the Business Planning Manual. Market Participants may conduct Economic Planning Studies that have not been designated as High Priority Economic Planning Studies at their own expense and may submit such studies for consideration in the development of the Transmission Plan when the CAISO provides notice of the stakeholder meeting regarding technical study results pursuant to Section 24.2.5.2.~~

**24.9 CAISO Planning Standards Committee.**

The CAISO shall maintain a Planning Standards Committee, which shall be open to participation by all Market Participants, electric utility regulatory agencies within California, and other interested parties, to review, provide advice on, and propose modifications to CAISO Planning Standards for consideration by CAISO management and the CAISO Governing Board. The Planning Standards Committee shall meet, at a minimum, on an annual basis prior to publication of the draft Unified Planning Assumptions and Study Plan under Section 24.2.1.3; however, additional meetings, web conferences, teleconferences may be scheduled as needed. Meetings of the Planning Standards Committee shall be noticed by Market Notice and such notice shall be posted to the CAISO Website. Teleconference capability will be made available for all meetings of the Planning Standards Committee. The CAISO Vice President of Market and Infrastructure Development or his or her designee shall serve as chair of the Planning Standards Committee. All materials addressed at or relating to such meetings, including agendas, presentations, background papers, party comments, and minutes shall be posted to the CAISO Website. The chair of the Planning Standards Committee shall seek approval by the CAISO Governing Board of any modifications to the CAISO Planning Standards, as those CAISO Planning Standards exist as of the effective date of Section 24.2, and must include in the report to the CAISO Governing Board a summary of the positions of parties with respect to the proposed modifications to the CAISO Planning Standards and the ground(s) for rejecting modifications, if any, proposed by Market Participants or other interested parties.



**Attachment D – MRTU Tariff Clean Sheets**

**Order 890 Compliance Filing**

**October 31, 2008**

**24 TRANSMISSION EXPANSION.**

**24.1 Determination of Need for Proposed Transmission Projects.**

A Participating TO, Project Sponsor, Market Participant, the CAISO, the CPUC, or CEC may propose a transmission system addition or upgrade, and the CAISO will determine, in accordance with this Section 24.1, whether the transmission addition or upgrade is needed, where it will (1) promote economic efficiency, (2) maintain System Reliability, (3) satisfy the requirements of a Location Constrained Resource Interconnection Facility, or (4) maintain the simultaneous feasibility of allocated Long-Term CRRs. CAISO management can determine the need for transmission additions or upgrades with an estimated capital investment of less than \$50 million without CAISO Governing Board approval. The determination of need by CAISO management for transmission additions or upgrades with an estimated capital cost of \$50 million or more must be approved by the CAISO Governing Board.

**24.1.1 Economically Driven Projects.**

The determination that a transmission addition or upgrade is needed to promote economic efficiency shall be made in accordance with this Section 24 and the Business Practice Manual in any of the following ways:

- (a) Where a Project Sponsor proposes a Merchant Transmission Facility and demonstrates to the CAISO the financial capability to pay the full cost of construction and operation of the Merchant Transmission Facility. The Merchant Transmission Facility must mitigate all operational concerns identified under Section 24.5 to the satisfaction of the CAISO, in consultation with the Participating TO(s) in whose PTO Service Territory the Merchant Transmission Facility will be located, and ensure the continuing feasibility of allocated Long Term CRRs over the length of their terms. To ensure that the Project Sponsor is

financially able to pay the construction and operating costs of the Merchant Transmission Facility, and where the Participating TO is not the Project Sponsor and is to construct the Merchant Transmission Facility under Section 24.1, the CAISO in cooperation with the Participating TO may require (1) a demonstration of creditworthiness (e.g., an appropriate credit rating), or (2) sufficient security in the form of an unconditional and irrevocable letter of credit or other similar security sufficient to meet its responsibilities and obligations for the full costs of the transmission addition or upgrade.

- (b) Where a Participating TO, Market Participant, Project Sponsor, the CPUC, or CEC proposes a transmission addition or upgrade during the Request Window and the project is approved by the CAISO Governing Board or by CAISO management if the proposed transmission addition or upgrade has a capital cost of less than \$50 million in accordance with the Study Plan and the project is included in the CAISO annual Transmission Plan. In determining whether to approve the project, the CAISO Governing Board or CAISO management, as applicable, shall consider the degree to which, if any, the benefits of the project outweigh the costs, in accordance with the procedures and using the technical studies set forth in the Business Practice Manual. The benefits of the project may include, but need not be limited to, a calculation of any reduction in production costs, Congestion costs, Transmission Losses, capacity or other electric supply costs resulting from improved access to cost-efficient resources, and environmental costs. The cost of the project must consider any estimated costs identified under Section 24.1.4 to maintain the simultaneous feasibility of allocated Long Term CRRs for the length of their term. The CAISO management

or CAISO Governing Board, as appropriate, in determining whether to approve or recommend the project, shall also consider the comparative costs and benefits of viable alternatives to the proposed transmission upgrade or addition, including (1) other transmission additions or upgrades, or the effects of other transmission additions or upgrades proposed under Section 24.2 during the Transmission Planning Process cycle, (2) Demand-side management, (3) acceleration or expansion of any transmission upgrade or addition already approved by the CAISO Governing Board or included in any CAISO annual Transmission Plan, or (4) Generation.

- (c) Where the CAISO proposes a transmission addition or upgrade during the CAISO's Transmission Planning Process and the project is approved by the CAISO Governing Board or included in the CAISO annual Transmission Plan and approved by CAISO management, as appropriate. In determining whether to approve the CAISO proposed transmission addition or upgrade, the CAISO Governing Board and CAISO management shall apply the same factors set forth in Section 24.1.1(b). If approved by the CAISO Governing Board or CAISO management, as appropriate, the CAISO will designate one or more of the Participating TOs with PTO Service Territories in which the terminus of the transmission addition or upgrade will be located to act as Project Sponsor. Where two or more Participating TOs are designated as Project Sponsors, such CAISO designation will include the proportionate responsibility between or among Participating TOs to own, construct, and finance the transmission addition or upgrade. If a

Participating TO refuses to act as a Project Sponsor under this Section 24.1.1(c), the CAISO will first request other designated Participating TO(s) to assume the remainder or greater proportionate responsibility, and if no other Participating TO had been designated or is willing to increase its proportionate responsibility, the CAISO may solicit bids to finance, own, and construct the transmission addition or upgrade.

**24.1.1.1 Information Requirements for Economic Transmission Projects.**

The Project Sponsor, Market Participant or relevant Participating TOs shall provide any necessary assistance and information to the CAISO to enable the CAISO to determine that a transmission upgrade or addition is needed to promote economic efficiency, and will perform all studies required by the adopted Study Plan in a manner consistent with the Business Practice Manual. A Project Sponsor of an economically driven transmission upgrade or addition to promote economic efficiency under Section 24.1.1 shall also provide in its proposal a statement whether the proposed upgrade or addition will be a Merchant Transmission Facility.

**24.1.2 Reliability Driven Projects.**

The CAISO, in coordination with each Participating TO with a PTO Service Territory will, as part of the Transmission Planning Process and consistent with the procedures set forth in the Business Practice Manual, identify the need for any transmission additions or upgrades required to ensure System Reliability consistent with all Applicable Reliability Criteria and CAISO Planning Standards. In making this determination, the CAISO, in coordination with each Participating TO with a PTO Service Territory and other Market Participants, shall consider lower cost alternatives to the construction of transmission additions or upgrades, such as acceleration or expansion of existing projects, Demand-side management, Remedial Action Schemes, appropriate Generation, interruptible Loads or reactive support. The CAISO shall direct each Participating TO with a PTO Service Area, as a registered Transmission Planner with NERC, to perform the necessary studies, based on the

Unified Planning Assumptions and Study Plan as set forth in Section 24.2.1, any applicable Interconnection Study, and in accordance with the Business Practice Manual, to determine the facilities needed to meet all Applicable Reliability Criteria and CAISO Planning Standards. The Participating TO with a PTO Service Area shall provide the CAISO and other Market Participants with all information relating to the studies performed under this Section, subject to any limitation provided in Section 20.2 or the applicable LGIP. Based on the study results, and as part of the Transmission Planning Process described in the Business Practice Manual, the CAISO, CEC, CPUC, Project Sponsors and other Market Participants shall be free to propose any transmission upgrades or additions deemed necessary to ensure System Reliability consistent with Applicable Reliability Criteria and CAISO Planning Standards. The Participating TO with a PTO Service Territory in which the transmission upgrade or addition deemed needed under this Section 24.1.2 is to be located shall be the Project Sponsor, with the responsibility to construct, own and finance, and maintain such transmission upgrade or addition.

**24.1.3 Location Constrained Resource Interconnection Facility Projects.**

The CAISO, CPUC, CEC, a Participating TO or any other Market Participant may propose a transmission addition as a Location Constrained Resource Interconnection Facility. A proposal shall include the following information, to the extent available:

- (a) Information showing that the proposal meets the requirements of Section 24.1.3.1; and
- (b) A description of the proposed facility, including the following information:
  - (1) Transmission studies demonstrating that the proposed facility satisfies Applicable Reliability Criteria and CAISO Planning Standards;
  - (2) Identification of the most feasible and cost-effective alternative transmission additions, which may include network upgrades, that would accomplish the objective of the proposal;
  - (3) A planning level cost estimate for the proposed facility and all proposed alternatives;

**24.1.4 Maintaining the Feasibility of Allocated Long Term CRRs.**

The CAISO is obligated to ensure the continuing feasibility of Long Term CRRs that are allocated by the CAISO over the length of their terms. In furtherance of this requirement the CAISO shall, as part of its annual Transmission Planning Process cycle, test and evaluate the simultaneous feasibility of allocated Long Term CRRs, including, but not limited to, when acting on the following types of projects: (a) planned or proposed transmission projects; (b) Generating Unit or transmission retirements; (c) Generating Unit interconnections; and (d) the interconnection of new Load. Pursuant to such evaluations, the CAISO shall identify the need for any transmission additions or upgrades required to ensure the continuing feasibility of allocated Long Term CRRs over the length of their terms and shall publish Congestion Data Summary along with the results of the CAISO technical studies. In assessing the need for transmission additions or upgrades to maintain the feasibility of allocated Long Term CRRs, the CAISO, in coordination with the Participating TOs and other Market Participants, shall consider lower cost alternatives to the construction of transmission additions or upgrades, such as acceleration or expansion of existing projects; Demand-side management; Remedial Action Schemes; constrained-on Generation; interruptible Loads; reactive support; or in cases where the infeasible Long Term CRRs involve a small magnitude of megawatts, ensuring against the risk of any potential revenue shortfall using the CRR Balancing Account and uplift mechanism in Section 11.2.4. As part of the CAISO's Transmission Planning Process, the Participating TOs and Market Participants shall provide the necessary assistance and information to the CAISO to allow it to assess and identify transmission additions or upgrades that may be necessary under Section 24.1.4. To the extent a transmission upgrade or addition is deemed needed to maintain the feasibility of allocated Long Term CRRs in accordance with this Section and included in the CAISO's annual Transmission Plan, the CAISO will designate the Participating TO(s) with a PTO Service Territory in which the transmission upgrade or addition is to be located as the Project Sponsor(s), responsible to construct, own and finance, and maintain such transmission upgrade or addition.

**24.2 Transmission Planning Process and Coordination of Technical Studies.**

The CAISO shall perform the CAISO's Transmission Planning Process on an annual cycle in accordance with the terms of this CAISO Tariff, the Transmission Control Agreement, and the Business Practice Manual. The Transmission Planning Process shall, at a minimum:

- (a) Coordinate and consolidate the transmission needs of the CAISO Balancing Authority Area into a single plan, which will be assessed on the basis of maintaining the reliability of the CAISO Controlled Grid in accordance with Applicable Reliability Criteria and CAISO Planning Standards, in a manner that promotes the economic efficiency of the CAISO Controlled Grid and considers federal and state environmental and other policies affecting the provision of Energy.
- (b) Reflect a planning horizon covering a minimum of ten (10) years that considers transmission enhancements and expansions, Demand Forecasts, Demand-side management, and capacity forecasts relating to generation technology type, additions and retirements, and such other factors as the CAISO determines are relevant.
- (c) Seek to avoid unnecessary duplication of facilities and ensure the simultaneous feasibility of the CAISO Transmission Plan and the transmission plans of interconnected Balancing Authority Areas, and otherwise coordinate with regional and sub-regional transmission planning processes and entities in accordance with Section 24.8.



- (d) Identify existing and projected limitations of the CAISO Controlled Grid's physical, economic or operational capability or performance and identify transmission upgrades and additions, including alternatives thereto, deemed needed in accordance with Section 24.1 to address the existing and projected limitations.
- (e) Account for any effects on the CAISO Controlled Grid of the interconnection of Generating Units on the Distribution System under the Wholesale Distribution Access Tariffs of the Participating TOs, including an assessment of the deliverability of such Generating Units on a basis comparable to the Deliverability Assessment performed under Appendix U or Appendix Y, as applicable.

**24.2.1 Unified Planning Assumptions and Study Plan.**

**24.2.1.1 Additional Projects and Data for Development of the Unified Planning Assumptions and Study Plan.**

The CAISO will develop Unified Planning Assumptions and Study Plan using information and data received during the Request Window in the previous planning cycle and under Section 24.2.3. The CAISO will also use the following in the development of the Unified Planning Assumptions and Study Plan:

- (1) WECC base cases for the relevant planning horizon;
- (2) Transmission upgrades and additions approved by the CAISO in past Transmission Planning Process cycles and scheduled to be energized within the planning horizon;
- (3) Location Constrained Resource Interconnection Facilities conditionally approved under Section 24.1.3.1(a);
- (4) Network Upgrades identified pursuant to Section 25, Appendix U, Appendix GG, or Appendix W relating to the CAISO's Large Generator Interconnection Procedures and Appendix AA relating to the CAISO's Small Generator Interconnection Procedures;

- (5) Operational solutions validated by the CAISO to address Local Capacity Area Resource requirements;
- (6) Regulatory initiatives, as appropriate, including state regulatory agency initiated programs;
- (7) Energy Resource Areas or similar resource areas identified as high priority by the CPUC or CEC; and
- (8) Results and analyses from Economic Planning Studies or other assessments that may have identified potentially needed transmission upgrades or additions performed in past CAISO Transmission Planning Process cycles.

**24.2.1.2 General Scope of Unified Planning Assumptions and Study Plan.**

The Unified Planning Assumptions and Study Plan shall, at a minimum, describe:

- (a) The planning data and assumptions to be used, to the maximum extent possible, as a base case for each technical study to be performed in the Transmission Planning Process cycle, including, but not limited to, those related to Demand Forecasts and distribution, generation capacity additions and retirements, and transmission system modifications;
- (b) A list of each technical study to be performed in the Transmission Planning Process cycle and a summary of the technical study's objective or purpose;
- (c) A description of any modifications to the planning data and assumptions developed as the general base case in Section 24.2.1.2(a) made in each technical study performed in the Transmission Planning Process cycle;
- (d) A description of the software tools, methodology and other criteria used in each technical study performed in the Transmission Planning Process cycle;
- (e) The identification of any entities directed to perform a particular technical study or portions of a technical study;

- (f) A proposed schedule for all stakeholder meetings to be held as part of the Transmission Planning Process cycle, and means for notification of any changes thereto, the location on the CAISO Website of information relating to the technical studies performed in the Transmission Planning Process cycle, and the name of a contact person at the CAISO for each technical study performed in the Transmission Planning Process cycle;
- (g) A list and description of each Economic Planning Study studied by the CAISO as a High Priority Economic Planning Study under Section 24.9 identified in the past Transmission Planning Process; and
- (h) To the maximum extent practicable, and where applicable, appropriate sensitivity analyses, including project or solution alternatives, to be performed as part of technical studies.

**24.2.1.3 Preparation of Draft and Final Unified Planning Assumptions and Study Plan.**

- (a) Following review of relevant information, the CAISO will prepare and post on the CAISO Website a draft Unified Planning Assumptions and Study Plan. The CAISO will issue a Market Notice announcing the availability such draft, soliciting comments, and scheduling a public conference(s) as required by Section 24.2.1.3(c).
- (b) All comments on the draft Unified Planning Assumptions and Study Plan will be posted by the CAISO to the CAISO Website.
- (c) Subsequent to the posting of the draft Unified Planning Assumptions and Study Plan, the CAISO will conduct a minimum of one public meeting open to Market Participants, electric utility regulatory agencies, and other interested parties to review, discuss, and recommend modifications to the draft Unified Planning

Assumptions and Study Plan. Additional meetings, web conferences, or teleconferences may be scheduled as needed. All stakeholder meetings, web conferences, or teleconferences shall be noticed by Market Notice and such notice shall be posted to the CAISO Website.

- (d) Following the public conference(s) required by Section 24.2.1.3(c), and under the schedule set forth in the Business Practice Manual, the CAISO will determine and publish to the CAISO Website the final Unified Planning Assumptions and Study Plan in accordance with the procedures set forth in the Business Practice Manual.

## **24.2.2 Technical Studies.**

### **24.2.2.1 Performance of Technical Studies**

- (a) In accordance with the Unified Planning Assumptions and Study Plan, and the procedures and deadlines in the Business Practice Manual, the CAISO will perform, or direct the performance by third parties of, technical studies and other assessments necessary for the Transmission Plan and Transmission Planning Process. The CAISO technical studies will include a Congestion Data Summary, as further described in the Business Practice Manual. According to the detailed schedule set forth in the Business Practice Manual, the CAISO will post the preliminary results of its technical studies and proposed mitigation solutions on the CAISO Website. Within one month after the posting of these results, Participating TOs or other third parties will submit the results of the technical assessments conducted at the direction of the CAISO to be posted to the CAISO Website. Subsequently, the CAISO will conduct a minimum of one public conference that provides an opportunity for comments on the preliminary results and mitigation proposals. Additional public meetings, web conferences, or

- teleconferences may be scheduled as needed. All meetings, web conferences, or teleconferences shall be noticed by Market Notice and shall be posted to the CAISO Website.
- (b) All technical studies, whether performed by the CAISO, the Participating TOs or other third parties under the direction of the CAISO, must utilize the Unified Planning Assumptions for the particular technical study to the maximum extent practical, and deviations from the Unified Planning Assumptions for the particular technical study must be documented in the preliminary and final results of each technical study. The CAISO will measure the results of the studies against NERC planning standards, WECC planning standards, and the CAISO Planning Standards, and other criteria established by the Business Practice Manual. After consideration of the comments received on the preliminary results, the CAISO will complete, or direct the completion of, the technical studies and post the final study results on the CAISO Website.
- (c) The CAISO technical study results will identify needs and proposed solutions to meet applicable WECC planning standards, NERC planning standards and other applicable planning standards. Pursuant to the schedule described in the Business Practice Manual, Participating TOs will submit transmission projects and alternative solutions through the Request Window in response to needs and proposed solutions identified by CAISO, as well as projects and solutions to reliability needs identified by the Participating TOs.
- (d) The CAISO and Participating TOs shall coordinate their respective transmission planning responsibilities required for compliance with the NERC Reliability Standards and for the purposes of developing the annual Transmission Plan according to the requirements and time schedules set forth in the Business Practice Manual.

**Attachment E – BPM Blacklines**

**Order 890 Compliance Filing**

**October 31, 2008**



California ISO  
Your Link to Power

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# Business Practice Manual for the Transmission Planning Process

**Order 890 Compliance**

Version 24.0

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# 1. Introduction

Welcome to the CAISO’s *BPM for the Transmission Planning Process*. In this Introduction, you will find the following information:

- The purpose of CAISO BPMs, in general
- What you can expect from this specific CAISO BPM

## 1.1 Purpose of California ISO Business Practice Manuals

The Business Practice Manuals (BPMs) developed by the CAISO are intended to contain implementation details consistent with, and supported by, the CAISO Tariff—including instructions, rules, procedures, examples and guidelines for the administration, operation, planning, and accounting requirements of the CAISO and the markets. Exhibit 4-Table 1 lists the currently available CAISO BPMs.

Table 1 Table-2-CAISO BPMs

Title
BPM for BPM Change Management
BPM for Candidate CRR Holder Registration
BPM for Change Management Process for MRTU BPMs
BPM for Compliance Monitoring
BPM for Congestion Revenue Rights
BPM for Credit Management
BPM for Definitions and Acronyms
BPM for Managing Full Network Model
BPM for Market Instruments
BPM for Market Operations
BPM for Metering
BPM for Outage Management
BPM for Reliability Requirements
BPM for Rules of Conduct Administration
BPM for Scheduling Coordinator Certification and Termination
BPM for Settlements and Billing
BPM For the Transmission Planning Process

## 1.2 Purpose of this Business Practice Manual

This BPM explains the CAISO Transmission Planning Process, as well as the annual Transmission Plan produced by this process. Additionally, the BPM discusses how other associated processes performed by the CAISO’s Planning and Infrastructure Development Department serve to guide the enhancement and expansion of transmission facilities to ensure

that the CAISO Controlled Grid can satisfy the needs of a competitive bulk power market in a reliable, economically efficient, and environmentally acceptable manner. In so doing, this BPM, together with corresponding CAISO Tariff provisions on the Transmission Planning Process, serve to fulfill the requirements of the Federal Energy Regulatory Commission's (FERC) Final Rule on *Preventing Undue Discrimination and Preference in Transmission Service*, Order No. 890 ("Order No. 890").<sup>1</sup> Among other things, this Order requires all transmission providers, including independent system operators, to implement and document, through open access Tariffs and other public postings, a coordinated, open, and transparent transmission planning process that complies with the planning principles and other requirements articulated in Order No. 890.

The provisions of this BPM are intended to be consistent with the CAISO Tariff. If, however, the provisions of this BPM conflict with the CAISO Tariff in any way, the CAISO is bound to operate in accordance with the CAISO Tariff. Any provision of the CAISO Tariff that may have been summarized or repeated in this BPM is only to aid understanding. Even though every effort will be made by the CAISO to update the information contained in this BPM and to notify Market Participants of changes, *it is the responsibility of each Market Participant* to ensure that he or she is using the most recent version of this BPM and to comply with all applicable provisions of the CAISO Tariff.

Any reference in this BPM to the CAISO Tariff, a given agreement, or any other BPM or instrument, is intended to refer to that Tariff, agreement, BPM or instrument as modified, amended, supplemented or restated in the most current version.

The captions and headings in this BPM are intended solely to facilitate reference and not to have any bearing on the meaning of any of the terms and conditions of this BPM.

### 1.3 Specific Topics Covered by this BPM

In this BPM, the following general topics will be covered:

- Overview of the CAISO Transmission Planning Process that covers the schedules and scope of each stage of the process.
- Roles and responsibilities of Participating Transmission Owners (PTOs) and participants in the CAISO Transmission Planning Process (TPP)
- ~~A description of the types or categories of transmission upgrades identified through the Transmission Planning Process, including:~~
  - ~~Reliability Transmission Projects~~
  - ~~Economic Transmission Projects~~
  - ~~Location Constrained Resource Interconnections~~
  - ~~Long-term Congestion Revenue Right (Long Term CRRs) Projects~~
- The "stages" that form the Transmission Planning Process, such as:
  - Development of Unified Planning Assumptions and Study Plans
  - Performanceing of technical studies and management of the Request Window

<sup>1</sup> Preventing Undue Discrimination and Preference in Transmission Service, Order No. 890, III FERC Stats. & Regs., Regs. Preambles ¶¶31,241 (2007).

- ~~Documentation of technical study results~~ Project approval process and development of CAISO Transmission Plan
- General calendar and major milestones of the TPP
- A description of the types or categories of transmission upgrades or additions identified through the TPP, including:
  - Reliability transmission projects
  - Economic transmission projects
  - Location Constrained Resource Interconnections Facilities (LCRIF)
  - Long-term Congestion Revenue Rights (Long Term CRRs) Projects
- Other key components related to the Transmission Planning Process include:
  - Request Window, including instructions and requirements for submitting study requests or project proposals to be considered in the CAISO Transmission Plan
  - Project final approval principles
  - Study and approval processes for Large Projects and projects with a capital cost of less than \$50 million.
- Information requirements from various participants to facilitate the Transmission Planning Process
- The availability of planning information provided by CAISO and accessibility of that information
- The CAISO's involvement in regional and sub-regional transmission planning with neighboring entities, and sub-regional and regional planning groups

## 2. Overview of the Transmission Planning Process and Annual Transmission Plan

The continuing development and growth of the CAISO's competitive markets necessarily rest, in significant part, on a foundation of adequate transmission infrastructure. Therefore, a primary function of the CAISO is to plan for, and promote, the enhancement and expansion of transmission capability within its footprint. The CAISO, with cooperation from Participating Transmission Owners (Participating TOs), Market Participants, Load Serving Entities (LSEs), publicly-owned utilities (POUs), neighboring transmission providers, regional and sub-regional planning groups including WECC committees such as TEPPC, and state regulatory authorities and other affected customers or entities (collectively referred to as TPP Participants), performs this function through the Transmission Planning Process in accordance with the terms of Section 24 of the CAISO Tariff,<sup>2</sup> as well as the business rules set forth in this BPM. The

<sup>2</sup> Reference to Section 24 of the CAISO Tariff also constitutes reference to Appendix EE of the CAISO Tariff. Appendix EE includes the majority of the CAISO Tariff provisions governing the Transmission Planning Process prior to the effective date of MRTU. Appendix EE will expire upon the commencement of MRTU and the relevant tariff sections will again be found in Section 24 of the CAISO Tariff. When there is a potential conflict between the pre-MRTU Tariff provisions and the MRTU Tariff provisions, this BPM references the MRTU Tariff provisions.

~~TPP~~Transmission Planning Process ensures independent analyses and recommendations, supported by timely and meaningful opportunities for broad stakeholder ~~TPP Participant~~ input and independent CAISO Board of Governor approval, all of which are ultimately incorporated into an annual CAISO Transmission Plan, project-specific reports, and other specific transmission-dependent resource adequacy studies.

## 2.1 The CAISO Transmission Planning Process

The CAISO's Transmission Planning Process is an integrated, open, participatory and transparent process that focuses on ensuring reliable, economically efficient, and non-discriminatory use of the transmission system. It accounts for three levels of transmission planning to meet these objectives:

- Local planning – Planning for the transmission systems of the CAISO's Participating TOs to meet the needs of ~~LSEs~~Load-Serving Entities serving Load within the CAISO Control Area. The PTOs planning activities are integrated into the 3-stage TPP that will be described in this BPM. In general, the PTOs will perform their studies using the same study assumptions, tools, and methodologies documented in the Study Plan that will be discussed with TPP Participants during the first stakeholder meeting in Stage 1 of the process. The study results from PTO studies will be presented during the CAISO Transmission Plan stakeholder meeting conducted during Stage 3. In addition, transmission projects proposed by PTOs must go through the Request Window during Stage 2 and will be evaluated by CAISO at the same time as the projects being proposed by other Project Sponsors. Consequently, TPP participants can participate in the local planning activities conducted by the CAISO throughout each stage of the planning process.
- Sub-regional planning – Planning at this level encompasses two components. First, the CAISO itself conducts sub-regional planning by aggregating the assessment of transmission needs of the Participating TOs and LSEs within the CAISO Balancing Authority Area. Second, as part of the foregoing process, the CAISO plans for the needs of the CAISO Balancing Authority Area, through the reciprocal exchange of transmission plans and other information, among the CAISO, Participating TOs and transmission systems neighboring the CAISO Balancing Authority Area (Interconnected Balancing Authority Areas) and/or established sub-regional planning entities. The CAISO believes this type of planning broadly facilitates the consistency of data, identification of efficiencies, and the avoidance of duplication to ensure simultaneous feasibility of local planning outcomes.
- Regional planning – Planning across sub-regions through the WECC, including by means of the CAISO's membership and active participation in WECC committees such as Transmission Expansion Planning Policy Committee (TEPPC).

Further, the implementation of the Transmission Planning Process is generally achieved through three stages below. In addition, the process also relies on the Request Window that will be explained in more detail in section 3.

- Stage 1: Identification Development of Unified Planning Assumptions and development of the Study Plan.
- Stage 2: Performance of technical analysis, posting of study results, and the proposed mitigation plans.
- Stage 3: Project approval Documentation of technical study results and development of CAISO Transmission Plan.

Finally, there are standards and interrelated planning information that drive the Transmission Planning Process, including, but not limited to:

- NERC/WECC Regional Reliability Council Transmission Planning Standards and Criteria
- CAISO Grid Planning Standards
- CAISO Annual Report on Market Issues and Performance
- Participating TOs Reliability assessments transmission project proposals
- Economic Planning Studies and Economic Transmission Project proposals, including Merchant Transmission Facilities
- Other alternatives or input CAISO receives from the Request Window
- Sub-regional transmission expansion plans
- Local Capacity Area Resource requirements
- Generator Interconnection Requests
- Generation and import deliverability assessments
- Reliability and congestion concerns from CAISO Short-term plan
- Long-term CRR feasibility assessments
- State initiatives, mandates, and policies.

### 2.1.1 Roles of Participants in the Transmission Planning Process

In order to achieve this multi-tiered<sup>3</sup> planning perspective, the CAISO engages with its TPP Participants. ~~Participating TOs; stakeholders; state regulatory agencies, such as the California Public Utilities Commission (CPUC) and the California Energy Commission (CEC); Publicly Owned Utilities (POUs); regional and sub-regional planning committees or other neighboring transmission providers; Load Serving Entities (LSEs); and affected customers.~~ The anticipated roles of respective TPP Participants are summarized in table 2 as follows:

<sup>3</sup> Local, sub-regional, and regional planning

Table 23: Roles and Responsibilities of TPP Transmission Planning Participants

No	Participant	Roles and Responsibilities
1	CAISO	Leads and manages the CAISO TPP Transmission Planning Process; responsible for coordinated planning of CAISO Controlled Grid; performs NERC's Planning Authority Coordinator functions; conducts transmission planning studies for the CAISO Controlled Grid to identify the need for system reinforcements; proposes transmission projects potential solutions as part of its study results as needed, and conducts an independent review of all proposed projects and project alternatives received through the Request Window; facilitates a manages the Request Window for proposing new transmission projects and/or study requests under the scope of Economic Planning Studies; approves beneficial projects consistent with CAISO Tariff authority; administers LGIP/SGIP processes; participates in regional/sub-regional planning groups; -and conducts simultaneous feasibility analyses for Long Term CRRs.
2	PTOs	Participate in the CAISO TPP Transmission Planning Process; perform NERC's Transmission Planner functions, including proposal of study assumptions for consideration in the Study Plan, updating of planning base case models, conducting local and bulk transmission planning studies of its service area under the direction of the CAISO for inclusion in the CAISO TPP Transmission Planning Process; develop, propose and submit propose new facilities transmission project proposals through the Request Window; prepare meaningful cost estimates for proposed and alternative facilities upon CAISO's request; conduct interconnection studies, facility studies, participate in regional/sub-regional planning groups, and construct projects when designated under the CAISO Tariff. The roles and responsibilities of the PTOs and CAISO are described in more detail at *** of this BPM.
3	Load Serving Entities (LSE)	Participate in the CAISO TPP Transmission Planning Process; assist in capacity planning and conduct procurement to meet resource adequacy requirements; obtain CRRs, voluntarily provide resource planning information, and propose desired non-wire alternatives.
4	Publicly Owned Utilities (POU)	Participate in the CAISO TPP Transmission Planning Process; voluntarily exchange information and coordinate plans with CAISO and Participating TOs and other regional and sub-regional planning groups.
5	California Energy Commission (CEC)	Participates in the CAISO TPP Transmission Planning Process; conducts Integrated Energy Policy Report (IEPR) and other strategic plans; provides data, permitting and



No	Participant	Roles and Responsibilities
		approval of new thermal generation.
6	<b>California Public Utilities Commission (CPUC)</b>	Participates in the CAISO <u>TPP</u> Transmission Planning Process; issues CPCN/environmental permits for new transmission projects, and administers the resource portfolio requirements of its jurisdictional LSEs, including the Renewable Portfolio Standard (RPS).
7	<b>Other Stakeholders <u>TPP Participants/Affected Customers or Entities</u></b>	Participate in the CAISO <u>TPP</u> Transmission Planning process; propose new transmission projects; request studies, <u>submit project proposals through the Request Window as needed,</u> and provide relevant information and data.
8	<b>Regional and Sub-regional Planning Groups, including <u>TEPPC and neighboring transmission providers</u></b>	Participate in the CAISO <u>TPP</u> Transmission Planning Process; perform transmission planning studies (including congestion studies) when appropriate; propose new conceptual facilities, along with analyses of alternatives; exchange information toward shaping transmission plans from sub-regional and regional perspectives; and consider CAISO's plans with respect to the larger regional or sub-regional transmission plan.

The integrated and coordinated nature of the Transmission Planning Process is set forth in Figure 1 (see p. 15 of this draft).

**2.1.1.2 Coordination of the Meeting, Planning and Study Responsibilities of the PTOs and CAISO.**

Tariff §24.2.2.1

The PTOs play an important role in the CAISO TPP as Transmission Planners within the CAISO Balancing Authority Area as defined by the NERC Functional Model. In particular, the PTOs provide key planning data that will be used in each TPP cycle. Consequently, the success of overall transmission planning activities relies on careful coordination between CAISO and the PTOs to ensure the effectiveness of the TPP. The paragraph below summarizes the major tasks, roles, responsibilities, and the timeline for the coordination that occur throughout each TPP cycle that apply to CAISO and its PTOs.

➤ Planning Data Provided by the PTOs

The PTOs are responsible for providing the following planning data to the CAISO by the due date shown in Attachment 3. The CAISO validates and incorporates planning data and other related information from the PTOs as well as from other sources (such as WECC and appropriate regional planning organizations) to develop the Study Plan during each planning cycle.

- The bus-level load forecast in each local area to be studied as defined in the Study Plan and the written methodology of how to derive these load forecasts if any modifications have been made to the California Energy Commission (CEC) load forecast.
- Contingency files that include all contingencies that will be studied in each scenario identified in the study plan. The contingency file must be provided in a defined electronic format that is readable by GE-PSLF or other power system analysis tools, or with detailed documentation as to the format in which it is provided.
- Verified dynamic files in GE-PSLF format (flat responses for all channels under normal conditions) for each scenario transient stability study will be studied.
- Change files or EPC files that include CAISO-approved transmission projects and applicable regulatory approved generation projects to reflect modeling changes that have been made to the previous year base cases.

➤ PTO and CAISO Technical Studies Identified in the Study Plan

The CAISO is responsible for developing the Study Plan that describes the details of all technical studies to be conducted in each planning cycle, including the roles and responsibilities of each entity conducting the studies, consistent with NERC functional responsibilities and with input from the PTOs and other stakeholders. CAISO and PTOs shall conduct the technical studies based on the scope, scenarios, and assumptions delineated in the Study Plan.

➤ NERC Reliability Base Cases Developed by the PTOs

Once the scope and assumptions of each study have been established through the Study Plan, PTOs are responsible for developing the base cases of their systems for NERC compliance assessments, pursuant to the requirements imposed under the applicable NERC requirements. The base cases shall then be submitted to CAISO.

➤ Planning Data Developed by the PTOs and Maintained by CAISO

The CAISO will assimilate the PTO base cases and verify that the modeling in the base cases is consistent with the scope and assumptions defined in the Study Plan. CAISO also is responsible for posting and managing planning data on its Regional Transmission secured website.

➤ PTO Transmission Upgrades and Additions Submitted through the Request Window

The Request Window is a 3.5 month time period wherein Project Sponsors and TPP Participants annually may submit project proposals or certain types of study requests to the CAISO. The PTOs must submit reliability transmission project proposals through the Request Window by October 15<sup>th</sup> of each year.

➤ NERC Reliability Assessments Performed by CAISO and PTOs

CAISO and the PTOs are each responsible for performing NERC reliability assessments using the base cases developed by the PTOs and integrated into the CAISO Balancing Authority Area-wide base case. These studies should be conducted according to the scope of roles and responsibilities, and according to the time schedule, set forth in Attachments 2 and 3 to this BPM.

➤ Technical Studies Conducted by CAISO

As part of its planning responsibilities for the entire Balancing Authority Area, CAISO also conducts studies to identify potential system limitations and congestion issues and may propose mitigation plans to address the needs that arise from other drivers affecting system design and requirements. These studies include the Seams Assessment, the Local Capacity Requirements Study, the Large Generator Interconnection (LGIP) Study, the CAISO Short-Term Plan, the Economic Planning Study, and other special plans (e.g., studies related to the integration of intermittent resources into the state renewable resource portfolio and onto the CAISO-controlled grid) that can vary from year to year. The CAISO will post the results of its studies and any available mitigation proposals on its website in mid-September.

➤ Detailed Scope of Transmission Projects Developed by CAISO and PTOs

During Stage 2, the CAISO will identify transmission needs, and may propose preliminary solutions to meet applicable standards. Once these transmission needs and preliminary solutions are identified, and at the request of CAISO, the PTOs will be responsible for providing the detailed scope of potential solutions in accordance with NERC Reliability Standards TPL-001 through TPL-004 and identifying the potential projects that would resolve the needs specified by the CAISO. Upon receiving CAISO's requests, the PTOs shall provide in a timely manner the detailed scope of the requested transmission projects such as detailed cost estimate, alternative routes, alternative solutions or any other information related to the proposed transmission projects to the CAISO. The CAISO, in consultation with the PTOs, will establish the time frame in which this information is to be provided based upon a consideration of the complexity of the project and other pertinent factors.

➤ Coordination of Public Meetings Scheduled by CAISO

The CAISO is responsible for managing the public meetings held throughout the TPP. This includes issuing market notices, posting meeting materials prior to the meeting, providing phone and web-access, leading the meetings, and working with PTOs on the agendas and topics being presented in the public meetings. The PTOs shall participate in the CAISO public meetings, provide meeting materials and present the topics according to the agenda. In addition to public meetings that will be held at the CAISO offices, additional public meetings may be held at local PTO locations to discuss the issues specific to each PTO. Although such meetings will be held locally, the CAISO will be responsible for leading the meetings and ensuring that TPP Participants notify TPP participants through the market notices, posting and distributing meeting materials, similar to public meetings held at CAISO offices.

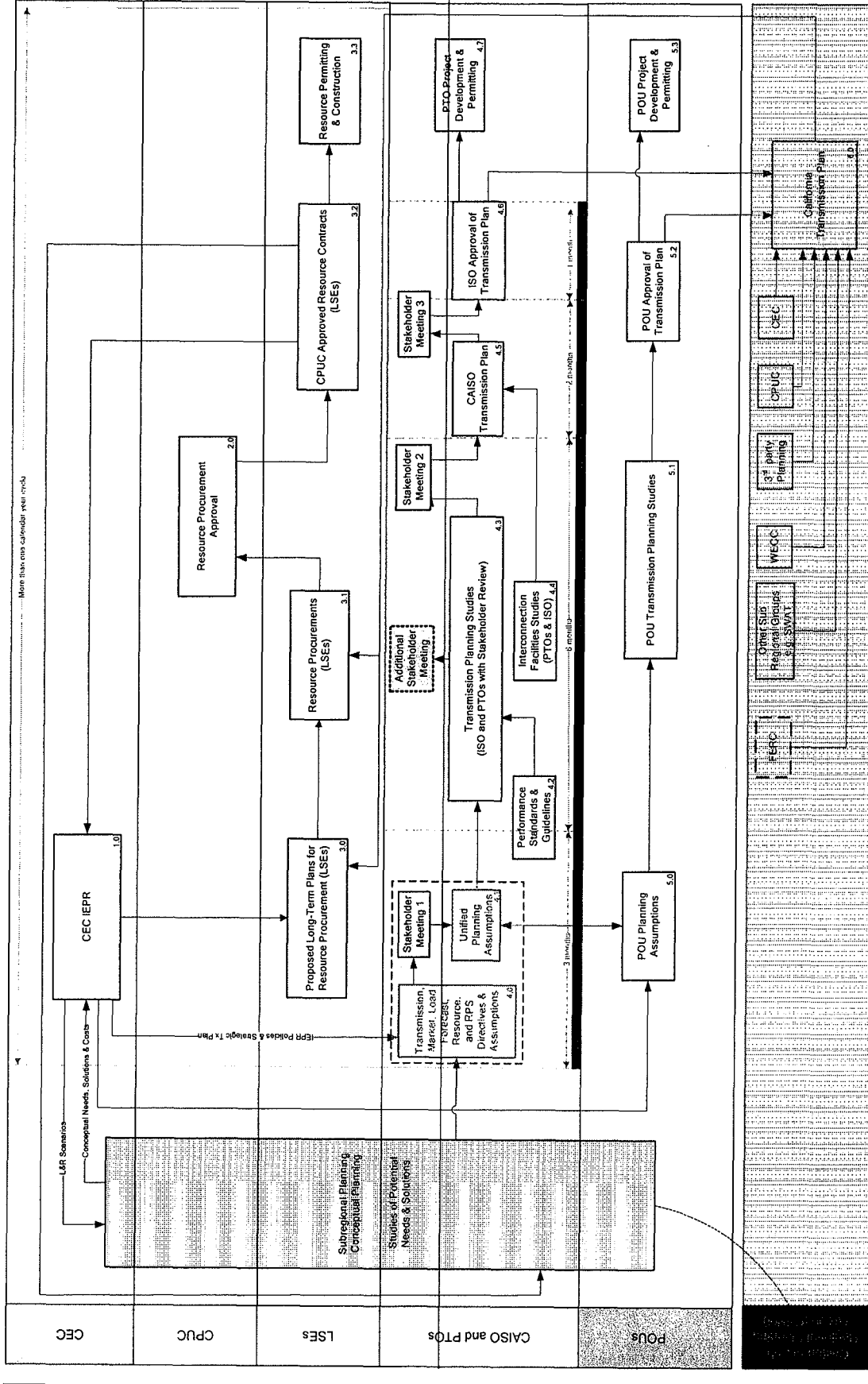
➤ Study Reports Provided by CAISO and the PTOs and Development of the Transmission Plan

The CAISO shall publish a preliminary report containing the assumptions, methodology, and study results for its NERC reliability assessment, as well as the results of the other technical studies conducted by the CAISO, by September 15<sup>th</sup> of each year. By October 15<sup>th</sup> of each year, the PTOs shall provide the CAISO the final study reports that document their NERC compliance, updates on the status of transmission projects previously approved by CAISO but not yet in-service, and newly proposed transmission additions and upgrades. During Stage 3, CAISO will incorporate relevant planning information from these reports into the annual CAISO Transmission Plan, as well as assimilate the studies presented by the PTOs, other TPP Participants and those conducted on its own accord. CAISO may approve projects included in the transmission planning studies prepared by the PTOs, alternative projects proposed by Non-PTOs, or projects identified by the CAISO.

➤ Appointment of Representatives to Coordinate CAISO/PTO Duties and Responsibilities

Each PTO and the CAISO shall appoint representatives that will be responsible for the coordination of planning activities between CAISO and the PTOs. The general responsibilities of the representatives will be to:

- o Ensure that the exchange of information (planning data, study results, report, etc.) or other information will occur according to the schedule identified in the Study Plan
- o Represent or delegate other individuals to participate in the CAISO TPP public meetings or other related meetings
- o Act as the point of contact for the CAISO's requests to develop detailed transmission projects and provide responses to related questions or comments raised by TPP Participants



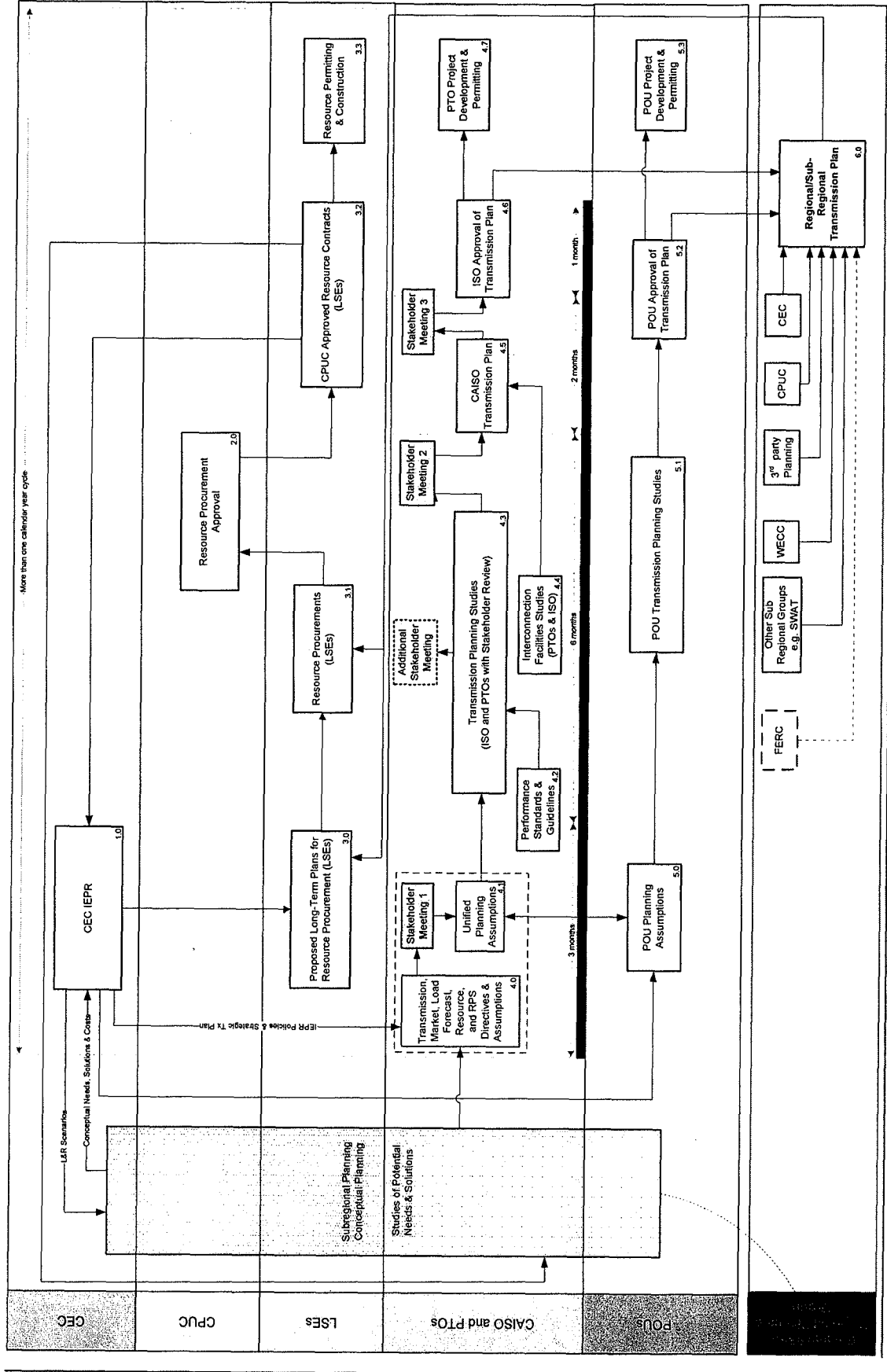


Figure 1: Coordination among Entities Regarding California ISO Transmission Plan

## 2.1.2 General Description of TPP Stages of Transmission Planning Process

The CAISO conducts the TPP Transmission Planning Process on overlapping cycles of approximately 13-18 months, beginning in August-January of Y1 and ending in January-February of Y3<sup>4</sup>. This cycle is comprised of a Request Window and the three general planning stages described in Section 2.1, as well as several supporting processes that culminate in the CAISO's Transmission Plan and other identified planning reports. The CAISO's planning horizon is a minimum of ten years and its Transmission Plan is presented to the CAISO Governing Board for review in January-February or March of each year. Figure 2 illustrates the overview of the timeline of Request Window and the three planning stages.

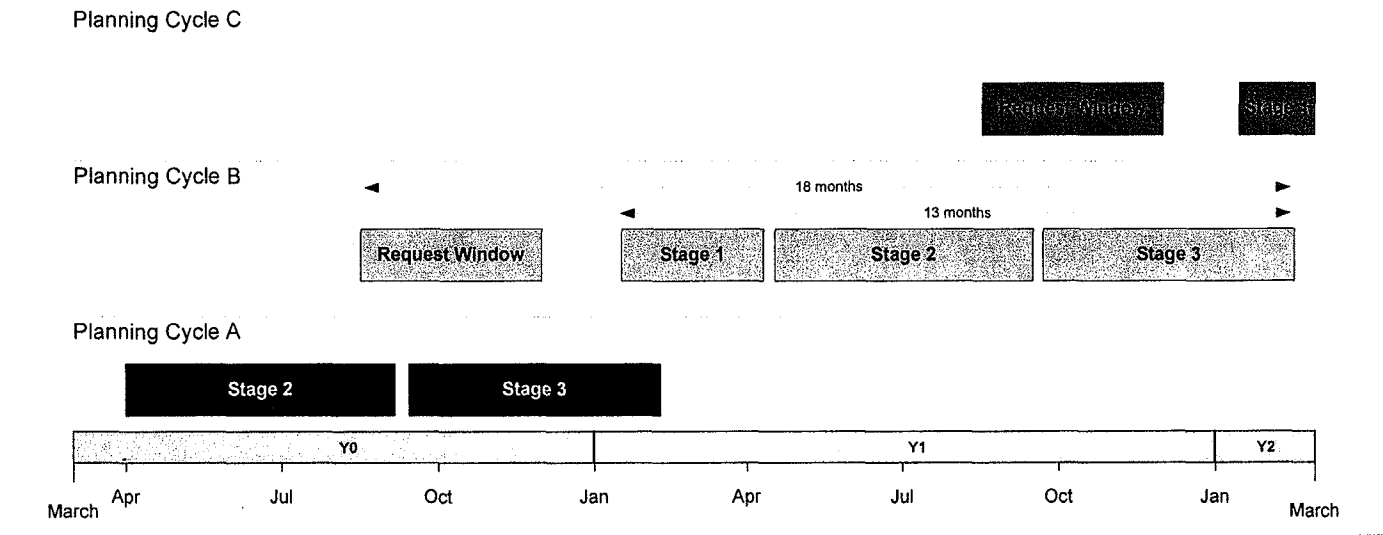


Figure 2: The CAISO TPP Stages and the Request Window

### 2.1.2.1 Request Window

#### CAISO Tariff Section 24.2.2

The CAISO's Transmission Planning Process utilizes a Request Window to provide stakeholders TPP Participants with the opportunity to propose economic or reliability-driven transmission upgrades or additions (projects) projects, requests for Economic Planning Studies, resource alternatives, i.e., Demand management programs or Generation, or otherwise submit additional relevant data to the CAISO for inclusion in the following year's annual Transmission Planning Process. The Request Window opens August 15<sup>th</sup> and closes November 15<sup>th</sup> of each planning cycle.

<sup>4</sup> If the TPP cycle is presumed to begin with the Request Window, which is opened between August 15 through November 30 of Y0 and overlaps the previous planning cycle, the entire duration of the process is 18 months.

All transmission project proposals seeking CAISO approval must be submitted through the Request Window. Certain inputs into the Transmission Planning Process must come through the Request Window. These include:

- Reliability transmission projects
- Economic Transmission Project proposals, including upgrades or additions proposed to reduce Local Capacity Area Resource requirements, reduce or eliminate Congestion, or Merchant Transmission Facilities to obtain Merchant Transmission Congestion Revenue Rights. Definitions and distinctions between Economic and Reliability Transmission Projects are defined in section 4.2.1 and 4.2.2 of this BPM.
- Location Constrained Resource Interconnection Facilities (LCRIFs) not otherwise identified through CAISO Interconnection Studies
- Transmission upgrades or additions determined to be the appropriate mechanism to maintain the feasibility or allocated Long-term CRRs
- Network Upgrades identified through CAISO Interconnection Studies
- Economic Planning Study requests
- Specific Demand management, Generation, and other resources for potential inclusion in the Transmission Planning Process analyses

The Request Window may, but need not apply to:

- Reliability Transmission Projects proposed by PTOs
- Network Upgrades identified through CAISO Interconnection Studies
- Location Constrained Resource Interconnection Facilities identified through CAISO Interconnection Studies
- Transmission upgrades or additions determined to be the appropriate mechanism to maintain the feasibility of allocated Long-term CRRs
- Operating solutions to reduce Local Capacity Requirements
- Alternative solutions to Transmission Projects proposed during the Request Window.

Besides the planning data, the CAISO will apply "screening criteria" to each submission it receives from the Request Window. Please refer to section 3.3 of this BPM for more information. Upon satisfying the screening criteria, each submission may be included in a different stage of the TPP based upon the nature of each submission. The following are three types of submissions that will likely be received through the Request Window and how these submissions will be integrated into the TPP stages: select the transmission projects and Economic Planning Study requests received during the Request Window that

- Economic Planning Study Requests<sup>5</sup> will be included in the preparation of the following cycle's Unified Planning Assumptions and Study Plan, which underlie the analyses performed as part of the following Transmission Planning Process cycle.

<sup>5</sup> These include High Priority Economic Planning Studies that will be performed by CAISO and Non-High Priority Economic Planning Studies that will be performed under CAISO direction by the requesters and at their expense.



- Project proposals that solve a need either identified by CAISO or with which CAISO concurs, but which require additional technical studies to be conducted as part of the project evaluation process, will be included in the following cycle's Study Plan.
- Project proposals for which all necessary technical studies have been completed will be considered in the approval process (Stage 3) of the CAISO planning process and included in the Transmission Plan for that cycle.

Reliability transmission projects proposed by PTOs shall be submitted by October 15 of each year to allow sufficient time for stakeholders to review these projects. The CAISO will post a summary of valid project proposals and study requests it receives from the Request Window on the CAISO website. The annual CAISO Transmission Plan will also provide a summary of these submissions.

The TPP Participants sponsoring any proposed project shall provide the required information for the projects seeking CAISO approval as further described in this BPM. These include (a) a description of the project's objectives, (b) a list of alternative projects that would accomplish these objectives, and (c) any methodological and/or data requirements imposed or suggested by the requesting party's or parties' local regulatory authority(ies).

As further discussed in Section 3.4, the screening process applied by CAISO to Request Window submissions generally assesses proposed transmission projects against three categories of criteria:

- (1) whether the submissions are "complete" in that they provide all necessary data or information requested by the CAISO with respect to the particular category of submission;
- (2) whether the proposal is or is not functionally duplicative of transmission upgrades or additions that have been previously approved by the CAISO; and
- (3) whether the proposal, if a sub-regional or regional project that affects other interconnected Control Areas, has been reviewed by the appropriate sub-regional planning entity and is not inconsistent with any sub-regional planning entity's preferred solution or project.

The CAISO applies separate screening criteria to study requests under Economic Planning Study Requests to select which requests will be designated High Priority Economic Planning Studies. High Priority Economic Planning Studies are included in the Study Plan for the upcoming planning cycle and will be performed by the CAISO at its cost. If a requested Economic Planning Study meets the screening criteria for a High Priority Study and is regional or sub-regional in scope, the study. These study requests, if meeting the screening criteria and are regional (and potentially sub-regional) in scope such as impacting not only CAISO controlled area, shall be submitted to WECC's Transmission Expansion Planning Policy Committee (TEPPC) or applicable sub-regional planning group. If TEPPC or other sub-regional planning group does not select such Economic Planning Study for inclusion in its study scope, the However, CAISO will retain still have the responsibility to conduct the study. Economic Planning studies for these requests if TEPPC does not select them in its study scope.

Similarly, other Economic Planning Studies not designated as High Priority Economic Planning Studies, but which meet the screening criteria and are regional (and potentially sub-regional) in scope, will be submitted to WECC's Transmission Expansion Planning Policy Committee

(TEPPC) as part of its joint coordinated evaluation and prioritization process. The TEPPC process will determine whether the request is performed and by whom. Economic Planning Studies that are neither High Priority Economic Planning Studies nor regional or sub-regional in scope may still be performed at the proponent's expense and submitted to the CAISO for review and potential inclusion in the final Transmission Plan. The CAISO will coordinate with any third party performing its own study to ensure that the study is consistent with the data, assumptions, and methodology employed by the CAISO.

Any proposed transmission upgrades or additions that do not pass the screening process will be subject to the CAISO's alternative dispute resolution (ADR) procedures under Section 13 of the CAISO Tariff.

### 2.1.2.2 Stage 1: Unified Planning Assumptions and of the Study Plan

CAISO Tariff Sections 24.2.3 and 24.2.4

Stage 1 of the Transmission Planning Process involves development of Unified Planning Assumptions and the Study Plan which encompasses the Unified Planning Assumptions<sup>6</sup> for each technical study. The objective of this stage is to determine the goals of, and agree upon assumptions for, the various studies and project evaluations to be performed as part of a TPP Transmission Planning Process cycle. Information from the Request Window conducted in the previous TPP cycle, as well as information from PTOs, neighboring balancing authorities, state agencies, regional and sub-regional planning groups<sup>7</sup> will be integrated into the development of the Unified Planning Assumptions and Study Plan. Input is also expected from the TPP Participants, and the CAISO will consider comments received via email to [regionaltransmission@caiso.com](mailto:regionaltransmission@caiso.com) other entities, such as the CEC, Participating TOs, POUs, CPUC, WECC, and potentially other sub-regional planning groups or neighboring transmission providers. This information obtained forms the basis of a the draft Unified Planning Assumptions and Study Plan produced by the CAISO as shown in (see Attachment 1). The Study Plan articulates the Unified Planning Assumptions and Study Plan and provides TPP Participants stakeholders with a coordinated plan for completing all of the required and proposed studies during Stage 2 of the that TPP Transmission Planning Process cycle. As such, the draft Unified Planning Assumptions and Study Plan will lists all the studies to be conducted, describes basic planning assumptions and inputs, sources for those assumptions and inputs, how assumptions and inputs will be applied, methodology, tools used, study criteria, (i.e. WECC Planning Standards), expected study outputs and assignments for performing specific analyses to Participating TOs and third parties as determined by the CAISO. Major milestones such as tentative schedules and locations of the meetings, postings of information, dates for the submission of comments and CAISO responses to the comments how the comments should be submitted to CAISO and how they will be responded, along with contact information of subject matter experts (SMEs) are also part of the scope of the study plan. Finally, the Study Plan will document the scope and major milestones for the evaluation of Large<sup>8</sup> Projects.

<sup>6</sup> The term "Unified Planning Assumptions" means the proposed assumptions of each technical study that stakeholders have reviewed and agree upon, regarding how the studies shall be conducted.

<sup>7</sup> By the 2<sup>nd</sup> week of December of each year, the CAISO will send out data requests to the neighboring balancing authorities, state agencies, regional/sub-regional planning groups, and TPP participants for the information that should be considered in the development of the Study Plan.

<sup>8</sup> Large Projects are defined as a transmission upgrade or addition that exceeds \$200 million in capital costs and consists of a proposed transmission line or substation facilities capable of operating at voltage levels greater than

Generally, the components of the Unified Planning Assumptions Study Plan are Demand, transmission system topology, generation assumptions, and imports. Stakeholders will be provided the opportunity to review and comment on the draft Unified Planning Assumptions prior to incorporation into the final Study Plan by the CAISO. TAs mentioned earlier, the information contained in the Study Plan is intended to allow replication of the studies performed during the CAISO's TPP Transmission Planning Process by competent transmission engineers.

*The timeframe for Stage 1 development is January through April of each year. The first CAISO TPP stakeholder meeting (public meeting) will be held to present the draft Study Plan to the stakeholders approximately in March of each year.*

During this stage, individual study plans and schedules for large proposed transmission projects (and their alternatives) with significant capital outlays (i.e., > \$50 million), especially those identified through the Request Window, also will be developed. The development of study assumptions and other inputs, the identification of possible project alternatives to be considered, and the schedule for completion of the necessary studies for such large projects may be determined through separate stakeholder process involving additional noticed stakeholder meetings and comment periods, and then published independently from the Unified Planning Assumptions if necessary. To maximize stakeholder and public participation, this additional meeting on study assumptions may be noticed both through CAISO Market Notices, as well as through the media in the area in which the project will be located. Such meetings may also be held near the project's proposed or anticipated location. The CAISO attempts to apply the Unified Planning Assumptions to such projects to the maximum extent possible, and provides access to updates and information on these larger project alternatives similar to that which is published for studies conducted for incorporation into the Transmission Plan. Further, to the extent practical, the CAISO will nevertheless seek to document within the Unified Planning Assumptions and Study Plan any special data, assumptions and other inputs tailored specifically for these large transmission project proposals. Updates on the latest statuses of these projects will also be documented in the annual CAISO Transmission Plan report.

**2.1.2.3 Stage 2: Technical Studies and Presentation of Results**

CAISO Tariff Section 24.2.5

Stage 2 of the TPP Transmission Planning Process involves the performance of technical studies to identify the need for system reinforcement and to propose applicable solutions. The initial results of these studies will be presented to TPP participants during this stage, and presentation of initial results and the proposed mitigation plans to stakeholders. The technical studies will follow the Study Plan using the Unified Planning Assumptions to the maximum extent possible. *The time frame for Stage 2 is May – October of each year.* The CAISO, Participating TOs, and other parties at the direction of the CAISO as appropriate<sup>9</sup> will perform technical studies according to the Study Plan and will post its study results on the CAISO website by mid-September of each year. The CAISO will rely on its study results as the benchmark during the Stage 3 project approval process. At the end of this stage, the CAISO coordinates the preparation and presentation of all study results to the stakeholders. A minimum of one public

<sup>9</sup> 200 kV. A large project may also be a project that does not meet the dollar or voltage level requirement, but in the CAISO's opinion raises significant policy issues warranting a separate planning process.

<sup>9</sup> CAISO will direct Participating TOs, Project Sponsors or other entities who perform the studies on their behalf to perform specific tasks. However, other studies such as those performed by neighboring Balancing Authority Areas shall be provided voluntary.

~~stakeholder meeting will be held in late October of each year<sup>10</sup> to deliver preliminary study results to stakeholders TPP Participants for their review and comment. The information presented to the TPP Participants stakeholders will shall include:~~

- ~~Summary of findings (need identifications)~~
- ~~Proposed mitigation plans solutions for the selected identified problems, including detailed descriptions of any reliability criteria violations and proposed mitigation solutions~~
- ~~Findings on High Priority Economic Planning Studies (i.e. feasible upgrades to relieve congestions or bottlenecks) and, if necessary, the scope for needed further analysis~~

~~As discussed mentioned earlier in this BPM, the PTOs are required to submit reliability transmission projects through the Request Window by October 15 each year. B, before the second stage Stage 2 is complete, to the extent Participating TOs or other parties are directed to perform elements of the Study Plan, the CAISO will hold, in coordination with the Participating TOs or other parties, additional public stakeholder meetings to discuss results of system performance assessment studies conducted by the PTOs and potential solutions to the problems identified in those studies that could be transmission and (wire and non-wire). These meetings provide an additional opportunity for stakeholders TPP Participants to provide input on the transmission alternatives to be considered in the CAISO's Transmission Plan. All meetings will be noticed by the CAISO by Market Notice and will be coordinated with the CAISO's stakeholder calendar.~~

#### **2.1.2.4 Stage 3: Project Approval and Development and Presentation of the Expansion Transmission Plan**

##### CAISO Tariff Section 24.2.5

~~Stage 3 of the TPP Transmission Planning Process involves the approval of projects from the Request Window that meet the CAISO project screening criteria, documentation of the technical study results and, related information related to the planning activities, and addressing stakeholder TPP Participant comments and/or concerns. The primary product resulting from this stage is the CAISO Transmission Plan, which will be presented to the CAISO Board of Governors. Also, if consistent with the agreed upon schedule in the Study Plan, the Transmission Plan may include the results of other specific technical studies involving Large larger transmission P projects or other identified planning evaluations. Otherwise, Large Projects such larger transmission projects or other identified planning evaluations will be presented independently of the Transmission Plan. Either way, the status of large projects will be documented in the Transmission Plan. The timeframe for this activity is November – January February.~~

~~During Within this stage, the CAISO develops its draft CAISO Transmission Plan report primarily based on the final study results. The Transmission Plan lists, but is not limited to, the status of the transmission projects subject to CAISO management approval (i.e., those with capital investment < \$50 million), along with the basis for of the CAISO's decision on such projects, including analyses of other alternatives not recommended by CAISO management. The Transmission Plan also provides the latest status of the projects CAISO previously approved but still under construction, and the status of on the transmission projects that requiring more than~~

<sup>10</sup> ~~The CAISO will send market notice to notify TPP participants for the exact dates when its study results will be posted as well as the date for the stakeholder meeting.~~

\$50 million of capital investment ~~that, which~~ are separately submitted to the CAISO Governing Board for approval. As noted above, the technical studies, reports and recommendations for those separately reviewed transmission projects may be prepared concomitantly with the Transmission Plan or on an alternative schedule.

The CAISO will presents a draft Transmission Plan report to TPP Participantsstakeholders at a public meeting in accordance with the timeframes set forth in this BPM. As part of this process, the CAISO will explicitly request the participation of representatives from neighboring transmission providers and sub-regional planning organizations, in order to seek input and identify potential improvements for the following year's Transmission Plan. The CAISO also will present its Transmission Plan at relevant regional and sub-regional planning groups. All stakeholder TPP Participant comments and CAISO responses throughout the development of the Transmission Plan will be posted on the website (<http://caiso.com/1f42/1f42d6e628ce0.html>~~http://caiso.com/thegrid/planning/index.html~~) and will be addressed in the final Transmission Plan. ~~in the CAISO transmission plan report~~The CAISO Transmission Plan will be finalized and scheduled for presentation during the CAISO Governing Board meeting in January-February or, if necessary, in ~~February~~March.

~~Participating~~-TOs and other successful Project Sponsors may move toward the development and permitting of those projects approved by the CAISO Governing Board or management, as applicable. Projects with estimated capital investment of \$50 million or less that are included as approved in the final Transmission Plan are deemed formally approved by CAISO management. Figure 4 illustrates the relationship between each stage of the CAISO TPP and the Request Window.

# The CAISO Transmission Plan

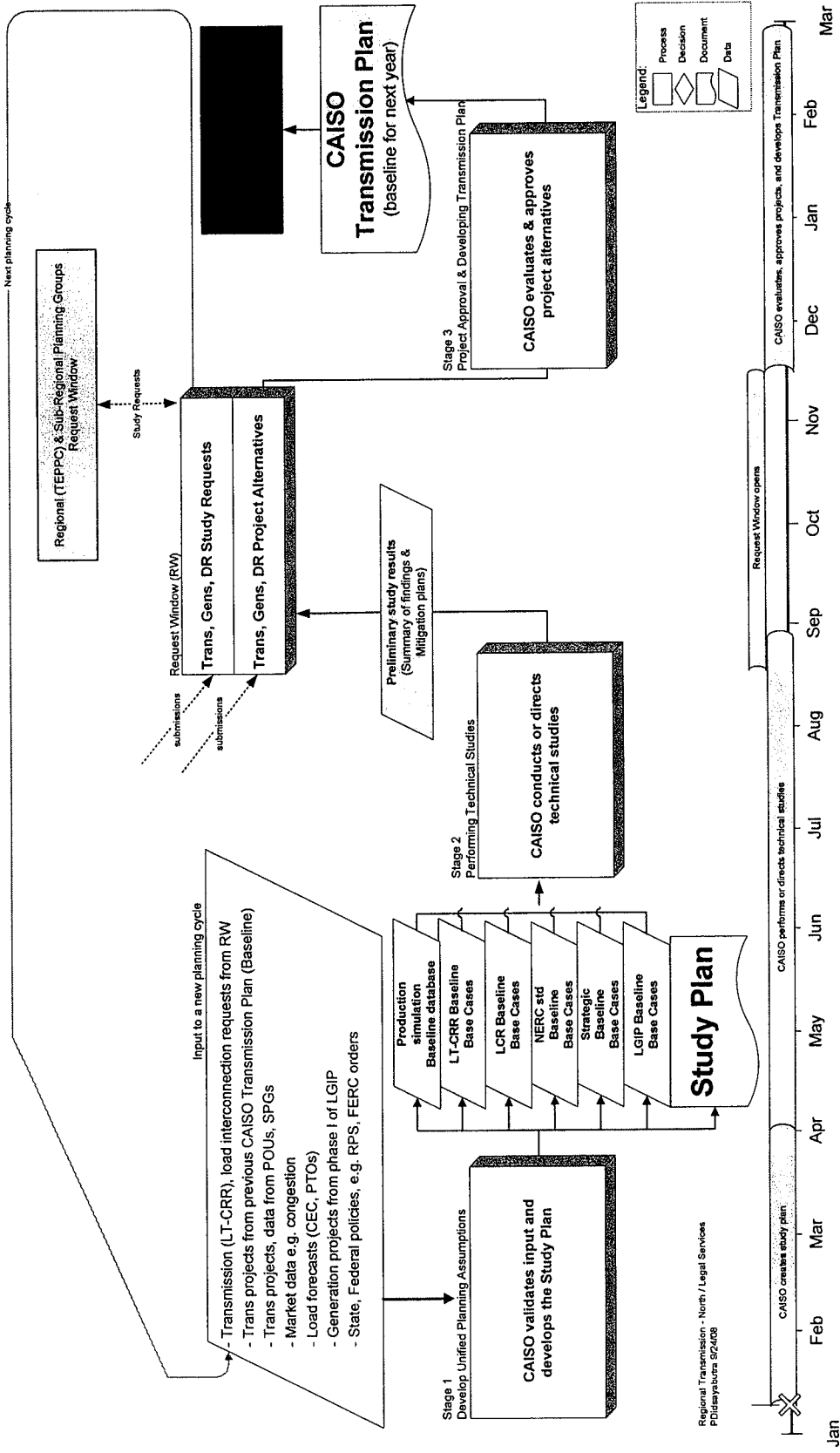


Figure 4: Request Window and three stages in the CAISO Transmission Planning Process

### 2.1.3 TPP General Calendar for Performing the Transmission Planning Process

The following table describes the approximate proposed timelines and milestones for the CAISO TPP Transmission Planning Process:

Table 4: Transmission Planning Process Schedule

<b>Dates<sup>11</sup></b>	<b>Milestones</b>
<b>By November 15<sup>th</sup></b>	Request Window closes.
<b>By December 7<sup>th</sup></b>	CAISO concludes all inputs from Request Window
<b>By End of January</b>	Previous year's Transmission Plan recommendations are made to the CAISO Board of Governors.
<b>By February 15<sup>th</sup></b>	CAISO identifies the High Priority Economic Planning Studies and transmission projects submitted during the Request Window that will be included in the Study Plan for the current year's Transmission Planning Process.
<b>By March 31<sup>st</sup></b>	CAISO publishes draft Unified Planning Assumptions and Study Plan
<b>By April 30<sup>th</sup></b>	Stakeholder meeting held to discuss the draft Unified Planning Assumptions and Study Plan
<b>By May 31<sup>st</sup></b>	Complete and publish final Unified Planning Assumptions and Study Plan, and respond to stakeholder comments on the Unified Planning Assumptions and Study Plan. Hold additional stakeholder meetings or teleconferences regarding the Unified Planning Assumptions and Study Plan as determined by the CAISO.  Complete any separate stakeholder processes regarding specific transmission projects.
<b>August 15<sup>th</sup></b>	Request Window for next planning cycle opens
<b>By October 31<sup>st</sup></b>	The technical analyses identified in the Study Plan are performed.  Participating TOs and other parties may hold stakeholder meetings to discuss results of system performance assessment studies and discuss potential transmission alternatives to mitigate the problems identified in studies assigned to those entities.
<b>By October 31<sup>st</sup></b>	Stakeholder meeting is held to discuss draft results of technical studies.

<sup>11</sup> If the due dates fall on the weekends or CAISO holidays, these due dates will be moved to close of business of the next working day.

Dates <sup>11</sup>	Milestones
<b>November 15<sup>th</sup></b>	Request Window for next year planning cycle closes
<b>By December 7<sup>th</sup></b>	CAISO concludes all inputs from Request Window
<b>By End of January Y-2</b>	The Transmission Plan report is finalized, including response to stakeholder comments on draft Transmission Plan study results.  Transmission Plan recommendations presented to the CAISO Governing Board.

Transmission Planning Process Schedule

No	Due Date	Activity
1	<u>2<sup>nd</sup> week of December</u>	<u>CAISO sends a letter to neighboring Balancing Authorities, sub-regional and regional planning groups requesting planning data and other related information to be included in the CAISO Transmission Plan</u>
2	<u>2<sup>nd</sup> week of January</u>	<u>PTOs, neighboring balancing authorities, regional/sub-regional planning groups, and other TPP participants provide CAISO planning data</u>
3	<u>End of January</u>	<u>If needed, CAISO Planning Standards Committee Meets</u>
4	<u>2<sup>nd</sup> week of February</u>	<u>CAISO develops the Draft Study Plan and posts it on CAISO website</u>
5	<u>March</u>	<b><u>CAISO hosts Stakeholder Meeting #1</u></b>
6	<u>Early April</u>	<u>The CAISO finalizes the Study Plan and posts the base cases and other planning data on its secured website</u>
7	<u>End of July</u>	<u>If needed, the CAISO hosts additional stakeholder meetings at the local locations</u>
8	<u>August 15</u>	<u>Request Window Opens</u>
9	<u>September 15</u>	<u>The CAISO posts preliminary study results on its Regional Transmission secure website</u>
10	<u>October 15</u>	<u>PTOs submit reliability project proposals through the Request Window along with their study reports</u>
11	<u>End of October</u>	<b><u>CAISO hosts Stakeholder Meeting #2</u></b>
12	<u>November 30</u>	<u>Request Window Closes</u>
13	<u>December-January</u>	<u>Projects with capital costs less than \$50 million will be submitted to the ELT meetings</u>
14	<u>End of January</u>	<u>The CAISO posts draft Transmission Plan on its website</u>



15	February	<b>CAISO hosts Stakeholder Meeting #3</b>
16	February (or March) Board Meeting	CAISO presents Transmission Plan to the Board of Governors

This reflects the minimum level of activity. As noted, additional stakeholder TPP Participant meetings may be scheduled as necessary, both for projects to be included in the Transmission Plan and for projects being studied through independently developed their own schedules. Should the issuance of the draft Study Plan, the CAISO preliminary study results, the PTO study submissions or the draft Transmission Plan be delayed beyond the approximate dates set forth above, the public meetings shall be accordingly adjusted.

**2.1.4 Transmission Projects Identified Through the TPP Transmission Planning Process**

The TPP Transmission Planning Process, which encompasses the CAISO's Large and Small Generator Interconnection Procedures (LGIP/SGIP), the production of the Transmission Plan, and other independent studies, will identify the following categories of transmission additions or upgrades:

**2.1.4.1 Transmission Projects Identified Through the LGIP/SGIP**

- Reliability Network Upgrades – The transmission facilities at or beyond the Point of Interconnection necessary to interconnect a Large Generating Facility safely and reliably to the CAISO Controlled Grid, which would not have been necessary without the interconnection of the Large Generating Facility. This includes Network Upgrades necessary to remedy short circuit or stability problems resulting from the interconnection of the Large Generating Facility to the CAISO Controlled Grid. Consistent with WECC practice, Reliability Network Upgrades also include the facilities necessary to mitigate any adverse impact the Large Generating Facility's interconnection may have on a path's WECC rating.
- Delivery Network Upgrades – Transmission facilities at or beyond the Point of Interconnection, other than Reliability Network Upgrades, identified in the Interconnection Studies to relieve constraints on the CAISO Controlled Grid and which the Interconnection Customer or the PTO elects to fund.
- Interconnection Facilities – The Participating-TO's Interconnection Facilities and the Interconnection Customer's Interconnection Facilities. Collectively, Interconnection Facilities include all facilities and equipment between the Generating Facility and the Point of Interconnection, including any modifications, additions, or upgrades that are necessary to physically and electrically interconnect the Generating Facility to the CAISO Controlled Grid. Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

In accordance with Tariff §7.2 and 7.5 of Appendix GG, the LGIP procedures for interconnection requests a queue cluster window, CAISO will coordinate the Phase II Interconnection Studies with the TPP, to the maximum extent possible, including:

- Consistency between the Interconnection Base Case Data used for the performance of Phase II Interconnection Studies and the Unified Planning Assumptions;
- Consideration of any conceptual transmission plans developed, but not rejected, in the TPP intended to access generation development areas as a means to satisfy the Network Upgrade requirements included in the Phase II Interconnection Study;
- Performance of sensitivities within the TPP to optimize transmission upgrades developed in the current TPP to achieve System Reliability, economic efficiency and satisfy Network Upgrade requirements;
- Consideration of future generation development potential in transmission upgrade designs pursuant to the criteria developed as part of the Unified Planning Assumptions;
- Consideration of phased development and option value of transmission projects to address uncertainty.

Generation projects entering the Phase II Interconnection Study will also be considered in the Unified Planning Assumptions, as appropriate. Transmission projects proposed through the Phase II Interconnection Study that require Board approval (those with capital costs of over \$50 million) will be integrated into the TPP stakeholder process.

~~➤ Location Constrained Resource Interconnection Facility— A High Voltage Transmission Facility, proposed to connect Location Constrained Interconnection Generator in designated Energy Resource Areas (ERAs), that has been determined by the CAISO to satisfy, or conditionally satisfy, all of the requirements of Section 24.1.3 of the CAISO Tariff. (See Section 4.2.3 for further discussion.)~~

**2.1.4.2 Transmission facilities originating outside the LGIP/SGIP in the Transmission Planning Process and deemed “needed” under Section 24.1 of the CAISO Tariff:**

- ~~Reliability Transmission Projects – The CAISO obligates Participating TOs, as NERC Transmission Planners, to identify the need for any transmission additions or upgrades required to ensure System Reliability consistent with Applicable Reliability Criteria and CAISO Planning Standards. -This obligation requires that the CAISO Controlled Grid be planned to a level that meets or exceeds transmission system performance criteria established by the WECC, NERC, Local Reliability Criteria, and other CAISO Planning Standards (collectively Reliability Criteria). Reliability Transmission Projects may also originate from CAISO recommendations from the CAISO’s short-term plan based on the past operational experiences. A transmission upgrade or addition will be justified on the basis of reliability where the project is specifically designed to mitigate or prevent identified Reliability Criteria violations.~~
- ~~Economic Transmission Projects – These types of upgrades promote economic efficiency. The CAISO Tariff does not define economic efficiency. However, economic efficiency may be demonstrated where (1) the Project Sponsor, other than a PTO, commits to pay the full cost of the construction, maintenance, and operation of the addition or upgrade and rely on the receipt of Merchant Transmission Congestion Revenue Rights to recover such costs; or (2) the economic benefits of the upgrade or~~

addition are expected to exceed its costs. Economically efficient transmission upgrades or additions may serve many objectives, including, but not limited to, lowering a region's Energy production costs, reducing or eliminating Congestion, reducing capacity costs (*i.e.*, lowering Local Capacity Requirements for a Local Capacity Area), and efficiently accessing renewable Energy resources.

- LCRIF Location Constrained Resource Interconnection Facility – A High Voltage Transmission Facility, proposed to connect location constrained resources in designated Energy Resource Areas (ERAs), that has been determined by the CAISO to satisfy, or conditionally satisfy, all of the requirements of Section 24.1.3 of the CAISO Tariff. (See Section 4.2.3 for further discussion.)
- Long-term CRR Transmission Projects – Transmission organizations must incorporate procedures into their Transmission Planning Processes that maintain or ensure the feasibility (but not the value) of allocated or awarded long-term firm transmission rights over their entire term. The terms under which the CAISO satisfies this requirement are set forth in Section 24.1.4 of the CAISO Tariff and are further addressed in Section 4.2.6 of this BPM.

### **2.1.5 Large Project Evaluations**

A Large Project is a transmission upgrade or addition that exceeds \$200 million in capital costs and consists of a proposed transmission line or substation facilities capable of operating at voltage levels greater than 200 kV. A large project may also be a project that does not meet the dollar and voltage levels described but that, in the CAISO's opinion, raises significant policy issues so as to require a separate planning process. Location Constrained Resource Interconnection Facilities are not included in this definition, regardless of the capital cost or voltage level of the transmission upgrade or addition.

Although the process to evaluate the impact from these projects is part of the CAISO TPP, Large Projects may require comprehensive technical studies to be conducted and it may take more than one planning cycle to complete the evaluation process. Consequently, in addition to the overview of these projects that will be documented in the overall Study Plan, the CAISO may develop individual study plans and public meeting schedules for the evaluation of each Large Project (and alternatives).

In developing the study plan and public process for the evaluation of Large Projects, CAISO may follow the guidelines set forth in Decision 06-11-018 issued by the California Public Utilities Commission on November 9, 2006. These guidelines set forth the requirements that must be met during the CAISO evaluation of a Large Project in order that a CAISO finding of electrical need for the project can be afforded a rebuttable presumption of reasonableness during the CPUC Certificate of Public Convenience and Need (CPCN) process.

Although the Large Project study process may proceed on a separate study and public participation track, the process will be coordinated with the TPP as follows:

- Development of the individual study plan and the schedule for completion of the necessary studies for such Large Projects may be determined through a separate TPP Participant public process involving additional noticed TPP

Participant meetings and comment periods, and then published in addition to the Unified Planning Assumptions, if necessary.

- To maximize TPP Participant public participation, this additional meeting addressing study assumptions may be noticed both through CAISO Market Notices and through the media in the area in which the project will be located. Other meetings may also be held near the project's proposed or anticipated location.
- CAISO will attempt to apply the Unified Planning Assumptions to Large Projects to the maximum extent possible. Nonetheless, TPP Participants will be advised at public meetings during Stage 1 if individual study assumptions for Large Projects are being separately considered at other public meetings.
- CAISO will provide access to updates and information regarding Large Project alternatives similar to that provided for studies that will be incorporated into the Transmission Plan. Further, to the extent practical, the CAISO will seek to document, within the Unified Planning Assumptions and Study Plan, any special data, assumptions and other inputs tailored specifically for Large Project proposals. Large Project status reports will be documented when CAISO posts its technical study results in mid-September and will also be provided in the annual CAISO Transmission Plan report.

Each Large Project recommended for approval by CAISO management will be presented to the CAISO Governing Board for approval in accordance to the schedule developed for the project.

## 2.2 CAISO Transmission Plan

The CAISO's Transmission Plan is the primary product of its Transmission Planning Process. Produced annually, it details information on newly proposed transmission projects and alternatives considered within the CAISO Balancing Authority Area, as well as external transmission facilities that will interconnect to the CAISO Controlled Grid. The Transmission Plan also articulates the plans or key activities of other participating entities and contains information on other issues involving Transmission Planning, such as Congestion analyses, a long-term projection of Local Capacity Requirements, resource deliverability and operational issues based on experiences learned from real-time operation. The Transmission Plan shall contain information, including, but not limited to, the following:

- Transmission Project Summary – Provides a list and details about transmission projects including:
  - Updates on the status of transmission projects approved by the CAISO during prior Transmission Planning Process cycles
  - Transmission projects that have been proposed to the CAISO for approval and recommendation
  - Transmission projects CAISO management approves in the current transmission plan and the basis of approval i.e. description of the analysis for assessing “need” for the preferred project

- Alternatives considered and the resulting comparison of these alternatives to the preferred project
- Transmission project proposals CAISO management does not approve along with the basis of its decisions
- Transmission projects proposals require approval from CAISO Board of Governors
- Transmission project proposals that are at a conceptual stage or require additional study that are advanced to mitigate reliability issues or provide economic benefits to the CAISO ratepayers, or for other purposes, including the potential development of Energy Resource Areas (that may also be competitive renewable energy zones (CREZ)) identified through State regulatory processes.
- System Outlook – Provides information on future system conditions to facilitate transmission planning decisions, including, but not limited to:
  - New generation from CAISO Interconnection Queue and CEC licensing process
  - Generation retirement analyses from CEC
  - Load forecast data from CEC
  - Other factors, such as state and federal policies impacting transmission planning, economic trends, fuel prices outlook, activities from other entities in the region that should be considered, future technology, impact from climate changes, etc.
- System Assessment Results – Results from various technical studies performed by the CAISO or other entities at the direction of the CAISO in accordance with the Study Plan that focus on different perspectives of the system, including, but not limited to:
  - Reliability – Studies performed to ensure that system performance can satisfy all NERC/WECC (TPL 001 – TPL 004) reliability and CAISO Planning Standards over both the short-term (up to 5 years) and long-term (10 years or longer)
  - Resource Adequacy and Related Issues – Studies support resource adequacy programs, including such as the Local Capacity Requirement (LCR) Technical Study, and import and Generation deliverability assessments
  - Economic Transmission project studies – Studies to determine how a proposed transmission upgrade or addition promotes economic efficiency relative to other alternatives
  - Economic Planning Studies – Studies that provide information for Market Participants to independently assess the effects of Congestion in order to facilitate market decisions regarding transmission or other resource additions or upgrades to mitigate the identified Congestion.
  - Location Constrained Resource Interconnection Facilities (LCRIFs) – evaluation of proposed LCRIFs from Project Sponsor(s) to connect location constrained resources in designated Energy Resource Areas (ERAs)
  - Long-Term Congestion Revenue Rights (CRRs) – Identify simultaneous feasibility of allocated Long Term CRRs

- Other System Planning Studies – Studies that evaluate specific relevant planning topics, including, but not limited to, aging power plants, conceptual Transmission Plans to facilitate Renewable Portfolio Standards, and operational studies to integrate renewable resources
- Short-Term Plan – Summary of recent concerns and recommendations based on system operators' experiences on the grid, including congestions, load, resources, and system performances. This also includes the assessments of near-term system conditions (1-3 years) with consideration of the benefits from future transmission upgrades. This study may recommend system reinforcements or additional actions that are not addressed by other future upgrades.
- Operating Guide – Informational guidelines for CAISO grid operations regarding possible impacts of new transmission projects and the need to revise existing—or develop new—operating procedures
- Scenarios Analysis – Results from specific, periodic studies focusing on opportunities to improve reliability and system performance
- Conclusions, Visions and Future Plans – Conclusion from the current plan, CAISO's vision on various topics, such as potential concerns, potential grid enhancements, and plans for enhancing future iterations of the Transmission Plan.

The Transmission Plan will be used by CAISO as part of the documentation of compliance with the NERC Reliability Standards applicable to Planning Coordinators.

### 3. Request Window

The CAISO's Transmission Planning Process utilizes a "Request Window" as a centralized, transparent, and organized method to solicit and manage alternative project proposals, Economic Planning Study requests, and to manage submission of project-related data. The Request Window is a 3.5-month window, opening on August 15<sup>th</sup> and ending on November 15<sup>th</sup> 30<sup>th</sup> of each year, during which stakeholders TPP Participants may submit certain types of transmission project proposals, Economic Planning Study requests, and other necessary data related to those projects and studies. Submissions during the Request Window will be evaluated against defined criteria in a screening process.

The screening process functions to:

- Ensure sufficient information is provided to the CAISO to allow consideration of the submission in the Transmission Planning Process
- Establish if other threshold criteria have been met, as described in Section 3.4 of this BPM.

As a general matter, submissions that satisfy the screening process will may be considered in the current year approval process or may be included within the scope of the following year's Study Plan. In general, project proposals for which all necessary technical studies have been performed will be considered in the current year approval process while High Priority study

requests<sup>12</sup> will be included in the following year Study Plan. The CAISO will conduct up to five (5) High Priority studies in each planning cycle. However, in addition, valid Economic Planning Study requests with a regional or sub-regional study scope may be referred to, and the study performed by, a sub-regional planning group or the Transmission Expansion Planning Policy Committee (TEPPC) of WECC in accordance with the TEPPC synchronized economic planning study process. Project proposals or Economic Planning Study requests that do not satisfy the Request Window requirements or are not otherwise selected may be submitted to the CAISO's alternative dispute resolution process under Section 13 of the CAISO Tariff.

The major components of the Request Window to be discussed are:

- Scope of the proposals and projects that may be submitted
- Submission process
- Data included in submission process
- Screening process

### 3.1 Scope of Proposals and Projects in Request Window

CAISO Tariff Section 24.2.2

Section 2.1.2 describes certain ~~the~~ categories of proposed transmission additions, upgrades, or economic study requests which, regardless of the Project Sponsors, ~~Some of these must go through the Request Window process to be considered for CAISO approval, while others do not. This section identifies the two categories, as well as other information, subject to the Request Window.~~

~~Projects or requests that must go through the Request Window process:~~ These project proposals are as show below:

- Reliability transmission upgrades or additions – PTOs with PTO Service Territories and TPP participants may propose reliability transmission upgrades or additions through the Request Window
- Merchant Transmission Facilities – Transmission upgrades or additions in which the Project Sponsor will seek revenue recovery through the receipt of Merchant Congestion Revenue Rights under Section 36.11 of the CAISO Tariff, rather than through the CAISO's Transmission Access Charge
- ~~Participating TO e~~ Economic transmission upgrades or additions – Transmission upgrades or additions proposed by Participating TOs or entities applying to become Participating TOs for approval primarily based on the economic efficiency of the projects and for which the Participating TOs intends to obtain revenue recovery through the CAISO's Transmission Access Charge. (Note that projects that are less than \$50 million dollars may also be identified through mitigation proposals submitted by Participating TOs with PTO Service Territories)

<sup>12</sup> Up to five studies that include Study Requests under Economic Planning study and the evaluation of major project proposals that additional technical studies are required before the projects can be submitted for CAISO approval.

- ~~LCRIF~~ Location-Constrained Resource Interconnection Facilities – proposed transmission projects to connect Location Constrained Interconnection Resource Generators in designated ERAs
- Projects to preserve Long-term Congestion Revenue Rights – These projects will be an output of CAISO studies conducted in conformity with the developed Study Plan
- Demand Response programs – For possible inclusion in base case/assumptions or as a resource alternative to resolve planning targets
- Generation projects – Information on proposed Generating Units may be submitted as proposed solutions along with the study requests under Economic Planning Study.
- Network Upgrades identified through the SGIP/LGIP – Transmission associated with requests to interconnect Generating Units will be identified through the SGIP or LGIP, as applicable
- Economic Planning Study requests – These are ~~stakeholder~~-TPP Participant requests for the CAISO to develop conceptual transmission solutions to mitigate identified system congestion and perform preliminary assessment of the economic benefits of such mitigation

Projects or requests that need *not* go through the Request Window:

- ~~Reliability transmission upgrades or additions – Participating TOs with PTO Service Territories, as NERC Transmission Planners, are under an obligation to propose transmission solutions to resolve any identified reliability criteria violations. Participating TOs may propose these projects through submission of individual mitigation proposals in accordance to the developed Study Plan~~
- ~~Network Upgrades identified through the SGIP/LGIP – Transmission associated with requests to interconnect Generating Units will be identified through the SGIP or LGIP, as applicable~~
- ~~Location Constrained Resource Interconnection Facilities – The CAISO's SGIP/LGIP may identify these types of projects as a result of performing Interconnection System Impact Studies.~~
- ~~Projects to preserve Long-term Congestion Revenue Rights – These projects will be an output of CAISO studies conducted in conformity with the developed Study Plan~~
- Operational solutions to address Local Capacity Requirements

## 3.2 Request Window Submission Process

This section describes the steps for submitting the required proposals or requests through the Request Window process. Proposals and requests submitted through the Request Window will be considered, provided that the following process steps are satisfactorily completed:

1. Initiation – Submitters shall start the process by submitting the appropriate forms to the CAISO at [requestwindow@caiso.com](mailto:requestwindow@caiso.com). The appropriate forms, including instructions for submission and the data requirements necessary, will be posted on the CAISO website at <http://caiso.com/1f42/1f42d6e628ce0.html> ~~http://www.caiso.com/thegrid/planning/index.html~~. These data forms include the details of the Economic Planning Study request or



project proposals necessary to allow initial evaluation. The CAISO will assign responsibility for the project or Economic Planning Study request to its staff and acknowledge receipt of the project information or Economic Planning Study request to the submitter within three Business Days.

2. Validation/Selection – Within ~~ten business~~ fourteen calendar days after receiving the form, the CAISO will apply the screening test to validate the transmission proposals or Economic Planning Study requests. At that time, the CAISO will inform submitters by e-mail whether the proposed project satisfies the screening criteria. For those submitters whose data or information are deemed incomplete by the CAISO, such submitters will have ~~seven five business~~ calendar days to supplement their submissions (if the ~~seventh~~ seventh day falls on a weekend or holiday, the deadline will be the close of business of the following Business Day).
3. Secondary Validation – For those submitters whose data or information are deemed incomplete by the CAISO as part of the initial validation in step 2 above, such submitters will have ~~seven calendar~~ five business days to supplement their submissions (if the ~~seventh~~ fifth day falls on a weekend or holiday, the deadline will be the following Business Day). Within ~~seven calendar~~ five business days after receiving the supplemental submission, the CAISO will inform the project proponent whether the screening criteria have been satisfied.

### 3.3 Data Requirements for Request Window Submissions

The data requirements necessary to initiate the Request Window process, as discussed in Section 3.2, will be described further in this section with respect to different categories of projects and/or requests. Data templates and accompanying instructions for submission to the Request Window may be found at <http://caiso.com/1f42/1f42d6e628ce0.html> <http://www.caiso.com/thegrid/planning/index.html> under the Request Window Forms and Instructions link.

#### 3.3.1 Economic Transmission Project Proposals

##### CAISO Tariff Section 24.2.2.1

As noted, any economic project, including those seeking cost recovery through Long-term Congestion Revenue Rights or to reduce Local Capacity Requirements, whether submitted by a PTO or sponsor of a Merchant Transmission Facility, must submit the following project information, which includes, but is not limited to:

##### General Data

- Basic description of the proposal, such as the scope, the nature of alternative (AC/DC), objectives, and the qualifications for the proposal to meet certain policies such as LCRIF, LT-CRRs, etc.
- Geographical location and proposed preferred project route
- Evidence of securing the route or ability to secure the route

**Technical Data**

- Network model for power flow study
- Dynamic models for stability study
- Short-circuit data
- Protection data

**Planning Level Cost Data**

- Detailed project construction, operation, and other costs necessary for the study
- Explanation of the accuracy of the cost estimate, and the level of risk of actual cost exceeding the estimate.

**Miscellaneous Data**

- Proposed entity to construct, own, and finance the project
- Planned operator of the project
- Construction schedule and expected online date

**3.3.2 Generation Project Proposals****CAISO Tariff Section 24.2.2.1**

Proposed Generating Facilities may also be submitted to the CAISO for purposes of evaluating the effect of such generation on resolving previously identified grid concerns, including Congestion, voltage support, etc. Proponents of generation projects for consideration in the Transmission Planning Process need to provide a similar set of project data that is required by the LGIP process:

**General Data**

- Basic description of the project, such as fuel type, size, location, etc.
- Proof of site control and CEC licensing status
- Description of the issue sought to be resolved by the Generating Facility, including any reference to results of prior technical studies included in published Transmission Plans.

**Technical Data**

- Network model of the project for power flow study
- Geographical location, evidence of land procurement
- Dynamic models for stability study
- Short-circuit data
- Protection data
- Other technical data that may be required for specific types of resources, such as wind generation

**Planning Level Cost Data**

- Detailed project construction, heat rate, and operation costs
- Proponent should specify expected contractual information necessary to assign generator profit, for estimate of CAISO transmission ratepayer benefits.

#### Miscellaneous Data

- Entity responsible for constructing, owning, and financing the project, and the entity responsible for the costs of the project.
- Planned operator of the project
- Construction schedule and expected online date
- Any additional miscellaneous data that may be applicable

### 3.3.3 Demand Responses and Other Proposals

#### CAISO Tariff Section 24.2.2.1

Information regarding demand management resources (*e.g.*, amount of load impact, location, cost of the program) may be submitted to CAISO for consideration in its Transmission Planning Process. The purpose of requesting such information is to properly account for demand response resources in assessing transmission infrastructure needs. Accordingly, validated demand management programs are to be included in the CAISO's Unified Planning Assumptions. The mechanisms and standards to be applied are currently in development based on ongoing coordination between the CAISO, CPUC, CEC and other Market Participants.

### 3.3.4 Location Constrained Resource Interconnection Facilities (LCRIFs)

#### CAISO Tariff Section 24.1.3

Any party proposing an LCRIF ~~Location Constrained Resource Interconnection Facility~~ shall include the following information in accordance with Section 24.1.3 of the CAISO Tariff:

- A description of the proposed facility, setting forth:
  - Transmission study results demonstrating that the transmission facility meets Applicable Reliability Requirements and CAISO Planning Standards
  - Identification of the most feasible and cost-effective alternative transmission additions, which may include network upgrades, that would accomplish the objectives of the proposal
  - A planning level cost estimate for the proposed facility and all proposed alternatives
  - An assessment of the potential for the future connection of further transmission additions that would convert the proposed facility into a network transmission facility, including conceptual plans
  - The estimated in-service date of the proposed facility, and

- A conceptual plan for connecting potential LCRIGs, if known, to the proposed facility.<sup>13</sup>
- Information showing that the proposal meets the criteria outlined in Section 24.1.3.1(a) of the CAISO Tariff. This information permits the CAISO to conditionally approve the LCRIF if the following criteria are met:
  - The transmission facility is to be constructed for the primary purpose of connecting two or more Location Constrained Resource Interconnection Generators (LCRIG) in an Energy Resource Area, and at least one of the LCRIG is to be owned by an entity or entities not an Affiliate of the owner(s) of another LCRIG in that Energy Resource Area.
  - The transmission facility will be a High Voltage Transmission Facility.
  - At the time of its in-service date, the transmission facility will not be a network facility and would not be eligible for inclusion in a Participating TO's TRR other than as an LCRIF.
  - That there is a need for the proposed facility. CAISO will consider the factors set forth in Section 24.1.3.4 to evaluate compliance with Section 24.1.3.1(a):

(1) The extent to which the facility meets or exceeds CAISO Planning Standards;

(2) The extent to which the facility has the capability and flexibility to interconnect LCRIGs in the ERA and to be converted to a network transmission facility;

(3) Whether the projected cost of the facility is reasonable in light of its projected benefits, in comparison to the costs and benefits of other alternatives for connecting Generating Units or otherwise meeting a need identified in the CAISO Transmission Planning Process, including alternatives that are not LCRIFs. In making this determination, the CAISO shall take into account (among other factors):

(a) The potential capacity of LCRIGs and the potential Energy that could be produced by LCRIGs in each ERA;

(b) The capacity of LCRIGs in the CAISO's Interconnection process for each ERA;

(c) The projected cost and in-service date of the facility in comparison with other transmission facilities that could connect LCRIGs to the CAISO Controlled Grid;

(d) Whether, and if so, the extent to which, the facility would create a risk of stranded costs.

<sup>13</sup> The foregoing conditions are subject to change pending the outcome of FERC Docket No. ER08-140 regarding the CAISO's proposed tariff language for Location Constrained Resource Interconnections.

➤ For final qualification as an LCRIF project, the proponent must provide the information required by Section 24.1.3.1(b), which, in addition to all of the above information required for conditional approval, includes a showing that the following requirements have been met:

- (a) The addition of the capital cost of the project will not exceed the 15% aggregate TRR net investment cap, calculated at the time of CAISO's evaluation of the facility; and,
- ⊖ (b) The demonstration of commercial interest requirement set forth in §24.1.3.2 has been met.

### 3.3.5 Economic Planning Studies

#### CAISO Section 24.2.2.2

Requests to perform an Economic Planning Study must identify the congested transmission element (binding constraint) or limiting facilities to be studied. The request should also include reference to the Congestion Data Summary for Congestion associated with the binding constraint, if applicable, or other information supporting the potential for increased future Congestion on the binding constraint. Furthermore, requester may submit up to 2 conceptual mitigation plans along with study requests. However, for the conceptual mitigation plans to be considered, sufficient data, *i.e.*, network model, planning level cost data in accordance with section 3.3 of this BPM, and anticipated online date of the alternatives must be provided to CAISO by the closing date of Request Window.

### 3.3.6 Other Planning Data

The Request Window is designed to be a centralized process to accommodate not only alternative transmission proposals, but also the exchange of information for purposes of developing the Unified Planning Assumptions. Thus, the CAISO will actively solicit updated data from Participating TOs, other Market Participants and neighboring control areas or transmission providers, and sub-regional planning groups in order to supplement existing WECC/TEPPC data.

#### 3.3.6.1 Information from Participating TOs

##### CAISO Tariff Section 24.2.3.1

In addition to any information that must be provided to the CAISO under the NERC Reliability Standards for Modeling, Data, and Analysis (NERC MOD Standards), Participating PTOs shall provide the CAISO on an annual or periodic basis in accordance with the schedule, procedures and in the form required by ~~thethis BPM Business Practice Manual for the Transmission Planning Process~~ any information and data reasonably required by the CAISO to conduct perform the TPP Transmission Planning Process, including, but not limited to: (1) modeling data for power flow, including reactive power and stability analyses; (2) a description of the total Demand to be served from each substation, including a description of any Energy efficiency

programs reflected in the total Demand; (3) the amount of any interruptible Loads included in the total Demand (including conditions under which an interruption can be implemented and any limitations on the duration and frequency of interruptions); (4), a description of Generating Units to be interconnected to the Distribution System of the Participating-TO, including generation type and anticipated Commercial Operation Date; (5) transmission system changes, including equipment replacement not requiring approval by the CAISO; (6) transmission network information, operating diagrams, including line ratings, line length, conductor sizes and lengths, substation equipment ratings, circuits on common towers and with common rights-of-ways and cross-overs, special protection schemes, and protection setting information; and (7) Contingency lists.

### 3.3.6.2 Information Provided by Participating Generators

CAISO Tariff Section 24.2.3.2

In addition to any information that must be provided to the CAISO under the NERC ~~MOD~~ Reliability Standards, Participating Generators shall provide the CAISO on an annual or periodic basis in accordance with the schedule, procedures and in the form required by ~~this~~ the BPM Business Practice Manual any information and data reasonably required by the CAISO to ~~conduct~~ perform the ~~TPP~~ Transmission Planning Process, including, but not limited to (1) modeling data for short-circuit and stability analysis and (2) data, such as term and status of any environmental or land use permits or agreements the expiration of which may affect that the operation of the Generating Unit.

### 3.3.6.3 Information Requested from Load Serving Entities

CAISO Tariff Section 24.2.3.3

In addition to any information that must be provided to the CAISO under the NERC ~~MOD~~ Reliability Standards, the CAISO shall solicit from Load Serving Entities through their Scheduling Coordinators information required by, or anticipated to be useful to, the CAISO in its ~~management of performance of the~~ TPP Transmission Planning Process, including, but not limited to (1) long-term resource plans; (2) existing long-term contracts for resources and transmission service outside the CAISO Control Area; (3) resource capacity and Energy bid information received through requests for offers or similar solicitations; and (4) Demand Forecasts, including forecasted effect of Energy efficiency and Demand response programs.

### 3.3.6.4 Information Requested from Interconnected Control Areas, Sub-Regional Planning Groups and Electric Utility Regulatory Agencies

CAISO Tariff Section 24.2.3.4

The CAISO shall solicit from interconnected Balancing Authority Area operators and transmission providers, regional and sub-regional planning groups within the WECC, the CPUC, the CEC, and Local Regulatory Authorities information required by, or anticipated to be useful to, the CAISO in its performance of the Transmission Planning Process, including, but not limited to (1) long-term transmission system plans; long-term resource plans; (3) generation interconnection queue information; and (4) Demand forecasts.

## 3.4 Screening Process

### 3.4.1 Transmission Projects

#### CAISO Tariff Section 24.2.2.1

In order to ensure that the ~~TPP Transmission Planning Process~~ proceeds in an efficient and timely manner, transmission project proposals are subject to screening criteria as set forth below:

- All data and other requested information must be complete. The CAISO will determine whether the proponent has provided sufficient information to evaluate the transmission proposal, other resource, or Economic Planning Study request. Failure to fully complete the appropriate data templates after the period allowed for supplemental submissions will constitute a failure to satisfy this requirement.
  - A proposed transmission project must connect to the CAISO Control Grid.
- Duplication – The proposals received during the Request Window must not duplicate benefits from transmission projects that have previously been approved by the CAISO. However, competing proposals received during a Request Window may be included in the Study Plan. As appropriate, the CAISO may encourage joint ownership of an optimal project that utilizes the superior features of each proposal.
- If a sub-regional or regional project that affects other Balancing Authority Areas, whether the proposal has previously been identified by the appropriate sub-regional or regional planning entity as a “preferred” solution.
- If the transmission proposal constitutes facilities to access renewable resources, whether one or more of the projects increase transfer capability with respect to a Competitive Renewable Energy Zone, Energy Resource Area, or similar designation identified through a state sanctioned entity.

### 3.4.2 Economic Planning Studies

#### CAISO Tariff Section 24.2.2.2

The screening process will generally place requests for Economic Planning Studies into one of three categories.

In each planning cycle, the CAISO will perform a maximum of five High Priority Economic Planning Studies on behalf of ~~stakeholders~~ TPP Participants. However, the CAISO retains discretion to perform greater than five High Priority Economic Planning Studies should patterns of Congestion so warrant. High Priority Economic Planning Studies will be selected based on consideration of at least one of the following:

- Whether the requested study seeks to address Congestion identified by the CAISO in the Congestion Data Summary.
- Whether the requested study seeks to address delivery of Location Constrained Resource Interconnection Generators in an Energy Resource Area or similar designation from a state sanctioned entity.

- Whether the requested study seeks to reduce or address the need for Local Capacity Area Resources in a Local Capacity Area.
- Whether resource and Demand information indicate that Congestion described in the request is projected to increase over the planning horizon used in the Transmission Planning Process and the projected magnitude of the Congestion.
- Whether the Economic Planning Study is intended to encompass the upgrades necessary to integrate new generation resources or loads on an aggregated or regional basis.

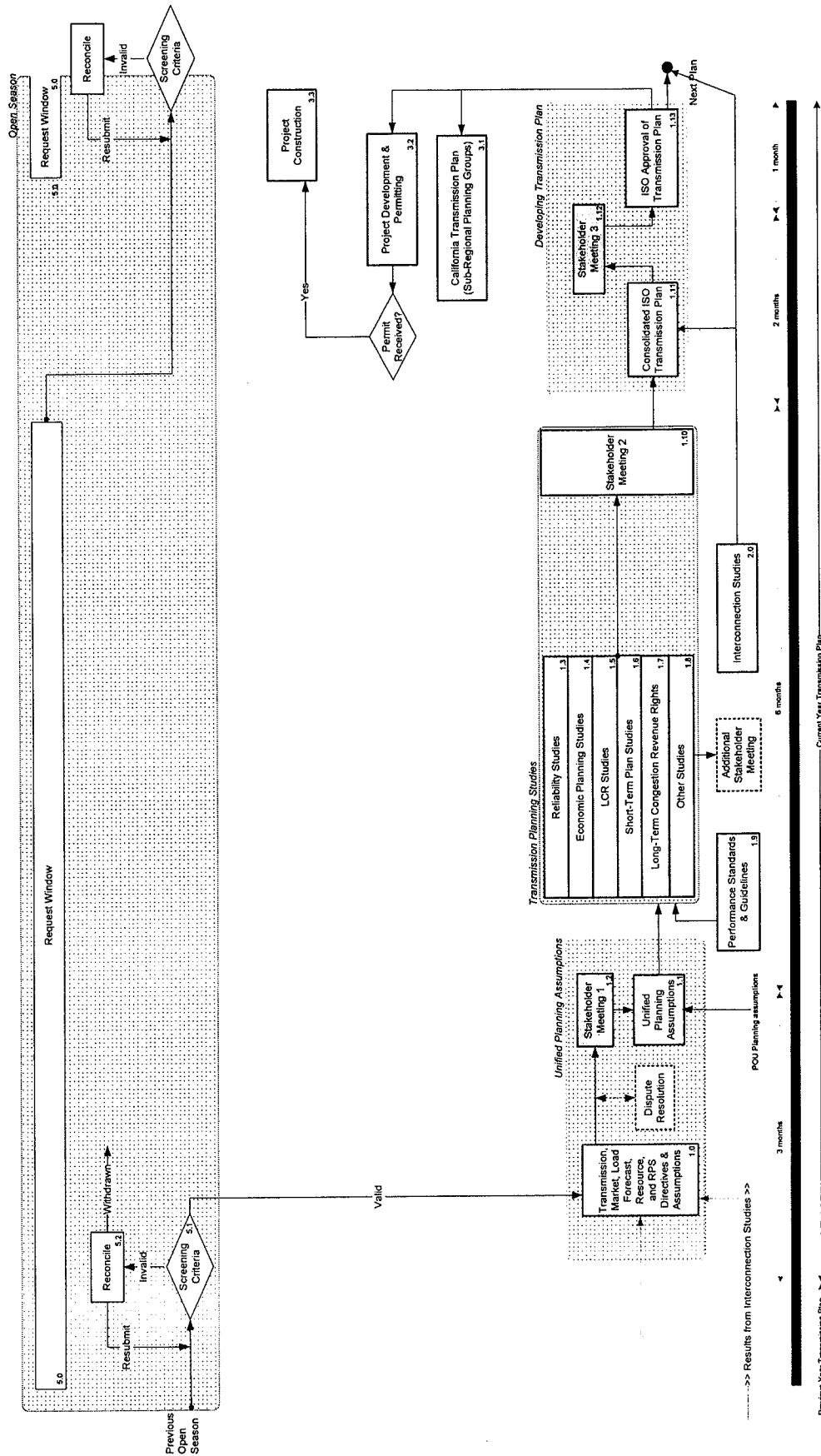
High Priority Economic Planning Studies will be included in the Study Plan and performed by the CAISO at its cost as part of the ~~TPP~~Transmission Planning Process cycle. The CAISO will notify TEPPC and other sub-regional planning groups of the selected High Priority Economic Planning Studies prior to the close of TEPPC's request window on January 31<sup>st</sup> of each year. To the extent that CAISO determines particular study requests under High Priority category should impact multi controlled areas, these study requests will be submitted to TEPPC or the sub-regional planning group by January 31<sup>st</sup> as well.

Where the request is not designated as a High Priority Economic Planning Study and the request is regional or sub-regional in scope, the CAISO will submit the requested Economic Planning Study to TEPPC as part of its request window that closes on January 31<sup>st</sup> of each year.

Requests that are neither High Priority Economic Planning Studies nor regional or sub-regional in scope will be rejected for inclusion in the CAISO's Study Plan, but still will be submitted to TEPPC for inclusion in the consolidated list of potential studies. The submitting entity may still perform the proposed Economic Planning Study at its own cost and submit the results to the CAISO for review and potential inclusion in the final Transmission Plan. The CAISO will coordinate with any third party performing its own study to ensure that the study is consistent with the data, assumptions, and methodology employed by the CAISO.

~~In conclusion, Figure 2 shows the overview of the Request Window and its interaction with the CAISO Transmission Planning Process.~~





Version 3. PD / CAISO P&ID 09/05/07

Figure 2: Proposed Request Window and Its Interplay with the CAISO Transmission Plan

## 4. Transmission Plan Development Process

Sections 4.1–4.3 below articulate the three stages of the CAISO's Transmission Planning Process in more detail.

### 4.1 Development of Unified Planning Assumptions and the Study Plan

Following the close of the Request Window, the CAISO will compile applicable information from the previous Request Window submissions along with the information it receives from PTOs, neighboring Balancing Authorities, regional, sub-regional planning group, state agencies, and TPP participants who respond to the data request issued by the CAISO and engages in the first stage of the TPP Transmission Planning Process. *The timeframe for Stage 1 development is January through April of each year.* The objective of this stage is to determine the goals, agree on data assumptions and inputs for creation of a base case, identify necessary modifications to the base case for individual technical studies, identify the technical studies to be performed as part of the TPP Transmission Planning Process cycle, and allow stakeholders TPP Participants to review and comment on the scope of the upcoming technical studies. This stage creates the Unified Planning Assumptions and Study Plan.

#### 4.1.1 Input into the Unified Planning Assumptions Study Plan

CAISO Tariff Section 24.2.4.1

The CAISO develops the Unified Planning Assumptions that will be documented in the Study Plan using information including, but not limited to:

- Information received during the prior TPP cycle's Request Window
- Applicable Reliability Criteria and CAISO Planning Standards
- WECC/TEPPC base cases for the relevant planning horizon
- Transmission upgrades and additions approved by the CAISO and scheduled to be energized within the planning horizon
- LCRIF Location Constrained Resource Interconnection Facilities conditionally approved under Section 24.1.3.1(a) of the CAISO Tariff
- Network Upgrades identified pursuant to Section 25, Appendix U or Appendix W relating to the CAISO's Large Generator Interconnection Procedures and Appendix AA relating to the CAISO's Small Generator Interconnection Procedures
- Operational solutions validated by the CAISO to address Local Capacity Area Resource requirements as part of the Local Capacity Technical Study
- Real-time operational data for CAISO short-term studies
- Regulatory initiatives, as appropriate, including state regulatory agency initiated programs
- Energy Resource Areas or similar resource areas identified as high priority by the CPUC or CEC; and

- Results and analyses from Economic Planning Studies or other assessments that may have identified potentially needed transmission upgrades or additions performed in past CAISO Transmission Planning Process cycles.

#### 4.1.1.1 CAISO Planning Standards Committee

##### CAISO Tariff Section 24.2.1

The CAISO maintains a Planning Standards Committee, which shall be open to participation by all Market Participants, electric utility regulatory agencies within California, and other interested parties, to review, provide advice on, and propose modifications to CAISO Planning Standards for consideration by CAISO management and the CAISO Governing Board. The CAISO Planning Standards are Reliability Criteria that:

- address specifics not covered in the NERC and WECC planning standards
- provide interpretations of the NERC and WECC planning standards specific to the CAISO Controlled Grid, and
- identify whether specific criteria should be adopted that are more stringent than the NERC and WECC planning standards.

The Planning Standards Committee shall meet, at a minimum, on an annual basis prior to publication of the draft Unified Planning Assumptions and Study Plan. To the extent necessary, the CAISO may notice additional meetings, web conferences, and teleconferences. Meetings of the Planning Standards Committee shall be noticed by Market Notice and such notice shall be posted to the CAISO Website. Teleconference capability will be made available for all meetings of the Planning Standards Committee.

The CAISO Vice President of Market Planning and Infrastructure Development or his or her designee shall serve as chair of the Planning Standards Committee. All materials addressed at or relating to such meetings, including agendas, presentations, background papers, and party comments, and minutes shall be posted to the CAISO Website. The chair of the Planning Standards Committee shall seek approval by the CAISO Governing Board of any modifications to the CAISO Planning Standards, as those CAISO Planning Standards exist as of December 21, 2007, and must include in the report to the CAISO Governing Board a summary of the positions of parties with respect to the proposed modifications to the CAISO Planning Standards and the ground(s) for rejecting modifications, if any, proposed by Market Participants or other interested parties.

#### 4.1.2 Process for Developing Unified Planning Assumptions and the Study Plan

##### CAISO Tariff Section 24.2.4.3

During the period from January through February of each year, the CAISO, in coordination with stakeholders TPP Participants, will review information received and validated during the Request Window or otherwise obtained by the CAISO, to develop a draft Unified Planning Assumptions and Study Plan for the annual TPP Transmission Planning Process cycle. This draft Unified Planning Assumptions and Study Plan is posted to the CAISO Website at least one week prior to the meeting and subsequently, after an opportunity for review by Stakeholders TPP Participants, presented at a stakeholder TPP Participant public meeting for comment by the end of early April. A Market Notice will announce the availability of the draft, solicit comments and establish a deadline for such comments, and schedule the stakeholder public meeting. Comments on the

draft ~~Unified Planning Assumptions and Study Plan~~ must be submitted to the CAISO electronically to [regionaltransmission@caiso.com](mailto:regionaltransmission@caiso.com). All ~~stakeholder TPP Participant~~ comments will be posted to the CAISO Website for Transmission Planning. If needed, Additional stakeholder public meetings, web conferences, or teleconferences may be scheduled as determined by the CAISO. Following all ~~stakeholder public~~ meetings and by the end of May of each year, the CAISO will publish to the CAISO Website, the final ~~Unified Planning Assumptions and Study Plan~~ which describes the Unified Planning Assumptions.

It should be noted that the annual Local Capacity Requirements Technical Study that sets targets for the forthcoming Resource Adequacy Compliance Year pursuant to Section 40.3 of the CAISO Tariff, will proceed separately from the development of the Unified Planning Assumptions and Study Plan. The final results of the Local Capacity Technical Study must be presented in May of each year. The timing of the Local Capacity Technical Study was developed in order to complete the study in sufficient time to allow Load Serving Entities sufficient time to procure necessary capacity prior to regulatory deadlines. This annual Local Capacity Technical Study will incorporate the outcome of the most recently completed Transmission Plan. Similarly, the Unified Planning Assumptions will incorporate operating procedures that affect the transmission system as identified in the Local Capacity Technical Study.

The Study Plan, however, will account for the Longer-Term Local Capacity Requirements Study that the CAISO performs to estimate Local Capacity Area Resource requirements three and five years out. The Local Capacity Technical Study Manual for the annual Local Capacity Technical Study is posted on the CAISO Website each year in October under Transmission Planning and Local Capacity Technical Study. CAISO also manages and performs technical studies on generation interconnection requests through the Large and Small Generator Interconnection Procedures (LGIP/SGIP). CAISO incorporates results from generation interconnection studies, including "Clustered" interconnection studies, in the annual Transmission Planning Process as input assumptions. As outlined in section 2.1.4, in addition to the information regarding new Generation projects, details of network upgrades and Net Qualifying Capacity resulting from generation Deliverability Assessments are key information to be included in the Transmission Planning Process.

### 4.1.3 Output

#### CAISO Tariff Section 24.2.4.2

The ~~Unified Planning Assumptions and Study Plan~~ describes the details of the subsequent ~~TPP Transmission Planning Process~~ cycle. At minimum, the Unified Planning Assumptions and Study Plan (see Section 4.1) will include:

- Objectives – Define the goal of each technical study performed and how those studies will be used in decision-making processes.
- Summary and roadmap of CAISO TPP Transmission Planning Process for the current cycle:
  - Preliminary schedule for ~~stakeholder TPP Participant~~ activities for the remaining ~~TPP Transmission Planning Process~~
  - Instructions for ~~stakeholders TPP Participants~~ to receive notifications or communication, and to provide comments to the CAISO

- Website locations where ~~TPP~~Transmission Planning Process information will be available and instructions regarding any steps necessary to gain access to such information.
- CAISO contact information for each study and the ~~TPP~~Transmission Planning Process.

➤ Planning data:

- Demand forecasts – values, source of the Demand forecasts, and methodology to derive Demand forecasts and any adjustments to original forecast as necessary to perform a particular technical study
- Generation assumptions – values, source of generation data, modeling of generation, description of generation dispatch methodology, and any adjustments to the foregoing as necessary to perform a particular technical study
- Generation retirement – values, source of generation retirement data, and list of generation retirement modeled in the studies
- Transmission Projects – Source of transmission project information and list of transmission projects modeled in the studies. These generally include the CAISO-approved transmission projects from the previous CAISO Transmission Plans.
- Import – values, source of import data, and methodology, and any adjustments to the foregoing as necessary to perform a particular technical study.

➤ Planning studies:

- List of all technical studies, including High Priority Economic Planning Studies, to be done for incorporation into the Transmission Plan or Transmission Planning Process generally, *i.e.*, technical studies that may not be completed by the publication date of the Transmission Plan
- For each study, explain:
  - Study assumptions (*e.g.*, study year, planning data applied to each technical study, any modifications to be made).
  - To the maximum extent possible, based on stakeholder-TPP Participant input, identified sensitivity analyses and project or solution alternatives to be included in each technical study, as appropriate
  - Methodology – describe how the study will be performed
  - Criteria – reliability or criteria applied to each study
  - Software – list software and tools for the study
  - Entity to perform the study or elements of the study.

➤ Comments received from ~~Stakeholders~~ TPP Participants, and CAISO responses thereto regarding the draft Unified Planning Assumptions and Study Plan.

An overview of the Unified Planning Assumption and Study Plan development is shown in Figure 3.

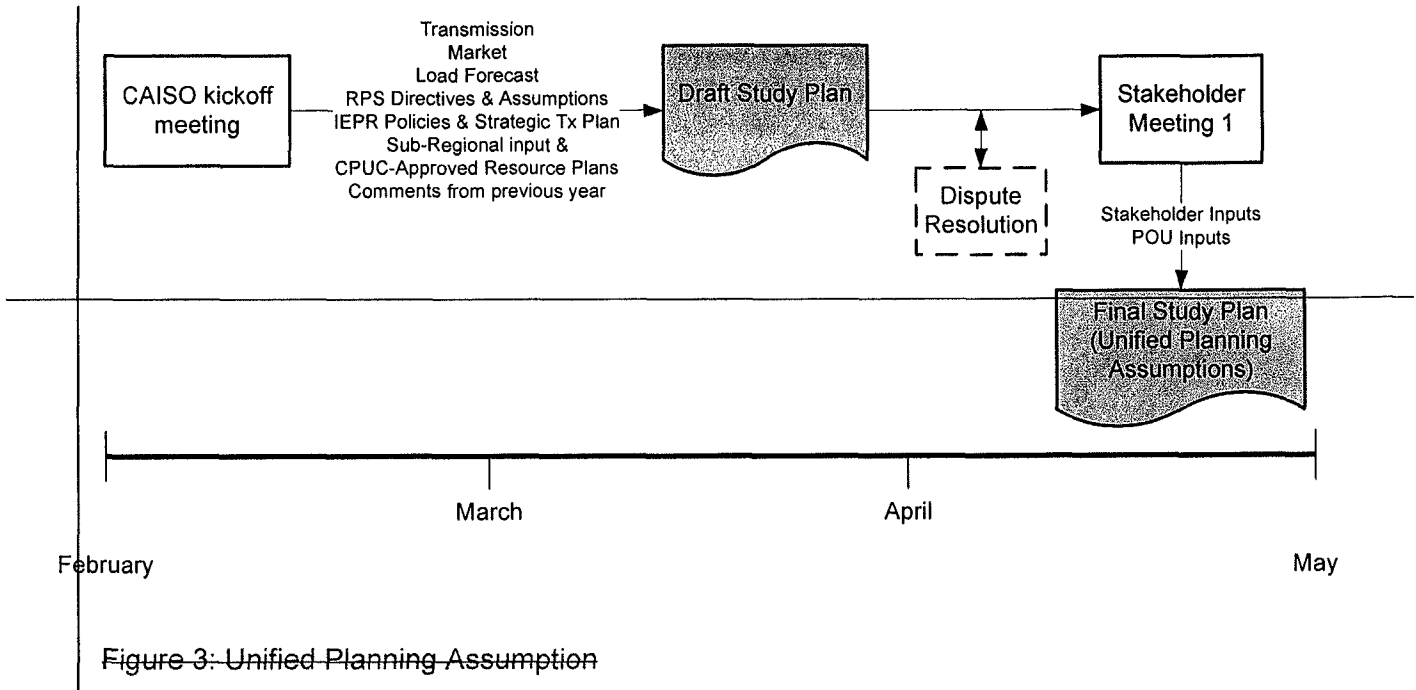
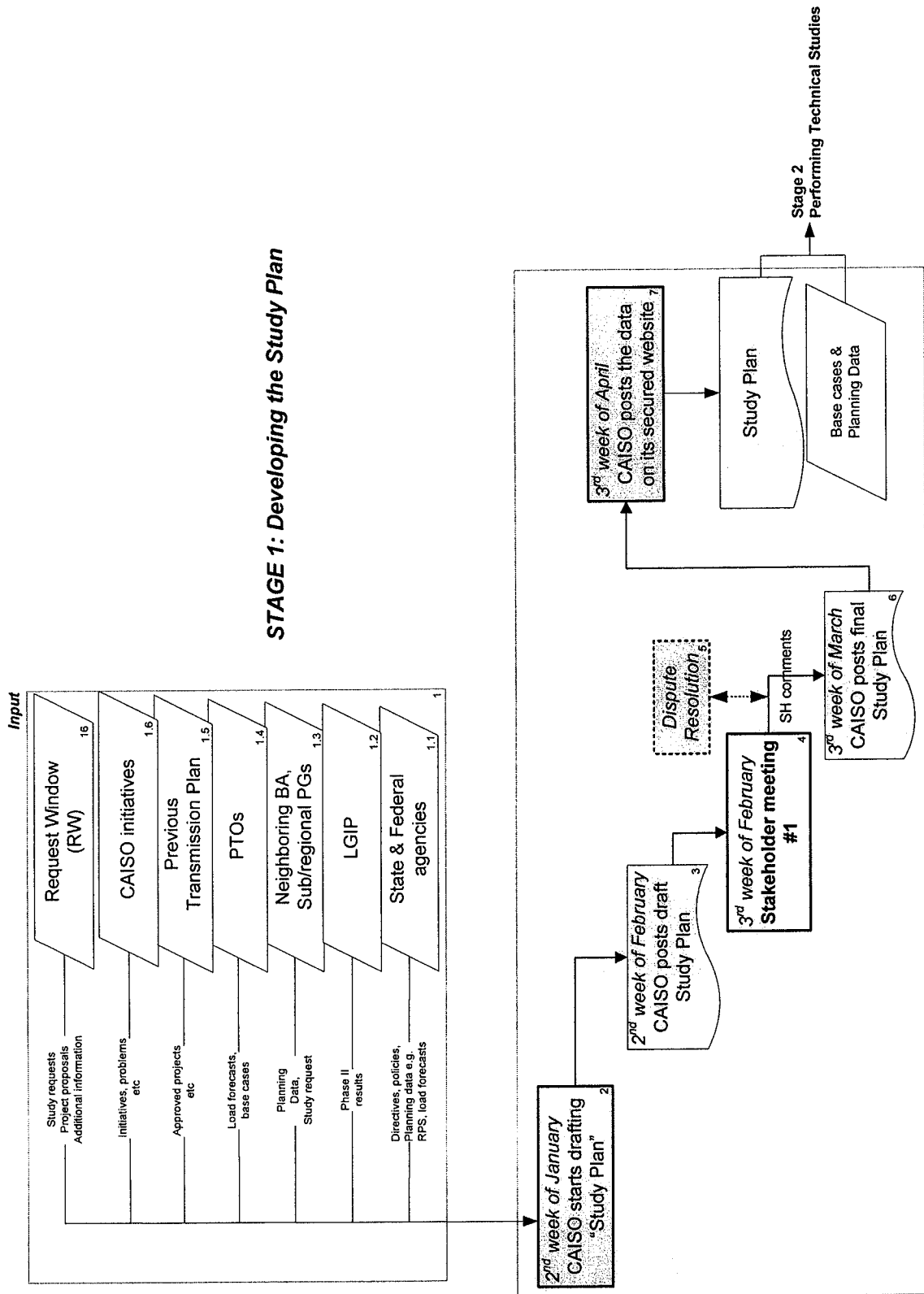


Figure 3: Unified Planning Assumption



**STAGE 1: Developing the Study Plan**

Figure 3: Developing the Study Plan

## 4.2 Performance of Technical Studies and Other Necessary Review Procedures

As indicated by the outline of the Study Plan, each ~~TPP~~Transmission Planning Process cycle will conduct a number of technical studies to meet stakeholder ~~TPP~~Participant objectives. The technical studies provide the bases for identifying potential physical and economic limitations of the CAISO Controlled Grid and potential upgrades to maintain or enhance system reliability, promote economic efficiency, maintain the feasibility of Long Term CRRs for the length of their terms, while also seeking to promote other policy objectives. These assessments involve, but are not limited to, the following technical studies:

- Power Flow Simulation – The study focusing on equipment thermal loadings and voltage magnitudes in the system at a specific study scenario
- Stability Analysis – Assessments of system responses during the transient period after disturbances or small signal stability of the system under various scenarios
- Voltage Stability – Analysis of reactive power sufficiency to ensure reliable system conditions under different system conditions and disturbances. Power flow and stability are primary technical studies in reliability assessment
- Short-Circuit – The study to be performed as part of interconnection process which focuses on the system's capability to withstand major short-circuits
- Economic Planning Studies (production cost simulation) – Assessments of future market conditions based on the historical input and future plan. The study concentrates on identifying potential congestions and mitigation plans that could relieve or eliminate the congestions
- Long Term Congestion Revenue Rights Feasibility Study (LTCRRs) – A Simultaneous Feasibility Test (SFT) will be performed to ensure that allocated Long Term CRRs will still be feasible according to their allocation.
- Long-Term Projected Local Capacity Requirement (LCR) Study – The study, which relies primarily on power flow analysis, determines capacity requirements in Local Capacity Areas over a projected 3-5 year planning horizon. The Local Capacity Technical Study, not the Long-Term LCR Study, establishes effective Local Capacity Area Resource requirements for the next Resource Adequacy Compliance Year.
- Short-Term Plan Study – The study analyzes recent system conditions and proposes upgrades or other recommendations based on the experience of CAISO system operators. This is similar to the Operating Guide which is the informational guideline for CAISO grid operations regarding possible impacts of new ~~T~~transmission ~~P~~projects and the need to revise existing—or develop new—operating procedures.
- Generation Interconnection – The results of the Phase II LGIP studies will be coordinated with this TPP as described above in Section 2.1.4.
- Other studies – ~~f~~From time to time, specific technical studies may be included in the Transmission Plan. These studies address special issues in addition to the scope of the other annual studies, such as long-term plans for particular areas or renewable resource integration studies

~~For the studies related to economic studies, it is imperative to describe two distinctive terms~~



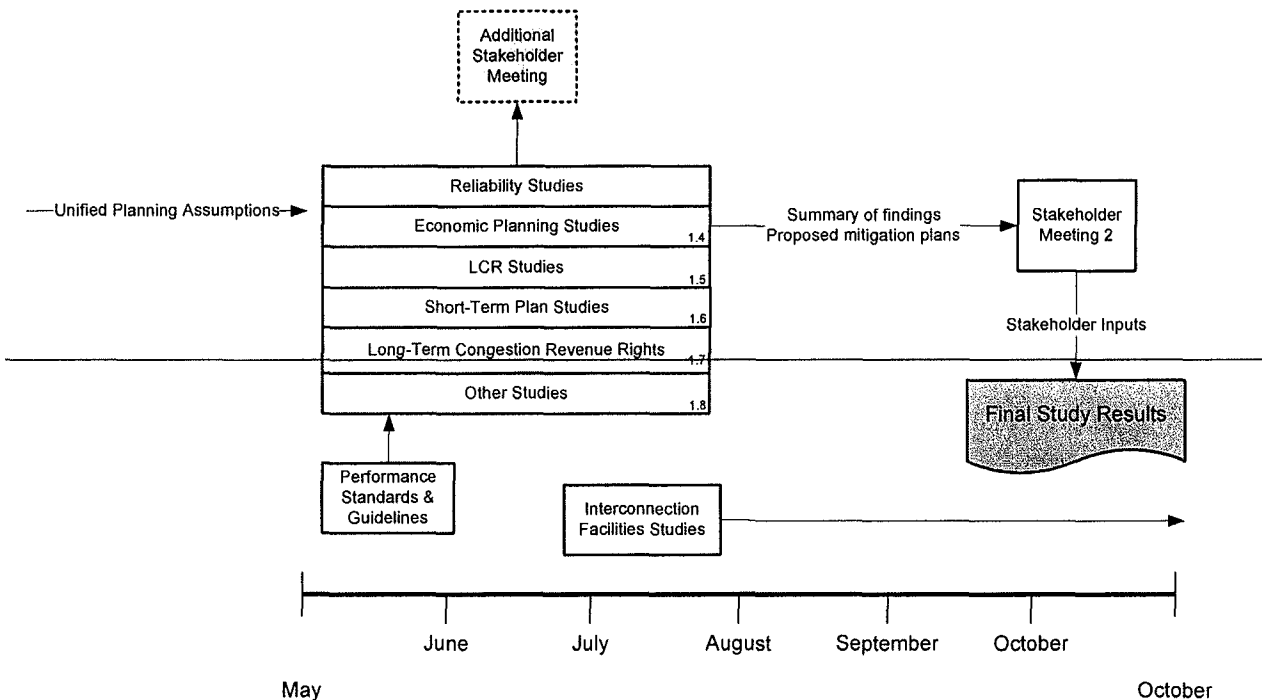
commonly used terms in this BPM. Economic Study Requests (study requests) represent submission of bottlenecks i.e. congestions that stakeholders submit to CAISO to perform economic study to identify feasible mitigation plans as part of the annual Economic Planning Study. The results from this study do not constitute submission of a transmission project for CAISO approval. However, Economic Projects represent the proposals of transmission projects or upgrades seeking approval from CAISO based on their economic benefits. In this case, the detailed scopes and other information of the project have been fully developed. Although both the Economic Study Requests and Economic Projects are required to be submitted to CAISO during the Request Window, they are uniquely different and will go to different processes in CAISO Transmission Plan.

The technical studies are required, to the maximum extent practicable, to utilize the Unified Planning Assumptions and any deviations must be documented in the preliminary results of the technical study. Results from the technical studies will be measured against the following planning standards to quantify system performance. The following reliability criteria violations will be used as fundamental to justify transmission upgrades:

- NERC Planning Standards
- WECC Planning Standards
- CAISO Planning Standards

For the evaluation of projects proposed to promote economic efficiency, the CAISO relies on criteria defined in Transmission Economic Assessment Methodology (TEAM) and other practices adopted by the industry to justify economic benefits of the proposals. Principles underlying TEAM may be found on the CAISO Website at <http://www.caiso.com/docs/2004/06103/2004060313241622985.pdf> and <http://www.caiso.com/184b/184bd6cc2d70.html>.

This second stage of the planning process is summarized in Figure 4.



-Figure 4: Performing Planning Studies

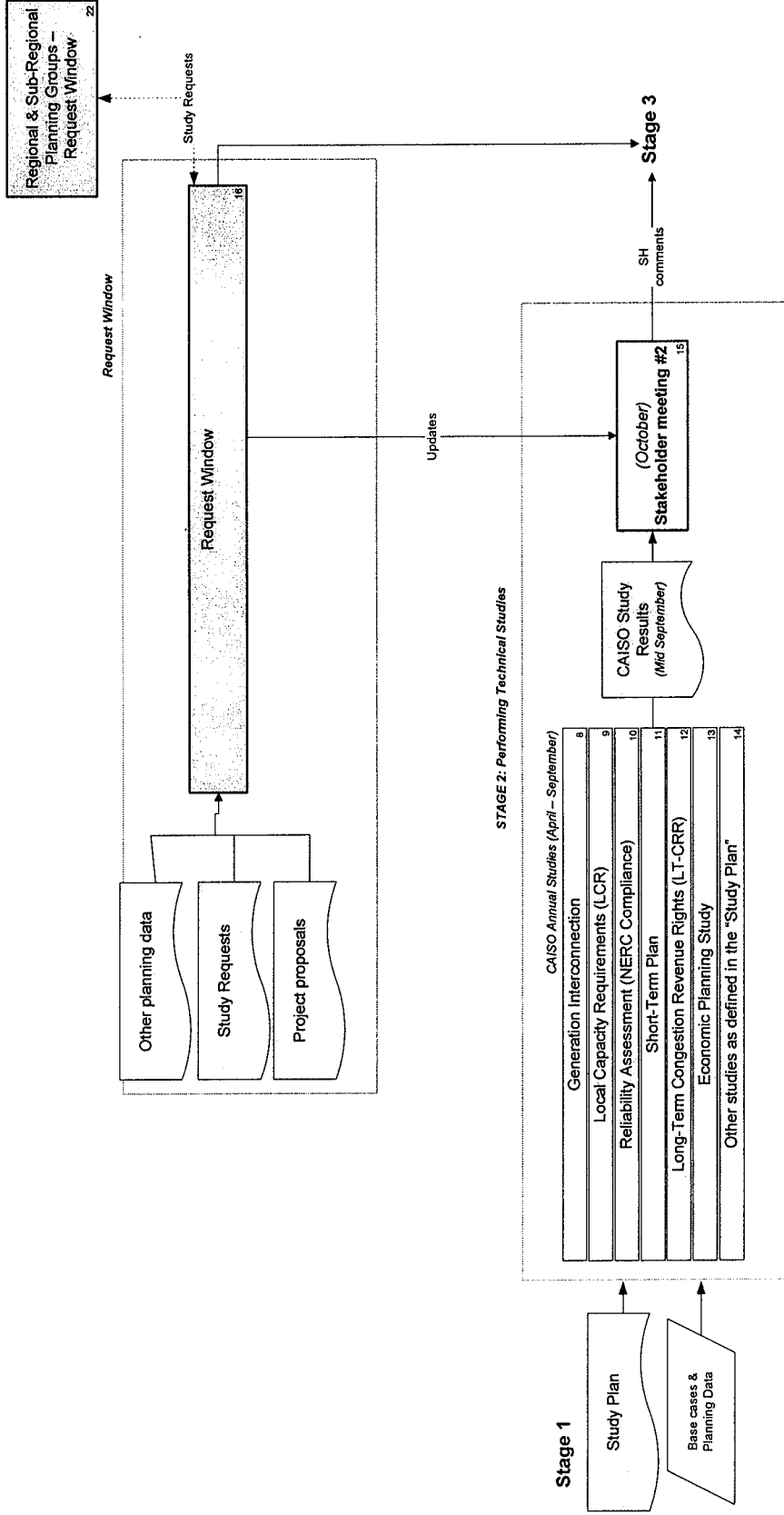


Figure 4: Performing Planning Studies

Based on resource considerations, technical expertise, and the roles of Participating TOs with PTO Service Territories as NERC Transmission Planners, the CAISO may assign technical studies or portions of technical studies to Project Sponsors or the Participating TOs to perform. Similarly, the CAISO may seek the voluntary commitment of other market participants to perform technical studies or portions thereof.

Once the responsible entities have completed the technical studies, the preliminary results will be presented to stakeholders ~~TPP Participants~~ during one or more additional stakeholder ~~TPP Participant~~ meetings to be held in the fall of each year.

#### 4.2.1 Determining Reliability Projects

##### CAISO Tariff Section 24.1.2

Reliability projects will be identified and justified using the following study tools identified in Section 4.2:

- Power Flow
- Transient Stability
- Voltage Stability

As required by applicable planning standards, technical studies must be performed on both the short-term (up to five years) and long-term ( $\approx$  ten years or more) under various stress conditions (e.g., summer peak), while considering the impact from losing critical system elements.

Thresholds for demonstrating compliance with these standards are included in the NERC reliability standards e.g. the summary in Table 1 of the Standard TPL-001-0 — System Performance Under Normal Conditions document, located at [ftp://www.nerc.com/pub/sys/all\\_updl/standards/rs/TPL\\_001-0.pdf](ftp://www.nerc.com/pub/sys/all_updl/standards/rs/TPL_001-0.pdf).  
<http://www.nerc.com/page.php?cid=2|20>.

As indicated in the Study Plan, reliability assessments may be performed by Participating TOs with a PTO Service Territory as a component of their role as a NERC designated Transmission Planner. While these assessments may be performed by the Participating TOs, the assessments must utilize the Unified Planning Assumptions, except as otherwise justified and documented. Accordingly, as part of the plan to maintain reliability and serve Load within the CAISO Balancing Area Authority, the CAISO anticipates receiving each year power flow and stability study results from Participating TOs with PTO Service Territories, along with the comparison between these results and the reliability standards. If criteria violations have been identified, mitigation plans to address the violations will be proposed by the Participating TOs as part of the October 15 submission by the PTOs, described in previous sections of this BPM for the CAISO's review and approval. Participating TOs must propose alternatives to address each criteria violation to assess the efficiency and effectiveness of the competing alternatives. Each alternative should set forth a sufficient description of the upgrades, costs, schedules, impacts on the grid, and other information related to the alternative.

The CAISO relies on the following guidelines for approving proposals as the appropriate solution:

- Need – The analysis shows violations of reliability criteria that require mitigation to be in place to ensure compliance of reliability standards.

- **Sufficient Data** – Sufficient information on each of the mitigation proposals to be evaluated compared with other alternatives. For example, project scope, descriptions, cost estimate of the proposals and alternatives, benefits (e.g. reliability criteria violations will be mitigated by the proposals), and scheduled in-service date are necessary information that must be provided to CAISO.
- **Technically Sound** – The suggested alternatives demonstrate an ability to eliminate the violation(s) based on a technically sound approach. This requires the Participating-TO to demonstrate that the proposed alternative utilizes technology that has been accepted by the industry. In cases where a new technology has been proposed as a preferred alternative, sufficient proof demonstrating that the alternative will work reliably, efficiently, and comply with all applicable standards will be required as part of the approval process.
- **Cost-Effective** – The preferred alternative must be an economically efficient approach to resolve criteria violations. Generally, this requires a least-cost solution. However, in some circumstances, least-cost solutions may not be selected or recommended if the CAISO finds that another approach appears to be more prudent. For example, if the analysis identifies that several criteria violations in the same vicinity can be anticipated in the future, the CAISO may recommend a construction of capital projects to eliminate all violations at the same time rather than incrementally addressing each violation in a potentially piece-meal fashion. This approach tries to avoid expenditures on redundant upgrades which may result in higher costs to the ratepayers.

CAISO management may approve proposals with an estimated capital cost of \$50 million or less, while the CAISO Governing Board must approve proposals with an estimated capital cost of greater than \$50 million, including Large Projects studied through a separate TPP Participant process. Moreover, for those proposals that must receive CAISO Governing Board approval, factors in addition to the reliability benefits may be considered as part of the recommendation and approval process, including, but not limited to:

- eEconomic advantages from mitigating congestion
- rReducing Local Capacity Area Resource requirements
- oOperational flexibility
- eEnvironmental benefits

## 4.2.2 Determining Economically Efficient Projects

### 4.2.2.1 Economic Planning Studies

CAISO Tariff Section 24.9

The CAISO Economic Planning Studies focus on identifying expected Congestion and other transmission element constraints and exploring potential mitigation plans for such bottlenecks on the grid. This will be accomplished by simulating future system conditions along with the observation of the Congestion that occurred in the past operating years, Local Capacity Area resource requirements, and other expected grid conditions consistent with the Unified Planning Assumptions, including use of the WECC base case for economic studies. The CAISO may also consider other data submitted through the Request Window, such as the long-term power supply plans for Long-Term CRR purposes. The studies utilize production simulation cost software using Security-Constrained Unit Commitment (SCUC) and Security-Constrained Economic Dispatch

(SCED) to determine market conditions. The framework to quantify potential benefits will be consistent with CAISO's TEAM approach.

The mitigation plans recommended from the studies which include the High Priority Economic Planning Studies will consider: 1) expansion or acceleration of previously approved transmission projects; and 2) new proposed upgrades or conceptual projects that can relieve the constraint. In order to efficiently manage the requests, CAISO will try to maximize the use of a batch or cluster approach to perform the High Priority Economic Planning Studies. In this case, one High Priority study may represent one batch or cluster of study.

The CAISO intends to coordinate High Priority Economic Planning Study efforts with sub-regional planning groups and TEPPC at the regional planning level. This collaboration emphasizes assigning Congestion-related studies to the proper forum. For example, Congestion observed in the CAISO Balancing Authority Area may impact multiple entities and should be addressed on a sub-regional or regional basis.

In each annual TPPTransmission Planning Process cycle, the CAISO will conduct a maximum of five High Priority Economic Planning Studies as requested by stakeholders-TPP Participants during the Request Window period. However, the CAISO may elect to perform additional High Priority Economic Planning Studies should Congestion or other system conditions warrant such studies. Stakeholders-TPP Participants will have the opportunity to comment on selected High Priority Economic Planning Studies during the development of the Unified Planning Assumptions and Study Plan which will be presented to the stakeholder-TPP Participant during the first public meeting. The CAISO's performance of Economic Planning Studies also coordinates with sub-regional and regional planning processes as described below.

In general, the Economic Planning Study process involves three major steps:

- Step 1: Publication of the Congestion Data Summary that provides information on Congestion on the CAISO Controlled Grid<sup>14</sup> and specifically identifies Significant and Recurring Congestion. This step occurs by mid-September during October of each year and is intended to provide information to stakeholders-TPP Participants to assist with Economic Planning Study requests during the Request Window. Due to the possibilities that results from grid operations during the past 12 months period may reflect incur a large number of congestion locations, CAISO intends to use the criteria in this step to filter out and provides a shorter list of major congestions that may beneficial to stakeholders TPP Participants. Significant and Recurring congestion is identified for the following scenarios:
  - Congestion during the past 12 months ending September 15.
  - Congestion during a 10-year planning horizon simulation. CAISO-approved reliability transmission projects and future system conditions will be modeled in these studies to ensure the impact from reliability projects iswill be reflected in any resulting Economic Planning Study.

Significant and Recurring Congestion is determined by the cost and duration of the Congestion as follows:

- Congestion that costs more than 5 million dollars,

<sup>14</sup> The compilation and publication of congestion data will begin upon implementation of the new market design (Market Redesign and Technology Upgrade – MRTU) to enable the performance of Economic Planning studies using production cost simulation software based on the CAISO TEAM methodology.

- Congestion that occurs more than 8 percent of the time<sup>15</sup>

- Step 2: Select High Priority Economic Planning Studies. The criteria used to make this determination are similar to the criteria set forth in Sections 4.2.2.12.1.2.1 and 3.4.2 of this BPM. In this context, the cost of the congestion is the primary selective criterion while the duration of the congestion shall be used as a tiebreaker. The CAISO's selection of the five High Priority Economic Planning Studies will be discussed during the first CAISO stakeholder-TPP Participant meeting to address the Unified Planning Assumptions and Study Plan.

In addition to studies addressing congestion, Economic Planning Study requests seeking to integrate new generation resources or loads on an aggregated regional basis also can be selected as High Priority Studies. Under such circumstances, the study requesters must provide sufficient information about the new generation resources or load as part of the Request Window submission.

- Step 2a:- The CAISO will use the following guidelines to cluster or batch multiple study requests it receives from the Request Window:
  - Several study requests can be assigned to the same cluster if they address the same congestion
  - If several study requests address different congestion but the congestion is related to each other, the study can be assigned to the same cluster
  - Several study requests for integrating new generation resources or loads that impact the same facility(ies) can be assigned to the same cluster

During the process of selecting the High Priority Studies, a cluster of study requests shall be treated as equivalent to one study request. Therefore, more than five study requests may be selected as High Priority Studies if a cluster is chosen during this process.

- ☐➤ Step 2ba – All Economic Planning Study requests are communicated to TEPPC by January 31<sup>st</sup> as part of that organization's request window. The CAISO will earmark those that it has identified as High Priority Economic Planning Studies that will be conducted by the CAISO. Other Economic Planning Study requests with a regional or sub-regional scope will be considered by TEPPC as part of its congestion study process.

- ☐➤ Step 2cb – The CAISO will fully participate in the TEPPC congestion study process and may alter the scope of any selected High Priority Economic Planning Study to effectuate any identified efficiencies resulting from "clustering" or combining study requests received by TEPPC. However, consistent with TEPPC principles, the CAISO anticipates taking responsibility for performing, completing and communicating the results of all High Priority Economic Planning Studies whether or not modified.

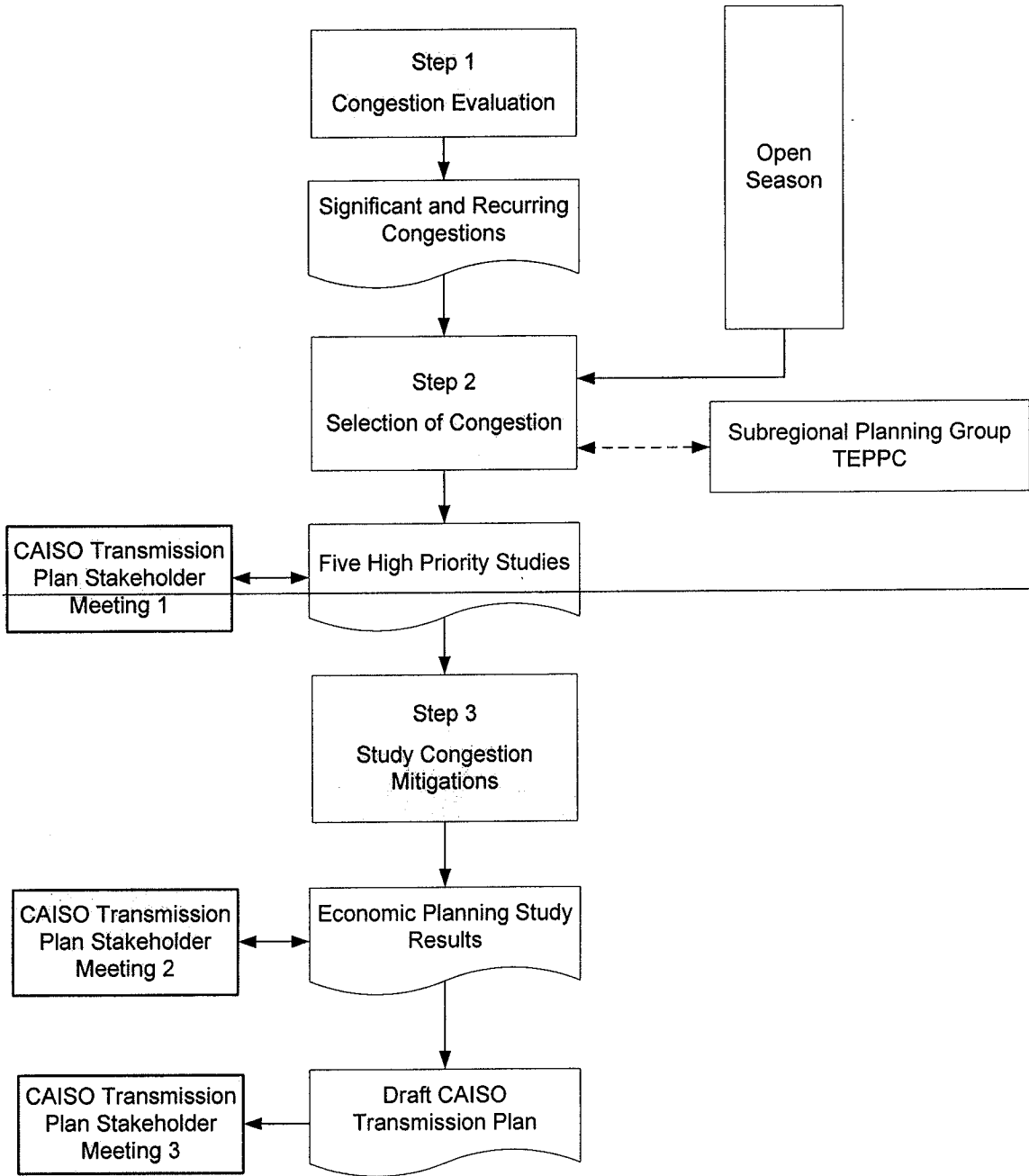
- ☐➤ Step 2de – To the extent non-High Priority Economic Planning Studies are not determined by TEPPC to be high priority for regional or sub-regional study, the CAISO will so notify the submitting entity and such submitting entity may still elect to perform the proposed Economic Planning Study at its own cost. The CAISO will coordinate with any

<sup>15</sup> However, due to the transition to a new market environment based on Locational Marginal Prices under the Market Redesign and Technology Upgrade (MRTU), if future congestion under MRTU appears to be significantly different from the past and other means to quantify Significant and Recurring congestion appear to be more appropriate, the CAISO may propose different criteria to address this issue.

third party performing its own study to ensure that the study is consistent with the data, assumptions, and methodology employed by the CAISO.

- **Step 3: Evaluate Congestion Mitigation Alternatives:** In this step, the CAISO identifies or evaluates potential plans to mitigate the Congestion studied in each High Priority Economic Planning Study. Each study analyzes up to 2 mitigation plans ~~for on the future~~ year scenarios. Study results will be presented to ~~stakeholders- TPP Participants~~ during the second ~~stakeholder~~ public meetings to address technical study preliminary results and during the third meeting to address the draft Transmission Plan. The results from studies conducted by third parties may be submitted to the CAISO for review and potential inclusion in the final Transmission Plan.

The overview of the Economic Planning Study process is shown in Figure 5.





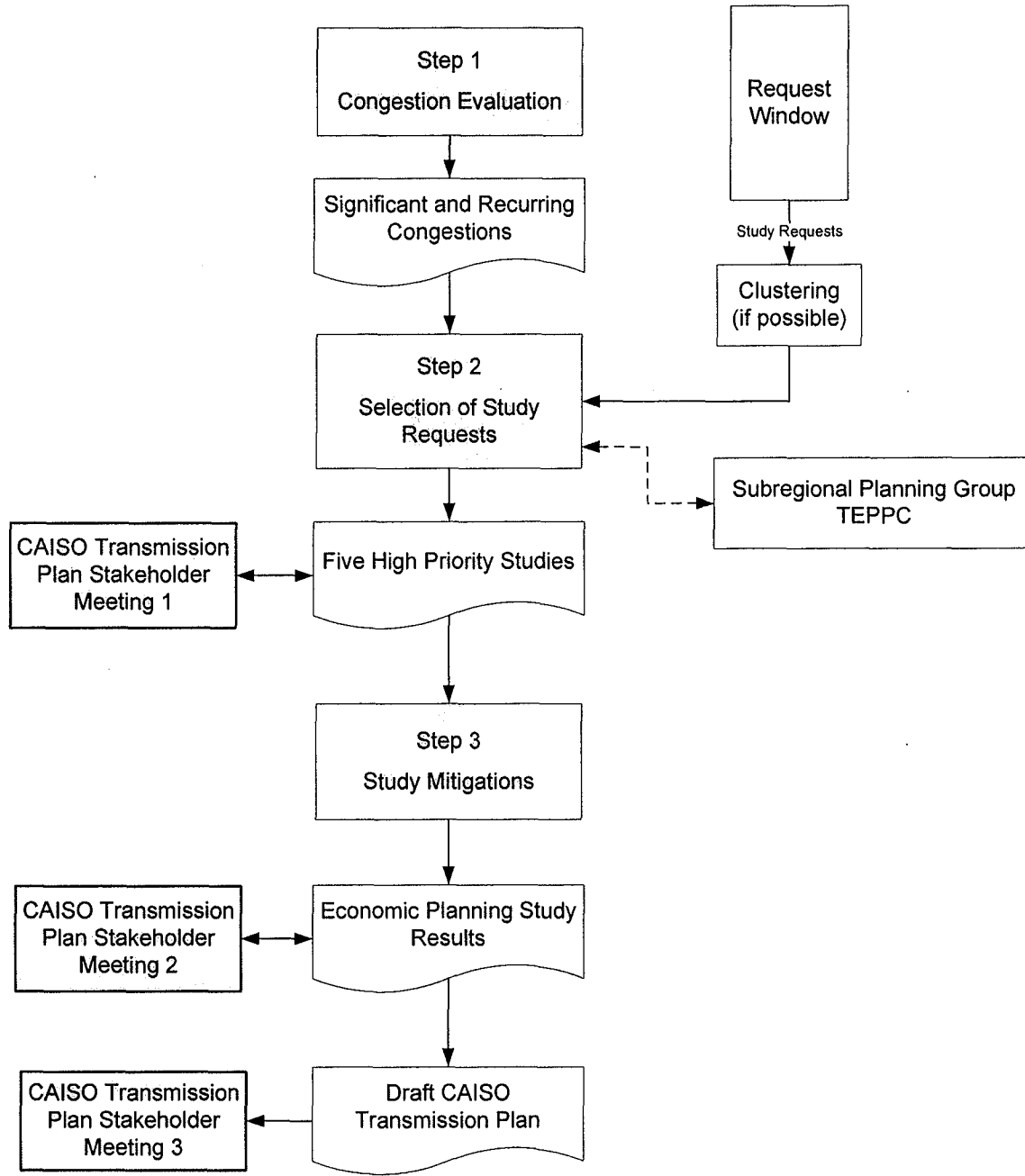


Figure 5: Overview of Economic Planning Study

#### 4.2.2.2 Methodology

The CAISO Economic Planning Studies focus on identifying expected Congestion and other transmission element constraints and exploring potential mitigation plans for such bottlenecks on the grid. This will be accomplished by considering Congestion observed in the past operating years, Local Capacity Area resource requirements, and other expected grid conditions consistent with the Unified Planning Assumptions, including use of the WECC base case for economic studies. The CAISO may also consider other data submitted through Request Window, such as the long-term power supply plans for Long-Term CRR purposes. The studies utilize production simulation cost software using Security-Constrained Unit Commitment (SCUC) and Security-Constrained Economic Dispatch (SCED) to determine market conditions. The framework to quantify potential benefits will be consistent with CAISO's TEAM approach.

The mitigation plans recommended from the High Priority Economic Planning Study will consider: 1) expansion or acceleration of previously approved transmission projects and 2) new proposed upgrades or conceptual projects that can relieve the constraint. In order to efficiently manage the requests, CAISO will try to maximize the use of a batch or cluster approach to perform the High Priority Economic Planning Studies. In this case, one High Priority study may represent one batch or cluster of study.

The CAISO intends to coordinate High Priority Economic Planning Study efforts with sub-regional planning groups and TEPPC at the regional planning level. This collaboration emphasizes assigning Congestion-related studies to the proper forum. For example, Congestion observed in the CAISO Balancing Authority Area may impact multiple entities and should be addressed on a sub-regional or regional basis.

It is imperative to note that the purpose of High Priority Economic Planning Studies is not to provide formal CAISO approval of Economic Transmission Project proposals. Selected High Priority Economic Planning Studies do not constitute submission of a transmission project for CAISO approval. Rather, these studies provide information on future system conditions and the feasibility of eliminating Congestion by specific alternatives. This information guides CAISO and other Market Participants development of specific economic projects for submission in a future Transmission Planning Process cycle.

#### 4.2.2.3 4.2.2.2 Technical Assessment for Specifically Proposed Economic Projects

##### CAISO Tariff Section 24.1.1

At the end of Request Window, when all valid project proposals have been collected, the following technical assessments will be conducted for each proposed economic project in the Study Plan as part of project evaluation:

- Power Flow – Determine thermal loadings on facilities and bus voltages due to the implementation of the project. Study results will be compared with applicable reliability standards to ensure system performance will meet reliability criteria
- Stability Analysis– Capability of the system to meet applicable reliability standards during various conditions, such as after disturbances
- Short-Circuit Study – Capability of the system to withstand faults
- Economic Study – Determine potential impact on system operating conditions and cost-benefits of the project (for TAC projects)

- Simultaneous Feasibility Test (SFT) – Determine amounts and source-sink combinations of incremental CRRs due to the project (for Non-TAC projects)

#### 4.2.3 ~~Determining LCRIF~~ ~~Location-Constrained Resource Interconnection~~

CAISO Tariff Section 24.1.3

The requirements for approval or conditional approval of a LCRIF are set forth in detail in 24.1.3 of the CAISO Tariff and in Section 3.3.4 above.

#### 4.2.4 ~~Determining Projects to Maintain Long-Term Congestion Revenue Rights~~

CAISO Tariff Section 24.1.4

The CAISO expects that released Long Term CRRs (LT-CRRs) will remain feasible during their full term. This expectation is based on the fact that the transfer capacity of existing grid facilities will be reduced to 60 percent of the normal ratings for the release of LT-CRRs, as well as the expectation that most proposed transmission upgrades will reduce Congestion; that is, the flows on binding constraints will be reduced or the flow capability through constrained facilities will be increased. However, for those infrequent changes to the transmission system that could result in substantial adverse impacts on binding constraints and cause infeasibility in certain LT-CRRs, the CAISO plans to perform an annual Simultaneous Feasibility Test (SFT) analysis to identify this outcome. In such instances, the Transmission Planning Process identifies potential ways to mitigate the adverse impacts, to be considered in conjunction with the overall Transmission Plan.

This new technical study, consisting of Simultaneous Feasibility Tests, will be integrated in the CAISO TPPTransmission Planning Process and will be performed in the context of (a) planned or proposed transmission projects; (b) Generating Unit or transmission retirements; (c) Generating Unit interconnections; and (d) the interconnection of new Load. -In assessing the need for transmission additions or upgrades to maintain the feasibility of allocated Long Term CRRs, the CAISO, in coordination with the Participating-TOs and other Market Participants, shall consider lower cost alternatives to the construction of transmission additions or upgrades, such as acceleration or expansion of existing projects, Demand-side management, Remedial Action Schemes, constrained-on Generation, interruptible Loads, reactive support, or in cases where the infeasible Long Term CRRs involve a small magnitude of megawatts, ensuring against the risk of any potential revenue shortfall using the CRR Balancing Account and uplift mechanism in Section 11.2.4 of the CAISO Tariff.

#### 4.2.5 ~~Merchant Transmission Process~~

CAISO Tariff Sections 24.1.1 and 36.11

Currently, any Market Participant, group of Market Participants or Participating-TO may act as a Project Sponsor to identify a possible transmission upgrade and seek its incorporation into the CAISO Transmission Planning Process for ultimate approval and construction. A Project Sponsor may elect to pursue the transmission upgrade or addition as a Merchant Transmission Facility. A Merchant Transmission Facility is a transmission upgrade or addition that is part of the CAISO Controlled Grid where the Project Sponsor does not seek a regulated rate of recovery, but rather funds the project itself and recovers its costs through an allocation of incremental Merchant

Transmission CRRs. A Merchant Transmission Facility will be deemed “needed” by the CAISO upon satisfaction of three elements:

- Mitigation of operational concerns identified under CAISO Tariff Section 24.5
- Mitigation of any impact from the proposed project that impairs the continuing feasibility of allocated Long Term CRRs over the length of their terms
- Proof that the Project Sponsor is financially able to pay the construction and operating costs of the Merchant Transmission Facility by requiring (1) a demonstration of creditworthiness (e.g. an appropriate credit rating), or (2) sufficient security in the form of an unconditional and irrevocable letter of credit or other similar security sufficient to meet its responsibilities and obligations for the full costs of the transmission addition or upgrade.

Accordingly, the CAISO and affected Participating TOs will perform technical studies to determine whether and how the project can be safely and reliably integrated with the CAISO Controlled Grid. Further, detailed Facilities Studies are performed by the Participating TOs with PTO Service Territories who own the existing transmission facilities to which the new project would interconnect, and these studies are performed at the expense of the Project Sponsor pursuant to provisions of the Transmission Owner Tariff of the applicable Participating TO.

#### 4.2.6 Long-Term Local Capacity Requirements Study

CAISO Tariff Sections 24.2, 24.2.4, and 24.1.1

In each planning cycle, the CAISO conducts technical studies to evaluate Local Capacity Area Resource needs under the following scenarios:

- Local Capacity Technical Study – Determines the Local Capacity Area Resource needs for the next Resource Adequacy Compliance Year.
- Long-Term Local Capacity Requirements (LCR) Study – Evaluates Local Capacity Area Resource needs on a 3 and 5 year planning horizon.

The Local Capacity Technical Study is used to implement that assignment of Local Capacity Area Resource responsibility under Section 40.3 of the CAISO Tariff. The Long-Term LCR Study provides Market Participants with information to utilize in the Transmission Planning Process or in their individual procurement activities. Both studies assess the minimum level of capacity needed to ensure reliable CAISO Controlled Grid operation under peak Demand conditions consistent with NERC and WECC standards and CAISO Planning Standards. The studies also evaluate the existing local areas and potentially identify the changes in local areas or sub-areas definitions due to the impacts from system topology changes. Both studies utilize a similar methodology, but evaluate different time horizons. Detailed study assumptions, methodology, tools, and other information necessary for the studies are found in the Local Capacity Technical Study Manual posted to the CAISO Website at Transmission Planning.

#### 4.2.7 Preservation of Generation Deliverability

CAISO Tariff, Appendix U, Section 3.3

The CAISO uses the deliverability analysis embodied in its Interconnection procedures to ensure that new Generation does not degrade the deliverability of existing resources. This mechanism generally maintains the stability of Net Qualifying Capacity (NQC) ratings for a given existing resource. Generally, economically and reliability driven transmission upgrades will enhance

generation deliverability. However, a transmission project could potentially degrade the deliverability of one or more generation projects. During the development and review of transmission project proposals, the potential for adverse impacts on generation deliverability will be assessed by the CAISO and the estimated cost impacts associated with the reduction in NQC will be considered in the analysis of project alternatives.

### **4.3 Project Approval Process and Development of CAISO Transmission Plan**

CAISO Sections 24.2.5.2 and 24.2.5.3

Stage 3 of the Transmission Planning Process involves the approval of the projects being proposed for CAISO through the Request Window, the development of the CAISO Transmission Plan and its presentation of the Transmission Plan to the CAISO Governing Board. The timeframe for this activity is November-December through January-February.

#### **4.3.1 Timeframes for Project Approvals**

Depending on the costs and voltage levels of the proposed projects, project approval will be granted through one of the following mechanisms:

- A project with capital costs that are less than \$50 Million may be approved by CAISO management during TPP Stage 3. Such projects will be presented for approval to the CAISO Executive Leadership Team (ELT) at the first meeting scheduled after the stakeholders have had an opportunity to review and comment on the draft Transmission Plan and prior to the presentation of the Transmission Plan to the CAISO Governing Board According to the TPP timeframe set forth at Section \*\*\* above, this will be the February ELT meeting.
- A project with capital costs greater than \$50 Million that has been identified during TPP Stage 2 but has not been designated as a Large Project may be presented to the CAISO Board of Governors for approval. Once the CAISO management has received sufficient information to certify that the project is justifiable and ready to be submitted to the board, the tentative schedule of the CAISO Board of Governor's meetings that each project will be presented to the board will be documented in the Transmission Plan.
- A project that qualifies as a Large Project (transmission upgrade or addition, or substation and related facilities, of 200 kV and above with capital costs greater than \$200 Million) will require comprehensive studies and may be evaluated through a separate public process that would qualify the CAISO economic evaluations for a rebuttable presumption of reasonableness if submitted to the CPUC as evidence of electrical need for the project during the CPCN approval process. The evaluation process for Large Projects may span more than one planning cycle. Large Projects will be submitted to the CAISO Board of Governors for approval in accordance with the public process established for that project.

#### **4.3.2 Development and Content of the Transmission Plan**

Within this stage, the CAISO will develop a draft CAISO Transmission Plan report based on the final study results from Stage 2 and CAISO management approval of projects with capital costs of

less than \$50 million. The draft Transmission Plan report will be presented to Stakeholders-TPP Participants for review and comment during the 3<sup>rd</sup> CAISO Transmission Plan stakeholder public meeting. The CAISO will independently provide the draft Transmission Plan to representatives from neighboring transmission providers or interconnected Balancing Authority Areas and sub-regional and regional planning groups for input and to facilitate transmission expansion coordination. After collecting stakeholder-TPP Participant comments on the draft Transmission Plan, which will be posted to the CAISO Website, the Transmission Plan will be finalized and scheduled for presentation to the CAISO Governing Board. Upon presentation of the Transmission Plan to the CAISO Governing Board, the CAISO will post the Final CAISO Transmission Plan on the CAISO Regional Transmission Website page under Transmission Planning and deliver the CAISO Transmission Plan to sub-regional and regional planning groups.

The draft and final Transmission Plan may include, but is not limited to:

- The results of technical studies performed under the Study Plan;
- Determinations, recommendations, and justifications for the need for identified transmission upgrades and additions;
- Assessments of conceptual transmission upgrades and additions for which need has not been formally determined by the CAISO Governing Board or management, but which have been identified by the CAISO as potential solutions to transmission needs studied during the Transmission Planning Process cycle;
- Results of Economic Planning Studies and other studies conducted by CAISO during the Transmission Planning Process cycle; and
- Updates on the status of transmission upgrades or additions previously approved by the CAISO, including identification of mitigation plans, if necessary, to address any potential delay in the anticipated completion of an approved transmission upgrade or addition;
- Updates on other key issues related to transmission planning activities i.e., new and ongoing initiatives; and
- The Board approval schedule for transmission upgrades and additions with capital costs of over \$50 million that have been recommended for approval by the CAISO.

Figure 6 shows an overview of Stage 3 for the CAISO Transmission Plan.

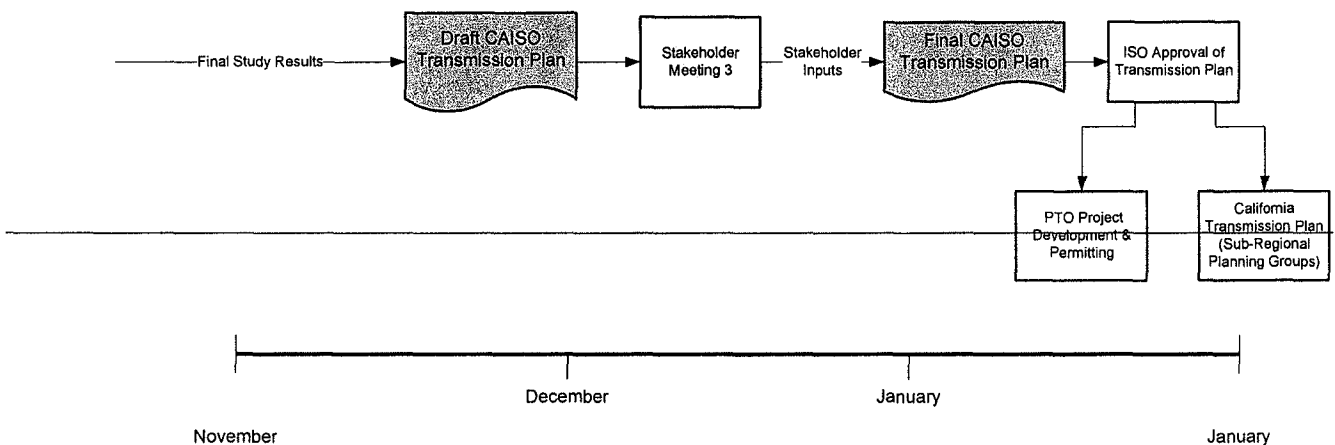


Figure 6: Development of CAISO Transmission Plan

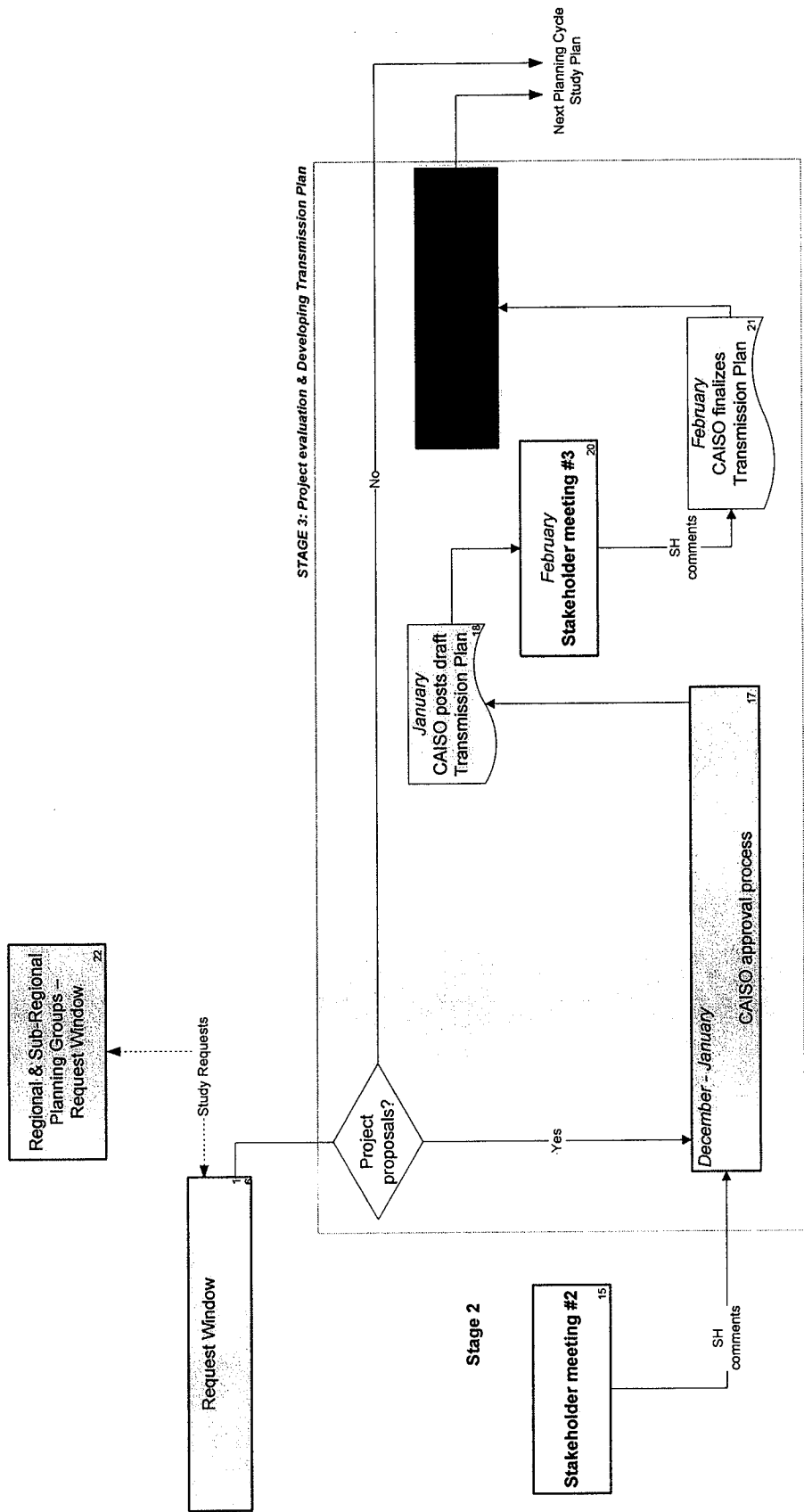


Figure 6: Development of CAISO Transmission Plan

## 5. Regional Coordination

To enhance the ongoing coordination efforts with neighboring transmission providers and regional and sub-regional organizations, as a component of the CAISO's Transmission Planning Process, the CAISO acts as an initiator, organizer, and participant in relevant forums for sub-regional and regional transmission planning. This section explains the CAISO's coordination with interconnected systems at both the sub-regional and regional levels.

### 5.1 Sub-Regional Coordination

#### CAISO Tariff Section 24.8

Ensuring regional coordination through a robust sub-regional planning process is an important objective of the CAISO's Transmission Planning Process. The CAISO will enhance its existing provisions regarding coordination within the WECC by including specific requirements to exchange information with sub-regional planning groups and, in their absence, directly with interconnected transmission providers. The CAISO is currently pursuing a bifurcated approach. First, the CAISO's Transmission Planning Process itself offers an open, transparent, and structured opportunity for interconnected neighbors to exchange planning information and objectives. Second, the CAISO is participating in the development of a Pacific Southwest Planning Association (PSPA), which hopes to encompass most of the transmission systems in California. Through either of these means, the CAISO will satisfy its requirement that transmission providers coordinate with neighboring systems to ensure simultaneous feasibility of their respective plans and assess the possibility of efficiencies through mutual cooperation.

Until a California sub-regional planning group is created and participant responsibilities defined, the CAISO will perform the transmission planning functions for its Balancing Authority Area in accordance with Section 24 of the CAISO Tariff and this BPM. However, the CAISO will continue to collaborate with representatives from adjacent transmission providers and existing sub-regional planning organizations through existing processes. ~~This collaboration involves a reciprocal exchange of information and participation, to the maximum extent possible, in order to ensure the simultaneous feasibility of respective Transmission Plans, the identification of potential areas for increased efficiency, and the consistent use of common assumptions. In this regard, At a minimum, the CAISO shall:~~

- solicit the participation, whether through sub-regional planning groups or individually, of all interconnected Control Areas in the development of the Unified Planning Assumptions and Study Plan and in reviewing the results of technical studies performed as part of the TPP in order to:
  - (1) coordinate, to the maximum extent practicable, planning assumptions, data and methodologies utilized by the CAISO, regional and sub-regional planning groups or interconnected Control Areas;
  - (2) ensure transmission expansion plans of the CAISO, regional and sub-regional planning groups or interconnected Control Areas are simultaneously feasible and seek to avoid duplication of facilities.



- coordinate with regional and sub-regional planning groups regarding the entity to perform requests for Economic Planning Studies or other Congestion related studies;
- transmit to applicable regional and sub-regional planning groups or interconnected Control Areas information on technical studies performed as part of the CAISO Transmission Planning Process;
- post on the CAISO Website links to the planning activities of applicable regional and sub-regional planning groups or interconnected Control Areas.

In order to effectively work together with neighboring transmission providers and other regional planning entities, the CAISO shall expressly request the participation of the proposed interconnected transmission providers and other entities in providing information during the Request Window, participating in the creation of the Unified Planning Assumptions and Study Plan, and reviewing study results and draft Transmission Plans. Requests for participation will be sent directly through electronic means to identified transmission planning representatives of entities, including, but not limited to:

- WestConnect Sub-Regional Groups
- Los Angeles Department of Water and Power
- ColumbiaGrid
- The Northern Tier Transmission Group
- The Northwest Transmission Assessment Committee of the Northwest Power Pool
- SWAT (Southwest Area Transmission)
- WATS (Western Arizona Transmission Studies)
- RETI (Renewable Energy Transmission Initiative)
- Arizona BTA (Biennial Transmission Assessment)

-The CAISO will also participate, as appropriate, in the planning activities of the foregoing entities and provide any information requested to facilitate those activities (subject to confidentiality limitations).

Through this interim collaboration, the CAISO intends to:

- Exchange information such as Transmission Plan and other information
- Ensure transmission expansion plans from neighboring transmission providers and the CAISO are simultaneously feasible and maximize the efficiency of infrastructure investment
- Communicate major activities that may impact respective control areas
- Coordinate requests for planning or economic studies that appear to impact more than one control area.

## 5.2 Regional Coordination

CAISO actively participates at the WECC through various WECC committees such as the Board of Directors, Planning Coordination Committee, Operations Committee, and the TEPPC

(Transmission Expansions Planning Policy Committee), among other subcommittees or workgroups. Through this participation, the CAISO seeks to:

- Exchange information, such as supplying data for the TEPPC data base and notifying WECC of potential projects that may impact multiple entities
- Participate in regional technical studies, such as the WECC path rating process
- Participate in the review of proposed reliability and economic projects that may have regional impact
- Potentially refer to TEPPC requests for economic studies that impact multiple sub-regions
- Cooperate in development and maintenance of the use in Transmission Planning analysis, including power flow, stability, dynamic voltage, and economic studies (*i.e.*, production cost simulation)
- Obtain policy guidelines and standards and software recommendations to maximize uniformity in the west-wide Transmission Planning Process
- Obtain path ratings for approved projects, when appropriate.

## 6. Obligation to Build

CAISO Tariff Sections 24.1.1, 24.1.2, 24.1.4, and 24.6

Sections 24.1.1, 24.1.2, 24.1.4 of the CAISO Tariff governs the assignment of responsibility to construct needed transmission facilities proposed identified by CAISO as needed through the TPPCAISO's Transmission Planning Process. That section requires a Participating-TO to construct all transmission additions or upgrades determined by the CAISO to be "needed," where:

- The additions or upgrades to the transmission facilities are located within its PTO Service Territory, unless it does not own the facility being upgraded or added *and* neither terminus of such facility is located within its PTO Service Territory
- The additions or upgrades are to existing transmission facilities that the Participating-TO owns, which are part of the CAISO Controlled Grid and are located outside of its PTO Service Territory, unless any joint ownership arrangement does not permit construction by the PTO
- The Participating-TO is also a Local Furnishing Participating-TO, if the CAISO or Project Sponsor tenders an application under Federal Power Act, Section 211, which requests the FERC to issue an order directing the Local Furnishing Participating-TO to construct such facilities. After receiving the Section 211 application, the Local Furnishing Participating TO is required to waive its right to request service under Section 213(a) of the Federal Power Act and to the issuance of a proposed order under Section 212(c) of the Federal Power Act. The obligation to construct arises after the FERC order, if granted, is no longer subject to rehearing or appeal.

"Need" arises under Section 24 of the CAISO Tariff when the transmission upgrade or addition maintains System Reliability (see Section 4.2.1 of this BPM); promotes economic efficiency, including maintaining the feasibility of allocated LT-CRRs (see Sections 4.2.2 and 4.2.4 of this BPM); or satisfies the requirements of constitutes a LCRIF Location Constrained Resource Interconnection Facility (see Section 4.2.3 of this BPM).

It should be noted that the obligation to construct does not attach to all Participating-TOs, but rather to those Participating-TOs with PTO Service Territories. A PTO Service Territory is "the area in which an IOU, a Local Public Owned Electric Utility, or federal power marketing administration that has turned over its transmission facilities and/or Entitlements to ISO Operational Control is obligated to provide electric service to Load. A PTO Service Territory may be comprised of the Service Areas of more than one Local Public Owned Electric Utility, if they are operating under an agreement with the ISO for aggregation of their MSS and their MSS Operator is designated as the Participating TO." (CAISO Tariff, Appendix A.)

However, the obligation to construct is further subject to the following conditions:

- The ability of the Participating-TO, after making a good faith effort, to obtain all necessary approvals and property rights under applicable federal, state, and local laws
- The presence of a cost recovery mechanism with cost responsibility assigned in accordance with Section 24 of the CAISO Tariff
- The right of the Participating-TO to dispute any need determination under the CAISO's ADR Procedures

The obligation of a Participating-TO to construct a needed transmission upgrade or addition further extends to a Merchant Transmission Facility, which is a transmission addition or upgrade that is part of the CAISO Controlled Grid and whose costs are paid by a Project Sponsor that does not recover the cost of the transmission investment through the CAISO's Transmission Access Charge (TAC) or Wheeling Access Charge (WAC) or other regulatory cost recovery mechanism. Rather than obtain a recovery of costs through a regulated rate, the Project Sponsor of the Merchant Transmission Facility obtains Merchant Congestion Revenue Rights in accordance with CAISO Tariff Section 36.11. (See Section 4.2.5 of this BPM and Section 4.2.4 of the BPM for Congestion Revenue Rights.) The Participating-TO's obligation to construct a Merchant Transmission Facility is contingent on the Project Sponsor demonstrating that it is financially able to pay "the costs of the project to be constructed by the Participating TO," such that the Participating-TO may require:

- A demonstration of creditworthiness, such as an appropriate credit rating
- Sufficient security in the form of an unconditional and irrevocable letter of credit or other similar security sufficient to meet its responsibilities and obligations for the full costs of the transmission addition or upgrade

If the Participating-TO cannot secure the necessary approvals and, therefore, is unable to construct the transmission upgrade or addition, the Participating-TO shall notify the CAISO and the CAISO shall convene a technical meeting to evaluate alternative proposals. The CAISO may take any action reasonably appropriate, after coordination with the Participating-TO, or Project Sponsor if not the Participating-TO, and other affected Market Participants, to develop and evaluate alternatives, including the discretion to confer the right to construct the transmission addition or upgrade on a non-Participating-TO. The obligation to construct can be distinct from the right to own. As noted, a non-Participating-TO Project Sponsor (e.g., a Transmission Owner), may retain ownership of a Merchant Transmission Facility notwithstanding the Participating-TO's role in operating and maintaining the transmission upgrade or addition. Similarly, a Participating TO without a PTO Service Territory may hold ownership as well as responsibility for maintenance of a transmission upgrade or addition approved to promote economic efficiency, in accordance with Section 14 of the Transmission Control Agreement. In the latter case, the Participating-TO sponsoring the project may, but is not required to, construct the project itself.

Transmission upgrades or additions to maintain System Reliability in accordance with Applicable Reliability Criteria and CAISO Planning Standards will primarily be sponsored, and therefore owned, by Participating-TO's with PTO Service Territories. This arises from:

- The practice of those Participating-TOs to perform annually, at the direction of the CAISO, reliability assessments of their PTO Service Territories that may cover all Loads within its their geographic PTO Service Territories to ensure compliance with Applicable Reliability Criteria and CAISO Planning Standards
- The obligation of those Participating-TOs to act as a Project Sponsor for transmission additions or upgrades in its PTO Service Territory identified or approved by the CAISO as needed to ensure System Reliability.

Similarly, to the extent that a transmission upgrade or addition constitutes the most efficient means to maintain the feasibility of allocated Long Term CRRs under Section 24.1.3 of the CAISO Tariff—apart from the expansion of, or acceleration of, an existing ~~Transmission Project~~ not sponsored by the PTO—the CAISO will direct the appropriate Participating-TO to sponsor the needed transmission project. This is consistent with the CAISO's designation of Participating-TO's with PTO Service Territories as the entity with the obligation to construct needed transmission upgrades or additions.

However, should the PTO prove to be unable or unwilling to fund and construct transmission upgrades or additions deemed as required to resolve reliability criteria violations or maintain the feasibility of LT- CRRs, the CAISO may exercise its right, as noted above, to seek a third-party Project Sponsor.

The Project Sponsor for Economic ~~Transmission Projects~~ will generally be the entity that submits the successful proposal through the Request Window process. To the extent the Project Sponsor cannot own, finance and construct the Economic ~~Transmission Project~~, including where the project is proposed by the CAISO, the CAISO will designate one or more of the Participating-TOs with PTO Service Territories in which the terminus of the transmission addition or upgrade will be located to act as Project Sponsor. Where two or more Participating-TOs are designated as Project Sponsors, such CAISO designation will include the proportionate responsibility between or among Participating-TOs to own, construct, and finance the transmission addition or upgrade. If a Participating-TO refuses to act as a Project Sponsor, the CAISO will first request other designated Participating-TO(s) to assume the remainder or greater proportionate responsibility, and if no other Participating-TO had been designated or is willing to increase its proportionate responsibility, the CAISO may solicit bids to finance, own, and construct the transmission addition or upgrade.

A Transmission Owner that is neither a ~~Participating-Transmission-Owner~~, nor seeking Merchant Transmission Facility treatment under the CAISO Tariff, retains any rights to construct and expand transmission facilities as those rights would exist absent any other obligations the Transmission Owner may have under the CAISO Tariff.

## 7. Cost Allocation – Transmission Access Charge

There are four general mechanisms by which a Transmission Owner can recover, or attempt to recover, its revenue requirement associated with transmission facilities turned over to the CAISO's Operational Control. The selected mechanism will depend on whether the Project Sponsor is a Participating-TO or not and, if a Participating-TO, whether the transmission facility constitutes a network facility or a Location Constrained Resource Interconnection Facility. Figure 7 illustrates the three mechanisms.

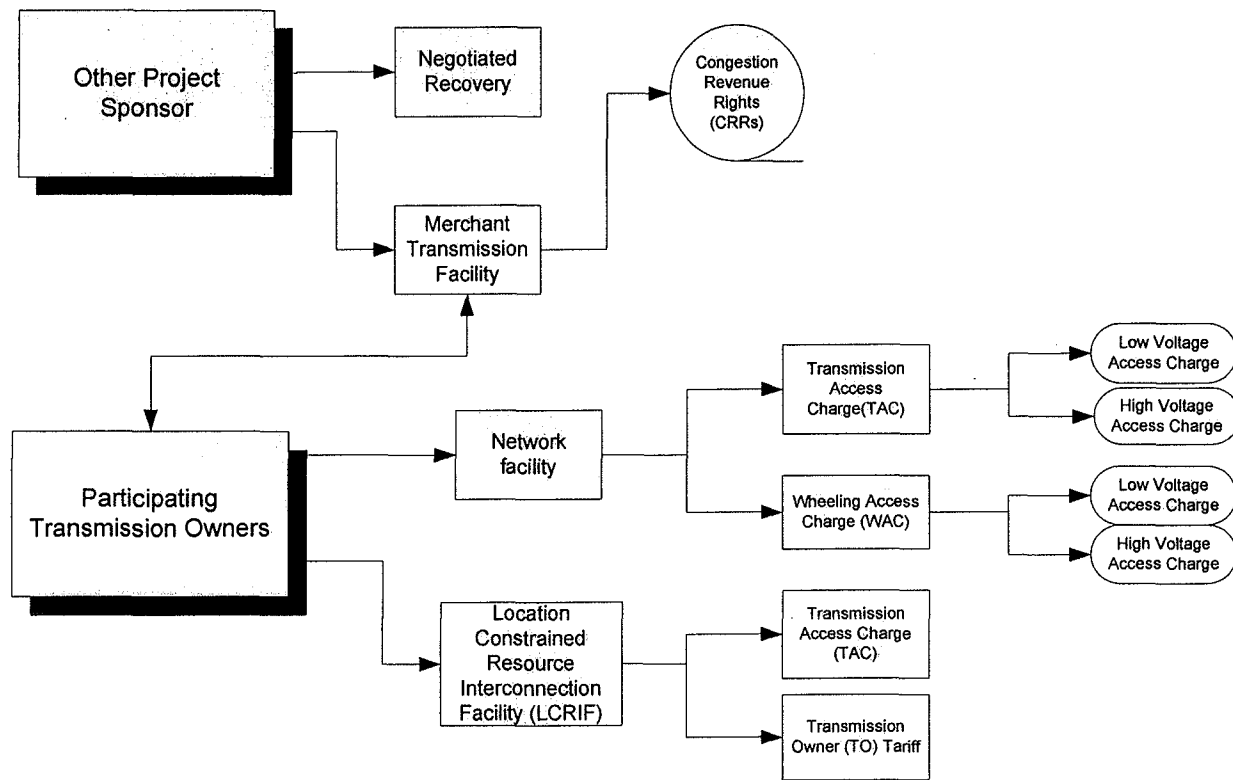


Figure 7: Mechanisms for Cost Allocation

### 7.1 Merchant Transmission Facility

CAISO Tariff Section 24.1.1 and 36.11

A Project Sponsor may elect to fund and construct a Merchant Transmission Facility. In this case, the Project Sponsor does not seek to recover the cost of the Merchant Transmission Facility transferred to the CAISO’s Operational Control through the CAISO’s Access Charge and Wheeling Access Charge or other regulatory cost recovery mechanisms. Instead, the Project Sponsor of a Merchant Transmission Facility seeks an allocation, at the Project Sponsor’s election, of either CRR Options or Obligations that reflect the contribution of the facility to grid transfer capacity. The conditions for receiving CRRs, for determining of the quantity of CRRs to be allocated, and for determining potential revenue from allocated CRRs, are set forth in Section 36.11 of the CAISO Tariff and the BPM for Congestion Revenue Rights, located at <http://www.caiso.com/1840/1840b23c226f0.html>.

### 7.2 Negotiated Recovery

CAISO Tariff Section 24.7.3

Under the current version of the MRTU Tariff, a Project Sponsor that elects not to receive Merchant Transmission CRRs may still receive cost recovery other than through the Access Charge. The CAISO anticipates modifying this authority to apply solely to projects previously

electing recovery under Section 24.7.3 of the "Simplified and Renumbered" ISO Tariff such that new transmission projects approved after the commencement of MRTU would not be eligible for negotiated rate recovery. Until such modification is made, a Project Sponsor that does not recover the investment cost under a FERC-approved rate through the Access Charge or a reimbursement or direct payment from a Participating TO, provided the upgrade or addition is under CAISO Operational Control, shall be entitled to receive a compensation package based on a negotiation between the Project Sponsor, CAISO and the relevant Participating-TO. The compensation for the Project Sponsor shall be commensurate with the amount of additional transmission capacity that results from the upgrade, determined by subtracting the rating of the transmission facility before the upgrade or addition from the new rating for the upgraded or additional transmission facility. The full amount of capacity added to the system will be as determined through the regional reliability council process of the WECC. If the parties agree to a compensation package, the CAISO will provide notice of agreement on the CAISO Website. The CAISO will file a proposed compensation package with FERC.

## 7.3 PTO Transmission Facility

CAISO Tariff Section 24.7.2 and 24.7.4

A facility constructed by a Participating-TO for transfer to the CAISO's Operational Control will be either a network transmission upgrade or addition, or a Location Constrained Resource Interconnection Facility.

### 7.3.1 Network Transmission Facility

A Participating-TO's recovery of costs for facilities turned over to the CAISO Operational Control begins with its FERC-approved Transmission Revenue Requirement. The Transmission Revenue Requirement is comprised of the total annual authorized revenue requirements associated with such network transmission facilities and Entitlements. The Transmission Revenue Requirement includes the costs of transmission facilities and Entitlements and deducts Transmission Revenue Credits, credits for Standby Transmission Revenue, and the transmission revenue expected to be actually received by the PTO for Existing Rights and Converted Rights. The remainder of the Participating-TO's Transmission Revenue Requirement is intended to be recovered through a combination of the CAISO's Transmission Access Charge (TAC) or Wheeling Access Charge (WAC).

The TAC is a charge paid by entities serving Load on the transmission and distribution systems of the Participating-TOs under the CAISO's Operational Control. The TAC includes the High Voltage Access Charge for facilities at 200kV and above, the Transition Charge and the Low Voltage Access Charge. The Low Voltage Access Charge is collected by each Participating-TO under its Transmission Owner Tariff, based on the transmission revenue requirement associated only with its own low voltage transmission facilities and Entitlements. The details of the High Voltage Access Charge and Transition Charge are set forth in Section 26 of the CAISO Tariff and Appendix F, Schedule 3.

The WAC is a charge assessed by the CAISO that is paid by a Scheduling Coordinator for Wheeling in accordance with Section 26.1. Wheeling can be in the form of a Wheel Out or Wheel Through. The former is defined as the use of the CAISO Controlled Grid for the transmission of energy from a Generating Unit located within the CAISO Controlled Grid to serve a Load located

outside the transmission and distribution system of a Participating-TO, except for Energy utilizing an Existing Contract. On the other hand, a Wheel Through is the use of the CAISO Controlled Grid for the transmission of Energy from a resource located outside the CAISO Controlled Grid to serve a Load located outside the transmission and distribution system of a Participating-TO, except for Energy utilizing an Existing Contract. The WAC may also consist of a High Voltage Wheeling Access Charge and a Low Voltage Wheeling Access Charge. The details of the WAC are set forth in Section 26 of the CAISO Tariff and Appendix N, Part F.

### 7.3.2 ~~Location-Constrained Resource Interconnection Facility~~

CAISO Tariff Section 26.6

~~Participating-TOs~~ finance the up-front costs of constructing ~~Location-Constrained Resource Interconnection Facilities (LCRIF)~~. The recovery of costs for such facilities comes from two sources. First, the costs of any unsubscribed capacity of qualifying LCRIFs will be rolled into the CAISO's TAC, similar to a network transmission facility. As generation resources are developed in the area and connect to the LCRIFs, cost recovery will be transferred on a going forward, *pro rata* basis to those new generation owners, and the costs included in TAC will be reduced accordingly. Once the anticipated generation is fully developed and the capacity of the LCRIF fully subscribed, the going forward costs of the project will be borne entirely by generation developers and will not be included in the TAC. Thus, the costs associated with the unsubscribed portion of the LCRIF will be included in TAC, until additional generators are interconnected, at which time costs will be assigned to such generators.

## 8. Study Charges

The CAISO's costs of ~~conducting~~performing its ~~Transmission Planning Process~~ and producing the annual Transmission Plan are generally recovered through the CAISO's Grid Management Charge (GMC). The GMC consists of charge codes assessed monthly to participating Scheduling Coordinators for the purpose of recovering all of the CAISO's administrative and operating costs. GMC rates are calculated as set forth in Section 11 of the CAISO Tariff. The formula rate methodology provides Market Participants with the financial security of predictable GMC pricing, while ensuring that the CAISO is able to recover its actual costs in a timely manner. The charges are shown as a monthly charge on the Settlements Statements for the last day of each month, with billable quantities being published on daily statements where applicable. A detailed discussion of GMC is beyond the scope of this BPM. For more information on GMC please see:

- Section 11 of MRTU Tariff - <http://www.aiso.com/1c40/1c407ff21c570.html>
- BPM for Settlements and Billing - <http://www.aiso.com/17ba/17baa8bc1ce20.html>
- Structure of GMC under MRTU - GMC <http://www.aiso.com/1872/18728fb96b370.html>

To the extent that a proposed transmission project, or High Priority Economic Planning Study, is accepted by the CAISO for evaluation as part of the Study Plan, the costs of those activities will typically be borne, based on the division of responsibilities, either by the CAISO and recovered through existing GMC procedures and practices or by the third party assigned or accepting responsibility for the study task under the Study Plan in accordance with that entity's tariff authority. Participants in the ~~TP~~ransmission Planning Process will be financially responsible for costs incurred in participating in the ~~Transmission Planning Process~~PP, including activities in support of the CAISO or ~~Participating-TO~~ evaluations. Further, the cost responsibilities of performing Interconnection Studies are governed by the CAISO's LGIP or SGIP Tariff language.

However, there is an exception to the foregoing. Where a requested Economic Planning Study is not selected for High Priority status, and therefore is not included by the CAISO in the Study Plan, the study requestor may nevertheless conduct the study in coordination with the CAISO. The CAISO's costs of assisting the third-party requestor to conduct its own Economic Planning Study will be the responsibility of the study requestor, and such party will be asked to enter into a study agreement with the CAISO. The *pro forma* study agreement shall be posted to the CAISO Website under Transmission Planning. Further, the CAISO intends to evaluate the need to develop terms and conditions under which participants of projects included in the Study Plan 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 a "time and materials" basis.

## 9. Stakeholders—The TPP Public Processes and Communications

### 9.1 TPP Public Stakeholder Processes

The CAISO initiates and coordinates a minimum of three ~~stakeholder annual meetings that are open to the public annually~~ as part of the ~~its TPP Transmission Planning Process and development of its Transmission Plan~~. The CAISO may in its sole discretion arrange additional stakeholder ~~public meetings (e.g., a meeting to discuss preliminary study results)~~. The ~~stakeholder three required public meetings correspond to the three stages of development of the Transmission Plan~~. Thus, ~~stakeholder meetings that are open to the public will be held to~~ 1) facilitate development of the Unified Planning Assumptions and Study Plan; 2) review preliminary results of technical analyses; and 3) ~~present the draft CAISO review the draft Transmission Plan and announce approved projects~~.

All ~~stakeholder public meetings~~ are open to TPP Market Participants, regulatory entities, and other interested parties. In each case, notice of the ~~stakeholder meeting~~ will be given a reasonable time prior to the scheduled meeting through Market Notices and will be included in the CAISO event calendar found on the CAISO Website. Entities can subscribe to Market Notices through the CAISO Website at <http://www.caiso.com/docs/2005/10/12/2005101209381421288.html>.

Teleconference and/or web conference services also will be provided for all ~~stakeholder meetings~~. Further, ~~stakeholders all interested parties~~ will be allowed to subscribe to any CAISO ~~TPP Transmission Planning Process~~ e-mail service that also will provide notice of ~~TPP Transmission Planning Process~~ activities, including the publication of draft and final Unified Planning Assumptions and Study Plans, technical study results, Transmission Plans, and other transmission planning reports. ~~Stakeholders Interested parties~~ can subscribe to the CAISO Transmission Planning Process e-mail service by contacting [regionaltransmission@caiso.com](mailto:regionaltransmission@caiso.com).

To the extent the CAISO delegates to the Participating TOs or other third parties, through the Study Plan, the responsibility to perform technical analyses, the CAISO also will require those entities to conduct a minimum of one ~~stakeholder public meeting~~, which also ~~facilitated by the CAISO and will be noticed through the CAISO's standard stakeholder notification mechanisms~~. In addition, the CAISO will include on the calendar of events maintained on the CAISO Website a schedule of the ~~stakeholder public meetings~~ conducted jointly between the CAISO and any Participating TO or third party, as well as other relevant meetings of the CEC, CPUC, sub-regional, and regional planning groups.

To maximize public participation, the open meetings scheduled in accordance with the evaluation process for Large Projects, described in Section 8 of this BPM, For large transmission



~~alternatives with significant capital outlays, additional stakeholder meetings may also be scheduled for the development of study plans and assumptions, identification of project alternatives to be considered, and to review study results. To maximize stakeholder and public participation, these additional meetings may be noticed both through standard CAISO stakeholder notice procedures, as well as through the media in the area in which the project will be located (particularly if public meetings are held near the project location) and through electronic (E-mail) notices to specific parties who might have an interest in the process. Such additional meetings also may be held near the project's location.~~

For all stakeholder events relating to the Transmission Planning Process, interested parties stakeholders will have the opportunity to submit comments on documents relevant to the meeting, and upon the meeting itself. Generally, comments from TPP participants shall be submitted to regionaltransmission@caiso.com. The CAISO shall incorporate stakeholder comments in subsequent planning activities and decisional items relating to those activities. In the case of decisional items (*i.e.* adoption of final a Study Plan or final Transmission Plan), the CAISO will indicate the manner in which it responded to such stakeholder comments.

Established CAISO stakeholder process protocols and standard guidelines for market notices, document postings, and the format of stakeholder meetings will be applied to all TPP public meetings.

- Market notices to announce the public meetings will be sent out at least 3 weeks prior to the meeting.
- The draft documents to be discussed during the public meetings will typically be posted no later than 1 week before the meeting. Consequently, interested parties can anticipate the posting of the draft Study Plan, CAISO study results, and the draft CAISO Transmission Plan on CAISO website at least 7 days before each public meeting.

## 9.2 Access to Transmission Planning Process Information

CAISO Tariff Sections 20.2 and 20.4

The CAISO provides access to non-confidential information related to the ~~TPP~~ Transmission Planning Process, including data, assumptions, decision criteria, study methodologies, and results to all stakeholders ~~TPP Participants~~ through the Study Plan, interim study reports, study manuals, the Transmission Plan, and relevant BPMs. Public documents related to the ~~TPP~~ Transmission Planning Process will be posted to the CAISO Website mainly under the regional Transmission Planning section webpage. The CAISO ~~w~~Website page at ~~Transmission Planning~~ also will provide links to the websites of relevant transmission planning entities including, but not limited to, the CPUC, CEC, and those entities listed in Section 5.1 of this BPM.

The CAISO will attempt to minimize the instances in which the ~~TPP~~ Transmission Planning Process requires the use of confidential information that has been specifically designated as such by the provider of the information by a particular market participant. Accordingly, the CAISO primarily will rely on WECC data to construct base cases for performing economic and reliability technical studies. Nevertheless, the CAISO shall maintain the confidentiality of information when:

- The information relates to procurement of resources submitted by LSEs under Sections 24.2.3.2 and 24.2.3.3 of the CAISO Tariff (CAISO Tariff Section 20.2(h)(1))

- The release of such information may harm the competitiveness of wholesale markets, as determined by the CAISO's Department of Market Monitoring (CAISO Tariff Section 20.2(h)(2))
- Release of such information may breach existing agreements and contracts, including previously executed Non-Disclosure Agreements (NDA) (CAISO Tariff Section 20.2(h)(3))
- The information involves third-party developed or other proprietary analysis tools, computer codes, or any other material that is protected by intellectual property rights (CAISO Tariff Section 20.2(h)(4))
- The information constitutes Critical Electric Infrastructure Information (CEII) in accordance with FERC regulations (CAISO Tariff Section 20.2(h)(5))

Apart from public information posted to the CAISO Website at Transmission Planning, the CAISO will post base cases relating to current initiatives the CAISO is working on to the Regional Transmission secure webpage ~~transmission planning documentation that may contain confidential information to the Market Participant Portal ( <https://portal.caiso.com> ). The Market Participant Portal is a web portal that provides centralized access to secure CAISO applications based on CAISO Multi-Application digital certificates. The Market Participant Portal will have an application link to Transmission Planning. More information on the instructions and qualifications to receive access to the secure webpage Market Participant Portal can be found in the MPP User Guide at <http://caiso.com/1f42/1f42d6e628ce0.html> ~~http://www.caiso.com/1e41/1e418e2e8530.pdf~~.~~

As part of the application process, entities will be required to comply with the following requirements to gain access to confidential planning information:

- Critical Energy Infrastructure Information may be provided to a requestor where such person is employed or designated to receive CEII by (1) a Market Participant; (2) or electric utility regulatory agency within California to receive CEII; (3) an Interconnection Customer that has submitted an Interconnection Request to the CAISO under the CAISO's Large Generator Interconnection Procedure/Small Generator Interconnection Procedures (LGIP); (4) a developer having a pending or potential proposal for development of a Generation Unit or transmission additions, upgrades or facilities and who is performing studies in contemplation of filing an Interconnection Request or submitting a transmission infrastructure project through the TPP; or (5) a not-for-profit organization representing consumer regulatory or environmental interests before Local Regulatory Agencies or federal regulatory agencies. To obtain Critical Energy Infrastructure Information, the requestor submits a statement as to the need for the CEII, and the requestor executes and returns to the CAISO the form of the non-disclosure agreement and non-disclosure statement available on the CAISO website under Transmission Planning. The CAISO may, at its sole discretion, reject a request for CEII and upon such rejection, the requestor will be directed to utilize the FERC procedures for access to the requested CEII.
- Information that is confidential under Section 20.2(h)(1) or 20.2(h)(2) may be disclosed to any individual designated by a Market Participant, electric utility regulatory agency within California, or other ~~stakeholder~~ TPP Participant that signs and returns to the CAISO the form of the non-disclosure agreement, nondisclosure statement and certification that the individual is or represents a non-Market Participant, which is any person or entity not involved in a marketing, sales, or brokering function as market, sales, or brokering are defined in FERC's Standards of Conduct for Transmission Providers (18 C.F.R. § 358 et seq.) except that information provided to CAISO pursuant to 20.2(h)(2) will be provided

only in composite form so that information specific to individual LSEs will not be disclosed and

- Data base and other transmission planning information obtained from WECC may be disclosed to individuals designated by a Market Participant, electric utility regulatory agency within California, or other stakeholder in accordance with the procedures set forth as follows:
  - A TPPMarket Participant that is a member of WECC and that requests the WECC planning data base: (i) shall execute the Non-Disclosure Agreement which is available on the CAISO website under Transmission Planning and (ii) shall provide to the CAISO a non-disclosure statement, the form of which is attached as an exhibit to the Non-Disclosure Agreement executed by the Market-TPP Participant and by each employee and consultant of the TPPMarket Participant who will have access to WECC planning data base.

○ A TPPMarket Participant that who is not a member of WECC and that requests the WECC planning data base: (i) shall execute the Non-Disclosure Agreement attached to this BPM, (ii) shall provide to the CAISO a fully executed WECC Non-Member Confidentiality Agreement for WECC Data, and (iii) shall provide to the CAISO a non-disclosure statement, the form of which is attached as an exhibit to the Non-Disclosure Agreement executed by the TPPMarket Participant and by each employee and consultant of the TPPMarket Participant who will have access to the WECC planning data base.

~~○ A non-Market Participant that is a member of the WECC and that requests the WECC planning data base: (i) shall reasonably demonstrate a legitimate business interest in the CAISO Markets, (ii) shall execute the Non-Disclosure Agreement and (iii) shall provide to the CAISO a non-disclosure statement, the form of which is attached as an exhibit to the Non-Disclosure Agreement executed by the non-Market Participant and by each employee and consultant of the non-Market Participant who will have access to the WECC planning data base.~~

○ A non-Market Participant that is not a member of the WECC and that requests the WECC planning data base: (i) shall reasonably demonstrate a legitimate business interest in the CAISO Markets, (ii) shall execute the Non-Disclosure Agreement, (iii) and shall provide to the CAISO a fully executed WECC Non-Member Confidentiality Agreement for WECC Data, and (iv) shall provide to the CAISO a non-disclosure statement, the form of which is attached as an exhibit to the Non-Disclosure Agreement executed by the non-Market Participant and by each employee and consultant of the non-Market Participant who will have access to the WECC planning data base.

## 10. Dispute Resolution Process

### CAISO Tariff Section 13

The Alternative Dispute Resolution (ADR) Procedures set forth in Section 13 of the CAISO Tariff apply to all disputes arising under CAISO Documents, including those related to the Transmission Planning Process. The ADR Procedures can be found at <http://www.caiso.com/1bcc/1bcc775734780ex.htm> The ADR Procedures provide for a three-tier process, progressing from negotiation to mediation to arbitration. Both substantive and

procedural disputes arising from the ~~TP~~Transmission Planning Process will be addressed through the existing ADR Procedures.

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**Attachment 1****Template - Study Plan in CAISO Transmission Plan****Section 1: Objectives**

- What this transmission planning effort attempts to achieve
- Roles and responsibilities of each entity contributing to each Transmission Plan component.

**Section 2: Summary of CAISO Planning Process**

- Overview of coordination process
- Schedules of all stakeholder meetings open to the public and other related activities
- Scope of each meeting
- Options available for stakeholder participation by interested parties in the meetings, such as in-person, conference call, Webcast, etc.
- Location where information such as planning assumptions or other related documents will be available for Stakeholders/interested parties
- Instructions for interested parties/~~Stakeholders~~ to receive notifications or communicate or provide comments to CAISO
- Contact persons and contact information of
  - Overall planning process
  - Subject matter experts (SME) for each technical study

**Section 3: Planning Data**

- Load forecast – Source of the load forecast, amount, and detailed methodology if original load is adjusted to the scope of each study
- Generation assumptions – Source of new generation data and list of new generation projects modeled in the study
- Generation retirement – Source of generation retirement data, list of generation retirement modeled in the studies
- Transmission Pprojects – Source of Ttransmission Pproject information and list of tTransmission Pproject modeled in the studies
- Import – Source of Import data, amount of import modeled, and methodology to determine the import (e.g., Import Allocation Methodology)
- Project proposals and study requests received during the Request Window

**Section 4: Planning Studies**

- List of all planning studies to be done in each Transmission Plan
  - Each study defines:
    - The objective the study tries to achieve
    - The study assumptions (e.g., study year, planning data applied to each study, or any modifications made to original planning data described in Section 4.1.3.)
    - Methodology – Describe how the study will be performed (this may refer to appropriate Business Practice Manuals or documents that have been produced and posted on the CAISO website at [URL to be determined])
    - Criteria – Reliability or criteria applied to each study, such as NERC/WECC or other standards being used
    - Software and Tools – List software and tools for each study
-



- o Entity to perform the study
- o Expected study results and location where interested parties~~Stakeholders~~ may access pages dedicated to the study
- o ~~Stakeholder~~-Public meetings or any major activities to be completed in addition to the regular schedules in CAISO Transmission Plan (if applicable)

**Section 5: Comments, Responses, and Disputes**

- Comments received from interested parties~~Stakeholders~~ that need to be addressed in the study plan
- CAISO responses to the comments
- Records of disputes CAISO has received, particularly for the unified planning assumptions and the resolutions through the ADR process

The above template is based on the study plan for the 2008 Transmission Plan that CAISO discussed during the ~~stakeholder~~ meeting, June 11, 2007, available at <http://caiso.com/1bf4/1bf4740146650.pdf>.

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## **Attachment 2**

### **Detailed NERC Reliability Assessment Studies**

The current NERC Reliability Standards related to transmission planning (TPL-001 through TPL-004) define the scope of and deliverables from the technical studies for which each entity is responsible under its compliance obligations related to those standards applicable to the entity's registration. The requirements apply to the annual assessments to be conducted by the CAISO and PTOs. These general requirements, such as types of technical studies, study scenarios, modeling in the base cases and the study results, are described in Sections A.1 through A. 7, below.

#### **A.1. Types of Technical Studies**

In each assessment, power flow, voltage stability, and transient stability studies must be conducted to demonstrate that system performance meet or exceed the criteria as identified in Table I of the effective TPL standards. The technical studies must evaluate impacts to the system under system normal and under Category B, C and D contingency conditions.

#### **A.2. Study Areas**

Due to the differences in load patterns and local area peaking, the technical studies will be performed on the following 11 study areas throughout CAISO balancing authority area:

1. PG&E Humboldt peak (non-coincident peak)
2. PG&E North Coast and North Bay peak (non-coincident peak)
3. PG&E North Valley peak (non-coincident peak)
4. PG&E Central valley (non-coincident peak)
5. PG&E Greater Bay Area (non-coincident peak)
6. PG&E Central Coast and Los Padres (non-coincident peak)



7. PG&E San Joaquin Valley (non-coincident peak)
8. Entire PG&E area coincident peak (represents all of Northern California)
9. Entire SCE area coincident peak
10. Entire SDG&E area coincident peak
11. Entire Southern California (CAISO Control Area) coincident peak

### **A. 3. Frequency of the Assessment**

The assessment must be made annually.

### **A. 4. Study Years**

For the extreme contingency (Category D) studies, the study must be conducted for the near-term (each year: Years One through Five). For the study under system normal, Category B, and Category C contingencies, both the near term (each year: Years One through Five) and long-term (each year: Years Six through Ten) must be studied unless changes to system conditions do not warrant such analyses.

### **A.5. Study Scenarios**

The technical studies must cover critical system conditions and be performed for selected demand levels over the range of forecasted system demand. In general, the summer peak scenarios with appropriate stressed -path flows must be studied for each study area. Additional scenarios can be studied if they are needed to ensure a complete planning analysis. The list of study scenarios, MW demand forecasts, and the stressed -path flows will be documented in the Study Plan of each year's Transmission Plan.

### **A.6. Base Cases and Contingencies Being Studied**





The standards also require certain components must be included in the studies and need to be documented for auditing purposes. Table 1 lists these modeling requirements and descriptions of contingencies according to the current TPL 001 through TPL 004 standards.

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**Summary of Modeling Requirements**

<b><u>Requirements</u></b>	<b><u>Apply To</u></b>
<u>Have established normal (pre-contingency) operating procedures in place Category A study.</u>	<u>Category A Study</u>
<u>All Category B contingencies must be studied and mitigations proposed for those that would produce severe System results or impacts. The rationale for the contingencies selected for evaluation shall be available as supporting information. An explanation of why the remaining simulations would produce less severe system results shall be available as supporting information.</u>	<u>Category B Study</u>
<u>Consider all possible C contingencies. Perform studies and evaluate those Category C contingencies that would produce the more severe system results or impacts. The rationale for the contingencies selected for evaluation shall be available as supporting information. An explanation of why the remaining simulations would produce less severe system results shall be available as supporting information.</u>	<u>Category C Study</u>
<u>Consider all possible D contingencies but studies must be performed and evaluated only for those Category D contingencies that would produce the more severe system results or impacts. The rationale for the contingencies selected for evaluation shall be available as supporting information. An explanation of why the remaining simulations would produce less severe system results shall be available as supporting information.</u>	<u>Category D Study</u>
<u>Have all projected firm transfers modeled.</u>	<u>Category A, B, C and D Studies</u>
<u>Include existing and planned facilities; transmission facilities that have been approved by the CAISO and applicable generation projects that have been approved by regulatory agencies.</u>	<u>Category A, B, C and D Studies</u>
<u>Include Reactive Power resources to ensure that adequate reactive resources are available to meet system performance.</u>	<u>Category A, B, C and D Studies</u>
<u>Include the effects of existing and planned protection systems, including any backup or redundant systems.</u>	<u>Category B, C and D Studies</u>
<u>Include the effects of existing and planned control devices Category B, C, and D studies.</u>	



	<u>Category B, C and D Studies</u>
<u>Include the planned (including maintenance) outage of any bulk electric equipment (including protection systems or their components) at those demand levels for which planned (including maintenance) outages are performed.</u>	<u>Category B, C and D Studies</u>

### **A.7. Study Results and Mitigation Plans**

The CAISO and PTO must demonstrate that the portion of system under their respective responsibilities meets the requirements identified in the Table 1 of TPL reliability standards. Therefore, both the CAISO and PTOs shall consistently document the following information in their respective study reports:

1. For the study under system normal and Category B and Category C contingencies, the study results list all study scenarios, identified reliability criteria violations, and the associated mitigation plans.
2. For the studies under Category D contingencies, the study results must show the evaluation for the risks and consequences of each extreme contingency.
3. For each identified reliability criteria violation, the study results must elaborate the conditions that violation occurs (e.g., study year, season, contingency that trigger the problem, special protection system that has been modeled, limiting facility or limiting conditions).
4. For the proposed mitigation plans, must provide:
  - a. A written summary of its plans to achieve the required system performance as described above throughout the planning horizon;
  - b. Schedule of implementation;
  - c. Discussion of expected required in-service dates of facilities;
  - d. Consider lead times necessary to implement plans. Review, in subsequent annual assessments where sufficient lead-time exists, the continuing need for identified system facilities. Detailed implementation plans are not needed.

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## Attachment 3

### Major Activities and Milestone Dates

Table 3 describes the major milestone and major activities that occur throughout the year. These include projected due dates of major activities such as submitting planning data, schedules for stakeholder meetings, the opening date and deadline for submitting projects through Request Window, development of the transmission plan, and presenting the plan to CAISO Board of Governors.

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Major Milestones, Activities, Due Dates, and Responsible Entities

<u>No.</u>	<u>Due Date</u>	<u>Entity</u>	<u>Activity</u>
1	<u>2nd week of December</u>	<u>CAISO</u>	<u>Sends a letter to neighboring Balancing Authorities, sub-regional and regional planning groups requesting planning data and other related information to be included in the CAISO Transmission Plan</u>
2	<u>2<sup>nd</sup> week of January</u>	<u>PTOs</u>	<u>Provide CAISO:</u> 1) <u>Local area load forecasts;</u> 2) <u>The methodology to calculate local area load forecasts and comparison to the CEC load forecast</u>
3	<u>2<sup>nd</sup> week of February</u>	<u>CAISO</u>	<u>CAISO develops the Draft Study Plan and posts it on CAISO website</u>
4	<u>End of February</u>	<u>CAISO</u>	<b><u>Hosts Stakeholder Meeting #1</u></b>
5	<u>End of March</u>	<u>PTOS</u>	<u>Provide CAISO:</u> 1) <u>All base cases for NERC compliance studies</u> 2) <u>Contingency files for NERC compliance studies</u> 3) <u>Change files or EPC files that describe the changes made to this year's base cases (compared to last year cases)</u> 4) <u>Verified dynamic files for transient stability study</u>
		<u>CAISO</u>	1) <u>Creates base cases for its studies</u> 2) <u>Posts planning data on the secured website</u>
6	<u>End of July</u>	<u>CAISO and PTOs</u>	<u>Host 2 stakeholder meetings (1 for Northern CA and 1 for Southern CA) to provide the update of study results and project proposals</u>
7	<u>August 15</u>	<u>CAISO</u>	<u>Request Window Opens</u>
		<u>CAISO</u>	<u>Complete all technical studies</u> <u>Posts preliminary study results on website</u> <u>Provides its portion of NERC compliance studies to PTOs</u>

8	September 15	PTOs	<u>Provide CAISO:</u> 1) Reliability assessment report that contains study results and mitigation plans in the format that comply with the requirements of the NERC Reliability Standards 2) Updated status of the projects that have been approved (but are not yet in-service) from the previous transmission plan 3) Submit reliability project proposals through the Request Window
9	End of October	CAISO	<b>Hosts Stakeholder Meeting #2</b>
10	November 30	CAISO	Request Window Closes
11	End of December	CAISO	Submit the projects that are subject to Right to Construct, Own and Operate held by the applicable PTOs
12	End of January	PTOs	For projects submitted under No. 11, PTO response to CAISO exercising or waiving PTO's Right to Construct, Own and Operate
13	2nd week of February	CAISO	<b>Hosts Stakeholder Meeting #3</b>
14	End of February	CAISO	Present Transmission Plan to CAISO Board of Governors

**Attachment F – BPM Clean Sheets**

**Order 890 Compliance Filing**

**October 31, 2008**



California ISO  
Your Link to Power

# Business Practice Manual for the Transmission Planning Process

**Order 890 Compliance**

Version 2.0



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# 1. Introduction

Welcome to the CAISO's *BPM for the Transmission Planning Process*. In this Introduction, you will find the following information:

- The purpose of CAISO BPMs, in general
- What you can expect from this specific CAISO BPM

## 1.1 Purpose of California ISO Business Practice Manuals

The Business Practice Manuals (BPMs) developed by the CAISO are intended to contain implementation details consistent with, and supported by, the CAISO Tariff—including instructions, rules, procedures, examples and guidelines for the administration, operation, planning, and accounting requirements of the CAISO and the markets. Table 1 lists the currently available CAISO BPMs.

Table 1 CAISO BPMs

Title
BPM for Candidate CRR Holder Registration
BPM for Change Management Process for MRTU BPMs
BPM for Compliance Monitoring
BPM for Congestion Revenue Rights
BPM for Credit Management
BPM for Definitions and Acronyms
BPM for Managing Full Network Model
BPM for Market Instruments
BPM for Market Operations
BPM for Metering
BPM for Outage Management
BPM for Reliability Requirements
BPM for Rules of Conduct Administration
BPM for Scheduling Coordinator Certification and Termination
BPM for Settlements and Billing
BPM For the Transmission Planning Process

## 1.2 Purpose of this Business Practice Manual

This BPM explains the CAISO Transmission Planning Process, as well as the annual Transmission Plan produced by this process. Additionally, the BPM discusses how other associated processes performed by the CAISO's Planning and Infrastructure Development Department serve to guide the enhancement and expansion of transmission facilities to ensure that the CAISO Controlled Grid can satisfy the needs of a competitive bulk power market in a

reliable, economically efficient, and environmentally acceptable manner. In so doing, this BPM, together with corresponding CAISO Tariff provisions on the Transmission Planning Process, serve to fulfill the requirements of the Federal Energy Regulatory Commission's (FERC) Final Rule on *Preventing Undue Discrimination and Preference in Transmission Service*, Order No. 890 ("Order No. 890").<sup>1</sup> Among other things, this Order requires all transmission providers, including independent system operators, to implement and document, through open access Tariffs and other public postings, a coordinated, open, and transparent transmission planning process that complies with the planning principles and other requirements articulated in Order No. 890.

The provisions of this BPM are intended to be consistent with the CAISO Tariff. If, however, the provisions of this BPM conflict with the CAISO Tariff in any way, the CAISO is bound to operate in accordance with the CAISO Tariff. Any provision of the CAISO Tariff that may have been summarized or repeated in this BPM is only to aid understanding. Even though every effort will be made by the CAISO to update the information contained in this BPM and to notify Market Participants of changes, *it is the responsibility of each Market Participant* to ensure that he or she is using the most recent version of this BPM and to comply with all applicable provisions of the CAISO Tariff.

Any reference in this BPM to the CAISO Tariff, a given agreement, or any other BPM or instrument, is intended to refer to that Tariff, agreement, BPM or instrument as modified, amended, supplemented or restated in the most current version.

The captions and headings in this BPM are intended solely to facilitate reference and not to have any bearing on the meaning of any of the terms and conditions of this BPM.

### 1.3 Specific Topics Covered by this BPM

In this BPM, the following general topics will be covered:

- Overview of the CAISO Transmission Planning Process that covers the schedules and scope of each stage of the process.
- Roles and responsibilities of Participating Transmission Owners (PTOs) and participants in the CAISO Transmission Planning Process (TPP)
- The "stages" that form the Transmission Planning Process, such as:
  - Development of Unified Planning Assumptions and Study Plans
  - Performance of technical studies and management of the Request Window
  - Project approval process and development of CAISO Transmission Plan
- General calendar and major milestones of the TPP
- A description of the types or categories of transmission upgrades or additions identified through the TPP, including:
  - Reliability transmission projects
  - Economic transmission projects
  - Location Constrained Resource Interconnections Facilities (LCRIF)

<sup>1</sup> Preventing Undue Discrimination and Preference in Transmission Service, Order No. 890, III FERC Stats. & Regs., Regs. Preambles ¶31,241 (2007).

- Long-term Congestion Revenue Rights (Long Term CRRs) Projects
- Other key components related to the Transmission Planning Process include:
  - Request Window, including instructions and requirements for submitting study requests or project proposals to be considered in the CAISO Transmission Plan
  - Project final approval principles
  - Study and approval processes for Large Projects and projects with a capital cost of less than \$50 million.
- Information requirements from various participants to facilitate the Transmission Planning Process
- The availability of planning information provided by CAISO and accessibility of that information
- The CAISO's involvement in regional and sub-regional transmission planning with neighboring entities, and sub-regional and regional planning groups

## 2. Overview of the Transmission Planning Process and Annual Transmission Plan

The continuing development and growth of the CAISO's competitive markets necessarily rest, in significant part, on a foundation of adequate transmission infrastructure. Therefore, a primary function of the CAISO is to plan for, and promote, the enhancement and expansion of transmission capability within its footprint. The CAISO, with cooperation from Participating Transmission Owners (Participating TOs), Market Participants, Load Serving Entities (LSEs), publicly-owned utilities (POUs), neighboring transmission providers, regional and sub-regional planning groups including WECC committees such as TEPPC, state regulatory authorities and other affected customers or entities (collectively referred to as TPP Participants), perform this function through the Transmission Planning Process in accordance with the terms of Section 24 of the CAISO Tariff,<sup>2</sup> as well as the business rules set forth in this BPM. The TPP ensures independent analyses and recommendations, supported by timely and meaningful opportunities for broad TPP Participant input and independent CAISO Board of Governor approval, all of which are ultimately incorporated into an annual CAISO Transmission Plan, project-specific reports, and other specific transmission-dependent resource adequacy studies.

### 2.1 The CAISO Transmission Planning Process

The CAISO's Transmission Planning Process is an integrated, open, participatory and transparent process that focuses on ensuring reliable, economically efficient, and non-discriminatory use of the transmission system. It accounts for three levels of transmission planning to meet these objectives:

<sup>2</sup> Reference to Section 24 of the CAISO Tariff also constitutes reference to Appendix EE of the CAISO Tariff. Appendix EE includes the majority of the CAISO Tariff provisions governing the Transmission Planning Process prior to the effective date of MRTU. Appendix EE will expire upon the commencement of MRTU and the relevant tariff sections will again be found in Section 24 of the CAISO Tariff. When there is a potential conflict between the pre-MRTU Tariff provisions and the MRTU Tariff provisions, this BPM references the MRTU Tariff provisions.

- Local planning – Planning for the transmission systems of the CAISO's Participating TOs to meet the needs of LSEs serving Load within the CAISO Control Area. The PTOs planning activities are integrated into the 3-stage TPP that will be described in this BPM. In general, the PTOs will perform their studies using the same study assumptions, tools, and methodologies documented in the Study Plan that will be discussed with TPP Participants during the first stakeholder meeting in Stage 1 of the process. The study results from PTO studies will be presented during the CAISO Transmission Plan stakeholder meeting conducted during Stage 3. In addition, transmission projects proposed by PTOs must go through the Request Window during Stage 2 and will be evaluated by CAISO at the same time as the projects being proposed by other Project Sponsors. Consequently, TPP participants can participate in the local planning activities conducted by the CAISO throughout each stage of the planning process.
- Sub-regional planning – Planning at this level encompasses two components. First, the CAISO itself conducts sub-regional planning by aggregating the assessment of transmission needs of the Participating TOs and LSEs within the CAISO Balancing Authority Area. Second, as part of the foregoing process, the CAISO plans for the needs of the CAISO Balancing Authority Area, through the reciprocal exchange of transmission plans and other information, among the CAISO, Participating TOs and transmission systems neighboring the CAISO Balancing Authority Area (Interconnected Balancing Authority Areas) and/or established sub-regional planning entities. The CAISO believes this type of planning broadly facilitates the consistency of data, identification of efficiencies, and the avoidance of duplication to ensure simultaneous feasibility of local planning outcomes.
- Regional planning – Planning across sub-regions through the WECC, including by means of the CAISO's membership and active participation in WECC committees such as Transmission Expansion Planning Policy Committee (TEPPC).

Further, the implementation of the Transmission Planning Process is generally achieved through three stages below. In addition, the process also relies on the Request Window that will be explained in more detail in section 3.

- Stage 1: Identification of Unified Planning Assumptions and development of the Study Plan.
- Stage 2: Performance of technical analyses, posting of study results, and the proposed mitigation plans.
- Stage 3: Project approval and development of CAISO Transmission Plan.

Finally, there are standards and interrelated planning information that drive the Transmission Planning Process, including, but not limited to:

- NERC/WECC Regional Reliability Council Transmission Planning Standards and Criteria
- CAISO Grid Planning Standards
- CAISO Annual Report on Market Issues and Performance
- Reliability transmission project proposals
- Economic Planning Studies and Economic transmission project proposals, including Merchant Transmission Facilities
- Other alternatives or input CAISO receives from the Request Window
- Sub-regional transmission expansion plans

- Local Capacity Area Resource requirements
- Generator Interconnection Requests
- Generation and import deliverability assessments
- Reliability and congestion concerns from CAISO Short-term plan
- Long-term CRR feasibility assessments
- State initiatives, mandates, and policies.

### 2.1.1 Roles of Participants in the Transmission Planning Process

In order to achieve this multi-tiered<sup>3</sup> planning perspective, the CAISO engages with its TPP Participants. The anticipated roles of respective TPP Participants are summarized in table 2:

---

<sup>3</sup> Local, sub-regional, and regional planning



Table 2: Roles and Responsibilities of TPP Participants

No	Participant	Roles and Responsibilities
1	<b>CAISO</b>	Leads and manages the CAISO TPP; responsible for coordinated planning of CAISO Controlled Grid; performs NERC's Planning Coordinator functions; conducts transmission planning studies for the CAISO Controlled Grid to identify the need for system reinforcements; proposes potential solutions as part of its study results as needed, and conducts an independent review of all proposed projects and project alternatives received through the Request Window; manages the Request Window for proposing new transmission projects and/or study requests; approves beneficial projects consistent with CAISO Tariff authority; administers LGIP/SGIP processes; participates in regional/sub-regional planning groups; and conducts simultaneous feasibility analyses for Long Term CRRs.
2	<b>PTOs</b>	Participate in the CAISO TPP; perform NERC's Transmission Planner functions, including proposal of study assumptions for consideration in the Study Plan, updating of planning base case models, conducting local and bulk transmission planning studies of its service area under the direction of the CAISO for inclusion in the CAISO TPP; develop, propose and submit new transmission project proposals through the Request Window; prepare meaningful cost estimates for proposed and alternative facilities upon CAISO's request; conduct interconnection studies, facility studies, participate in regional/sub-regional planning groups, and construct projects when designated under the CAISO Tariff. The roles and responsibilities of the PTOs and CAISO are described in more detail at *** of this BPM.
3	<b>Load Serving Entities (LSE)</b>	Participate in the CAISO TPP; assist in capacity planning and conduct procurement to meet resource adequacy requirements; obtain CRRs, voluntarily provide resource planning information, and propose desired non-wire alternatives.
4	<b>Publicly Owned Utilities (POU)</b>	Participate in the CAISO TPP; voluntarily exchange information and coordinate plans with CAISO and PTOs and other regional and sub-regional planning groups.
5	<b>California Energy Commission (CEC)</b>	Participates in the CAISO TPP; conducts Integrated Energy Policy Report (IEPR) and other strategic plans; provides data, permitting and approval of new thermal generation.
6	<b>California Public Utilities Commission (CPUC)</b>	Participates in the CAISO TPP; issues CPCN/environmental permits for new transmission projects, and administers the resource portfolio requirements of its jurisdictional LSEs, including the Renewable Portfolio Standard (RPS).

No	Participant	Roles and Responsibilities
7	<b>Other TPP Participants/Affected Customers or Entities</b>	Participate in the CAISO TPP; propose new transmission projects; request studies, submit project proposals through the Request Window as needed, and provide relevant information and data.
8	<b>Regional and Sub-regional Planning Groups, including TEPPC and neighboring transmission providers</b>	Participate in the CAISO TPP; perform transmission planning studies (including congestion studies) when appropriate; propose new conceptual facilities, along with analyses of alternatives; exchange information toward shaping transmission plans from sub-regional and regional perspectives; and consider CAISO's plans with respect to the larger regional or sub-regional transmission plan.

The integrated and coordinated nature of the Transmission Planning Process is set forth in Figure 1 (see p. 15 of this draft).

#### 2.1.1.2 Coordination of the Meeting, Planning and Study Responsibilities of the PTOs and CAISO.

##### Tariff §24.2.2.1

The PTOs play an important role in the CAISO TPP as Transmission Planners within the CAISO Balancing Authority Area as defined by the NERC Functional Model. In particular, the PTOs provide key planning data that will be used in each TPP cycle. Consequently, the success of overall transmission planning activities relies on careful coordination between CAISO and the PTOs to ensure the effectiveness of the TPP. The paragraph below summarizes the major tasks, roles, responsibilities, and the timeline for the coordination that occur throughout each TPP cycle that apply to CAISO and its PTOs.

##### ➤ Planning Data Provided by the PTOs

The PTOs are responsible for providing the following planning data to the CAISO by the due date shown in Attachment 3. The CAISO validates and incorporates planning data and other related information from the PTOs as well as from other sources (such as WECC and appropriate regional planning organizations) to develop the Study Plan during each planning cycle.

- The bus-level load forecast in each local area to be studied as defined in the Study Plan and the written methodology of how to derive these load forecasts if any modifications have been made to the California Energy Commission (CEC) load forecast.
- Contingency files that include all contingencies that will be studied in each scenario identified in the study plan. The contingency file must be provided in a defined electronic format that is readable by GE-PSLF or other power

system analysis tools, or with detailed documentation as to the format in which it is provided.

- Verified dynamic files in GE-PSLF format (flat responses for all channels under normal conditions) for each scenario transient stability study will be studied.
- Change files or EPC files that include CAISO-approved transmission projects and applicable regulatory approved generation projects to reflect modeling changes that have been made to the previous year base cases.

➤ PTO and CAISO Technical Studies Identified in the Study Plan

The CAISO is responsible for developing the Study Plan that describes the details of all technical studies to be conducted in each planning cycle, including the roles and responsibilities of each entity conducting the studies, consistent with NERC functional responsibilities and with input from the PTOs and other stakeholders. CAISO and PTOs shall conduct the technical studies based on the scope, scenarios, and assumptions delineated in the Study Plan.

➤ NERC Reliability Base Cases Developed by the PTOs

Once the scope and assumptions of each study have been established through the Study Plan, PTOs are responsible for developing the base cases of their systems for NERC compliance assessments, pursuant to the requirements imposed under the applicable NERC requirements. The base cases shall then be submitted to CAISO.

➤ Planning Data Developed by the PTOs and Maintained by CAISO

The CAISO will assimilate the PTO base cases and verify that the modeling in the base cases is consistent with the scope and assumptions defined in the Study Plan. CAISO also is responsible for posting and managing planning data on its Regional Transmission secured website.

➤ PTO Transmission Upgrades and Additions Submitted through the Request Window

The Request Window is a 3.5 month time period wherein Project Sponsors and TPP Participants annually may submit project proposals or certain types of study requests to the CAISO. The PTOs must submit reliability transmission project proposals through the Request Window by October 15<sup>th</sup> of each year.

➤ NERC Reliability Assessments Performed by CAISO and PTOs

CAISO and the PTOs are each responsible for performing NERC reliability assessments using the base cases developed by the PTOs and integrated into the CAISO Balancing Authority Area-wide base case. These studies should be conducted according to the scope of roles and responsibilities, and according to the time schedule, set forth in Attachments 2 and 3 to this BPM.

➤ **Technical Studies Conducted by CAISO**

As part of its planning responsibilities for the entire Balancing Authority Area, CAISO also conducts studies to identify potential system limitations and congestion issues and may propose mitigation plans to address the needs that arise from other drivers affecting system design and requirements. These studies include the Seams Assessment, the Local Capacity Requirements Study, the Large Generator Interconnection (LGIP) Study, the CAISO Short-Term Plan, the Economic Planning Study, and other special plans (e.g., studies related to the integration of intermittent resources into the state renewable resource portfolio and onto the CAISO-controlled grid) that can vary from year to year. The CAISO will post the results of its studies and any available mitigation proposals on its website in mid-September.

➤ **Detailed Scope of Transmission Projects Developed by CAISO and PTOs**

During Stage 2, the CAISO will identify transmission needs, and may propose preliminary solutions to meet applicable standards. Once these transmission needs and preliminary solutions are identified, and at the request of CAISO, the PTOs will be responsible for providing the detailed scope of potential solutions in accordance with NERC Reliability Standards TPL-001 through TPL-004 and identifying the potential projects that would resolve the needs specified by the CAISO. Upon receiving CAISO's requests, the PTOs shall provide in a timely manner the detailed scope of the requested transmission projects such as detailed cost estimate, alternative routes, alternative solutions or any other information related to the proposed transmission projects to the CAISO. The CAISO, in consultation with the PTOs, will establish the time frame in which this information is to be provided based upon a consideration of the complexity of the project and other pertinent factors.

➤ **Coordination of Public Meetings Scheduled by CAISO**

The CAISO is responsible for managing the public meetings held throughout the TPP. This includes issuing market notices, posting meeting materials prior to the meeting, providing phone and web-access, leading the meetings, and working with PTOs on the agendas and topics being presented in the public meetings. The PTOs shall participate in the CAISO public meetings, provide meeting materials and present the topics according to the agenda. In addition to public meetings that will be held at the CAISO offices, additional public meetings may be held at local PTO locations to discuss the issues specific to each PTO. Although such meetings will be held locally, the CAISO will be responsible for leading the meetings and ensuring that TPP Participants notify TPP participants through the market notices, posting and distributing meeting materials, similar to public meetings held at CAISO offices.

➤ **Study Reports Provided by CAISO and the PTOs and Development of the Transmission Plan**

The CAISO shall publish a preliminary report containing the assumptions, methodology, and study results for its NERC reliability assessment, as well as the results of the other technical studies conducted by the CAISO, by September 15<sup>th</sup> of each year. By October 15<sup>th</sup> of each year, the PTOs shall provide the CAISO the final study reports that document their NERC compliance, updates on the status of transmission projects previously approved by CAISO but not yet in-service, and newly proposed transmission additions and upgrades. During Stage 3, CAISO will incorporate relevant planning

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information from these reports into the annual CAISO Transmission Plan, as well as assimilate the studies presented by the PTOs, other TPP Participants and those conducted on its own accord. CAISO may approve projects included in the transmission planning studies prepared by the PTOs, alternative projects proposed by Non-PTOs, or projects identified by the CAISO.

➤ Appointment of Representatives to Coordinate CAISO/PTO Duties and Responsibilities

Each PTO and the CAISO shall appoint representatives that will be responsible for the coordination of planning activities between CAISO and the PTOs. The general responsibilities of the representatives will be to:

- Ensure that the exchange of information (planning data, study results, report, etc.) or other information will occur according to the schedule identified in the Study Plan
- Represent or delegate other individuals to participate in the CAISO TPP public meetings or other related meetings
- Act as the point of contact for the CAISO's requests to develop detailed transmission projects and provide responses to related questions or comments raised by TPP Participants

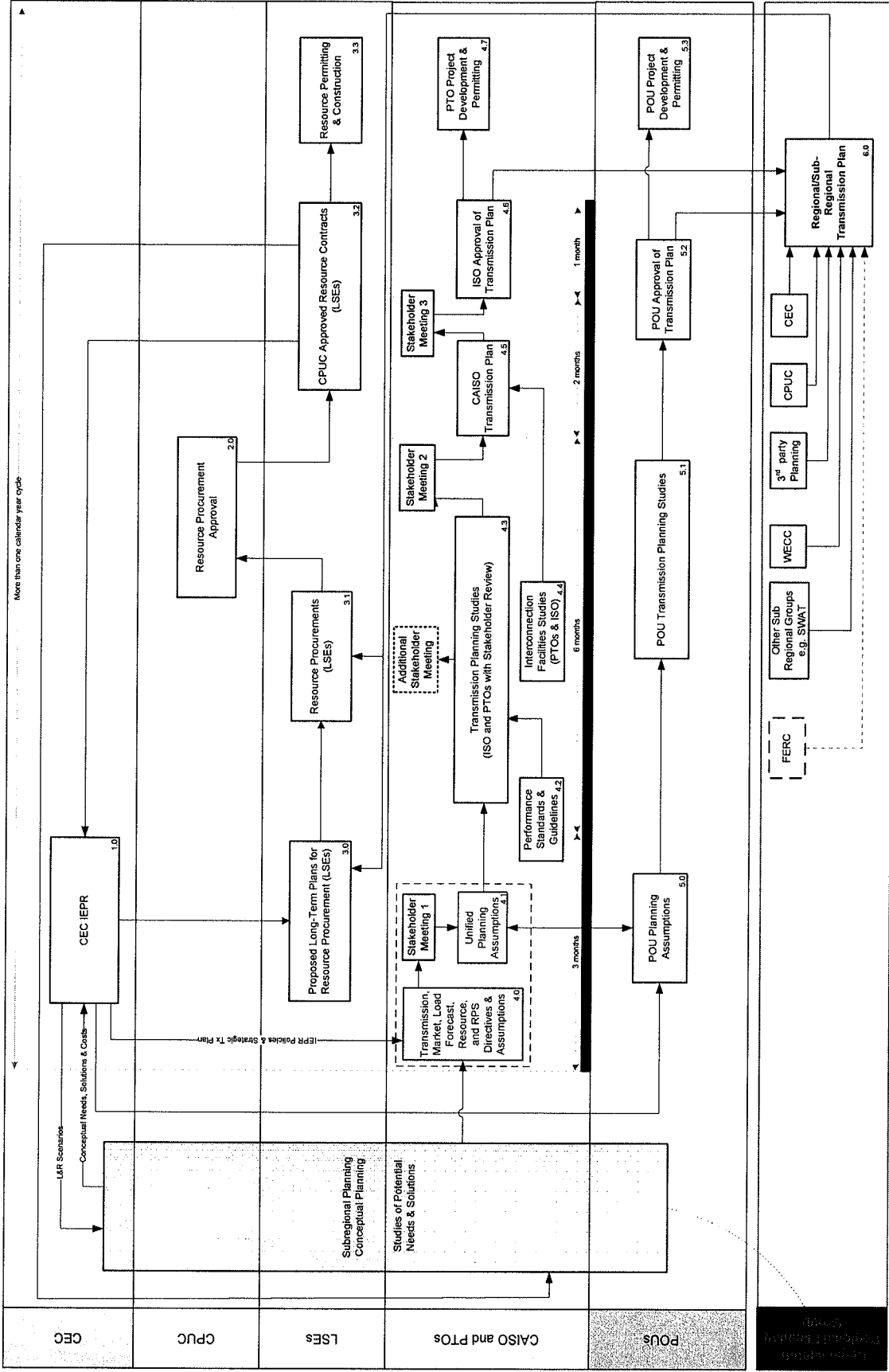


Figure 1: Coordination among Entities Regarding California ISO Transmission Plan

## 2.1.2 General Description of TPP Stages

The CAISO conducts the TPP on overlapping cycles of approximately 13 months, beginning in January of Y1 and ending in February of Y2.<sup>4</sup> The cycle is comprised of a Request Window and the three general planning stages described in Section 2.1, as well as several supporting processes that culminate in the CAISO’s Transmission Plan and other identified planning reports. The CAISO’s planning horizon is a minimum of ten years and its Transmission Plan is presented to the CAISO Governing Board for review in February or March of each year. Figure 2 illustrates the overview of the timeline of Request Window and the three planning stages.

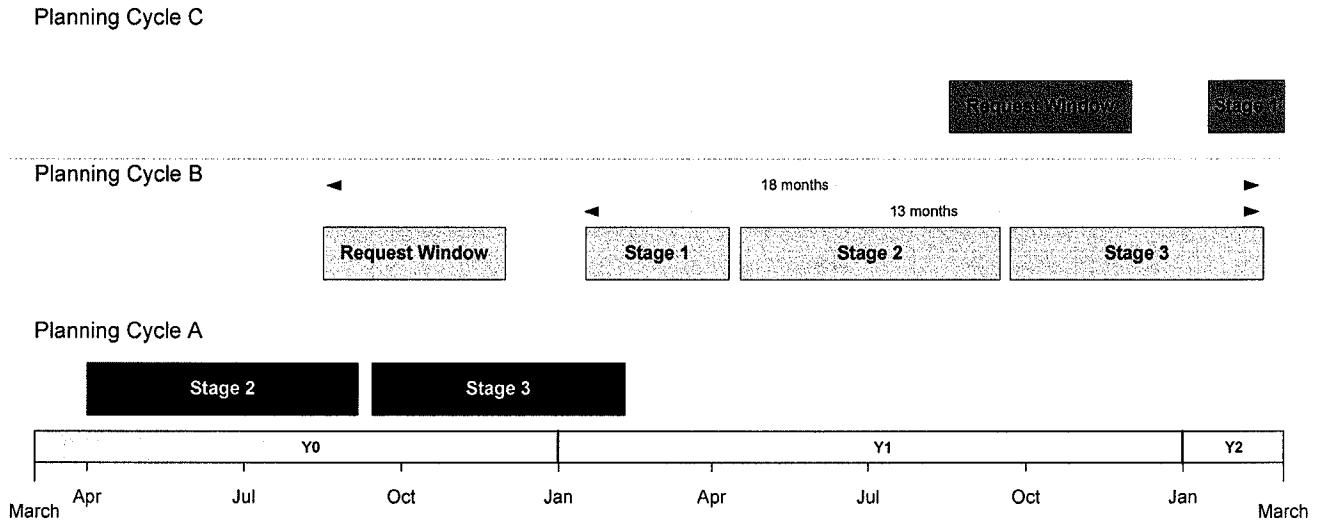


Figure 2: The CAISO TPP Stages and the Request Window

### 2.1.2.1 Request Window

#### CAISO Tariff Section 24.2.2

The CAISO’s Transmission Planning Process utilizes a Request Window to provide TPP Participants with the opportunity to propose economic or reliability-driven transmission upgrades or additions (projects), requests for Economic Planning Studies, resource alternatives, *i.e.*, Demand management programs or Generation, or otherwise submit additional relevant data to the CAISO for inclusion in the following year’s annual Transmission Planning Process. The Request Window opens August 15<sup>th</sup> and closes November 30<sup>th</sup> of each planning cycle.

All transmission project proposals seeking CAISO approval must be submitted through the Request Window. These include:

- Reliability transmission projects

<sup>4</sup> If the TPP cycle is presumed to begin with the Request Window, which is opened between August 15 through November 30 of Y0 and overlaps the previous planning cycle, the entire duration of the process is 18 months.

- Economic transmission project proposals, including upgrades or additions proposed to reduce Local Capacity Area Resource requirements, reduce or eliminate Congestion, or Merchant Transmission Facilities to obtain Merchant Transmission Congestion Revenue Rights. Definitions and distinctions between Economic and Reliability transmission projects are defined in section 4.2.1 and 4.2.2 of this BPM.
- Location Constrained Resource Interconnection Facilities
- Transmission upgrades or additions determined to be the appropriate mechanism to maintain the feasibility or allocated Long-term CRRs
- Network Upgrades identified through CAISO Interconnection Studies
- Economic Planning Study requests
- Specific Demand management, Generation, and other resources for potential inclusion in the Transmission Planning Process analyses
- Operating solutions to reduce Local Capacity Requirements
- Alternative solutions to transmission projects proposed during the Request Window.

Besides the planning data, the CAISO will apply “screening criteria” to each submission it receives from the Request Window. Please refer to section 3.3 of this BPM for more information. Upon satisfying the screening criteria, each submission may be included in a different stage of the TPP based upon the nature of each submission. The following are three types of submissions that will likely be received through the Request Window and how these submissions will be integrated into the TPP stages:

- Economic Planning Study Requests<sup>5</sup> will be included in the preparation of the following cycle's Study Plan.
- Project proposals that solve a need either identified by CAISO or with which CAISO concurs, but which require additional technical studies to be conducted as part of the project evaluation process, will be included in the following cycle's Study Plan.
- Project proposals for which all necessary technical studies have been completed will be considered in the approval process (Stage 3) of the CAISO planning process and included in the Transmission Plan for that cycle.

Reliability transmission projects proposed by PTOs shall be submitted by October 15 of each year to allow sufficient time for stakeholders to review these projects. The CAISO will post a summary of valid project proposals and study requests it receives from the Request Window on the CAISO website. The annual CAISO Transmission Plan will also provide a summary of these submissions.

The TPP Participants sponsoring any proposed project shall provide the required information for the projects seeking CAISO approval as further described in this BPM. These include (a) a description of the project's objectives, (b) a list of alternative projects that would accomplish these

<sup>5</sup> These include High Priority Economic Planning Studies that will be performed by CAISO and Non-High Priority Economic Planning Studies that will be performed under CAISO direction by the requesters and at their expense.



objectives, and (c) any methodological and/or data requirements imposed or suggested by the requesting party's or parties' local regulatory authority(ies).

As further discussed in Section 3.4, the screening process applied by CAISO to Request Window submissions generally assesses proposed transmission projects against three categories of criteria:

- (1) whether the submissions are "complete" in that they provide all necessary data or information requested by the CAISO with respect to the particular category of submission;
- (2) whether the proposal is or is not functionally duplicative of transmission upgrades or additions that have been previously approved by the CAISO; and
- (3) whether the proposal, if a sub-regional or regional project that affects other interconnected Control Areas, has been reviewed by the appropriate sub-regional planning entity and is not inconsistent with any sub-regional planning entity's preferred solution or project.

The CAISO applies separate screening criteria to Economic Planning Study Requests to select which requests will be designated High Priority Economic Planning Studies. High Priority Economic Planning Studies are included in the Study Plan for the upcoming planning cycle and will be performed by the CAISO at its cost. If a requested Economic Planning Study meets the screening criteria for a High Priority Study and is regional or sub-regional in scope, the study shall be submitted to WECC's Transmission Expansion Planning Policy Committee (TEPPC) or applicable sub-regional planning group. If TEPPC or other sub-regional planning group does not select such Economic Planning Study for inclusion in its study scope, the CAISO will retain the responsibility to conduct the study.

Similarly, other Economic Planning Studies not designated as High Priority Economic Planning Studies, but which meet the screening criteria and are regional (and potentially sub-regional) in scope, will be submitted to WECC's Transmission Expansion Planning Policy Committee (TEPPC) as part of its joint coordinated evaluation and prioritization process. The TEPPC process will determine whether the request is performed and by whom. Economic Planning Studies that are neither High Priority Economic Planning Studies nor regional or sub-regional in scope may still be performed at the proponent's expense and submitted to the CAISO for review and potential inclusion in the final Transmission Plan. The CAISO will coordinate with any third party performing its own study to ensure that the study is consistent with the data, assumptions, and methodology employed by the CAISO.

Any proposed transmission upgrades or additions that do not pass the screening process will be subject to the CAISO's alternative dispute resolution (ADR) procedures under Section 13 of the CAISO Tariff.

### 2.1.2.2 Stage 1: Unified Planning Assumptions of the Study Plan

CAISO Tariff Sections 24.2.3 and 24.2.4

Stage 1 of the Transmission Planning Process involves development of the Study Plan which encompasses the Unified Planning Assumptions<sup>6</sup> for each technical study. The objective of this

<sup>6</sup> The term "Unified Planning Assumptions" means the proposed assumptions of each technical study that stakeholders have reviewed and agree upon, regarding how the studies shall be conducted.

stage is to determine the goals of, and agree upon assumptions for, the various studies and project evaluations to be performed as part of a TPP cycle. Information from the Request Window conducted in the previous TPP cycle, as well as information from PTOs, neighboring balancing authorities, state agencies, regional and sub-regional planning groups<sup>7</sup> will be integrated into the development of the Study Plan. Input is also expected from the TPP Participants, and the CAISO will consider comments received via email to [regionaltransmission@caiso.com](mailto:regionaltransmission@caiso.com). This information forms the basis of the Study Plan produced by the CAISO as shown in Attachment 1. The Study Plan articulates the Unified Planning Assumptions and provides TPP Participants with a coordinated plan for completing all of the required and proposed studies during Stage 2 of the TPP cycle. The Study Plan lists all the studies to be conducted, describes basic planning assumptions and inputs, sources for those assumptions and inputs, how assumptions and inputs will be applied, methodology, tools used, study criteria, (i.e. WECC Planning Standards), expected study outputs and assignments for performing specific analyses to PTOs and third parties as determined by the CAISO. Major milestones such as tentative schedules and locations of the meetings, postings of information, dates for the submission of comments and CAISO responses to the comments, along with contact information of subject matter experts (SMEs) are also part of the scope of the study plan. Finally, the Study Plan will document the scope and major milestones for the evaluation of Large<sup>8</sup> Projects.

Generally, the components of the Study Plan are Demand, transmission system topology, generation assumptions, and imports. As mentioned earlier, the information contained in the Study Plan is intended to allow replication of the studies performed during the CAISO's TPP by competent transmission engineers.

*The timeframe for Stage 1 development is January through April of each year. The first CAISO TPP stakeholder meeting (public meeting) will be held to present the draft Study Plan to the stakeholders approximately in March of each year.*

### 2.1.2.3 Stage 2: Technical Studies and Presentation of Results

#### CAISO Tariff Section 24.2.5

Stage 2 of the TPP involves the performance of technical studies to identify the need for system reinforcement and to propose applicable solutions. The initial results of these studies will be presented to TPP participants during this stage. The technical studies will follow the Study Plan using the Unified Planning Assumptions to the maximum extent possible. *The time frame for Stage 2 is May – October of each year.* The CAISO will perform technical studies according to the Study Plan and will post its study results on the CAISO website by mid-September of each year. The CAISO will rely on its study results as the benchmark during the Stage 3 project

<sup>7</sup> By the 2<sup>nd</sup> week of December of each year, the CAISO will send out data requests to the neighboring balancing authorities, state agencies, regional/sub-regional planning groups, and TPP participants for the information that should be considered in the development of the Study Plan.

<sup>8</sup> Large Projects are defined as a transmission upgrade or addition that exceeds \$200 million in capital costs and consists of a proposed transmission line or substation facilities capable of operating at voltage levels greater than 200 kV. A large project may also be a project that does not meet the dollar or voltage level requirement, but in the CAISO's opinion raises significant policy issues warranting a separate planning process.

approval process. A minimum of one public meeting will be held in October of each year<sup>9</sup> to deliver preliminary study results to TPP Participants for their review and comment. The information presented to the TPP Participants shall include:

- Summary of findings (need identifications)
- Proposed solutions for the selected identified problems, including detailed descriptions of any reliability criteria violations and proposed mitigation solutions
- Findings on High Priority Economic Planning Studies (i.e. feasible upgrades to relieve congestions or bottlenecks) and, if necessary, the scope for needed further analysis

As discussed earlier in this BPM, the PTOs are required to submit reliability transmission projects through the Request Window by October 15 each year. Before Stage 2 is complete, the CAISO will hold, in coordination with the PTOs or other parties, additional public meetings to discuss results of system performance assessment studies conducted by the PTOs and potential solutions to the problems identified in those studies (wire and non-wire). These meetings provide an additional opportunity for TPP Participants to provide input on the transmission alternatives to be considered in the CAISO's Transmission Plan. All meetings will be noticed by the CAISO by Market Notice and will be coordinated with the CAISO's stakeholder calendar.

#### 2.1.2.4 Stage 3: Project Approval and Development of the Expansion Transmission Plan

##### CAISO Tariff Section 24.2.5

Stage 3 of the TPP involves the approval of projects from the Request Window that meet the CAISO project screening criteria, documentation of the technical study results and information related to the planning activities, and addressing TPP Participant comments and/or concerns. The primary product resulting from this stage is the CAISO Transmission Plan, which will be presented to the CAISO Board of Governors. Also, if consistent with the agreed upon schedule in the Study Plan, the Transmission Plan may include the results of other specific technical studies involving Large Projects or other identified planning evaluations. Otherwise, Large Projects or other identified planning evaluations will be presented independently of the Transmission Plan. Either way, the status of large projects will be documented in the Transmission Plan. *The timeframe for this activity is November – February.*

During this stage, the CAISO develops its draft CAISO Transmission Plan report primarily based on the final study results. The Transmission Plan lists, but is not limited to, the status of the transmission projects subject to CAISO management approval (i.e., those with capital investment < \$50 million), along with the basis for the CAISO's decision on such projects, including analyses of other alternatives not recommended by CAISO management. The Transmission Plan also provides the status of projects CAISO previously approved but still under construction, and the status of projects requiring more than \$50 million of capital investment that are separately submitted to the CAISO Governing Board for approval. As noted above, the technical studies, reports and recommendations for those separately reviewed transmission projects may be prepared concomitantly with the Transmission Plan or on an alternative schedule.

<sup>9</sup> The CAISO will send market notice to notify TPP participants for the exact dates when its study results will be posted as well as the date for the stakeholder meeting.

The CAISO will present a draft Transmission Plan report to TPP Participants at a public meeting in accordance with the timeframes set forth in this BPM. As part of this process, the CAISO will explicitly request the participation of representatives from neighboring transmission providers and sub-regional planning organizations, in order to seek input and identify potential improvements for the following year's Transmission Plan. The CAISO also will present its Transmission Plan at relevant regional and sub-regional planning groups. All TPP Participant comments and CAISO responses throughout the development of the Transmission Plan will be posted on the website (<http://caiso.com/1f42/1f42d6e628ce0.html>) and will be addressed in the final Transmission Plan. The CAISO Transmission Plan will be finalized and scheduled for presentation during the CAISO Governing Board meeting in February or, if necessary, in March.

PTOs and other successful Project Sponsors may move toward the development and permitting of those projects approved by the CAISO Governing Board or management, as applicable. Projects with estimated capital investment of \$50 million or less that are included as approved in the final Transmission Plan are deemed formally approved by CAISO management. Figure 3 illustrates the relationship between each stage of the CAISO TPP and the Request Window.

# The CAISO Transmission Plan

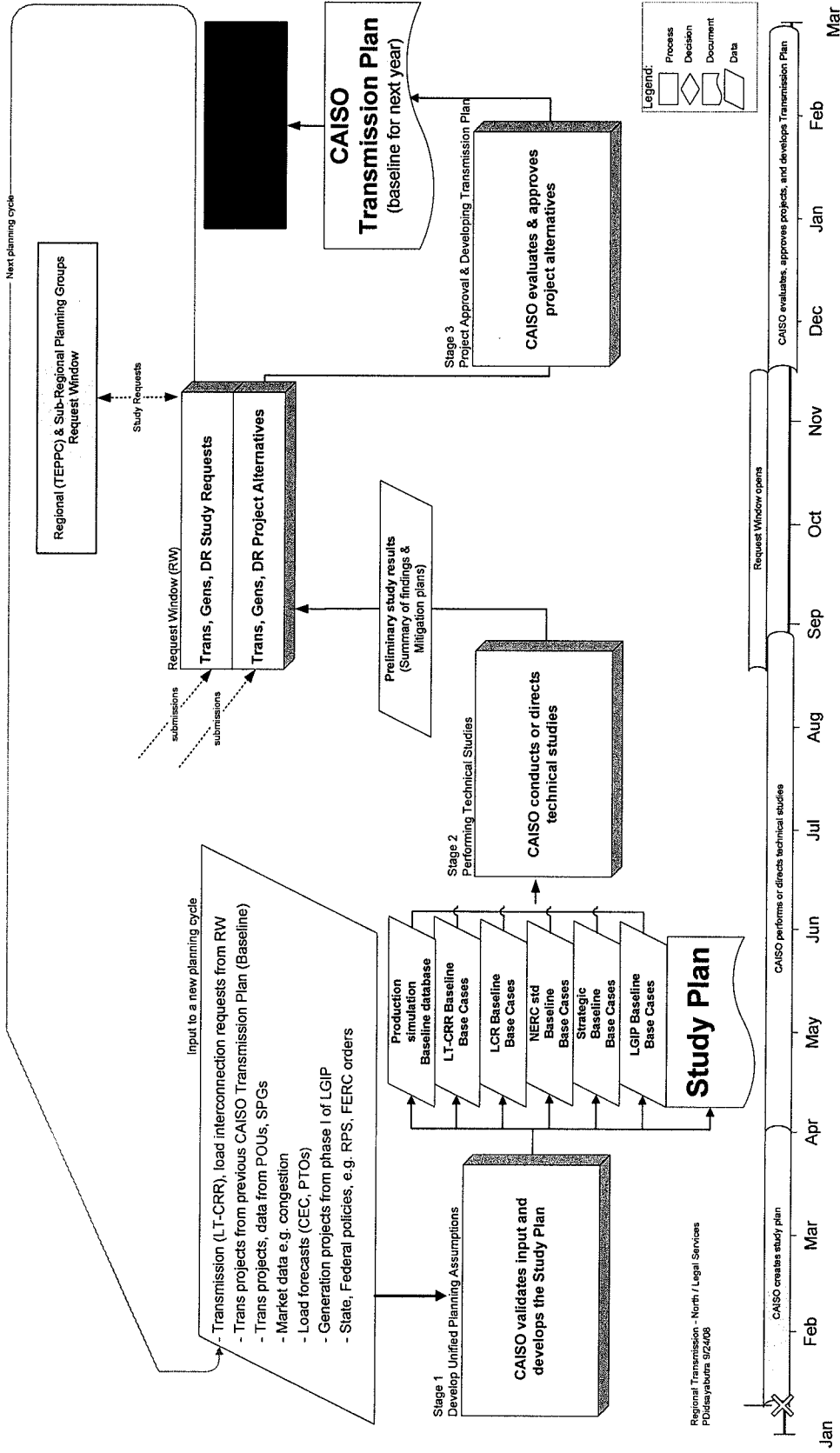


Figure 3: Request Window and three stages in the CAISO Transmission Planning Process

### 2.1.3 TPP General Calendar

The following table describes the approximate proposed timelines and milestones for the CAISO TPP:

Transmission Planning Process Schedule

No	Due Date	Activity
1	2 <sup>nd</sup> week of December	CAISO sends a letter to neighboring Balancing Authorities, sub-regional and regional planning groups requesting planning data and other related information to be included in the CAISO Transmission Plan
2	2 <sup>nd</sup> week of January	PTOs, neighboring balancing authorities, regional/sub-regional planning groups, and other TPP participants provide CAISO planning data
3	End of January	If needed, CAISO Planning Standards Committee Meets
4	2 <sup>nd</sup> week of February	CAISO develops the Draft Study Plan and posts it on CAISO website
5	March	<b>CAISO hosts Stakeholder Meeting #1</b>
6	Early April	The CAISO finalizes the Study Plan and posts the base cases and other planning data on its secured website
7	End of July	If needed, the CAISO hosts additional stakeholder meetings at the local locations
8	August 15	Request Window Opens
9	September 15	The CAISO posts preliminary study results on its Regional Transmission secure website
10	October 15	PTOs submit reliability project proposals through the Request Window along with their study reports
11	End of October	CAISO hosts Stakeholder Meeting #2
12	November 30	Request Window Closes
13	December-January	Projects with capital costs less than \$50 million will be submitted to the ELT meetings
14	End of January	The CAISO posts draft Transmission Plan on its website
15	February	CAISO hosts Stakeholder Meeting #3
16	February (or March) Board Meeting	CAISO presents Transmission Plan to the Board of Governors

This reflects the minimum level of activity. As noted, additional TPP Participant meetings may be scheduled as necessary, both for projects to be included in the Transmission Plan and for projects being studied through their own schedules. Should the issuance of the draft Study Plan, the CAISO preliminary study results, the PTO study submissions or the draft Transmission Plan be delayed beyond the approximate dates set forth above, the public meetings shall be accordingly adjusted.

## 2.1.4 Transmission Projects Identified Through the TPP

The TPP, which encompasses the CAISO's Large and Small Generator Interconnection Procedures (LGIP/SGIP), will identify the following categories of transmission additions or upgrades:

### 2.1.4.1 Transmission Projects Identified Through the LGIP/SGIP

- Reliability Network Upgrades – The transmission facilities at or beyond the Point of Interconnection necessary to interconnect a Large Generating Facility safely and reliably to the CAISO Controlled Grid, which would not have been necessary without the interconnection of the Large Generating Facility. This includes Network Upgrades necessary to remedy short circuit or stability problems resulting from the interconnection of the Large Generating Facility to the CAISO Controlled Grid. Consistent with WECC practice, Reliability Network Upgrades also include the facilities necessary to mitigate any adverse impact the Large Generating Facility's interconnection may have on a path's WECC rating.
- Delivery Network Upgrades – Transmission facilities at or beyond the Point of Interconnection, other than Reliability Network Upgrades, identified in the Interconnection Studies to relieve constraints on the CAISO Controlled Grid and which the Interconnection Customer or the PTO elects to fund.
- Interconnection Facilities – The PTO's Interconnection Facilities and the Interconnection Customer's Interconnection Facilities. Collectively, Interconnection Facilities include all facilities and equipment between the Generating Facility and the Point of Interconnection, including any modifications, additions, or upgrades that are necessary to physically and electrically interconnect the Generating Facility to the CAISO Controlled Grid. Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

In accordance with Tariff §7.2 and 7.5 of Appendix GG, the LGIP procedures for interconnection requests a queue cluster window, CAISO will coordinate the Phase II Interconnection Studies with the TPP, to the maximum extent possible, including:

- Consistency between the Interconnection Base Case Data used for the performance of Phase II Interconnection Studies and the Unified Planning Assumptions;
- Consideration of any conceptual transmission plans developed, but not rejected, in the TPP intended to access generation development areas as a means to satisfy the Network Upgrade requirements included in the Phase II Interconnection Study;

- Performance of sensitivities within the TPP to optimize transmission upgrades developed in the current TPP to achieve System Reliability, economic efficiency and satisfy Network Upgrade requirements;
- Consideration of future generation development potential in transmission upgrade designs pursuant to the criteria developed as part of the Unified Planning Assumptions;
- Consideration of phased development and option value of transmission projects to address uncertainty.

Generation projects entering the Phase II Interconnection Study will also be considered in the Unified Planning Assumptions, as appropriate. Transmission projects proposed through the Phase II Interconnection Study that require Board approval (those with capital costs of over \$50 million) will be integrated into the TPP stakeholder process.

#### **2.1.4.2 Transmission facilities originating outside the LGIP/SGIP and deemed “needed” under Section 24.1 of the CAISO Tariff**

- Reliability transmission projects – The CAISO obligates PTOs, as NERC Transmission Planners, to identify the need for any transmission additions or upgrades required to ensure System Reliability consistent with Applicable Reliability Criteria and CAISO Planning Standards. This obligation requires that the CAISO Controlled Grid be planned to a level that meets or exceeds transmission system performance criteria established by the WECC, NERC, Local Reliability Criteria, and other CAISO Planning Standards (collectively Reliability Criteria). Reliability transmission projects may also originate from CAISO recommendations from the CAISO’s short-term plan based on the past operational experiences. A transmission upgrade or addition will be justified on the basis of reliability where the project is specifically designed to mitigate or prevent identified Reliability Criteria violations.
- Economic transmission projects – These types of upgrades promote economic efficiency. The CAISO Tariff does not define economic efficiency. However, economic efficiency may be demonstrated where (1) the Project Sponsor, other than a PTO, commits to pay the full cost of the construction, maintenance, and operation of the addition or upgrade and rely on the receipt of Merchant Transmission Congestion Revenue Rights to recover such costs; or (2) the economic benefits of the upgrade or addition are expected to exceed its costs. Economically efficient transmission upgrades or additions may serve many objectives, including, but not limited to, lowering a region’s Energy production costs, reducing or eliminating Congestion, reducing capacity costs (*i.e.*, lowering Local Capacity Requirements for a Local Capacity Area), and efficiently accessing renewable Energy resources.
- LCRIF – A High Voltage Transmission Facility, proposed to connect location constrained resources in designated Energy Resource Areas (ERAs), that has been determined by the CAISO to satisfy, or conditionally satisfy, all of the requirements of Section 24.1.3 of the CAISO Tariff. (See Section 4.2.3 for further discussion.)
- Long-term CRR transmission projects – Transmission organizations must incorporate procedures into their Transmission Planning Processes that maintain or ensure the feasibility (but not the value) of allocated or awarded long-term firm transmission rights over their entire term. The terms under which the CAISO satisfies this requirement are



set forth in Section 24.1.4 of the CAISO Tariff and are further addressed in Section 4.2.6 of this BPM.

### 2.1.5 Large Project Evaluations

A Large Project is a transmission upgrade or addition that exceeds \$200 million in capital costs and consists of a proposed transmission line or substation facilities capable of operating at voltage levels greater than 200 kV. A large project may also be a project that does not meet the dollar and voltage levels described but that, in the CAISO's opinion, raises significant policy issues so as to require a separate planning process. Location Constrained Resource Interconnection Facilities are not included in this definition, regardless of the capital cost or voltage level of the transmission upgrade or addition.

Although the process to evaluate the impact from these projects is part of the CAISO TPP, Large Projects may require comprehensive technical studies to be conducted and it may take more than one planning cycle to complete the evaluation process. Consequently, in addition to the overview of these projects that will be documented in the overall Study Plan, the CAISO may develop individual study plans and public meeting schedules for the evaluation of each Large Project (and alternatives).

In developing the study plan and public process for the evaluation of Large Projects, CAISO may follow the guidelines set forth in Decision 06-11-018 issued by the California Public Utilities Commission on November 9, 2006. These guidelines set forth the requirements that must be met during the CAISO evaluation of a Large Project in order that a CAISO finding of electrical need for the project can be afforded a rebuttable presumption of reasonableness during the CPUC Certificate of Public Convenience and Need (CPCN) process.

Although the Large Project study process may proceed on a separate study and public participation track, the process will be coordinated with the TPP as follows:

- Development of the individual study plan and the schedule for completion of the necessary studies for such Large Projects may be determined through a separate TPP Participant public process involving additional noticed TPP Participant meetings and comment periods, and then published in addition to the Unified Planning Assumptions, if necessary.
- To maximize TPP Participant public participation, this additional meeting addressing study assumptions may be noticed both through CAISO Market Notices and through the media in the area in which the project will be located. Other meetings may also be held near the project's proposed or anticipated location.
- CAISO will attempt to apply the Unified Planning Assumptions to Large Projects to the maximum extent possible. Nonetheless, TPP Participants will be advised at public meetings during Stage 1 if individual study assumptions for Large Projects are being separately considered at other public meetings.
- CAISO will provide access to updates and information regarding Large Project alternatives similar to that provided for studies that will be incorporated into the Transmission Plan. Further, to the extent practical, the CAISO will seek to document, within the Unified Planning Assumptions and Study Plan, any special

data, assumptions and other inputs tailored specifically for Large Project proposals. Large Project status reports will be documented when CAISO posts its technical study results in mid-September and will also be provided in the annual CAISO Transmission Plan report.

Each Large Project recommended for approval by CAISO management will be presented to the CAISO Governing Board for approval in accordance to the schedule developed for the project.

## 2.2 CAISO Transmission Plan

The CAISO's Transmission Plan is the primary product of its TPP. Produced annually, it details information on newly proposed transmission projects and alternatives considered within the CAISO Balancing Authority Area, as well as external transmission facilities that will interconnect to the CAISO Controlled Grid. The Transmission Plan also articulates the plans or key activities of other participating entities and contains information on other issues such as Congestion analyses, a long-term projection of Local Capacity Requirements, resource deliverability and operational issues based on experiences learned from real-time operation. The Transmission Plan shall contain information, including, but not limited to, the following:

- Transmission Project Summary – Provides a list and details about transmission projects including:
  - Updates on the status of transmission projects approved by the CAISO during prior Transmission Planning Process cycles
  - Transmission projects that have been proposed to the CAISO for approval and recommendation
  - Transmission projects CAISO management approves in the current transmission plan and the basis of approval i.e. description of the analysis for assessing “need” for the preferred project
  - Alternatives considered and the resulting comparison of these alternatives to the preferred project
  - Transmission project proposals CAISO management does not approve along with the basis of its decisions
  - Transmission projects proposals require approval from CAISO Board of Governors
  - Transmission project proposals that are at a conceptual stage or require additional study that are advanced to mitigate reliability issues or provide economic benefits to the CAISO ratepayers, or for other purposes, including the potential development of Energy Resource Areas (that may also be competitive renewable energy zones (CREZ)) identified through State regulatory processes.
- System Outlook – Provides information on future system conditions to facilitate transmission planning decisions, including, but not limited to:
  - New generation from CAISO Interconnection Queue and CEC licensing process
  - Generation retirement analyses from CEC

- Load forecast data from CEC
- Other factors, such as state and federal policies impacting transmission planning, economic trends, fuel prices outlook, activities from other entities in the region that should be considered, future technology, impact from climate changes, etc.
- System Assessment Results – Results from various technical studies performed by the CAISO or other entities at the direction of the CAISO in accordance with the Study Plan that focus on different perspectives of the system, including, but not limited to:
  - Reliability – Studies performed to ensure that system performance can satisfy all NERC/WECC (TPL 001 – TPL 004) reliability and CAISO Planning Standards over both the short-term (up to 5 years) and long-term (10 years or longer)
  - Resource Adequacy and Related Issues – Studies support resource adequacy programs such as the Local Capacity Requirement (LCR) Technical Study
  - Economic transmission project studies – Studies to determine how a proposed transmission upgrade or addition promotes economic efficiency relative to other alternatives
  - Economic Planning Studies – Studies that provide information for Market Participants to independently assess the effects of Congestion in order to facilitate market decisions regarding transmission or other resource additions or upgrades to mitigate the identified Congestion.
  - Location Constrained Resource Interconnection Facilities (LCRIFs) – evaluation of proposed LCRIFs from Project Sponsor(s) to connect location constrained resources in designated Energy Resource Areas (ERAs)
  - Long-Term Congestion Revenue Rights (CRRs) – Identify simultaneous feasibility of allocated Long Term CRRs
  - Other System Planning Studies – Studies that evaluate specific relevant planning topics, including, but not limited to, aging power plants, conceptual Transmission Plans to facilitate Renewable Portfolio Standards, and operational studies to integrate renewable resources
  - Short-Term Plan – Summary of recent concerns and recommendations based on system operators’ experiences on the grid, including congestions, load, resources, and system performances. This also includes the assessments of near-term system conditions (1-3 years) with consideration of the benefits from future transmission upgrades. This study may recommend system reinforcements or additional actions that are not addressed by other future upgrades.
  - Operating Guide – Informational guidelines for CAISO grid operations regarding possible impacts of new transmission projects and the need to revise existing—or develop new—operating procedures
  - Scenarios Analysis – Results from specific, periodic studies focusing on opportunities to improve reliability and system performance

- Conclusions, Visions and Future Plans – Conclusion from the current plan, CAISO’s vision on various topics, such as potential concerns, potential grid enhancements, and plans for enhancing future iterations of the Transmission Plan.

The Transmission Plan will be used by CAISO as part of the documentation of compliance with the NERC Reliability Standards applicable to Planning Coordinators.

### 3. Request Window

The CAISO’s Transmission Planning Process utilizes a “Request Window” as a centralized, transparent, and organized method to solicit and manage project proposals, Economic Planning Study requests, and submission of project-related data. The Request Window is a 3.5 month window, *opening on August 15<sup>th</sup> and ending on November 30<sup>th</sup>* of each year, during which TPP Participants may submit project proposals, Economic Planning Study requests, and other necessary data related to those projects and studies. Submissions during the Request Window will be evaluated against defined criteria in a screening process.

The screening process functions to:

- Ensure sufficient information is provided to the CAISO to allow consideration of the submission in the Transmission Planning Process
- Establish if other threshold criteria have been met, as described in Section 3.4 of this BPM.

Submissions that satisfy the screening process may be considered in the current year approval process or may be included within the scope of the following year’s Study Plan. In general, project proposals for which all necessary technical studies have been performed will be considered in the current year approval process while High Priority study requests<sup>10</sup> will be included in the following year Study Plan. The CAISO will conduct up to five (5) High Priority studies in each planning cycle. In addition, valid Economic Planning Study requests with a regional or sub-regional study scope may be referred to, and the study performed by, a sub-regional planning group or the Transmission Expansion Planning Policy Committee (TEPPC) of WECC in accordance with the TEPPC synchronized economic planning study process. Project proposals or Economic Planning Study requests that do not satisfy the Request Window requirements or are not otherwise selected may be submitted to the CAISO’s alternative dispute resolution process under Section 13 of the CAISO Tariff.

The major components of the Request Window to be discussed are:

- Scope of the proposals and projects that may be submitted
- Submission process
- Data included in submission process
- Screening process

<sup>10</sup> Up to five studies that include Study Requests under Economic Planning study and the evaluation of major project proposals that additional technical studies are required before the projects can be submitted for CAISO approval.

### 3.1 Scope of Proposals and Projects in Request Window

#### CAISO Tariff Section 24.2.2

Section 2.1.2 describes the categories of proposed transmission additions, upgrades, or economic study requests which, regardless of the Project Sponsors, must go through the Request Window process to be considered for CAISO approval. These project proposals are as show below:

- Reliability transmission upgrades or additions – PTOs with PTO Service Territories and TPP participants may propose reliability transmission upgrades or additions through the Request Window
- Merchant Transmission Facilities – Transmission upgrades or additions in which the Project Sponsor will seek revenue recovery through the receipt of Merchant Congestion Revenue Rights under Section 36.11 of the CAISO Tariff, rather than through the CAISO's Transmission Access Charge
- Economic transmission upgrades or additions – Transmission upgrades or additions proposed by PTOs or entities applying to become PTOs for approval primarily based on the economic efficiency of the projects and for which the PTOs intend to obtain revenue recovery through the CAISO's Transmission Access Charge. (Note that projects that are less than \$50 million may also be identified through mitigation proposals submitted by PTOs with PTO Service Territories)
- LCRIF – proposed transmission projects to connect Location Constrained Interconnection Resource Generators in designated ERAs
- Projects to preserve Long-term Congestion Revenue Rights – These projects will be an output of CAISO studies conducted in conformity with the developed Study Plan
- Demand Response programs – For possible inclusion in base case/assumptions or as a resource alternative to resolve planning targets
- Generation projects – Information on proposed Generating Units may be submitted as proposed solutions along with study requests under Economic Planning Study
- Network Upgrades identified through the SGIP/LGIP – Transmission associated with requests to interconnect Generating Units will be identified through the SGIP or LGIP, as applicable
- Economic Planning Study requests – These are TPP Participant requests for the CAISO to develop conceptual transmission solutions to mitigate identified system congestion and perform preliminary assessment of the economic benefits of such mitigation
- Operational solutions to address Local Capacity Requirements

### 3.2 Request Window Submission Process

This section describes the steps for submitting the required proposals or requests through the Request Window process. Proposals and requests submitted through the Request Window will be considered, provided that the following process steps are satisfactorily completed:

1. Initiation – Submitters shall start the process by submitting the appropriate forms to the CAISO at [requestwindow@caiso.com](mailto:requestwindow@caiso.com). The appropriate forms, including instructions for

submission and the data requirements necessary, will be posted on the CAISO website at <http://caiso.com/1f42/1f42d6e628ce0.html>. These data forms include the details of the Economic Planning Study request or project proposals necessary to allow initial evaluation. The CAISO will assign responsibility for the project or Economic Planning Study request to its staff and acknowledge receipt of the project information or Economic Planning Study request to the submitter within three Business Days.

2. Validation/Selection – Within ten business days after receiving the form, the CAISO will apply the screening test to validate the transmission proposals or Economic Planning Study requests. At that time, the CAISO will inform submitters by e-mail whether the proposed project satisfies the screening criteria. For those submitters whose data or information are deemed incomplete by the CAISO, such submitters will have five business days to supplement their submissions.
3. Secondary Validation – For those submitters whose data or information are deemed incomplete by the CAISO as part of the initial validation in step 2 above, such submitters will have five business days to supplement their submissions (if the fifth day falls on a weekend or holiday, the deadline will be the following Business Day). Within five business days after receiving the supplemental submission, the CAISO will inform the project proponent whether the screening criteria have been satisfied.

### 3.3 Data Requirements for Request Window Submissions

The data requirements necessary to initiate the Request Window process, as discussed in Section 3.2, will be described further in this section with respect to different categories of projects and/or requests. Data templates and accompanying instructions for submission to the Request Window may be found at <http://caiso.com/1f42/1f42d6e628ce0.html> under the Request Window Forms and Instructions link.

#### 3.3.1 Economic Transmission Project Proposals

##### CAISO Tariff Section 24.2.2.1

As noted, any economic project, including those seeking cost recovery through Long-term Congestion Revenue Rights or to reduce Local Capacity Requirements, whether submitted by a PTO or sponsor of a Merchant Transmission Facility, must submit the following project information, which includes, but is not limited to:

##### General Data

- Basic description of the proposal, such as the scope, the nature of alternative (AC/DC), objectives, and the qualifications for the proposal to meet certain policies such as LCRIF, LT-CRRs, etc.
- Geographical location and proposed preferred project route
- Evidence of securing the route or ability to secure the route

##### Technical Data

- Network model for power flow study

- Dynamic models for stability study

- Short-circuit data

- Protection data

#### Planning Level Cost Data

- Detailed project construction, operation, and other costs necessary for the study

- Explanation of the accuracy of the cost estimate, and the level of risk of actual cost exceeding the estimate.

#### Miscellaneous Data

- Proposed entity to construct, own, and finance the project

- Planned operator of the project

- Construction schedule and expected online date

### 3.3.2 Generation Project Proposals

#### CAISO Tariff Section 24.2.2.1

Proposed Generating Facilities may also be submitted to the CAISO for purposes of evaluating the effect of such generation on resolving previously identified grid concerns, including Congestion, voltage support, etc. Proponents of generation projects for consideration in the Transmission Planning Process need to provide a similar set of project data that is required by the LGIP process:

#### General Data

- Basic description of the project, such as fuel type, size, location, etc.

- Proof of site control and CEC licensing status

- Description of the issue sought to be resolved by the Generating Facility, including any reference to results of prior technical studies included in published Transmission Plans.

#### Technical Data

- Network model of the project for power flow study

- Geographical location, evidence of land procurement

- Dynamic models for stability study

- Short-circuit data

- Protection data

- Other technical data that may be required for specific types of resources, such as wind generation

#### Planning Level Cost Data

- Detailed project construction, heat rate, and operation costs

- Proponent should specify expected contractual information necessary to assign generator profit, for estimate of CAISO transmission ratepayer benefits

### Miscellaneous Data

- Entity responsible for constructing, owning, and financing the project, and the entity responsible for the costs of the project
- Planned operator of the project
- Construction schedule and expected online date
- Any additional miscellaneous data that may be applicable

### 3.3.3 Demand Responses and Other Proposals

#### CAISO Tariff Section 24.2.2.1

Information regarding demand management resources (*e.g.*, amount of load impact, location, cost of the program) may be submitted to CAISO for consideration in its Transmission Planning Process. The purpose of requesting such information is to properly account for demand response resources in assessing transmission infrastructure needs. Accordingly, validated demand management programs are to be included in the CAISO's Unified Planning Assumptions. The mechanisms and standards to be applied are currently in development based on ongoing coordination between the CAISO, CPUC, CEC and other Market Participants.

### 3.3.4 Location Constrained Resource Interconnection Facilities (LCRIFs)

#### CAISO Tariff Section 24.1.3

Any party proposing an LCRIF shall include the following information in accordance with Section 24.1.3 of the CAISO Tariff:

- A description of the proposed facility, setting forth:
  - Transmission study results demonstrating that the transmission facility meets Applicable Reliability Requirements and CAISO Planning Standards
  - Identification of the most feasible and cost-effective alternative transmission additions, which may include network upgrades, that would accomplish the objectives of the proposal
  - A planning level cost estimate for the proposed facility and all proposed alternatives
  - An assessment of the potential for the future connection of further transmission additions that would convert the proposed facility into a network transmission facility, including conceptual plans
  - The estimated in-service date of the proposed facility, and
  - A conceptual plan for connecting potential LCRIFs, if known, to the proposed facility.



- Information showing that the proposal meets the criteria outlined in Section 24.1.3.1(a) of the CAISO Tariff. This information permits the CAISO to conditionally approve the LCRIF if the following criteria are met:
  - The transmission facility is to be constructed for the primary purpose of connecting two or more Location Constrained Resource Interconnection Generators (LCRIG) in an Energy Resource Area, and at least one of the LCRIG is to be owned by an entity or entities not an Affiliate of the owner(s) of another LCRIG in that Energy Resource Area
  - The transmission facility will be a High Voltage Transmission Facility
  - At the time of its in-service date, the transmission facility will not be a network facility and would not be eligible for inclusion in a Participating TO's TRR other than as an LCRIF
  - That there is a need for the proposed facility. CAISO will consider the factors set forth in Section 24.1.3.4 to evaluate compliance with Section 24.1.3.1(a):
    - (1) The extent to which the facility meets or exceeds CAISO Planning Standards;
    - (2) The extent to which the facility has the capability and flexibility to interconnect LCRIGs in the ERA and to be converted to a network transmission facility;
    - (3) Whether the projected cost of the facility is reasonable in light of its projected benefits, in comparison to the costs and benefits of other alternatives for connecting Generating Units or otherwise meeting a need identified in the CAISO Transmission Planning Process, including alternatives that are not LCRIFs. In making this determination, the CAISO shall take into account (among other factors):
      - (a) The potential capacity of LCRIGs and the potential Energy that could be produced by LCRIGs in each ERA;
      - (b) The capacity of LCRIGs in the CAISO's Interconnection process for each ERA;
      - (c) The projected cost and in-service date of the facility in comparison with other transmission facilities that could connect LCRIGs to the CAISO Controlled Grid;
      - (d) Whether, and if so, the extent to which, the facility would create a risk of stranded costs.
- For final qualification as an LCRIF project, the proponent must provide the information required by Section 24.1.3.1(b), which, in addition to all of the above information required for conditional approval, includes a showing that the following requirements have been met:
  - (a) The addition of the capital cost of the project will not exceed the 15% aggregate TRR net investment cap,

calculated at the time of CAISO's evaluation of the facility;  
and,

(b) The demonstration of commercial interest requirement set forth in §24.1.3.2 has been met.

### 3.3.5 Economic Planning Studies

#### CAISO Section 24.2.2.2

Requests to perform an Economic Planning Study must identify the congested transmission element (binding constraint) or limiting facilities to be studied. The request should also include reference to the Congestion Data Summary for Congestion associated with the binding constraint, if applicable, or other information supporting the potential for increased future Congestion on the binding constraint. Furthermore, requester may submit up to 2 conceptual mitigation plans along with study requests. However, for the conceptual mitigation plans to be considered, sufficient data, *i.e.*, network model, planning level cost data in accordance with section 3.3 of this BPM, and anticipated online date of the alternatives must be provided to CAISO by the closing date of Request Window.

### 3.3.6 Other Planning Data

The Request Window is designed to be a centralized process to accommodate not only alternative transmission proposals, but also the exchange of information for purposes of developing the Unified Planning Assumptions. Thus, the CAISO will actively solicit updated data from PTOs, other Market Participants and neighboring control areas or transmission providers, and sub-regional planning groups in order to supplement existing WECC/TEPPC data.

#### 3.3.6.1 Information from PTOs

##### CAISO Tariff Section 24.2.3.1

In addition to any information that must be provided to the CAISO under the NERC Reliability Standards PTOs shall provide the CAISO on an annual or periodic basis in accordance with the schedule, procedures and in the form required by this BPM any information and data reasonably required by the CAISO to conduct the TPP, including, but not limited to: (1) modeling data for power flow, including reactive power and stability analyses; (2) a description of the total Demand to be served from each substation, including a description of any Energy efficiency programs reflected in the total Demand; (3) the amount of any interruptible Loads included in the total Demand (including conditions under which an interruption can be implemented and any limitations on the duration and frequency of interruptions); (4), a description of Generating Units to be interconnected to the Distribution System of the PTO, including generation type and anticipated Commercial Operation Date; (5) transmission system changes, including equipment replacement not requiring approval by the CAISO; (6) transmission network information, operating diagrams, including line ratings, line length, conductor sizes and lengths, substation equipment ratings, circuits on common towers and with common rights-of-ways and cross-overs, special protection schemes, and protection setting information; and (7) Contingency lists.

### 3.3.6.2 Information Provided by Participating Generators

#### CAISO Tariff Section 24.2.3.2

In addition to any information that must be provided to the CAISO under the NERC Reliability Standards, Participating Generators shall provide the CAISO on an annual or periodic basis in accordance with the schedule, procedures and in the form required by this BPM any information and data reasonably required by the CAISO to conduct the TPP, including, but not limited to (1) modeling data for short-circuit and stability analysis and (2) data, such as term and status of any environmental or land use permits or agreements the expiration of which may affect that the operation of the Generating Unit.

### 3.3.6.3 Information Requested from Load Serving Entities

#### CAISO Tariff Section 24.2.3.3

In addition to any information that must be provided to the CAISO under the NERC Reliability Standards, the CAISO shall solicit from Load Serving Entities through their Scheduling Coordinators information required by, or anticipated to be useful to, the CAISO in its management of the TPP, including, but not limited to (1) long-term resource plans; (2) existing long-term contracts for resources and transmission service outside the CAISO Control Area; (3) resource capacity and Energy bid information received through requests for offers or similar solicitations; and (4) Demand Forecasts, including forecasted effect of Energy efficiency and Demand response programs.

### 3.3.6.4 Information Requested from Interconnected Control Areas, Sub-Regional Planning Groups and Electric Utility Regulatory Agencies

#### CAISO Tariff Section 24.2.3.4

The CAISO shall solicit from interconnected Balancing Authority Area operators and transmission providers, regional and sub-regional planning groups within the WECC, the CPUC, the CEC, and Local Regulatory Authorities information required by, or anticipated to be useful to, the CAISO in its performance of the Transmission Planning Process, including, but not limited to (1) long-term transmission system plans; long-term resource plans; (3) generation interconnection queue information; and (4) Demand forecasts.

## 3.4 Screening Process

### 3.4.1 Transmission Projects

#### CAISO Tariff Section 24.2.2.1

In order to ensure that the TPP proceeds in an efficient and timely manner, transmission project proposals are subject to screening criteria as set forth below:

- All data and other requested information must be complete. The CAISO will determine whether the proponent has provided sufficient information to evaluate the transmission proposal, other resource, or Economic Planning Study request. Failure to fully complete the appropriate data templates after the period allowed for supplemental submissions will constitute a failure to satisfy this requirement.

- A proposed transmission project must connect to the CAISO Control Grid.
- Duplication – The proposals received during the Request Window must not duplicate benefits from transmission projects that have previously been approved by the CAISO. However, competing proposals received during a Request Window may be included in the Study Plan. As appropriate, the CAISO may encourage joint ownership of an optimal project that utilizes the superior features of each proposal.
- If a sub-regional or regional project that affects other Balancing Authority Areas, whether the proposal has previously been identified by the appropriate sub-regional or regional planning entity as a “preferred” solution.
- If the transmission proposal constitutes facilities to access renewable resources, whether one or more of the projects increase transfer capability with respect to a Competitive Renewable Energy Zone, Energy Resource Area, or similar designation identified through a state sanctioned entity.

### 3.4.2 Economic Planning Studies

#### CAISO Tariff Section 24.2.2.2

The screening process will generally place requests for Economic Planning Studies into one of three categories.

In each planning cycle, the CAISO will perform a maximum of five High Priority Economic Planning Studies on behalf of TPP Participants. However, the CAISO retains discretion to perform greater than five High Priority Economic Planning Studies should patterns of Congestion so warrant. High Priority Economic Planning Studies will be selected based on consideration of at least one of the following:

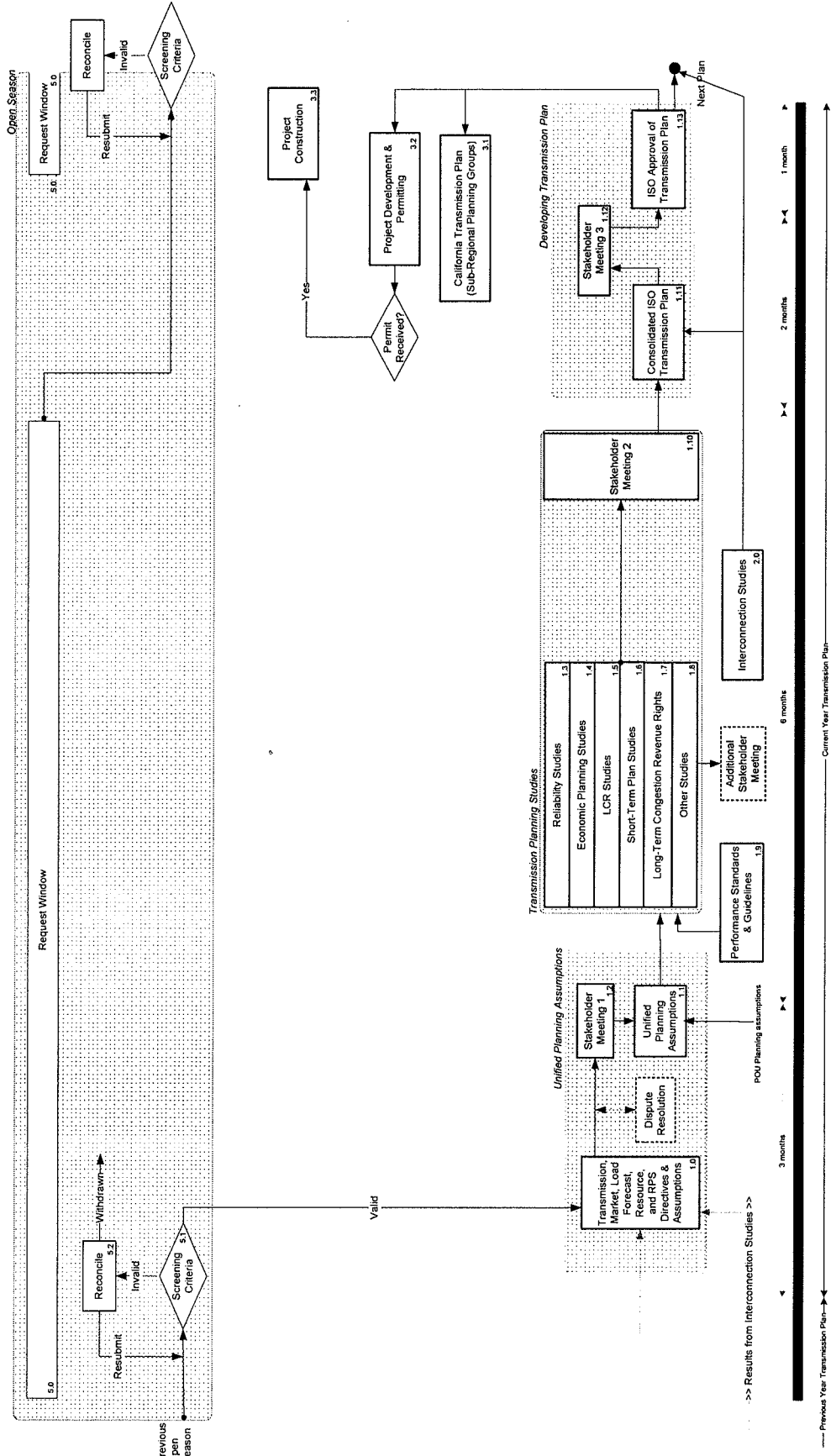
- Whether the requested study seeks to address Congestion identified by the CAISO in the Congestion Data Summary.
- Whether the requested study seeks to address delivery of Location Constrained Resource Interconnection Generators in an Energy Resource Area or similar designation from a state sanctioned entity.
- Whether the requested study seeks to reduce or address the need for Local Capacity Area Resources in a Local Capacity Area.
- Whether resource and Demand information indicate that Congestion described in the request is projected to increase over the planning horizon used in the Transmission Planning Process and the projected magnitude of the Congestion.
- Whether the Economic Planning Study is intended to encompass the upgrades necessary to integrate new generation resources or loads on an aggregated or regional basis.

High Priority Economic Planning Studies will be included in the Study Plan and performed by the CAISO at its cost as part of the TPP cycle. The CAISO will notify TEPPC and other sub-regional planning groups of the selected High Priority Economic Planning Studies prior to the close of TEPPC’s request window on January 31<sup>st</sup> of each year. To the extent that CAISO determines particular study requests under High Priority category should impact multi controlled

areas, these study requests will be submitted to TEPPC or the sub-regional planning group by January 31<sup>st</sup> as well.

Where the request is not designated as a High Priority Economic Planning Study and the request is regional or sub-regional in scope, the CAISO will submit the requested Economic Planning Study to TEPPC as part of its request window that closes on January 31<sup>st</sup> of each year.

Requests that are neither High Priority Economic Planning Studies nor regional or sub-regional in scope will be rejected for inclusion in the CAISO's Study Plan, but still will be submitted to TEPPC for inclusion in the consolidated list of potential studies. The submitting entity may still perform the proposed Economic Planning Study at its own cost and submit the results to the CAISO for review and potential inclusion in the final Transmission Plan. The CAISO will coordinate with any third party performing its own study to ensure that the study is consistent with the data, assumptions, and methodology employed by the CAISO.



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## 4. Transmission Plan Development Process

Sections 4.1–4.3 below articulate the three stages of the CAISO's Transmission Planning Process in more detail.

### 4.1 Development of the Study Plan

Following the close of the Request Window, the CAISO will compile applicable information from the previous Request Window submissions along with the information it receives from PTOs, neighboring Balancing Authorities, regional, sub-regional planning group, state agencies, and TPP participants who respond to the data request issued by the CAISO and engage in the first stage of the TPP. *The timeframe for Stage 1 development is January through April of each year.* The objective of this stage is to determine the goals, agree on data assumptions and inputs for creation of a base case, identify necessary modifications to the base case for individual technical studies, identify the technical studies to be performed as part of the TPP cycle, and allow TPP Participants to review and comment on the scope of the upcoming technical studies. This stage creates the Unified Planning Assumptions and Study Plan.

#### 4.1.1 Input into the Study Plan

CAISO Tariff Section 24.2.4.1

The CAISO develops the Unified Planning Assumptions that will be documented in the Study Plan using information including, but not limited to:

- Information received during the prior TPP cycle's Request Window
- Applicable Reliability Criteria and CAISO Planning Standards
- WECC/TEPPC base cases for the relevant planning horizon
- Transmission upgrades and additions approved by the CAISO and scheduled to be energized within the planning horizon
- LCRIF conditionally approved under Section 24.1.3.1(a) of the CAISO Tariff
- Network Upgrades identified pursuant to Section 25, Appendix U or Appendix W relating to the CAISO's Large Generator Interconnection Procedures and Appendix AA relating to the CAISO's Small Generator Interconnection Procedures
- Operational solutions validated by the CAISO to address Local Capacity Area Resource requirements as part of the Local Capacity Technical Study
- Real-time operational data for CAISO short-term studies
- Regulatory initiatives, as appropriate, including state regulatory agency initiated programs
- Energy Resource Areas or similar resource areas identified by the CPUC or CEC; and
- Results and analyses from Economic Planning Studies or other assessments that may have identified potentially needed transmission upgrades or additions performed in past CAISO Transmission Planning Process cycles.

##### 4.1.1.1 CAISO Planning Standards Committee

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### CAISO Tariff Section 24.2.1

The CAISO maintains a Planning Standards Committee, which shall be open to participation by all Market Participants, electric utility regulatory agencies within California, and other interested parties, to review, provide advice on, and propose modifications to CAISO Planning Standards for consideration by CAISO management and the CAISO Governing Board. The CAISO Planning Standards are Reliability Criteria that:

- address specifics not covered in the NERC and WECC planning standards
- provide interpretations of the NERC and WECC planning standards specific to the CAISO Controlled Grid, and
- identify whether specific criteria should be adopted that are more stringent than the NERC and WECC planning standards.

The Planning Standards Committee shall meet, at a minimum, on an annual basis prior to publication of the draft Unified Planning Assumptions and Study Plan. To the extent necessary, the CAISO may notice additional meetings, web conferences, and teleconferences. Meetings of the Planning Standards Committee shall be noticed by Market Notice and such notice shall be posted to the CAISO Website. Teleconference capability will be made available for all meetings of the Planning Standards Committee.

The CAISO Vice President of Market and Infrastructure Development or his or her designee shall serve as chair of the Planning Standards Committee. All materials addressed at or relating to such meetings, including agendas, presentations, background papers, and party comments shall be posted to the CAISO Website. The chair of the Planning Standards Committee shall seek approval by the CAISO Governing Board of any modifications to the CAISO Planning Standards, as those CAISO Planning Standards exist as of December 21, 2007, and must include in the report to the CAISO Governing Board a summary of the positions of parties with respect to the proposed modifications to the CAISO Planning Standards and the ground(s) for rejecting modifications, if any, proposed by Market Participants or other interested parties.

## 4.1.2 Process for Developing the Study Plan

### CAISO Tariff Section 24.2.4.3

During the period from January through February of each year, the CAISO, in coordination with TPP Participants, will review information received and validated during the Request Window or otherwise obtained by the CAISO, to develop a draft Study Plan for the annual TPP cycle. This draft Study Plan is posted to the CAISO Website at least one week prior to the meeting and subsequently, after an opportunity for review by TPP Participants, presented at a TPP Participant public meeting for comment by early April. A Market Notice will announce the availability of the draft, solicit comments and establish a deadline for such comments, and schedule the public meeting. Comments on the draft Study Plan must be submitted to the CAISO electronically to [regionaltransmission@caiso.com](mailto:regionaltransmission@caiso.com). All TPP Participant comments will be posted to the CAISO Website for Transmission Planning. If needed, additional public meetings, web conferences, or teleconferences may be scheduled as determined by the CAISO. Following all public meetings and by May of each year, the CAISO will publish to the CAISO Website, the final Study Plan which describes the Unified Planning Assumptions.

It should be noted that the annual Local Capacity Requirements Technical Study that sets targets for the forthcoming Resource Adequacy Compliance Year pursuant to Section 40.3 of the CAISO Tariff, will proceed separately from the development of the Unified Planning Assumptions and Study Plan. The final results of the Local Capacity Technical Study must be presented in May of



each year. The timing of the Local Capacity Technical Study was developed in order to complete the study in sufficient time to allow Load Serving Entities sufficient time to procure necessary capacity prior to regulatory deadlines. This annual Local Capacity Technical Study will incorporate the outcome of the most recently completed Transmission Plan. Similarly, the Unified Planning Assumptions will incorporate operating procedures that affect the transmission system as identified in the Local Capacity Technical Study.

The Study Plan, however, will account for the Longer-Term Local Capacity Requirements Study that the CAISO performs to estimate Local Capacity Area Resource requirements three and five years out. The Local Capacity Technical Study Manual for the annual Local Capacity Technical Study is posted on the CAISO Website each year in October under Transmission Planning and Local Capacity Technical Study. CAISO also manages and performs technical studies on generation interconnection requests through the Large and Small Generator Interconnection Procedures (LGIP/SGIP). CAISO incorporates results from generation interconnection studies, including "Clustered" interconnection studies, in the annual Transmission Planning Process as input assumptions. As outlined in section 2.1.4, in addition to the information regarding new Generation projects, details of network upgrades and Net Qualifying Capacity resulting from generation Deliverability Assessments are key information to be included in the Transmission Planning Process.

### 4.1.3 Output

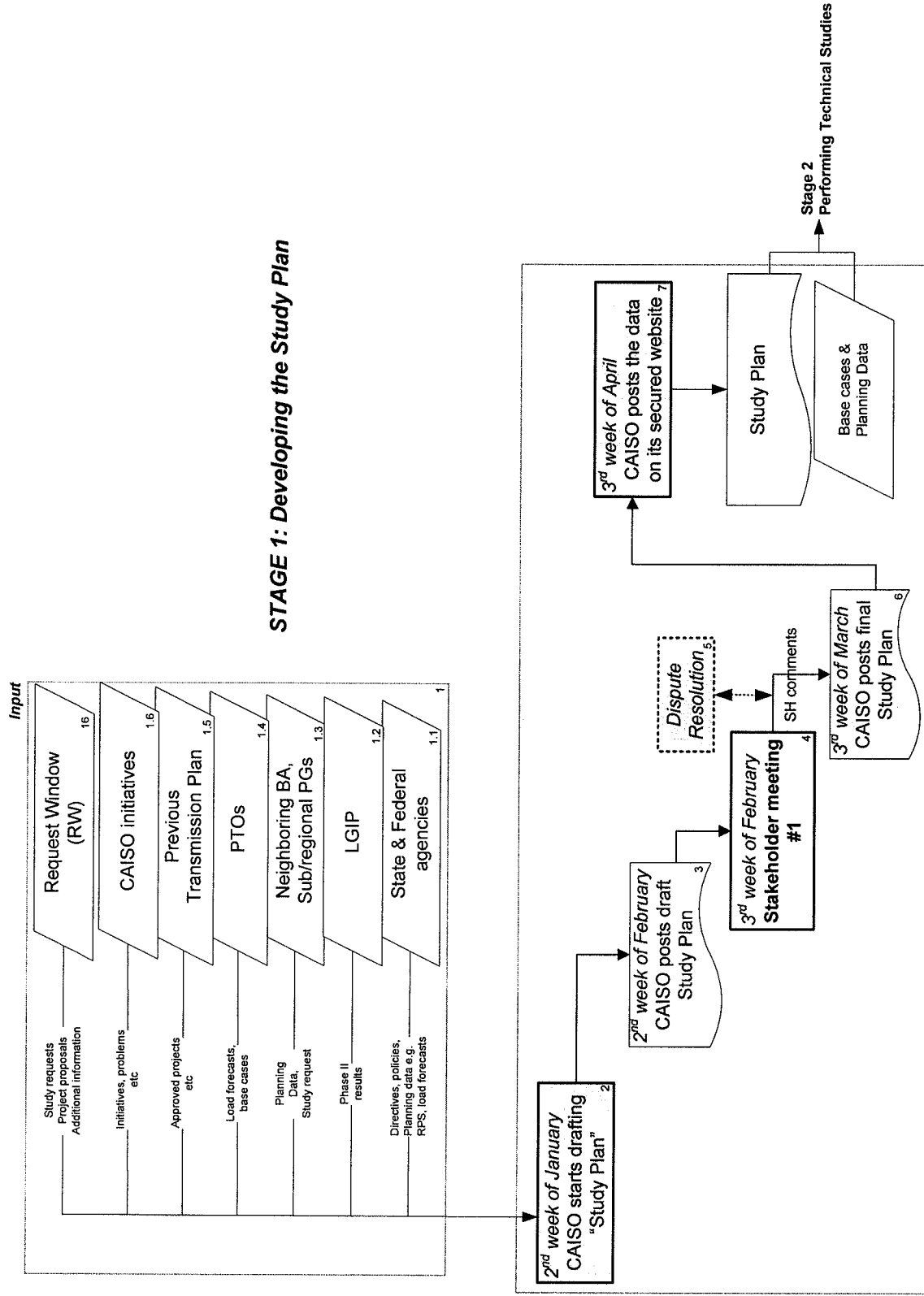
#### CAISO Tariff Section 24.2.4.2

The Study Plan describes the details of the subsequent TPP cycle. At minimum, the Unified Planning Assumptions and Study Plan (see Section 4.1) will include:

- Objectives – Define the goal of each technical study performed and how those studies will be used in decision-making processes.
- Summary and roadmap of CAISO TPP for the current cycle:
  - Preliminary schedule for TPP Participant activities for the remaining TPP
  - Instructions for TPP Participants to receive notifications or communication, and to provide comments to the CAISO
  - Website locations where TPP information will be available and instructions regarding any steps necessary to gain access to such information
  - CAISO contact information for each study and the TPP
- Planning data:
  - Demand forecasts – values, source of the Demand forecasts, and methodology to derive Demand forecasts and any adjustments to original forecast as necessary to perform a particular technical study
  - Generation assumptions – values, source of generation data, modeling of generation, description of generation dispatch methodology, and any adjustments to the foregoing as necessary to perform a particular technical study
  - Generation retirement – values, source of generation retirement data, and list of generation retirement modeled in the studies
  - Transmission Projects – Source of transmission project information and list of transmission projects modeled in the studies. These generally include the CAISO-approved transmission projects from the previous CAISO Transmission Plans.

- Import – values, source of import data, and methodology, and any adjustments to the foregoing as necessary to perform a particular technical study.
- Planning studies:
  - List of all technical studies, including High Priority Economic Planning Studies, to be done for incorporation into the Transmission Plan or Transmission Planning Process generally, *i.e.*, technical studies that may not be completed by the publication date of the Transmission Plan
  - For each study, explain:
    - Study assumptions (*e.g.*, study year, planning data applied to each technical study, any modifications to be made).
    - To the maximum extent possible, based on TPP Participant input, identified sensitivity analyses and project or solution alternatives to be included in each technical study, as appropriate
    - Methodology – describe how the study will be performed
    - Criteria – reliability or criteria applied to each study
    - Software – list software and tools for the study
    - Entity to perform the study or elements of the study.
- Comments received from TPP Participants, and CAISO responses thereto regarding the draft Unified Planning Assumptions and Study Plan.

An overview of the Unified Planning Assumption and Study Plan development is shown in Figure 4.



**STAGE 1: Developing the Study Plan**

Figure 4: Developing the Study Plan

## 4.2 Performance of Technical Studies and Other Necessary Review Procedures

As indicated by the outline of the Study Plan, each TPP cycle will conduct a number of technical studies to meet TPP Participant objectives. The technical studies provide the bases for identifying potential physical and economic limitations of the CAISO Controlled Grid and potential upgrades to maintain or enhance system reliability, promote economic efficiency, maintain the feasibility of Long Term CRRs for the length of their terms, while also seeking to promote other policy objectives. These assessments involve, but are not limited to, the following technical studies:

- Power Flow Simulation – The study focusing on equipment thermal loadings and voltage magnitudes in the system at a specific study scenario
- Stability Analysis – Assessments of system responses during the transient period after disturbances or small signal stability of the system under various scenarios
- Voltage Stability – Analysis of reactive power sufficiency to ensure reliable system conditions under different system conditions and disturbances. Power flow and stability are primary technical studies in reliability assessment
- Short-Circuit – The study to be performed as part of interconnection process which focuses on the system’s capability to withstand major short-circuits
- Economic Planning Studies (production cost simulation) – Assessments of future market conditions based on the historical input and future plan. The study concentrates on identifying potential congestions and mitigation plans that could relieve or eliminate the congestions
- Long Term Congestion Revenue Rights Feasibility Study (LTCRRs) – A Simultaneous Feasibility Test (SFT) will be performed to ensure that allocated Long Term CRRs will still be feasible according to their allocation.
- Long-Term Projected Local Capacity Requirement (LCR) Study – The study, which relies primarily on power flow analysis, determines capacity requirements in Local Capacity Areas over a projected 3-5 year planning horizon. The Local Capacity Technical Study, not the Long-Term LCR Study, establishes effective Local Capacity Area Resource requirements for the next Resource Adequacy Compliance Year.
- Short-Term Plan Study – The study analyzes recent system conditions and proposes upgrades or other recommendations based on the experience of CAISO system operators. This is similar to the Operating Guide which is the informational guideline for CAISO grid operations regarding possible impacts of new transmission projects and the need to revise existing—or develop new—operating procedures.
- Generation Interconnection – The results of the Phase II LGIP studies will be coordinated with this TPP as described above in Section 2.1.4.
- Other studies – From time to time, specific technical studies may be included in the Transmission Plan. These studies address special issues in addition to the scope of the other annual studies, such as long-term plans for particular areas or renewable resource integration studies

The technical studies are required, to the maximum extent practicable, to utilize the Unified Planning Assumptions and any deviations must be documented in the preliminary results of the

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technical study. Results from the technical studies will be measured against the following planning standards to quantify system performance. The following reliability criteria violations will be used as fundamental to justify transmission upgrades:

- NERC Planning Standards
- WECC Planning Standards
- CAISO Planning Standards

For the evaluation of projects proposed to promote economic efficiency, the CAISO relies on criteria defined in Transmission Economic Assessment Methodology (TEAM) and other practices adopted by the industry to justify economic benefits of the proposals. Principles underlying TEAM may be found on the CAISO Website at

<http://www.caiso.com/docs/2004/06103/2004060313241622985.pdf> and  
<http://www.caiso.com/184b/184bd6cc2d70.html>.

This second stage of the planning process is summarized in Figure 5.

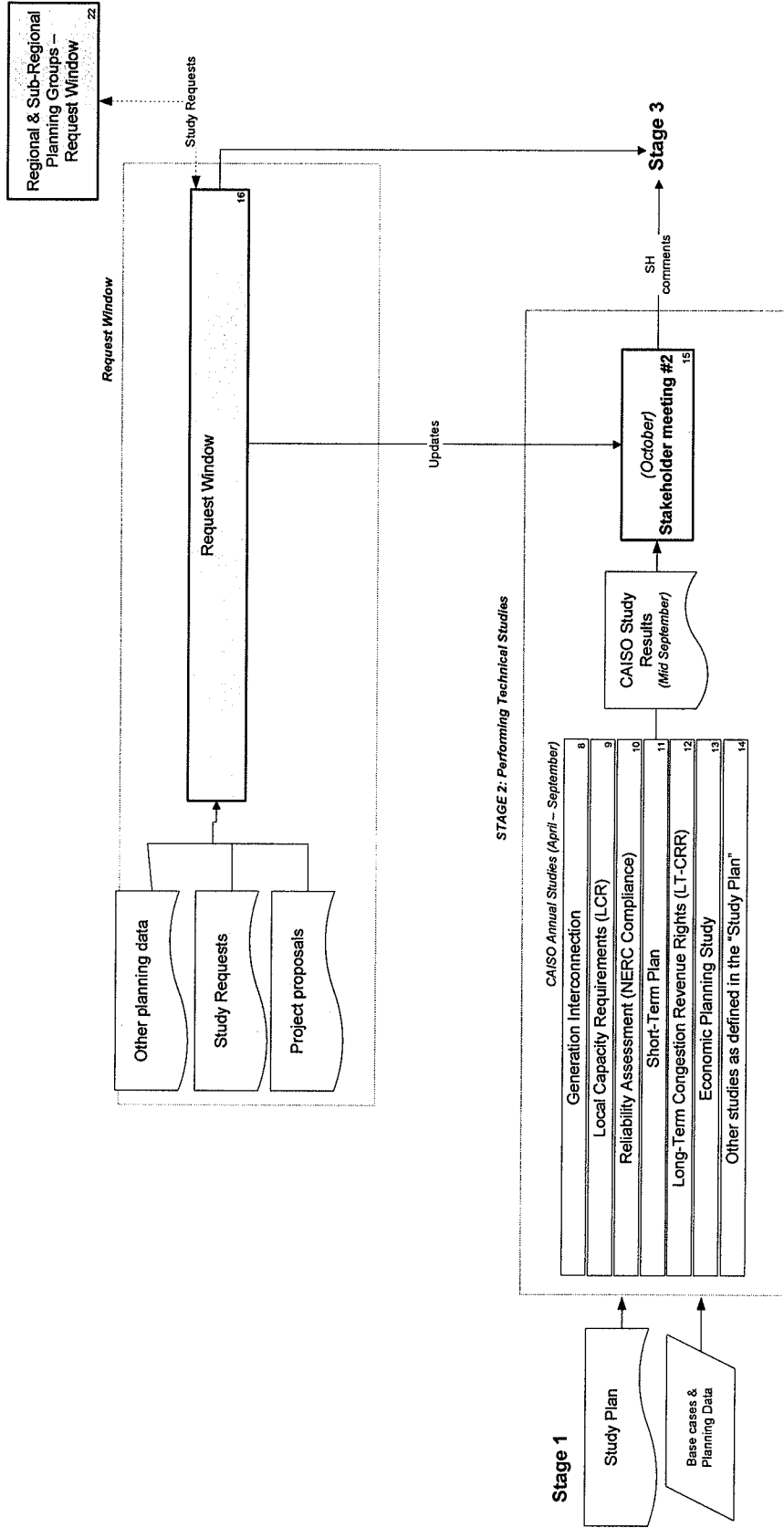


Figure 5: Performing Planning Studies

Based on resource considerations, technical expertise, and the roles of PTOs with PTO Service Territories as NERC Transmission Planners, the CAISO may assign technical studies or portions of technical studies to Project Sponsors or the PTOs to perform. Similarly, the CAISO may seek the voluntary commitment of other market participants to perform technical studies or portions thereof.

Once the responsible entities have completed the technical studies, the preliminary results will be presented to TPP Participants during one or more additional TPP Participant meetings to be held in the fall of each year.

#### 4.2.1 Determining Reliability Projects

##### CAISO Tariff Section 24.1.2

Reliability projects will be identified and justified using the following study tools identified in Section 4.2:

- Power Flow
- Transient Stability
- Voltage Stability

As required by applicable planning standards, technical studies must be performed on both the short-term (up to five years) and long-term ( $\approx$  ten years or more) under various stress conditions (e.g., summer peak), while considering the impact from losing critical system elements. Thresholds for demonstrating compliance with these standards are included in the NERC reliability standards e.g. the summary in Table 1 of the Standard TPL-001-0 — System Performance Under Normal Conditions document, located at <http://www.nerc.com/page.php?cid=2|20>.

As indicated in the Study Plan, reliability assessments may be performed by PTOs with a PTO Service Territory as a component of their role as a NERC designated Transmission Planner. While these assessments may be performed by the PTOs, the assessments must utilize the Unified Planning Assumptions, except as otherwise justified and documented. Accordingly, as part of the plan to maintain reliability and serve Load within the CAISO Balancing Area Authority, the CAISO anticipates receiving each year power flow and stability study results from PTOs with PTO Service Territories, along with the comparison between these results and the reliability standards. If criteria violations have been identified, mitigation plans to address the violations will be proposed by the PTOs as part of the October 15 submission by the PTOs, described in previous sections of this BPM. PTOs must propose alternatives to address each criteria violation to assess the efficiency and effectiveness of the competing alternatives. Each alternative should set forth a sufficient description of the upgrades, costs, schedules, impacts on the grid, and other information related to the alternative.

The CAISO relies on the following guidelines for approving proposals as the appropriate solution:

- Need – The analysis shows violations of reliability criteria that require mitigation to be in place to ensure compliance of reliability standards.
- Sufficient Data – Sufficient information on each of the mitigation proposals to be evaluated compared with other alternatives. For example, project scope, descriptions, cost estimate of the proposals and alternatives, benefits (e.g. reliability criteria violations will be

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mitigated by the proposals), and scheduled in-service date are necessary information that must be provided to CAISO.

- **Technically Sound** – The suggested alternatives demonstrate an ability to eliminate the violation(s) based on a technically sound approach. This requires the PTO to demonstrate that the proposed alternative utilizes technology that has been accepted by the industry. In cases where a new technology has been proposed as a preferred alternative, sufficient proof demonstrating that the alternative will work reliably, efficiently, and comply with all applicable standards will be required as part of the approval process.
- **Cost-Effective** – The preferred alternative must be an economically efficient approach to resolve criteria violations. Generally, this requires a least-cost solution. However, in some circumstances, least-cost solutions may not be selected or recommended if the CAISO finds that another approach appears to be more prudent. For example, if the analysis identifies that several criteria violations in the same vicinity can be anticipated in the future, the CAISO may recommend a construction of capital projects to eliminate all violations at the same time rather than incrementally addressing each violation in a potentially piece-meal fashion. This approach tries to avoid expenditures on redundant upgrades which may result in higher costs to the ratepayers.

CAISO management may approve proposals with an estimated capital cost of \$50 million or less, while the CAISO Governing Board must approve proposals with an estimated capital cost of greater than \$50 million, including Large Projects studied through a separate TPP Participant process. Moreover, for those proposals that must receive CAISO Governing Board approval, factors in addition to the reliability benefits may be considered as part of the recommendation and approval process, including, but not limited to:

- Economic advantages from mitigating congestion
- Reducing Local Capacity Area Resource requirements
- Operational flexibility
- Environmental benefits

## 4.2.2 Determining Economically Efficient Projects

### 4.2.2.1 Economic Planning Studies

#### CAISO Tariff Section 24.9

The CAISO Economic Planning Studies focus on identifying expected Congestion and other transmission element constraints and exploring potential mitigation plans for such bottlenecks on the grid. This will be accomplished by simulating future system conditions along with the observation of the Congestion that occurred in the past operating years, Local Capacity Area resource requirements, and other expected grid conditions consistent with the Unified Planning Assumptions, including use of the WECC base case for economic studies. The CAISO may also consider other data submitted through the Request Window, such as the long-term power supply plans for Long-Term CRR purposes. The studies utilize production simulation cost software using Security-Constrained Unit Commitment (SCUC) and Security-Constrained Economic Dispatch (SCED) to determine market conditions. The framework to quantify potential benefits will be consistent with CAISO's TEAM approach.

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The mitigation plans recommended from the studies which include the High Priority Economic Planning Studies will consider: 1) expansion or acceleration of previously approved transmission projects; and 2) new proposed upgrades or conceptual projects that can relieve the constraint. In order to efficiently manage the requests, CAISO will try to maximize the use of a batch or cluster approach to perform the High Priority Economic Planning Studies. In this case, one High Priority study may represent one batch or cluster of study.

The CAISO intends to coordinate High Priority Economic Planning Study efforts with sub-regional planning groups and TEPPC at the regional planning level. This collaboration emphasizes assigning Congestion-related studies to the proper forum. For example, Congestion observed in the CAISO Balancing Authority Area may impact multiple entities and should be addressed on a sub-regional or regional basis.

In each annual TPP cycle, the CAISO will conduct a maximum of five High Priority Studies as requested by TPP Participants during the Request Window period. However, the CAISO may elect to perform additional High Priority Studies should Congestion or other system conditions warrant such studies. TPP Participants will have the opportunity to comment on selected High Priority Studies during the development of the Study Plan which will be presented to the TPP Participant during the first public meeting. The CAISO's performance of Economic Planning Studies also coordinates with sub-regional and regional planning processes as described below.

In general, the Economic Planning Study process involves three major steps:

- Step 1: Publication of the Congestion Data Summary that provides information on Congestion on the CAISO Controlled Grid<sup>11</sup> and specifically identifies Significant and Recurring Congestion. This step occurs by mid-September of each year and is intended to provide information to TPP Participants to assist with Economic Planning Study requests during the Request Window. Due to the possibility that results from grid operations during the past 12 months period may reflect a large number of congestion locations, CAISO intends to use the criteria in this step to filter out and provide a shorter list of major congestions that may be beneficial to TPP Participants. Significant and Recurring congestion is identified for the following scenarios:
  - Congestion during the past 12 months ending September 1.
  - Congestion during a 10-year planning horizon simulation. CAISO-approved reliability transmission projects and future system conditions will be modeled in these studies to ensure the impact from reliability projects is reflected in any resulting Economic Planning Study.

Significant and Recurring Congestion is determined by the cost and duration of the Congestion as follows:

- Congestion that costs more than 5 million dollars,
- Congestion that occurs more than 8 percent of the time<sup>12</sup>

<sup>11</sup> The compilation and publication of congestion data will begin upon implementation of the new market design (Market Redesign and Technology Upgrade – MRTU) to enable the performance of Economic Planning studies using production cost simulation software based on the CAISO TEAM methodology.

<sup>12</sup> However, due to the transition to a new market environment based on Locational Marginal Prices under the Market Redesign and Technology Upgrade (MRTU), if future congestion under MRTU appears to be significantly different from the past and other means to quantify Significant and Recurring congestion appear to be more appropriate, the CAISO may propose different criteria to address this issue.

- **Step 2: Select High Priority Studies.** The criteria used to make this determination are similar to the criteria set forth in Sections 2.1.2.1 and 3.4.2 of this BPM. In this context, the cost of the congestion is the primary selective criterion while the duration of the congestion shall be used as a tiebreaker. The CAISO's selection of the five High Priority Studies will be discussed during the first CAISO TPP Participant meeting to address the Unified Planning Assumptions and Study Plan.

In addition to studies addressing congestion, Economic Planning Study requests seeking to integrate new generation resources or loads on an aggregated regional basis also can be selected as High Priority Studies. Under such circumstances, the study requesters must provide sufficient information about the new generation resources or load as part of the Request Window submission.

- **Step 2a:-** The CAISO will use the following guidelines to cluster or batch multiple study requests it receives from the Request Window:
  - Several study requests can be assigned to the same cluster if they address the same congestion
  - If several study requests address different congestion but the congestion is related to each other, the study can be assigned to the same cluster
  - Several study requests for integrating new generation resources or loads that impact the same facility(ies) can be assigned to the same cluster

During the process of selecting the High Priority Studies, a cluster of study requests shall be treated as equivalent to one study request. Therefore, more than five study requests may be selected as High Priority Studies if a cluster is chosen during this process.

- **Step 2b –** All Economic Planning Study requests are communicated to TEPPC by January 31<sup>st</sup> as part of that organization's request window. The CAISO will earmark those that it has identified as High Priority Studies that will be conducted by the CAISO. Other Economic Planning Study requests with a regional or sub-regional scope will be considered by TEPPC as part of its congestion study process.
- **Step 2c –** The CAISO will fully participate in the TEPPC congestion study process and may alter the scope of any selected High Priority Study to effectuate any identified efficiencies resulting from "clustering" or combining study requests received by TEPPC. However, consistent with TEPPC principles, the CAISO anticipates taking responsibility for performing, completing and communicating the results of all High Priority Studies whether or not modified.
- **Step 2d –** To the extent non-High Priority Studies are not determined by TEPPC to be high priority for regional or sub-regional study, the CAISO will so notify the submitting entity and such submitting entity may elect to perform the proposed Economic Planning Study at its own cost. The CAISO will coordinate with any third party performing its own study to ensure that the study is consistent with the data, assumptions, and methodology employed by the CAISO.
- **Step 3: Evaluate Congestion Mitigation Alternatives:** In this step, the CAISO identifies or evaluates potential plans to mitigate the Congestion studied in each High Priority Economic Planning Study. Each study analyzes up to 2 mitigation plans for future year scenarios. Study results will be presented to TPP Participants during the second public

meeting to address technical study preliminary results and during the third meeting to address the draft Transmission Plan. The results from studies conducted by third parties may be submitted to the CAISO for review and potential inclusion in the final Transmission Plan.

The overview of the Economic Planning Study process is shown in Figure 6.

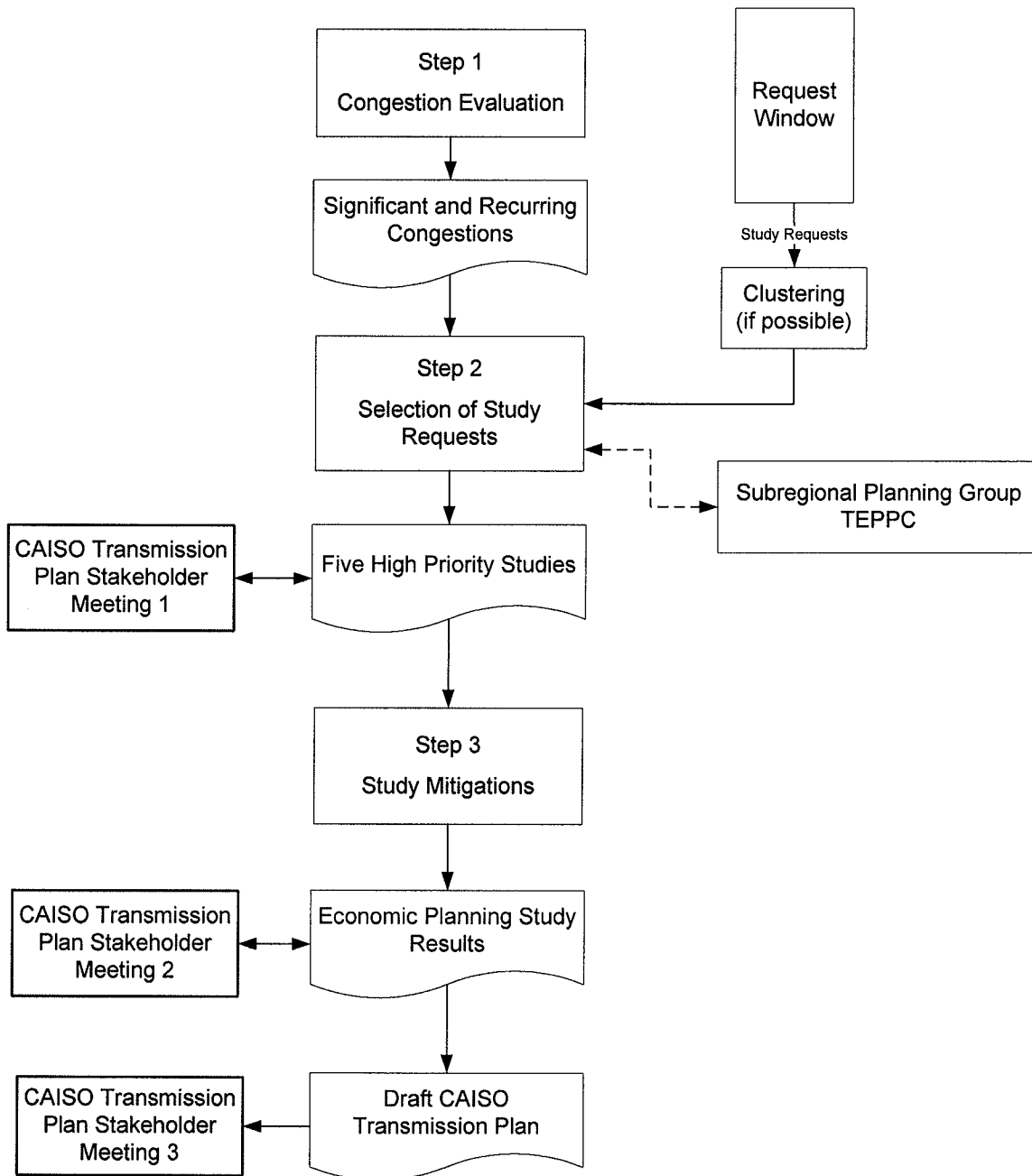


Figure 6: Overview of Economic Planning Study

#### 4.2.2.2 Technical Assessment for Specifically Proposed Economic Projects

##### CAISO Tariff Section 24.1.1

At the end of Request Window, when all valid project proposals have been collected, the following technical assessments will be conducted for each proposed economic project in the Study Plan as part of project evaluation:

- Power Flow – Determine thermal loadings on facilities and bus voltages due to the implementation of the project. Study results will be compared with applicable reliability standards to ensure system performance will meet reliability criteria
- Stability Analysis– Capability of the system to meet applicable reliability standards during various conditions, such as after disturbances
- Short-Circuit Study – Capability of the system to withstand faults
- Economic Study – Determine potential impact on system operating conditions and cost-benefits of the project (for TAC projects)
- Simultaneous Feasibility Test (SFT) – Determine amounts and source-sink combinations of incremental CRRs due to the project (for Non-TAC projects)

#### 4.2.3 Determining LCRIF

##### CAISO Tariff Section 24.1.3

The requirements for approval or conditional approval of a LCRIF are set forth in detail in 24.1.3 of the CAISO Tariff and in Section 3.3.4 above.

#### 4.2.4 Determining Projects to Maintain Long-Term Congestion Revenue Rights

##### CAISO Tariff Section 24.1.4

The CAISO expects that released Long Term CRRs (LT-CRRs) will remain feasible during their full term. This expectation is based on the fact that the transfer capacity of existing grid facilities will be reduced to 60 percent of the normal ratings for the release of LT-CRRs, as well as the expectation that most proposed transmission upgrades will reduce Congestion; that is, the flows on binding constraints will be reduced or the flow capability through constrained facilities will be increased. However, for those infrequent changes to the transmission system that could result in substantial adverse impacts on binding constraints and cause infeasibility in certain LT-CRRs, the CAISO plans to perform an annual Simultaneous Feasibility Test (SFT) analysis to identify this outcome. In such instances, the Transmission Planning Process identifies potential ways to mitigate the adverse impacts, to be considered in conjunction with the overall Transmission Plan.

This new technical study, consisting of Simultaneous Feasibility Tests, will be integrated in the CAISO TPP and will be performed in the context of (a) planned or proposed transmission projects; (b) Generating Unit or transmission retirements; (c) Generating Unit interconnections; and (d) the interconnection of new Load. In assessing the need for transmission additions or upgrades to maintain the feasibility of allocated Long Term CRRs, the CAISO, in coordination with the PTOs and other Market Participants, shall consider lower cost alternatives to the construction of transmission additions or upgrades, such as acceleration or expansion of existing projects, Demand-side management, Remedial Action Schemes, constrained-on Generation, interruptible

Loads, reactive support, or in cases where the infeasible Long Term CRRs involve a small magnitude of megawatts, ensuring against the risk of any potential revenue shortfall using the CRR Balancing Account and uplift mechanism in Section 11.2.4 of the CAISO Tariff.

#### 4.2.5 Merchant Transmission Process

CAISO Tariff Sections 24.1.1 and 36.11

Currently, any Market Participant, group of Market Participants or PTO may act as a Project Sponsor to identify a possible transmission upgrade and seek its incorporation into the CAISO Transmission Planning Process for ultimate approval and construction. A Project Sponsor may elect to pursue the transmission upgrade or addition as a Merchant Transmission Facility. A Merchant Transmission Facility is a transmission upgrade or addition that is part of the CAISO Controlled Grid where the Project Sponsor does not seek a regulated rate of recovery, but rather funds the project itself and recovers its costs through an allocation of incremental Merchant Transmission CRRs. A Merchant Transmission Facility will be deemed "needed" by the CAISO upon satisfaction of three elements:

- Mitigation of operational concerns identified under CAISO Tariff Section 24.5
- Mitigation of any impact from the proposed project that impairs the continuing feasibility of allocated Long Term CRRs over the length of their terms
- Proof that the Project Sponsor is financially able to pay the construction and operating costs of the Merchant Transmission Facility by requiring (1) a demonstration of creditworthiness (*e.g.* an appropriate credit rating), or (2) sufficient security in the form of an unconditional and irrevocable letter of credit or other similar security sufficient to meet its responsibilities and obligations for the full costs of the transmission addition or upgrade.

Accordingly, the CAISO and affected Participating TOs will perform technical studies to determine whether and how the project can be safely and reliably integrated with the CAISO Controlled Grid. Further, detailed Facilities Studies are performed by the Participating TOs with PTO Service Territories who own the existing transmission facilities to which the new project would interconnect, and these studies are performed at the expense of the Project Sponsor pursuant to provisions of the Transmission Owner Tariff of the applicable Participating TO.

#### 4.2.6 Long-Term Local Capacity Requirements Study

CAISO Tariff Sections 24.2, 24.2.4, and 24.1.1

In each planning cycle, the CAISO conducts technical studies to evaluate Local Capacity Area Resource needs under the following scenarios:

- Local Capacity Technical Study – Determines the Local Capacity Area Resource needs for the next Resource Adequacy Compliance Year.
- Long-Term Local Capacity Requirements (LCR) Study – Evaluates Local Capacity Area Resource needs on a 3 and 5 year planning horizon.

The Local Capacity Technical Study is used to implement that assignment of Local Capacity Area Resource responsibility under Section 40.3 of the CAISO Tariff. The Long-Term LCR Study provides Market Participants with information to utilize in the Transmission Planning Process or in

their individual procurement activities. Both studies assess the minimum level of capacity needed to ensure reliable CAISO Controlled Grid operation under peak Demand conditions consistent with NERC and WECC standards and CAISO Planning Standards. The studies also evaluate the existing local areas and potentially identify the changes in local areas or sub-areas definitions due to the impacts from system topology changes. Both studies utilize a similar methodology, but evaluate different time horizons. Detailed study assumptions, methodology, tools, and other information necessary for the studies are found in the Local Capacity Technical Study Manual posted to the CAISO Website at Transmission Planning.

#### **4.2.7 Preservation of Generation Deliverability**

CAISO Tariff, Appendix U, Section 3.3

The CAISO uses the deliverability analysis embodied in its Interconnection procedures to ensure that new Generation does not degrade the deliverability of existing resources. This mechanism generally maintains the stability of Net Qualifying Capacity (NQC) ratings for a given existing resource. Generally, economically and reliability driven transmission upgrades will enhance generation deliverability. However, a transmission project could potentially degrade the deliverability of one or more generation projects. During the development and review of transmission project proposals, the potential for adverse impacts on generation deliverability will be assessed by the CAISO and the estimated cost impacts associated with the reduction in NQC will be considered in the analysis of project alternatives.

### **4.3 Project Approval Process and Development of CAISO Transmission Plan**

CAISO Sections 24.2.5.2 and 24.2.5.3

Stage 3 of the TPP involves approval of the projects being proposed for CAISO through the Request Window, the development of the CAISO Transmission Plan and presentation of the Transmission Plan to the CAISO Governing Board. The timeframe for this activity is December through February.

#### **4.3.1 Timeframes for Project Approvals**

Depending on the costs and voltage levels of the proposed projects, project approval will be granted through one of the following mechanisms:

- A project with capital costs that are less than \$50 Million may be approved by CAISO management during TPP Stage 3. Such projects will be presented for approval to the CAISO Executive Leadership Team (ELT) at the first meeting scheduled after the stakeholders have had an opportunity to review and comment on the draft Transmission Plan and prior to the presentation of the Transmission Plan to the CAISO Governing Board According to the TPP timeframe set forth at Section \*\*\* above, this will be the February ELT meeting.
- A project with capital costs greater than \$50 Million that has been identified during TPP Stage 2 but has not been designated as a Large Project may be presented to the CAISO Board of Governors for approval. Once the CAISO management has received sufficient information to certify that the project is justifiable and ready to be submitted to the board,

the tentative schedule of the CAISO Board of Governor's meetings that each project will be presented to the board will be documented in the Transmission Plan.

- A project that qualifies as a Large Project (transmission upgrade or addition, or substation and related facilities, of 200 kV and above with capital costs greater than \$200 Million) will require comprehensive studies and may be evaluated through a separate public process that would qualify the CAISO economic evaluations for a rebuttable presumption of reasonableness if submitted to the CPUC as evidence of electrical need for the project during the CPCN approval process. The evaluation process for Large Projects may span more than one planning cycle. Large Projects will be submitted to the CAISO Board of Governors for approval in accordance with the public process established for that project.

#### 4.3.2 Development and Content of the Transmission Plan

The CAISO will develop a draft CAISO Transmission Plan report based on the final study results from Stage 2 and CAISO management approval of projects with capital costs of less than \$50 million. The draft Transmission Plan report will be presented to TPP Participants for review and comment during the 3<sup>rd</sup> CAISO public meeting. The CAISO will independently provide the draft Transmission Plan to representatives from neighboring transmission providers or interconnected Balancing Authority Areas and sub-regional and regional planning groups for input and to facilitate transmission expansion coordination. After collecting TPP Participant comments on the draft Transmission Plan, which will be posted to the CAISO Website, the Transmission Plan will be finalized and scheduled for presentation to the CAISO Governing Board. Upon presentation of the Transmission Plan to the CAISO Governing Board, the CAISO will post the Final CAISO Transmission Plan on the CAISO Regional Transmission Webpage under Transmission Planning and deliver the CAISO Transmission Plan to sub-regional and regional planning groups.

The draft and final Transmission Plan may include, but is not limited to:

- The results of technical studies performed under the Study Plan;
- Determinations, recommendations, and justifications for the need for identified transmission upgrades and additions;
- Assessments of conceptual transmission upgrades and additions for which need has not been formally determined by the CAISO Governing Board or management, but which have been identified by the CAISO as potential solutions to transmission needs studied during the Transmission Planning Process cycle;
- Results of Economic Planning Studies and other studies conducted by CAISO during the Transmission Planning Process cycle;
- Updates on the status of transmission upgrades or additions previously approved by the CAISO, including identification of mitigation plans, if necessary, to address any potential delay in the anticipated completion of an approved transmission upgrade or addition;
- Updates on other key issues related to transmission planning activities i.e., new and ongoing initiatives; and
- The Board approval schedule for transmission upgrades and additions with capital costs of over \$50 million that have been recommended for approval by the CAISO.

Figure 7 shows an overview of Stage 3 for the CAISO Transmission Plan.

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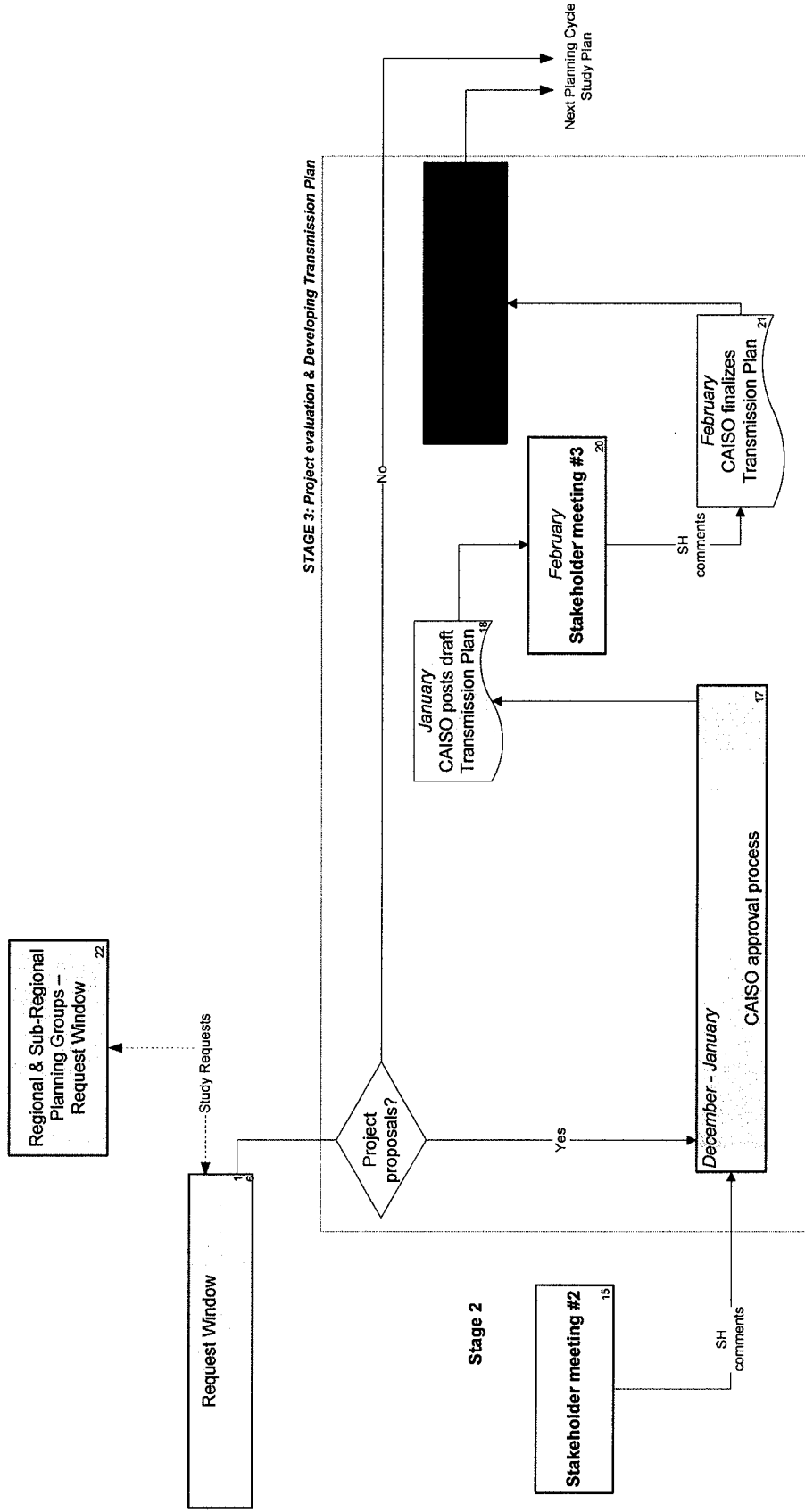


Figure 7: Development of CAISO Transmission Plan



## 5. Regional Coordination

To enhance the ongoing coordination efforts with neighboring transmission providers and regional and sub-regional organizations, as a component of the CAISO's Transmission Planning Process, the CAISO acts as an initiator, organizer, and participant in relevant forums for sub-regional and regional transmission planning. This section explains the CAISO's coordination with interconnected systems at both the sub-regional and regional levels.

### 5.1 Sub-Regional Coordination

#### CAISO Tariff Section 24.8

Ensuring regional coordination through a robust sub-regional planning process is an important objective of the CAISO's Transmission Planning Process. The CAISO will enhance its existing provisions regarding coordination within the WECC by including specific requirements to exchange information with sub-regional planning groups and, in their absence, directly with interconnected transmission providers. The CAISO is currently pursuing a bifurcated approach. First, the CAISO's Transmission Planning Process itself offers an open, transparent, and structured opportunity for interconnected neighbors to exchange planning information and objectives. Second, the CAISO is participating in the development of a Pacific Southwest Planning Association (PSPA), which hopes to encompass most of the transmission systems in California. Through either of these means, the CAISO will satisfy its requirement that transmission providers coordinate with neighboring systems to ensure simultaneous feasibility of their respective plans and assess the possibility of efficiencies through mutual cooperation.

Until a California sub-regional planning group is created and participant responsibilities defined, the CAISO will perform the transmission planning functions for its Balancing Authority Area in accordance with Section 24 of the CAISO Tariff and this BPM. However, the CAISO will continue to collaborate with representatives from adjacent transmission providers and existing sub-regional planning organizations through existing processes. At a minimum, the CAISO shall:

- solicit the participation, whether through sub-regional planning groups or individually, of all interconnected Control Areas in the development of the Unified Planning Assumptions and Study Plan and in reviewing the results of technical studies performed as part of the TPP in order to:
  - (1) coordinate, to the maximum extent practicable, planning assumptions, data and methodologies utilized by the CAISO, regional and sub-regional planning groups or interconnected Control Areas;
  - (2) ensure transmission expansion plans of the CAISO, regional and sub-regional planning groups or interconnected Control Areas are simultaneously feasible and seek to avoid duplication of facilities.
- coordinate with regional and sub-regional planning groups regarding the entity to perform requests for Economic Planning Studies or other Congestion related studies;
- transmit to applicable regional and sub-regional planning groups or interconnected Control Areas information on technical studies performed as part of the CAISO Transmission Planning Process;
- post on the CAISO Website links to the planning activities of applicable regional and sub-regional planning groups or interconnected Control Areas.

In order to effectively work together with neighboring transmission providers and other regional planning entities, the CAISO shall expressly request the participation of the proposed interconnected transmission providers and other entities in providing information during the Request Window, participating in the creation of the Unified Planning Assumptions and Study Plan, and reviewing study results and draft Transmission Plans. Requests for participation will be sent directly through electronic means to identified transmission planning representatives of entities, including, but not limited to:

- WestConnect Sub-Regional Groups
- Los Angeles Department of Water and Power
- ColumbiaGrid
- The Northern Tier Transmission Group
- The Northwest Transmission Assessment Committee of the Northwest Power Pool
- SWAT (Southwest Area Transmission)
- WATS (Western Arizona Transmission Studies)
- RETI (Renewable Energy Transmission Initiative)
- Arizona BTA (Biennial Transmission Assessment)

The CAISO will also participate, as appropriate, in the planning activities of the foregoing entities and provide any information requested to facilitate those activities (subject to confidentiality limitations).

Through this interim collaboration, the CAISO intends to:

- Exchange information such as Transmission Plan and other information
- Ensure transmission expansion plans from neighboring transmission providers and the CAISO are simultaneously feasible and maximize the efficiency of infrastructure investment
- Communicate major activities that may impact respective control areas
- Coordinate requests for planning or economic studies that appear to impact more than one control area.

## 5.2 Regional Coordination

CAISO actively participates at the WECC through various WECC committees such as the Board of Directors, Planning Coordination Committee, Operations Committee, and the TEPPC (Transmission Expansions Planning Policy Committee), among other subcommittees or workgroups. Through this participation, the CAISO seeks to:

- Exchange information, such as supplying data for the TEPPC data base and notifying WECC of potential projects that may impact multiple entities
- Participate in regional technical studies, such as the WECC path rating process
- Participate in the review of proposed reliability and economic projects that may have regional impact

- Potentially refer to TEPPC requests for economic studies that impact multiple sub-regions
- Cooperate in development and maintenance of the use in Transmission Planning analysis, including power flow, stability, dynamic voltage, and economic studies (*i.e.*, production cost simulation)
- Obtain policy guidelines and standards and software recommendations to maximize uniformity in the west-wide Transmission Planning Process
- Obtain path ratings for approved projects, when appropriate.

## 6. Obligation to Build

CAISO Tariff Sections 24.1.1, 24.1.2, 24.1.4, and 24.6

Sections 24.1.1, 24.1.2, 24.1.4 of the CAISO Tariff govern the assignment of responsibility to construct needed transmission facilities proposed by CAISO through the TPP. That section requires a PTO to construct transmission additions or upgrades determined by the CAISO to be "needed," where:

- The additions or upgrades to the transmission facilities are located within its PTO Service Territory, unless it does not own the facility being upgraded or added *and* neither terminus of such facility is located within its PTO Service Territory
- The additions or upgrades are to existing transmission facilities that the PTO owns, which are part of the CAISO Controlled Grid and are located outside of its PTO Service Territory, unless any joint ownership arrangement does not permit construction by the PTO
- The PTO is also a Local Furnishing PTO, if the CAISO or Project Sponsor tenders an application under Federal Power Act, Section 211, which requests the FERC to issue an order directing the Local Furnishing PTO to construct such facilities. After receiving the Section 211 application, the Local Furnishing Participating TO is required to waive its right to request service under Section 213(a) of the Federal Power Act and to the issuance of a proposed order under Section 212(c) of the Federal Power Act. The obligation to construct arises after the FERC order, if granted, is no longer subject to rehearing or appeal.

"Need" arises under Section 24 of the CAISO Tariff when the transmission upgrade or addition maintains System Reliability (*see* Section 4.2.1 of this BPM); promotes economic efficiency, including maintaining the feasibility of allocated LT-CRRs (*see* Sections 4.2.2 and 4.2.4 of this BPM); or satisfies the requirements of LCRIF (*see* Section 4.2.3 of this BPM).

It should be noted that the obligation to construct does not attach to all PTOs, but rather to those PTOs with PTO Service Territories. A PTO Service Territory is "the area in which an IOU, a Local Public Owned Electric Utility, or federal power marketing administration that has turned over its transmission facilities and/or Entitlements to ISO Operational Control is obligated to provide electric service to Load. A PTO Service Territory may be comprised of the Service Areas of more than one Local Public Owned Electric Utility, if they are operating under an agreement with the ISO for aggregation of their MSS and their MSS Operator is designated as the Participating TO." (CAISO Tariff, Appendix A.)

However, the obligation to construct is further subject to the following conditions:

- The ability of the PTO, after making a good faith effort, to obtain all necessary approvals and property rights under applicable federal, state, and local laws

- The presence of a cost recovery mechanism with cost responsibility assigned in accordance with Section 24 of the CAISO Tariff
- The right of the PTO to dispute any need determination under the CAISO's ADR Procedures

The obligation of a PTO to construct a needed transmission upgrade or addition further extends to a Merchant Transmission Facility, which is a transmission addition or upgrade that is part of the CAISO Controlled Grid and whose costs are paid by a Project Sponsor that does not recover the cost of the transmission investment through the CAISO's Transmission Access Charge (TAC) or Wheeling Access Charge (WAC) or other regulatory cost recovery mechanism. Rather than obtain a recovery of costs through a regulated rate, the Project Sponsor of the Merchant Transmission Facility obtains Merchant Congestion Revenue Rights in accordance with CAISO Tariff Section 36.11. (See Section 4.2.5 of this BPM and Section 4.2.4 of the BPM for Congestion Revenue Rights.) The PTO's obligation to construct a Merchant Transmission Facility is contingent on the Project Sponsor demonstrating that it is financially able to pay "the costs of the project to be constructed by the Participating TO," such that the PTO may require:

- A demonstration of creditworthiness, such as an appropriate credit rating
- Sufficient security in the form of an unconditional and irrevocable letter of credit or other similar security sufficient to meet its responsibilities and obligations for the full costs of the transmission addition or upgrade

If the PTO cannot secure the necessary approvals and, therefore, is unable to construct the transmission upgrade or addition, the PTO shall notify the CAISO and the CAISO shall convene a technical meeting to evaluate alternative proposals. The CAISO may take any action reasonably appropriate, after coordination with the PTO, or Project Sponsor if not the PTO, and other affected Market Participants, to develop and evaluate alternatives, including the discretion to confer the right to construct the transmission addition or upgrade on a non-PTO. The obligation to construct can be distinct from the right to own. As noted, a non-PTO Project Sponsor (e.g., a Transmission Owner), may retain ownership of a Merchant Transmission Facility notwithstanding the PTO's role in operating and maintaining the transmission upgrade or addition. Similarly, a PTO without a PTO Service Territory may hold ownership as well as responsibility for maintenance of a transmission upgrade or addition approved to promote economic efficiency, in accordance with Section 14 of the Transmission Control Agreement. In the latter case, the PTO sponsoring the project may, but is not required to, construct the project itself.

Transmission upgrades or additions to maintain System Reliability in accordance with Applicable Reliability Criteria and CAISO Planning Standards will primarily be sponsored, and therefore owned, by PTO's with PTO Service Territories. This arises from:

- The practice of those PTOs to perform annually, at the direction of the CAISO, reliability assessments of their PTO Service Territories that may cover all Loads within their geographic PTO Service Territories to ensure compliance with Applicable Reliability Criteria and CAISO Planning Standards
- The obligation of those PTOs to act as a Project Sponsor for transmission additions or upgrades in its PTO Service Territory identified or approved by the CAISO as needed to ensure System Reliability.

Similarly, to the extent that a transmission upgrade or addition constitutes the most efficient means to maintain the feasibility of allocated Long Term CRRs under Section 24.1.3 of the CAISO Tariff—apart from the expansion of, or acceleration of, an existing transmission project not sponsored by the PTO—the CAISO will direct the appropriate PTO to sponsor the needed

transmission project. This is consistent with the CAISO's designation of PTO's with PTO Service Territories as the entity with the obligation to construct needed transmission upgrades or additions.

However, should the PTO prove to be unable or unwilling to fund and construct transmission upgrades or additions deemed as required to resolve reliability criteria violations or maintain the feasibility of LT- CRRs, the CAISO may exercise its right, as noted above, to seek a third-party Project Sponsor.

The Project Sponsor for Economic transmission projects will generally be the entity that submits the successful proposal through the Request Window process. To the extent the Project Sponsor cannot own, finance and construct the Economic transmission project, including where the project is proposed by the CAISO, the CAISO will designate one or more of the PTOs with PTO Service Territories in which the terminus of the transmission addition or upgrade will be located to act as Project Sponsor. Where two or more PTOs are designated as Project Sponsors, such CAISO designation will include the proportionate responsibility between or among PTOs to own, construct, and finance the transmission addition or upgrade. If a PTO refuses to act as a Project Sponsor, the CAISO will first request other designated PTO(s) to assume the remainder or greater proportionate responsibility, and if no other PTO had been designated or is willing to increase its proportionate responsibility, the CAISO may solicit bids to finance, own, and construct the transmission addition or upgrade.

A Transmission Owner that is neither a PTO, nor seeking Merchant Transmission Facility treatment under the CAISO Tariff, retains any rights to construct and expand transmission facilities as those rights would exist absent any other obligations the Transmission Owner may have under the CAISO Tariff.

## **7. Cost Allocation – Transmission Access Charge**

There are four general mechanisms by which a Transmission Owner can recover, or attempt to recover, its revenue requirement associated with transmission facilities turned over to the CAISO's Operational Control. The selected mechanism will depend on whether the Project Sponsor is a PTO or not and, if a PTO, whether the transmission facility constitutes a network facility or a Location Constrained Resource Interconnection Facility. Figure 8 illustrates the three mechanisms.

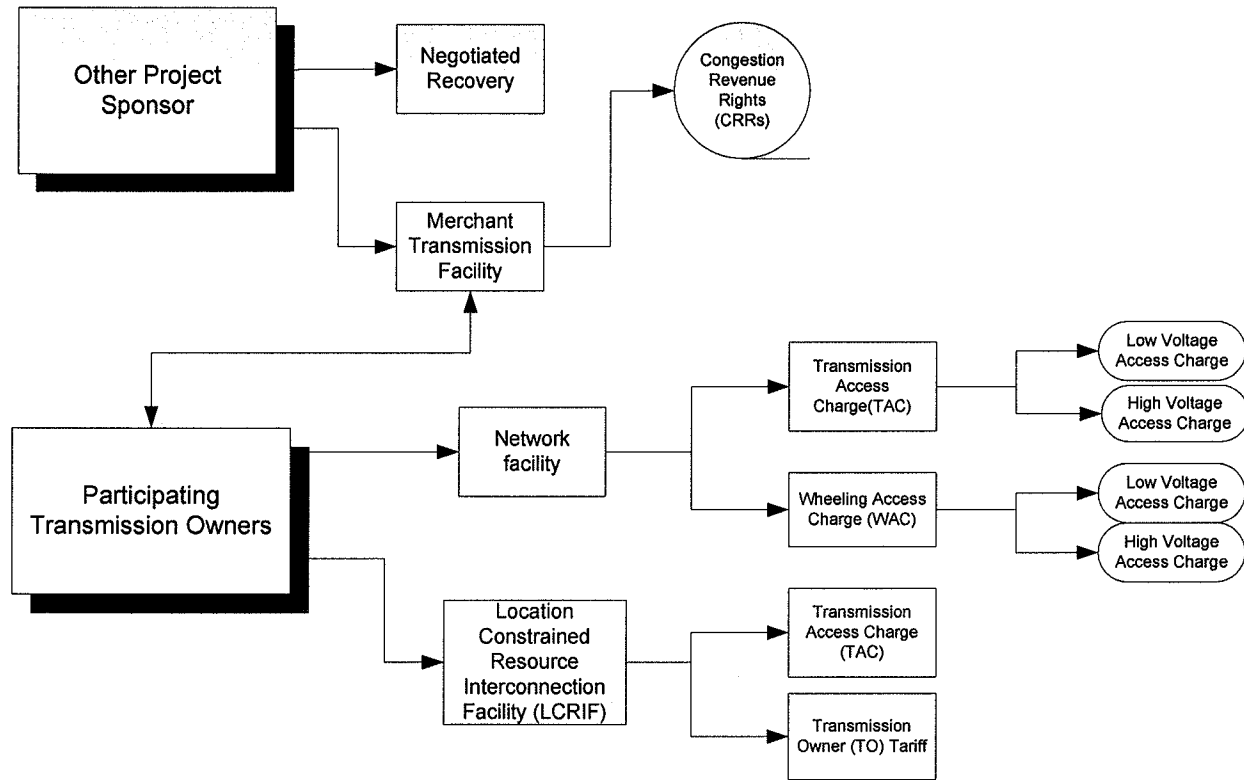


Figure 8: Mechanisms for Cost Allocation

## 7.1 Merchant Transmission Facility

CAISO Tariff Section 24.1.1 and 36.11

A Project Sponsor may elect to fund and construct a Merchant Transmission Facility. In this case, the Project Sponsor does not seek to recover the cost of the Merchant Transmission Facility transferred to the CAISO’s Operational Control through the CAISO’s Access Charge and Wheeling Access Charge or other regulatory cost recovery mechanisms. Instead, the Project Sponsor of a Merchant Transmission Facility seeks an allocation, at the Project Sponsor’s election, of either CRR Options or Obligations that reflect the contribution of the facility to grid transfer capacity. The conditions for receiving CRRs, for determining of the quantity of CRRs to be allocated, and for determining potential revenue from allocated CRRs, are set forth in Section 36.11 of the CAISO Tariff and the BPM for Congestion Revenue Rights, located at <http://www.caiso.com/1840/1840b23c226f0.html>.

## 7.2 Negotiated Recovery

CAISO Tariff Section 24.7.3

Under the current version of the MRTU Tariff, a Project Sponsor that elects not to receive Merchant Transmission CRRs may still receive cost recovery other than through the Access Charge. The CAISO anticipates modifying this authority to apply solely to projects previously

electing recovery under Section 24.7.3 of the "Simplified and Renumbered" ISO Tariff such that new transmission projects approved after the commencement of MRTU would not be eligible for negotiated rate recovery. Until such modification is made, a Project Sponsor that does not recover the investment cost under a FERC-approved rate through the Access Charge or a reimbursement or direct payment from a Participating TO, provided the upgrade or addition is under CAISO Operational Control, shall be entitled to receive a compensation package based on a negotiation between the Project Sponsor, CAISO and the relevant PTO. The compensation for the Project Sponsor shall be commensurate with the amount of additional transmission capacity that results from the upgrade, determined by subtracting the rating of the transmission facility before the upgrade or addition from the new rating for the upgraded or additional transmission facility. The full amount of capacity added to the system will be as determined through the regional reliability council process of the WECC. If the parties agree to a compensation package, the CAISO will provide notice of agreement on the CAISO Website. The CAISO will file a proposed compensation package with FERC.

## 7.3 PTO Transmission Facility

CAISO Tariff Section 24.7.2 and 24.7.4

A facility constructed by a PTO for transfer to the CAISO's Operational Control will be either a network transmission upgrade or addition, or a Location Constrained Resource Interconnection Facility.

### 7.3.1 Network Transmission Facility

A PTO's recovery of costs for facilities turned over to the CAISO Operational Control begins with its FERC-approved Transmission Revenue Requirement. The Transmission Revenue Requirement is comprised of the total annual authorized revenue requirements associated with such network transmission facilities and Entitlements. The Transmission Revenue Requirement includes the costs of transmission facilities and Entitlements and deducts Transmission Revenue Credits, credits for Standby Transmission Revenue, and the transmission revenue expected to be actually received by the PTO for Existing Rights and Converted Rights. The remainder of the PTO's Transmission Revenue Requirement is intended to be recovered through a combination of the CAISO's Transmission Access Charge (TAC) or Wheeling Access Charge (WAC).

The TAC is a charge paid by entities serving Load on the transmission and distribution systems of the PTOs under the CAISO's Operational Control. The TAC includes the High Voltage Access Charge for facilities at 200kV and above, the Transition Charge and the Low Voltage Access Charge. The Low Voltage Access Charge is collected by each PTO under its Transmission Owner Tariff, based on the transmission revenue requirement associated only with its own low voltage transmission facilities and Entitlements. The details of the High Voltage Access Charge and Transition Charge are set forth in Section 26 of the CAISO Tariff and Appendix F, Schedule 3.

The WAC is a charge assessed by the CAISO that is paid by a Scheduling Coordinator for Wheeling in accordance with Section 26.1. Wheeling can be in the form of a Wheel Out or Wheel Through. The former is defined as the use of the CAISO Controlled Grid for the transmission of energy from a Generating Unit located within the CAISO Controlled Grid to serve a Load located outside the transmission and distribution system of a PTO, except for Energy utilizing an Existing Contract. On the other hand, a Wheel Through is the use of the CAISO Controlled Grid for the

transmission of Energy from a resource located outside the CAISO Controlled Grid to serve a Load located outside the transmission and distribution system of a PTO, except for Energy utilizing an Existing Contract. The WAC may also consist of a High Voltage Wheeling Access Charge and a Low Voltage Wheeling Access Charge. The details of the WAC are set forth in Section 26 of the CAISO Tariff and Appendix N, Part F.

### 7.3.2 LCRIF

#### CAISO Tariff Section 26.6

PTOs finance the up-front costs of constructing LCRIF. The recovery of costs for such facilities comes from two sources. First, the costs of any unsubscribed capacity of qualifying LCRIFs will be rolled into the CAISO's TAC, similar to a network transmission facility. As generation resources are developed in the area and connect to the LCRIFs, cost recovery will be transferred on a going forward, *pro rata* basis to those new generation owners, and the costs included in TAC will be reduced accordingly. Once the anticipated generation is fully developed and the capacity of the LCRIF fully subscribed, the going forward costs of the project will be borne entirely by generation developers and will not be included in the TAC. Thus, the costs associated with the unsubscribed portion of the LCRIF will be included in TAC, until additional generators are interconnected, at which time costs will be assigned to such generators.

## 8. Study Charges

The CAISO's costs of conducting its TPP and producing the annual Transmission Plan are generally recovered through the CAISO's Grid Management Charge (GMC). The GMC consists of charge codes assessed monthly to participating Scheduling Coordinators for the purpose of recovering all of the CAISO's administrative and operating costs. GMC rates are calculated as set forth in Section 11 of the CAISO Tariff. The formula rate methodology provides Market Participants with the financial security of predictable GMC pricing, while ensuring that the CAISO is able to recover its actual costs in a timely manner. The charges are shown as a monthly charge on the Settlements Statements for the last day of each month, with billable quantities being published on daily statements where applicable. A detailed discussion of GMC is beyond the scope of this BPM. For more information on GMC please see:

- Section 11 of MRTU Tariff - <http://www.aiso.com/1c40/1c407ff21c570.html>
- BPM for Settlements and Billing - <http://www.aiso.com/17ba/17baa8bc1ce20.html>
- Structure of GMC under MRTU - GMC <http://www.aiso.com/1872/18728fb96b370.html>

To the extent that a proposed transmission project, or High Priority Economic Planning Study, is accepted by the CAISO for evaluation as part of the Study Plan, the costs of those activities will typically be borne, based on the division of responsibilities, either by the CAISO and recovered through existing GMC procedures and practices or by the third party assigned or accepting responsibility for the study task under the Study Plan in accordance with that entity's tariff authority. Participants in the TPP will be financially responsible for costs incurred in participating in the TPP, including activities in support of the CAISO or PTO evaluations. Further, the cost responsibilities of performing Interconnection Studies are governed by the CAISO's LGIP or SGIP Tariff language.

However, there is an exception to the foregoing. Where a requested Economic Planning Study is not selected for High Priority status, and therefore is not included by the CAISO in the Study Plan,



the study requestor may nevertheless conduct the study in coordination with the CAISO. The CAISO's costs of assisting the third-party requestor to conduct its own Economic Planning Study will be the responsibility of the study requestor, and such party will be asked to enter into a study agreement with the CAISO. The *pro forma* study agreement shall be posted to the CAISO Website under Transmission Planning. Further, the CAISO intends to evaluate the need to develop terms and conditions under which participants of projects included in the Study Plan 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 a "time and materials" basis.

## 9. The TPP Public Processes and Communications

### 9.1 TPP Public Processes

The CAISO initiates and coordinates a minimum of three annual meetings that are open to the public as part of the TPP. The CAISO may in its sole discretion arrange additional public meetings (*e.g.*, a meeting to discuss preliminary study results). The three required public meetings correspond to the three stages of development of the Transmission Plan. Thus, meetings that are open to the public will be held to 1) facilitate development of the Unified Planning Assumptions and Study Plan; 2) review preliminary results of technical analyses; and 3) present the draft CAISO Transmission Plan and announce approved projects.

All public meetings are open to TPP Participants and other interested parties. In each case, notice of the meeting will be given a reasonable time prior to the scheduled meeting through Market Notices and will be included in the CAISO event calendar found on the CAISO Website. Entities can subscribe to Market Notices through the CAISO Website at <http://www.caiso.com/docs/2005/10/12/2005101209381421288.html>. Teleconference and/or web conference services also will be provided for all meetings. Further, all interested parties will be allowed to subscribe to any CAISO TPP e-mail service that also will provide notice of TPP activities, including the publication of draft and final Unified Planning Assumptions and Study Plans, technical study results, Transmission Plans, and other transmission planning reports. Interested parties can subscribe to the CAISO Transmission Planning Process e-mail service by contacting [regionaltransmission@caiso.com](mailto:regionaltransmission@caiso.com).

To the extent the CAISO delegates to the PTOs or other third parties, through the Study Plan, the responsibility to perform technical analyses, the CAISO also will require those entities to conduct a minimum of one public meeting, which also facilitated by the CAISO and noticed through the CAISO's standard stakeholder notification mechanisms. In addition, the CAISO will include on the calendar of events maintained on the CAISO Website a schedule of the public meetings conducted jointly between the CAISO and any PTO or third party, as well as other relevant meetings of the CEC, CPUC, sub-regional, and regional planning groups.

To maximize public participation, the open meetings scheduled in accordance with the evaluation process for Large Projects, described in Section 4.1 of this BPM, may be noticed through standard CAISO stakeholder notice procedures, through the media in the area in which the project will be located (particularly if public meetings are held near the project location) and through electronic (E-mail) notices to specific parties who might have an interest in the process.

For all events relating to the Transmission Planning Process, interested parties will have the opportunity to submit comments on documents relevant to the meeting, and upon the meeting itself. Generally, comments from TPP participants shall be submitted to [regionaltransmission@caiso.com](mailto:regionaltransmission@caiso.com). The CAISO shall incorporate comments in subsequent

planning activities and decisional items relating to those activities. In the case of decisional items (*i.e.* adoption of final a Study Plan or final Transmission Plan), the CAISO will indicate the manner in which it responded to such comments.

Established CAISO stakeholder process protocols and standard guidelines for market notices, document postings, and the format of stakeholder meetings will be applied to all TPP public meetings.

- Market notices to announce the public meetings will be sent out at least 3 weeks prior to the meeting.
- The draft documents to be discussed during the public meetings will typically be posted no later than 1 week before the meeting. Consequently, interested parties can anticipate the posting of the draft Study Plan, CAISO study results, and the draft CAISO Transmission Plan on CAISO website at least 7 days before each public meeting.

## 9.2 Access to Transmission Planning Process Information

### CAISO Tariff Sections 20.2 and 20.4

The CAISO provides access to non-confidential information related to the TPP, including data, assumptions, decision criteria, study methodologies, and results to all TPP Participants through the Study Plan, interim study reports, study manuals, the Transmission Plan, and relevant BPMs. Public documents related to the TPP will be posted to the CAISO Website mainly under the regional Transmission webpage. The CAISO webpage also will provide links to the websites of relevant transmission planning entities including, but not limited to, the CPUC, CEC, and those entities listed in Section 5.1 of this BPM.

The CAISO will attempt to minimize the instances in which the TPP requires the use of confidential information that has been specifically designated as such by the provider of the information. Nevertheless, the CAISO shall maintain the confidentiality of information when:

- The information relates to procurement of resources submitted by LSEs under Sections 24.2.3.2 and 24.2.3.3 of the CAISO Tariff (CAISO Tariff Section 20.2(h)(1))
- The release of such information may harm the competitiveness of wholesale markets, as determined by the CAISO's Department of Market Monitoring (CAISO Tariff Section 20.2(h)(2))
- Release of such information may breach existing agreements and contracts, including previously executed Non-Disclosure Agreements (NDA) (CAISO Tariff Section 20.2(h)(3))
- The information involves third-party developed or other proprietary analysis tools, computer codes, or any other material that is protected by intellectual property rights (CAISO Tariff Section 20.2(h)(4))
- The information constitutes Critical Electric Infrastructure Information (CEII) in accordance with FERC regulations (CAISO Tariff Section 20.2(h)(5))

Apart from public information posted to the CAISO Website at Transmission Planning, the CAISO will post base cases relating to current initiatives the CAISO is working on to the Regional Transmission secure webpage. More information on the instructions and qualifications to receive access to the secure webpage can be found at <http://caiso.com/1f42/1f42d6e628ce0.html>.

As part of the application process, entities will be required to comply with the following requirements to gain access to confidential planning information:

- Critical Energy Infrastructure Information may be provided to a requestor where such person is employed or designated to receive CEII by (1) a Market Participant; (2) electric utility regulatory agency within California to receive CEII; (3) an Interconnection Customer that has submitted an Interconnection Request to the CAISO under the CAISO's Large Generator Interconnection Procedure/Small Generator Interconnection Procedures (LGIP); (4) a developer having a pending or potential proposal for development of a Generation Unit or transmission additions, upgrades or facilities and who is performing studies in contemplation of filing an Interconnection Request or submitting a transmission infrastructure project through the TPP; or (5) a not-for-profit organization representing consumer regulatory or environmental interests before Local Regulatory Agencies or federal regulatory agencies. To obtain Critical Energy Infrastructure Information, the requestor submits a statement as to the need for the CEII, and the requestor executes and returns to the CAISO the form of the non-disclosure agreement and non-disclosure statement available on the CAISO website under Transmission Planning. The CAISO may, at its sole discretion, reject a request for CEII and upon such rejection, the requestor will be directed to utilize the FERC procedures for access to the requested CEII.
- Information that is confidential under Section 20.2(h)(1) or 20.2.(h)(2) may be disclosed to any individual designated by a Market Participant, electric utility regulatory agency within California, or other TPP Participant that signs and returns to the CAISO the form of the non-disclosure agreement, nondisclosure statement and certification that the individual is or represents a non-Market Participant, which is any person or entity not involved in a marketing, sales, or brokering function as market, sales, or brokering are defined in FERC's Standards of Conduct for Transmission Providers (18 C.F.R. § 358 et seq.) except that information provided to CAISO pursuant to 20.2(h)(2) will be provided only in composite form so that information specific to individual LSEs will not be disclosed and
- Data base and other transmission planning information obtained from WECC may be disclosed to individuals designated by a Market Participant, electric utility regulatory agency within California, or other stakeholder in accordance with the procedures set forth as follows:
  - A TPP Participant that is a member of WECC and that requests the WECC planning data base: (i) shall execute the Non-Disclosure Agreement which is available on the CAISO website under Transmission Planning and (ii) shall provide to the CAISO a non-disclosure statement, the form of which is attached as an exhibit to the Non-Disclosure Agreement executed by the TPP Participant and by each employee and consultant of the TPP Participant who will have access to WECC planning data base.

A TPP Participant who is not a member of WECC and requests the WECC planning data base: (i) shall execute the Non-Disclosure Agreement attached to this BPM, (ii) shall provide to the CAISO a fully executed WECC Non-Member Confidentiality Agreement for WECC Data, and (iii) shall provide to the CAISO a non-disclosure statement, the form of which is attached as an exhibit to the Non-Disclosure Agreement executed by the TPP Participant and by each employee and consultant of the TPP Participant who will have access to the WECC planning data base.

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## 10. Dispute Resolution Process

### CAISO Tariff Section 13

The Alternative Dispute Resolution (ADR) Procedures set forth in Section 13 of the CAISO Tariff apply to all disputes arising under CAISO Documents, including those related to the Transmission Planning Process. The ADR Procedures can be found at <http://www.caiso.com/1bcc/1bcc775734780ex.html>. The ADR Procedures provide for a three-tier process, progressing from negotiation to mediation to arbitration. Both substantive and procedural disputes arising from the TPP will be addressed through the existing ADR Procedures.

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**Attachment 1****Template - Study Plan in CAISO Transmission Plan****Section 1: Objectives**

- What this transmission planning effort attempts to achieve
- Roles and responsibilities of each entity contributing to each Transmission Plan component.

**Section 2: Summary of CAISO Planning Process**

- Overview of coordination process
- Schedules of all meetings open to the public and other related activities
- Scope of each meeting
- Options available for participation by interested parties in the meetings, such as in-person, conference call, Webcast, etc.
- Location where information such as planning assumptions or other related documents will be available for interested parties
- Instructions for interested parties to receive notifications or communicate or provide comments to CAISO
- Contact persons and contact information of
  - Overall planning process
  - Subject matter experts (SME) for each technical study

**Section 3: Planning Data**

- Load forecast – Source of the load forecast, amount, and detailed methodology if original load is adjusted to the scope of each study
- Generation assumptions – Source of new generation data and list of new generation projects modeled in the study
- Generation retirement – Source of generation retirement data, list of generation retirement modeled in the studies
- Transmission projects – Source of transmission project information and list of transmission project modeled in the studies
- Import – Source of Import data, amount of import modeled, and methodology to determine the import (e.g., Import Allocation Methodology)
- Project proposals and study requests received during the Request Window

**Section 4: Planning Studies**

- List of all planning studies to be done in each Transmission Plan
  - Each study defines:
    - The objective the study tries to achieve
    - The study assumptions (e.g., study year, planning data applied to each study, or any modifications made to original planning data described in Section 4.1.3.)
    - Methodology – Describe how the study will be performed (this may refer to appropriate Business Practice Manuals or documents that have been produced and posted on the CAISO website at *[URL to be determined]*)
    - Criteria – Reliability or criteria applied to each study, such as NERC/WECC or other standards being used
    - Software and Tools – List software and tools for each study
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- Entity to perform the study
- Expected study results and location where interested parties may access pages dedicated to the study
- Public meetings or any major activities to be completed in addition to the regular schedules in CAISO Transmission Plan (if applicable)

**Section 5: Comments, Responses, and Disputes**

- Comments received from interested parties that need to be addressed in the study plan
- CAISO responses to the comments
- Records of disputes CAISO has received, particularly for the unified planning assumptions and the resolutions through the ADR process

The above template is based on the study plan for the 2008 Transmission Plan that CAISO discussed during the meeting, June 11, 2007, available at <http://caiso.com/1bf4/1bf4740146650.pdf>.

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## Attachment 2

### Detailed NERC Reliability Assessment Studies

The current NERC Reliability Standards related to transmission planning (TPL-001 through TPL-004) define the scope of and deliverables from the technical studies for which each entity is responsible under its compliance obligations related to those standards applicable to the entity's registration. The requirements apply to the annual assessments to be conducted by the CAISO and PTOs. These general requirements, such as types of technical studies, study scenarios, modeling in the base cases and the study results, are described in Sections A.1 through A. 7, below.

#### A.1. Types of Technical Studies

In each assessment, power flow, voltage stability, and transient stability studies must be conducted to demonstrate that system performance meet or exceed the criteria as identified in Table I of the effective TPL standards. The technical studies must evaluate impacts to the system under system normal and under Category B, C and D contingency conditions.

#### A.2. Study Areas

Due to the differences in load patterns and local area peaking, the technical studies will be performed on the following 11 study areas throughout CAISO balancing authority area:

1. PG&E Humboldt peak (non-coincident peak)
  2. PG&E North Coast and North Bay peak (non-coincident peak)
  3. PG&E North Valley peak (non-coincident peak)
  4. PG&E Central valley (non-coincident peak)
  5. PG&E Greater Bay Area (non-coincident peak)
  6. PG&E Central Coast and Los Padres (non-coincident peak)
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7. PG&E San Joaquin Valley (non-coincident peak)
8. Entire PG&E area coincident peak (represents all of Northern California)
9. Entire SCE area coincident peak
10. Entire SDG&E area coincident peak
11. Entire Southern California (CAISO Control Area) coincident peak

### **A. 3. Frequency of the Assessment**

The assessment must be made annually.

### **A. 4. Study Years**

For the extreme contingency (Category D) studies, the study must be conducted for the near-term (each year: Years One through Five). For the study under system normal, Category B, and Category C contingencies, both the near term (each year: Years One through Five) and long-term (each year: Years Six through Ten) must be studied unless changes to system conditions do not warrant such analyses.

### **A.5. Study Scenarios**

The technical studies must cover critical system conditions and be performed for selected demand levels over the range of forecasted system demand. In general, the summer peak scenarios with appropriate stressed -path flows must be studied for each study area. Additional scenarios can be studied if they are needed to ensure a complete planning analysis. The list of study scenarios, MW demand forecasts, and the stressed -path flows will be documented in the Study Plan of each year's Transmission Plan.

### **A.6. Base Cases and Contingencies Being Studied**

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The standards also require certain components must be included in the studies and need to be documented for auditing purposes. Table 1 lists these modeling requirements and descriptions of contingencies according to the current TPL 001 through TPL 004 standards.

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**Summary of Modeling Requirements**

<b>Requirements</b>	<b>Apply To</b>
Have established normal (pre-contingency) operating procedures in place Category A study.	Category A Study
All Category B contingencies must be studied and mitigations proposed for those that would produce severe System results or impacts. The rationale for the contingencies selected for evaluation shall be available as supporting information. An explanation of why the remaining simulations would produce less severe system results shall be available as supporting information.	Category B Study
Consider all possible C contingencies. Perform studies and evaluate those Category C contingencies that would produce the more severe system results or impacts. The rationale for the contingencies selected for evaluation shall be available as supporting information. An explanation of why the remaining simulations would produce less severe system results shall be available as supporting information.	Category C Study
Consider all possible D contingencies but studies must be performed and evaluated only for those Category D contingencies that would produce the more severe system results or impacts. The rationale for the contingencies selected for evaluation shall be available as supporting information. An explanation of why the remaining simulations would produce less severe system results shall be available as supporting information.	Category D Study
Have all projected firm transfers modeled.	Category A, B, C and D Studies
Include existing and planned facilities; transmission facilities that have been approved by the CAISO and applicable generation projects that have been approved by regulatory agencies.	Category A, B, C and D Studies
Include Reactive Power resources to ensure that adequate reactive resources are available to meet system performance.	Category A, B, C and D Studies
Include the effects of existing and planned protection systems, including any backup or redundant systems.	Category B, C and D Studies
Include the effects of existing and planned control devices Category B, C, and D studies.	

	Category B, C and D Studies
Include the planned (including maintenance) outage of any bulk electric equipment (including protection systems or their components) at those demand levels for which planned (including maintenance) outages are performed.	Category B, C and D Studies

### A.7. Study Results and Mitigation Plans

The CAISO and PTO must demonstrate that the portion of system under their respective responsibilities meets the requirements identified in the Table 1 of TPL reliability standards. Therefore, both the CAISO and PTOs shall consistently document the following information in their respective study reports:

1. For the study under system normal and Category B and Category C contingencies, the study results list all study scenarios, identified reliability criteria violations, and the associated mitigation plans.
2. For the studies under Category D contingencies, the study results must show the evaluation for the risks and consequences of each extreme contingency.
3. For each identified reliability criteria violation, the study results must elaborate the conditions that violation occurs (e.g., study year, season, contingency that trigger the problem, special protection system that has been modeled, limiting facility or limiting conditions).
4. For the proposed mitigation plans, must provide:
  - a. A written summary of its plans to achieve the required system performance as described above throughout the planning horizon;
  - b. Schedule of implementation;
  - c. Discussion of expected required in-service dates of facilities;
  - d. Consider lead times necessary to implement plans. Review, in subsequent annual assessments where sufficient lead-time exists, the continuing need for identified system facilities. Detailed implementation plans are not needed.

## Attachment 3

### **Major Activities and Milestone Dates**

Table 3 describes the major milestone and major activities that occur throughout the year. These include projected due dates of major activities such as submitting planning data, schedules for stakeholder meetings, the opening date and deadline for submitting projects through Request Window, development of the transmission plan, and presenting the plan to CAISO Board of Governors.

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## Major Milestones, Activities, Due Dates, and Responsible Entities

No.	Due Date	Entity	Activity
1	2nd week of December	CAISO	Sends a letter to neighboring Balancing Authorities, sub-regional and regional planning groups requesting planning data and other related information to be included in the CAISO Transmission Plan
2	2 <sup>nd</sup> week of January	PTOs	Provide CAISO: 1) Local area load forecasts; 2) The methodology to calculate local area load forecasts and comparison to the CEC load forecast
3	2 <sup>nd</sup> week of February	CAISO	CAISO develops the Draft Study Plan and posts it on CAISO website
4	End of February	CAISO	<b>Hosts Stakeholder Meeting #1</b>
5	End of March	PTOS	Provide CAISO: 1) All base cases for NERC compliance studies 2) Contingency files for NERC compliance studies 3) Change files or EPC files that describe the changes made to this year's base cases (compared to last year cases) 4) Verified dynamic files for transient stability study
		CAISO	1) Creates base cases for its studies 2) Posts planning data on the secured website
6	End of July	CAISO and PTOs	Host 2 stakeholder meetings (1 for Northern CA and 1 for Southern CA) to provide the update of study results and project proposals
7	August 15	CAISO	Request Window Opens
		CAISO	Complete all technical studies Posts preliminary study results on website Provides its portion of NERC compliance studies to PTOs



8	September 15	PTOs	Provide CAISO: 1) Reliability assessment report that contains study results and mitigation plans in the format that comply with the requirements of the NERC Reliability Standards 2) Updated status of the projects that have been approved (but are not yet in-service) from the previous transmission plan 3) Submit reliability project proposals through the Request Window
9	End of October	CAISO	<b>Hosts Stakeholder Meeting #2</b>
10	November 30	CAISO	Request Window Closes
11	End of December	CAISO	Submit the projects that are subject to Right to Construct, Own and Operate held by the applicable PTOs
12	End of January	PTOs	For projects submitted under No. 11, PTO response to CAISO exercising or waiving PTO's Right to Construct, Own and Operate
13	2nd week of February	CAISO	<b>Hosts Stakeholder Meeting #3</b>
14	End of February	CAISO	Present Transmission Plan to CAISO Board of Governors