Renewable Energy Transmission Planning Process (RETPP)

Draft Final Proposal

January 6, 2010

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I. EXECUTIVE SUMMARY

The central objective of the ISO's proposed renewable energy transmission planning process (RETPP) is to enhance the existing transmission planning and generation interconnection processes to promote the development of infrastructure needed to achieve the state's 33 percent renewable portfolio standard (RPS) by 2020. To this end, the proposed RETPP will: (1) develop a statewide conceptual transmission plan through collaboration among all transmission providers and owners in California; (2) finalize that plan for the ISO balancing authority area with sufficient detail both to establish needs and to elicit specific proposals to build the needed transmission; (3) establish, in the ISO tariff, access to renewable supply resources as a formal criterion for assessing need for specific transmission upgrades and approving their cost recovery through regulated rates; (4) enable transmission infrastructure development to move forward expeditiously and efficiently to support the state's environmental goals; (5) coordinate RETPP activities and milestones with key ongoing activities of the ISO's existing Order 890 compliant transmission planning process and the generation interconnection process in a practical way; and (6) provide opportunities for stakeholder participation and input to the process.

The draft final proposal retains the three-phase approach described in the prior straw proposals. In Phase 1 the ISO and other members of the California Transmission Planning Group (CTPG), building on the work of the Renewable Energy Transmission Initiative (RETI) and supported by a substantial effort with state agencies, RETI and other stakeholders, will produce by May 2010 a statewide conceptual transmission plan. In Phase 2 the ISO will accept further input from stakeholders on the Phase 1 plan and will refine the portion of the Phase 1 plan that applies to its balancing authority area to arrive at a final plan to present to its Board of Governors in December 2010 for approval of need for the Phase 2 plan elements. In Phase 3 the ISO will receive proposals to build specific elements of the Phase 2 plan and will present these to its Board for final or conditional approval starting in March 2010.

In addition to providing further details on the three RETPP phases, this draft final proposal improves upon the previous straw proposals by:

- More fully integrating the ISO's existing Order 890 transmission planning process (TPP) and large generation interconnection process (LGIP) into the RETPP structure; and

- Clarifying the role of the right of first refusal to build and own elements of the final December 2010 transmission plan, and the potential roles for independent transmission companies (ITCs) under the RETPP.

The ISO expects that certain aspects of the proposed RETPP and the related changes to the existing TPP and LGIP needed to enhance their coordination with the RETPP will likely require supporting tariff changes. The ISO will present this proposal to its Board of Governors at the February 2010 meeting and given Board approval will file the tariff changes with the Federal Energy Regulatory Commission shortly thereafter.

This section begins by providing the overarching rationale and design of the new RETPP and the accompanying changes needed to the current TPP and the LGIP. The section then provides a high-level overview of the three phases of the draft final RETPP proposal; subsequent sections fill in additional details of the proposal.

1. Design of the RETPP Planning Framework

The primary driver of new transmission infrastructure over the coming decade will be the need to integrate new renewable generation resources into the transmission grid and support the delivery of energy from these resources to end-use customers to achieve the state's target of 33 percent renewable energy on an annual basis by 2020. For this reason the new RETPP is best viewed as an extension or enhancement of the generation interconnection process. In other words, the objectives of the RETPP are essentially the same as those of the interconnection process, namely, to reliably interconnect new resources, to mitigate network impacts downstream from each new interconnection, and in most cases to ensure that energy from such resources is fully deliverable to end-users that rely on the ISO grid.

The existing interconnection process must be enhanced, however, to address the expected volume and geographic distribution of new generation resources that will be coming on line between now and 2020, and to do so from a perspective that reflects the statewide applicability of the renewable portfolio standard. Moreover, given the central role of new renewable generation as the driver of new transmission infrastructure, it is essential to integrate as far as practical all planning functions into a single coordinated process. This will make efficient use of ISO and stakeholder resources and ensure that the resulting transmission plans are truly comprehensive and not fragmented into separate reliability, economic and generation interconnection tracks with overlapping implications for transmission to meet RPS goals. Thus the draft final RETPP proposal offers a comprehensive annual planning framework designed to meet reliability, economic and environmental needs. As such the proposed RETPP will entail some major changes to how the ISO conducts transmission planning. The core changes are described below.

Statewide assessment of transmission needs. As evidenced in the RETI process, a statewide renewable transmission plan, along with mechanisms for regional and sub-

regional coordination, are needed to enable efficient development and delivery of state and regional renewable energy resources. Under the new RETPP structure the annual transmission planning process will begin with a process for initially creating and then updating the comprehensive statewide transmission plan, as reflected in Phase 1 of this proposal.

Access to renewable resources as a new criterion for determining need for transmission upgrades. The ISO's prior straw proposals have discussed the need to adopt a renewable energy access criterion for approving transmission upgrades. The current TPP has reliability and economic criteria for approving the need for an upgrade, whereas the LGIP provides for reliability and deliverability network upgrades to accommodate new generation resources that satisfy the requirements of the ISO interconnection queue. These processes do not have a basis to approve transmission that will be needed for access to anticipated new renewable resources beyond the current queue unless such transmission can be justified based on the existing reliability or economic criteria. The RETPP tariff changes will address this gap.

Effective integration and consolidation of ISO planning processes. In the initial September 15 issue paper the ISO sought to address RPS needs simply by modifying the current TPP to incorporate a renewable access planning criterion. The ISO and stakeholders quickly recognized, however, that the current TPP and the companion LGIP were not initially designed for the comprehensive planning approach required to meet state policy goals. In later straw proposals the ISO developed a separate renewable energy track that would parallel the current TPP and LGIP with certain linkages between the tracks at designated milestones. In response the stakeholders pointed out, and the ISO agreed, that the three-track process would be too fragmented and would not achieve the ISO's stated objective to do comprehensive planning.

As a key advance over prior proposals the ISO now proposes to establish a new, substantially consolidated planning structure under the RETPP, rather than simply trying to build a new criterion and new coordination steps into the existing TPP and LGIP. Although the RETPP will require significant changes to existing processes and creation of new ones, the ISO believes that the RETPP structure proposed now represents a logically integrated planning process that can achieve the needed statewide coordination while fulfilling the requirements of the existing TPP and LGIP.

Shift from a project proposal approach to a comprehensive plan approach. The new RETPP proposal departs from today's TPP whereby the ISO provides detailed reliability and economic (congestion) study results and then parties respond by submitting project proposals into a request window. Instead, under the RETPP the ISO will provide a comprehensive plan that specifies the actual transmission elements needed, to which parties can respond by submitting proposals to build specific elements of that plan. The limited exceptions to this new paradigm are the ability of parties to submit merchant transmission projects (i.e., projects not seeking cost recovery through

the transmission access charge) in Phase 2 of the RETPP, and the treatment of the existing reliability and economic TPP project categories discussed in the next paragraph.

Treatment of the existing reliability and economic TPP categories. Under the current TPP, request window proposals that address reliability needs are the responsibility of the incumbent PTOs through an obligation to build as specified in the ISO tariff. The RETPP will retain and will integrate the current TPP approach for developing reliability projects, which will become baseline assumptions for renewable transmission planning. In contrast, other projects submitted to the current TPP request window are evaluated by the ISO to determine whether there is sufficient economic basis to justify funding them through the ISO's transmission access charge. If the ISO justifies such a project based on economics, the PTO or independent entity that proposed the project would have the right to build and own the project. Under the proposed RETPP, however, where statewide renewable energy goals require comprehensive planning, it is no longer meaningful, appropriate or even feasible to evaluate economic request window projects using the methodology of the current TPP. Rather, the economic benefits of any particular new transmission element must be assessed relative to a comprehensive plan that reflects the transmission needs of new renewable generation resources. Under the RETPP economic studies of the final Phase 2 plan will provide the appropriate basis against which the ISO can evaluate other projects that may offer economic benefits and are not already reflected in elements of the Phase 2 plan. For the 2010 cycle of the RETPP the ISO intends to apply this approach to evaluate economic projects that were submitted in the 2008-9 TPP request windows. For subsequent cycles the ISO would accept economic project proposals from both PTOs and non-PTOs during the Phase 3 period following Board approval of the Phase 2 plan.

Rights and obligations for renewable transmission project development. The ISO proposes that PTOs with service territories will receive rights of first refusal to build and own transmission projects corresponding to the transmission elements contained in the final Phase 2 plan approved by the ISO Board. For elements that are partially in the territories of more than one PTO, each relevant PTO will have the right to build and own the portion of the element that is within its territory or to negotiate an alternative joint arrangement. If any PTO fails to exercise all of its rights of first refusal by submitting proposals to build within the first 90 days of Phase 3, the ISO will accept proposals from other parties to build and own the affected plan elements. For plan elements for which no acceptable proposal was submitted by either the relevant PTO or another party, the ISO may impose an obligation to build on the relevant PTO. The ISO believes that the right of first refusal and obligation to build as structured here are consistent with such rights and obligations in the ISO tariff today as they apply to generation interconnection

related projects, reliability projects identified through the TPP, and economic projects that are identified by the ISO.[1]

Opportunities for independent transmission companies under RETPP. Under the proposed RETPP the ISO identifies at least four types of opportunities for ITCs to build and own transmission:

- ITCs may submit merchant transmission projects for consideration in Phase 2, and can build and own such projects subject to the same requirements and criteria that apply today.
- ITCs may submit potential economic project proposals for consideration in Phase 3 in response to the ISO's economic study of the final Phase 2 plan. (For the 2010 cycle of the RETPP the ISO will consider economic projects submitted in the 2008-9 TPP request windows at this stage of the process.)
- ITCs may propose to build elements of the final Phase 2 plan in instances where the relevant PTO has not exercised its right of first refusal within the first 90 days of Phase 3.
- ITCs may develop collaborative projects with one or more of the PTOs, or may submit a proposal to the CPUC in competition with a PTO proposal if the ITC believes it can offer a superior or more cost-effective project.

Order 890 compliance. The ISO will ensure that the key decision-making phases of the RETPP for the ISO balancing authority area (i.e., Phases 2 and 3) will, like the current TPP, be Order 890 compliant.

2. RETPP Phase 1

Phase 1, already in progress, is a collaborative effort among the various transmission providers and owners in California under the structure of the CTPG. The goal of Phase 1 is to complete a statewide 33 percent RPS conceptual transmission plan by the end of May 2010, with a draft version released for comment in March 2010.[2] Some early concerns by non-participants about the transparency and openness of the CTPG planning process have been partially resolved through publication of information on the new CTPG web site[3] and the start of a stakeholder process to elicit public review and

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[1] The parties involved in the generation interconnection process are the ISO, the PTO and the Interconnection customer. (See ISO Tariff Appendix U, Section 1.2.2; Appendix V, Section 1.2.2.) PTOs have the obligation to build reliability projects as set forth in ISO Tariff Section 24.1.2, and PTOs have the right of first refusal to construct and own ISO-proposed and approved economic projects according to ISO Tariff Section 24.1.1(c).

[2] The draft and final conceptual plans would identify specific facilities to be added to the transmission system or upgraded, including new lines at specific voltage levels between designated points of interconnection, substation upgrades, etc., but would not include all the engineering details required to develop accurate cost estimates for proposals to build the facilities.

[3] CTPG materials are available at www.ctpg.us.

input. This aspect of CTPG is still undergoing further development with participation of the ISO, other CTPG members and State agencies, and the ISO expects to provide addition information about the CTPG process for developing the final Phase 1 plan in the near future.

As described more fully in the next section, the CTPG has studies in progress that will result in an initial public report to be issued in early January in draft form and by mid February in final form. While the March and May 2010 conceptual plans will build upon these early CTPG results, the ISO is aware of the need to perform further studies based on different planning assumptions and scenarios in order to produce the May 2010 plan. The ISO is working with the CTPG members to develop a plan for conducting these further studies. In the near future the ISO will hold substantive discussions with stakeholders regarding the specifics of the additional studies to be performed and the proposed CTPG approach for developing the May 2010 statewide conceptual plan.

An important qualification of the CTPG process and the May 2010 conceptual plan is that they will not make decisions or otherwise determine the outcomes of any decisions regarding approval of specific projects or allocation of project costs. Such decisions will be made by the relevant CTPG member entities in accordance with their own processes for such decisions. Thus the May 2010 statewide plan is intended to be truly conceptual, not prescriptive, and the CTPG is intended to be a vehicle for statewide collaboration on planning but not a decision making body.

3. RETPP Phase 2

In Phase 2 of the RETPP, the ISO and the other California planning authorities will use the Phase 1 conceptual plan as a starting point for each to develop and finalize a transmission plan for its own balancing authority area. Thus in Phase 2 the ISO will refine the portion of the Phase 1 plan that applies to its balancing authority area to arrive at an ISO transmission plan by December 2010 that will then be submitted to the ISO Board of Governors for approval. Board approval of the Phase 2 plan will constitute a finding of need for the new or upgraded transmission elements identified in the December 2010 plan, thereby setting the stage for approving project proposals to build specific elements of the plan and allowing the costs of these elements to be recovered through the ISO's transmission access charge mechanism. The ISO expects that the CTPG members will continue to collaborate as a group during Phase 2 so that all member planning authorities can maintain the statewide perspective that guided Phase 1. More specifics on the CTPG role in Phase 2 will be forthcoming at a later time.

The ISO will conduct a four-month stakeholder process as part of Phase 2, starting in April 2010 after the March release of the draft CTPG statewide conceptual plan and continuing through the end of July. During this time the ISO will provide opportunities for stakeholders to provide written comments on the March draft and May final CTPG plans, and to offer ideas for potential enhancements such as inter-state lines that would enable

access to additional renewable resources outside California. The ISO does not envision that contribution of comments or ideas by stakeholders in Phase 2 would establish rights to develop any specific elements of the final Phase 2 plan that may be based on those ideas. Rights to build and own elements of the Phase 2 plan will follow the principles of Phase 3 discussed below. The four-month Phase 2 stakeholder process will also be the submission opportunity for proposed merchant transmission projects, which would be evaluated by the ISO in accordance with existing requirements and criteria.

The ISO will refine the Phase 1 transmission plan by applying specific criteria for ranking alternative transmission elements to access particular renewable zones, which will include commercial interest, economic costs, measures of renewable energy development potential, renewable integration requirements, and environmental considerations. The draft final proposal retains the provision for distinguishing Category 1 (unconditional or final approval) versus Category 2 (conditional approval) elements of the December 2010 final plan. Category 2 approvals are intended to enable pre-construction development work to proceed on projects whose ultimate need depends on factors that cannot yet be known with sufficient certainty, with assurance of recovery of project costs for any projects that are eventually denied final approval.

4. RETPP Phase 3

In Phase 3, which starts in January 2011 following ISO Board approval of the December 2010 plan, the ISO will receive project proposals to build specific elements of that plan. The ISO then expects to submit specific project proposals to its Board for approval starting in March 2011.

As summarized in the paragraph above on right of first refusal, the ISO proposes that the elements of the final Phase 2 plan will be developed by first applying a right of first refusal to the relevant PTOs with service territories within the ISO, then opening plan elements to third-party proposals where the right of first refusal was not exercised, and finally applying an obligation to build on the relevant PTOs if necessary. Phase 3 would also include an opportunity for any party to submit an economic project proposal, subject to requirements and criteria comparable to those of the current TPP request window. As noted above, the ISO will evaluate economic project proposals based on a congestion analysis that includes the elements of the Phase 2 final plan.

5. Linkages between the RETPP, the current TPP and the LGIP

In the December 2 straw proposal the ISO provided some initial ideas on how to integrate the new RETPP with the existing transmission planning process (TPP) and the large generator interconnection process (LGIP). The motive for such integration is the recognition that much if not most of the new transmission infrastructure needed over the next decade will be driven by access to renewable resources or support for renewable integration, and as such these activities cannot be conducted apart from one another. In

particular, the ISO must ensure that consistent study assumptions are being developed for all of the studies that will be conducted in the TPP and the RETPP, beginning with the 2011 study cycle. The ISO will provide a more complete proposal for integrating these processes in the near future, but as a starting point offers the following ideas it is considering for 2010 and 2011.

First, under the TPP structure the ISO has just completed the 2009 request window into which participants have submitted 80 reliability projects and 33 economic and other projects. In addition there are 11 economic and other projects that were submitted in the 2008 TPP request window. For the reliability projects the ISO is proceeding with the existing 2010 TPP timetable to present a transmission plan to its Board for approval this coming March. This aspect of the existing TPP for 2010 would therefore be unaffected by the new RETPP.

Second, the ISO will consider economic and other non-reliability projects from the 2008-09 request windows to identify their potential renewable access benefits within both Phase 1 and Phase 2. As stated earlier, the current TPP methodology for how to assess economic projects cannot be meaningfully done prior to establishing the Phase 2 final plan as a baseline for the assessment. Thus if any elements of these economic project submissions appear as elements of the final Phase 2 plan they would do so because they are needed for renewable access, and as such would be subject to the Phase 3 right of first refusal provisions.

Third, because reliability assessments and other studies (congestion studies, feasibility of long term congestion revenue rights, short-term assessments and locational capacity technical studies) are conducted annually as part of the existing TPP and therefore must be done again for 2011, the ISO will accelerate this process during 2010 so that its results converge with the December 2010 results of the RETPP Phase 2. The idea is to enable ISO management to present a single plan to the Board of Governors at the end of 2010 that reflects proposals to build the needed reliability upgrades identified under the existing TPP, and the additional infrastructure needed to support access to renewable resources, to ensure deliverability of renewable energy to load and to support access to other resource types needed for renewable integration. During this process the ISO would also accept and evaluate merchant transmission project proposals, in accordance with existing requirements and criteria. To complete the 2011 reliability assessment on the shorter time frame (i.e., to be ready for the ISO Board by December 2010 rather than March 2011 per the normal TPP), the ISO is developing a schedule for developing the study plan, performing the studies and publishing the study results that will allow sufficient time for PTOs to submit reliability project proposals by the end of the RETPP Phase 2 comment period on July 31. The ISO intends to commence stakeholder discussions on this schedule in the near future.

Fourth, with regard to the LGIP, the ISO is already engaged in its study process to address the interconnection and deliverability needs of the projects currently in the queue, including the serial projects and the transition cluster. Many of the projects in the

queue are renewable resources located in areas that are likely to have further generation development beyond the current queue projects. For this reason, as the ISO stated in the December 2 straw proposal, many LGIP related transmission upgrades would be significant enough to warrant consideration from the larger perspective of the RETPP, rather than the narrower perspective of the current LGIP. Several stakeholders who commented on this aspect of the straw proposal expressed a concern that moving the significant LGIP upgrades into the RETPP process would delay their implementation. The ISO believes that any such delays will be minimal. Under the current LGIP study time line the ISO would complete the study process for the interconnection queue by October 2010. Under the RETPP time line the ISO would take the final plan, including any LGIP related upgrades that are moved into the RETPP, to the Board in December 2010, which is essentially a difference of two months for final approval of these upgrades. Later in this paper the ISO provides further discussion of the criteria it proposes to use for identifying the significant LGIP related upgrades to be considered within the RETPP. LGIP related upgrades that are not identified as significant would proceed to approval under the existing LGIP procedures and time line.

II. BACKGROUND

The stakeholder process that led to the present RETPP draft final proposal began on September 15, 2009 when the ISO launched its "Getting to 33% RPS" initiative by publishing an issue paper and straw proposal outlining a new tariff category for network upgrades to support renewable energy access and a framework for comprehensively planning the transmission upgrades that will be needed to reach California's 33 percent renewable energy target by 2020. The issue paper was followed up with a stakeholder meeting on September 23, after which interested parties had an opportunity to submit written comments by September 30. Since then the ISO issued revised straw proposals on October 30 and December 2, each followed by a stakeholder meeting or conference call and another opportunity to submit written comments. The last round of written comments in this process was submitted on December 15. [4]

As a result of these activities and in consideration of the thoughtful and constructive comments of stakeholders the ISO reached the following conclusions, which are reflected in the present draft final RETPP proposal.

1. To develop transmission infrastructure to achieve the state's 33 percent renewable energy target it will be neither sufficient nor efficient to approach transmission planning in a piecemeal fashion, project by project. A more comprehensive planning approach is needed.
2. The comprehensive approach should take a full statewide perspective in collaboration with the other planning authorities in the state. For this purpose the established California Transmission Planning Group (CTPG) is considered the appropriate vehicle to create a statewide conceptual transmission plan.

[4] All comments are available at http://www.caiso.com/242a/242abe1517440.html.

3. To accommodate a reasonable lead time for building transmission by 2020, the initial statewide conceptual plan should be completed in the first half of 2010 to enable further necessary analysis and development efforts to proceed.
4. The transmission plan developed by the CTPG should be truly conceptual in the sense that it would not entail decisions to approve specific transmission projects or allocate project costs. The member planning authorities would each make such decisions in accordance with their own procedures with regard to transmission facilities that would be part of their balancing authority areas.
5. The conceptual transmission plan developed by the CTPG would not perform sufficient analysis or planning activities to address all the reliability and operating needs of its members. Again, each member planning authority will be responsible for planning to meet these needs, but with awareness of the statewide plan as a context for planning.
6. Based on the previous two points, the ISO must conduct its own Order 890 compliant transmission planning process and its generation interconnection process, both of which have activities in progress that cannot be delayed significantly.
7. At the same time the critical need for a comprehensive approach to planning means that the current transmission planning and generation interconnection activities should be integrated as far as possible. In particular the ISO will tailor the RETPP and modify existing procedures so that a single annual transmission planning process can address both renewable energy access and the other infrastructure needs of the ISO grid, leading to a single annual transmission plan that is presented to the ISO Board for approval.

Several of the above conclusions were already reflected in the ISO's December 2 revised straw proposal. In general, stakeholders have supported the ISO's revised structure for the planning process as described in the December 2 straw proposal, but have offered several recommendations for revisions and clarifications. The ISO's proposal for right of first refusal has been contentious among stakeholders, and is the subject of further discussion in this paper. Stakeholder comments referenced in the text of this proposal will refer to comments on the December 2 proposal, unless otherwise dated.

In order to bring this RETPP proposal to the ISO Board of Governors for approval at the February 2010 Board meeting and to enable a timely tariff filing with the Federal Energy Regulatory Commission, the ISO proposes the following updated schedule for the stakeholder process:

- January 12 – Stakeholder conference call to discuss draft final proposal
- January 19 – Stakeholder comments due on draft final proposal
- February 11-12, 2010 – ISO Board of Governors meeting
- February 2010 – Tariff stakeholder process and tariff filing.

III. REVISED RETPP PROPOSAL

This section provides additional details regarding each of the three phases of the proposed RETPP.

A. Phase 1 – Statewide Renewable Energy Conceptual Transmission Plan

As the central objective and deliverable of Phase 1, the ISO will work with the other members of the California Transmission Planning Group (CTPG) to develop a comprehensive state-wide conceptual transmission plan, focusing on the transmission elements required to achieve the 33 percent renewable energy target by 2020. The target date for this deliverable is May 2010, with a draft version available for discussion and comment in March. The ISO is currently working with the other CTPG members to develop a plan and timetable for creating the Phase 1 deliverable, and will be able to provide the stakeholders more information on these activities in the near future.

The CTPG was formed as a result of discussions facilitated by FERC to address the state's transmission needs in a manner that would be coordinated statewide and would respect the various business and regulatory models of the participants. The CTPG includes transmission owners with service territories and transmission operators, i.e., parties that have both the responsibility for transmission planning and the technical capabilities to perform the required activities. The statewide 33% RPS plan will build on the RETI Phase 2A report and the ISO's September 15 report regarding transmission within its footprint,[5] and will include input from the other stakeholders and coordination with state agencies. One explicit CTPG objective is to identify opportunities for joint transmission projects, which the ISO believes is an important focus and potential benefit of developing a statewide 33 percent renewable transmission plan.

Conceptual transmission planning as the ISO envisions for the Phase 1 process is performed when it is necessary to identify and evaluate numerous potential new transmission elements. More detailed engineering studies are typically performed after the conceptual analysis is vetted with stakeholders, by ranking the most promising potential elements and then analyzing them in more detail. Conceptual planning can utilize different types of analytical approaches. For example, RETI's Phase 2A conceptual plan, which sought to identify sufficient transmission elements to support access to a large number of possible renewable zones, did not conduct power flow analysis, but rather used generation shift factors to identify transmission elements that would be impacted by renewable energy projects at particular locations. In contrast, the ISO's September 15 study using the RETI data did conduct power flow analysis to evaluate potential transmission elements, but was still conceptual in nature. Similarly,

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[5] California Independent System Operator, "2020 Renewable Transmission Conceptual Plan Based on Inputs from the RETI Process: Study Results," September 15, 2009; available at http://www.caiso.com/242a/242ae729af70.pdf.

CTPG, using a different input assumption set than the ISO used, is conducting power flow and stability studies to support an initial statewide conceptual plan. The statewide conceptual plan will identify potential transmission upgrades that support the state's 33% RPS goals, but is not intended to address all the reliability and operational needs of the CTPG balancing authorities, nor will it provide all the engineering details required to develop accurate cost estimates for proposals to build the facilities.

One important implication of the point just noted – that the conceptual plan will not attempt to address all the reliability and operating needs of the member balancing authorities – is that the Phase 1 collaborative effort will not obviate the need for the ISO to conduct its own Order 890 transmission planning process to address all of its transmission needs. Thus the ISO is now preparing to begin the stakeholder process to develop unified planning assumptions and a study plan for the annual reliability and congestion studies specified in the existing ISO TPP. As described elsewhere in this paper, this effort will enable the ISO to accept PTO proposals for reliability projects in July of this year and ultimately to provide its Board of Governors with a comprehensive Phase 2 plan in December that addresses both the new transmission needed for renewable energy access and the reliability needs of the ISO grid. In the near future the ISO will provide stakeholders additional details and a schedule for its upcoming Order 890 process activities, as well as the proposed tariff and BPM changes that will be required to effect these modifications to the ISO TPP.

CTPG Process Status and Next Steps

Many stakeholders have expressed concern about the planning process of the CTPG. They note the nascent state of the CTPG process, and are concerned that, despite the intentions of some CTPG members, its process cannot be Order 890 compliant and will lack fairness, accountability and transparency.[6] There is also concern that CTPG will not place sufficient weight on the RETI results,[7] and that its membership excludes key stakeholders in the RETI process including state agencies, generators, and ITCs.[8]

The ISO recognizes that many of these stakeholder concerns cannot be definitively answered in this paper because the CTPG process is still under development. As a member of CTPG, the ISO is working with other CTPG members[9] to address these concerns and expects that although the CTPG process may not be established as a fully

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[6] See, e.g., November 10 comments by CPUC at 3-6; eSolar at 1; Large-scale Solar Association at 4-5; Solar Millennium at 1; California Wind Energy Association at 1; NCPA at 1; Green Energy Express LLC at 1; IEP at 1-2;Pattern Energy at 1; DayStar Farms at 2.

[7] A process for CTPG-RETI coordination is underway.

[8] See, e.g., comments by CPUC at 5-6.

[9] See, e.g., comments by PG&E at 3.

Order 890 compliant process,[10] it will become more transparent and allow for meaningful input by stakeholders.

Since the ISO's December 2 revised straw proposal, the CTPG has implemented its web site,[11] posted a study plan reflecting the studies its members currently have underway, and held a stakeholder conference call on December 17 to discuss its study plan.[12] The studies described in this plan will form the basis for the CTPG's initial draft study report to be published in January 2010, followed by a stakeholder meeting to discuss the draft report.

The CTPG report is expected to provide one component of the conceptual transmission plan. Based on the limited time for developing the this initial CTPG study and the limited scope of their studies, the ISO believes that additional scenario analysis will need to be conducted using additional base-case assumptions to those used by CTPG. These scenarios and renewable portfolio assumptions would examine the impact of regulatory, technological and economic drivers on renewable resource development.[13] They may also include consideration of transmission enhancements that are based on operational needs stemming from renewable integration, such as greater access to dispatchable resources needed to smooth intermittent renewable resources in real time. The ISO intends to develop these scenarios and base case assumptions in conjunction with the CTPG and in consultation with state agencies and stakeholders. These scenarios and input assumptions will be captured in a study plan that will provide direction for the next iterations of the studies needed to develop the statewide plan.

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[10] As discussed elsewhere in this paper, the ISO does not expect the CTPG to be a decision making body that will approve specific transmission projects and determine allocation of project costs, which are essential elements of a fully Order 890 compliant transmission planning process. ISO Board and Management will make any such decisions that affect the ISO balancing authority area in a manner that is consistent with the existing Order 890 compliant planning process.

[11] See www.ctpg.us.

[12] http://www.ctpg.us/public/images/stories/downloads/CTPG_revised_Study_Plan_Nov_2_draft.pdf

[13] Such analysis could reflect, for example, the scenarios being studied in the ISO's current 33% RPS operational study, which is evaluating the operational impacts of renewable integration (e.g., ramping, load following, and regulating reserve requirements) for alternative renewable resource scenarios based on the CPUC's renewable implementation analysis and adjusted for updated 2020 CEC load forecasts reflecting different levels of demand side policies. A number of stakeholders proposed ideas on the use of planning scenarios to determine the core set of lines that would be unconditionally approved. See, e.g., PG&E at 2-3 (November 10); California Wind Energy Association, Sept. 30, at 5-7. The ISO and CTPG have not yet determined how to structure any specific scenarios to be evaluated for 33% RPS transmission planning, but intend to be responsive to stakeholder comments and resource planning processes at the state agencies (see, e.g., comments by CPUC November 10 at 7-8).

The ISO is working with CTPG to finalize and communicate the proposed ISO's RETPP Phase I timeframe and work toward a common schedule to support the delivery of a draft conceptual plan in March and a final conceptual plan in May.

B. Phase 2 – Identifying the Infrastructure Needed to Reach 33% RPS

The objective of Phase 2 will be to develop, starting from the Phase 1 statewide conceptual plan, a refined, cost-effective final plan for renewable transmission that will be submitted for formal determination of need for specific projects to the ISO Board in December 2010, and the corresponding decision makers of the other CTPG transmission operators. Phase 2 will be coordinated with the reliability and other study processes that must be conducted under the ISO's Order 890 process and will incorporate large LGIP network upgrades (with smaller LGIP projects being evaluated outside the RETPP), such that the ISO can present a comprehensive, integrated plan in December 2010 that includes all the ISO's transmission planning processes.

Organization of Phase 2

Phase 2 is divided into two sub-phases: a formal stakeholder comment period, which will also be the window for submission of limited types of project proposals, followed by a subsequent period for plan finalization. However, it is expected that the ISO will be conducting analysis and informally exchanging technical data with stakeholders, as well as holding stakeholder meetings to provide updates and gather additional feedback, throughout this phase.

Comment Period and Limited Project Submission Window

Following release of the draft conceptual plan in March 2010 during the RETPP Phase 1, stakeholders will have a four month opportunity (April through July) to review and comment on the plan, and at that time may suggest amendments to the plan, which could include recommendations for consideration of interstate projects. As noted, this period will also be the window for submission of limited types of project proposals, specifically merchant projects, location-constrained resource interconnection facilities (LCRIF) and PTO project proposals for addressing identified reliability needs. This comment period should be long enough to allow ample opportunity for additional stakeholder comments on any plan modifications that appear when the conceptual plan is finalized in May 2010. The ISO will seek sufficient stakeholder input to ensure that the infrastructure alternatives that are considered in Phase 2 reflect broad agreement on the efficient and robust transmission facilities that best support the state's 33% RPS goal, in accordance with the criteria discussed below.

With the exception of merchant projects, LCRIF projects and PTO-submitted reliability projects, the comment period is not considered to be equivalent to the current TPP's request window since the ISO is not requesting project proposals from project sponsors. A "comment" is defined here as

- Provision of additional technical information on transmission elements in the conceptual plan that may affect the specifications of those elements in the final plan;
- Alternative interconnection points for in-state or interstate transmission lines; or
- Additional information that could cause the ISO to revise some of its study assumptions (e.g., updated data on behind the meter distributed generation).

If a detailed project proposal is submitted, the ISO may use some or all of the information provided in that proposal on an as-needed basis to support its RETPP planning, but will not evaluate the project separately from the overall plan. Moreover, such comments, including any full project proposals, do not confer rights to build or own transmission upon the submitting party (see discussion of rights of first refusal in the next section of the paper). The ISO will evaluate all comments initially using the set of criteria that are established to select and rank alternative transmission elements. The ISO may reject particular comments with less than a formal analysis consisting of, for example, power flow studies or production simulations. The ISO will seek to catalogue and consider all comments, and will provide reasons for its decisions in stakeholder forums if requested.

Phase 2 Study Period and Final Plan Specifications

Following the stakeholder input on the conceptual transmission plan, that plan and the proposed adjustments to that plan will be subject by the ISO (for the plan components in its territory), in continued coordination with CTPG, to economic, environmental, commercial and other criteria to arrive at an efficient, reliable, and operationally sound final 33% RPS transmission plan. Specific criteria could also be augmented by some renewable resource "scenario" analysis that would further screen for the transmission elements likely to be needed across a range of scenarios.

Transmission planning during Phase 2 will result in transmission needs identified in the final Phase 2 comprehensive transmission plan for the ISO footprint that will be sufficiently refined and detailed to serve as the basis for Phase 3 submission and approval of proposals to construct the facilities in the plan. There are often many transmission alternatives for meeting a particular transmission need, each of which can have trade-offs in terms of reliability, economic and operational benefits. The ISO's intention is to address these considerations and trade-offs in its Phase 2 planning process such that the final plan will be extremely specific and not subject to further consideration of comparable alternatives. The final plan would provide sufficient engineering details for the PTOs or other parties to develop accurate cost estimates as part of their proposals to build specific elements of the plan. Information provided may include, but is not limited to: conductor size, line impedance, series compensation levels, substation bus and breaker configuration, breaker clearing times, transformer characteristics (capacity, impedance, tap range), shunt capacitor and reactor sizes, FACTS device specifications, SPS requirements, among others.

Phase 2 Methodology

Phase 2 has the following objectives:

- Select and rank transmission elements for purposes of renewable generation interconnection and integration;
- Appropriately size the identified transmission elements to reflect future generation interconnection ("right-sizing") and/or to facilitate meeting renewable integration operational requirements;
- Provide information that can demonstrate the cost-effectiveness of the set of transmission elements in the final plan.

On the basis of the criteria specified below, the Phase 2 process will distinguish two categories of specific transmission elements. Category 1 will be comprised of plan elements that are considered foundational and can be approved without further conditions. Category 2 elements will be those that are approved conditionally as supporting achievement of the 33% RPS target, but whose final design and approval will be subject to future development of generation or demonstrations of commercial interest.[14]

The ISO has adopted the above nomenclature in order to clarify the concepts behind these categories of transmission projects. Although ISO Category 1 conceptual projects will be roughly consistent with the intent of the RETI concept of "least regrets" transmission projects – what the RETI called "renewable foundation" and "renewable delivery" – they will not necessarily be identical with the projects identified through the RETI process.[15]

Analytical Process for Selecting the Transmission Elements for Generation Interconnection

In Phase 2, the ISO will utilize all relevant information to establish a proposed final plan for the ISO-controlled grid (in the context of the state-wide plan) based on transparent criteria that can be used for need determination. As noted, ISO expects that the ranking criteria used in Phases 2 and 3 of the RETPP would include the commercial interest criteria discussed in the prior proposal, with similar or different thresholds. Proposed

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[14] A number of stakeholders have raised concerns about conditional approval status, in particular that such approvals will not provide sufficient certainty for making logistical and financial commitments for generation project development and construction. See, e.g., comments of Solar Millenium at 1 (November 10); IEP at 3 (November 10). Other stakeholders have endorsed the concept of unconditional versus conditional approval for transmission projects, while providing their own ideas on how to determine the unconditional set. See, e.g., comments of PGE&E at 2-3 (November 10); California Wind Energy Association, at 5-7 (September 30). At this stage, ISO believes that the guiding concept of "least regrets" infrastructure development should remain integral to the planning process, while acknowledging that it needs to be further elaborated.

[15] See RETI, Phase 2A Draft Report, June 2009, pp. 1-6 to 1-7.

criteria for ranking projects in Phase 2 to minimize the risk of stranded investment are set forth below.

The ISO is open to other criteria to be used for distinguishing between Category 1 and Category 2 transmission elements, and between alternative elements that could enter Category 2. While no stakeholders have submitted very specific comments on the criteria (listed below), some stakeholders have requested additional information on them as well as the opportunity to help shape the final ranking criteria.[16] The ISO expects that these criteria, as listed or as revised following further stakeholder comments, will be submitted in its RETPP tariff filing (similarly to the way similar criteria are in the tariff rules for LCRIF). However, the exact ranking methodology (i.e., the exact weighting among criteria and other methodological aspects) will not be filed, thus allowing time for the ISO and stakeholders to begin a more focused process to refine the methodology as soon as possible and certainly prior to Phase 2.

Another aspect to the ranking of transmission elements is the alignment between the CPUC's Long-Term Procurement Planning (LTPP) proceeding and transmission development. CPUC notes that "consistency between the resource assumptions" used in RETPP and LTPP "for the IOUs could significantly streamline the CPUC's need determination in the transmission project permitting process and reduce the risk of delays from litigation."[17] ISO notes that it has worked cooperatively with the CPUC and stakeholders to align resource assumptions between LTPP and its 33% RPS operational study. It will be more difficult to conduct multiple renewable resource scenarios in the transmission planning process, due to the large numbers of transmission studies that will need to be conducted. However, the ISO intends to work with the CPUC in reviewing resource assumptions and ensuring that RETPP and LTPP are as closely aligned as possible. As requested by the CPUC, if this alignment does not take place satisfactorily in Phase 1, it will be continued into Phase 2.

Selection and Ranking of Transmission Elements

Category 1 – Transmission Upgrades or Additions Eligible for Final Approval

Category 1 transmission elements will be eligible for final ISO approval at the end of Phase 2 and will be designed to facilitate access to renewable generation with a high commercial interest level in multiple resource areas under various resource location and integration assumptions. Transmission elements will be ranked, using the following criteria:

1. commercial interest in the zone(s) accessed by the transmission element, as evidenced by signed and approved power purchase agreements and interconnection agreements;

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16 See, e.g., SCE comments at 5.

17 CPUC comments at 7.

2. the expected cost of the transmission element compared to the expected costs of other transmission elements;
3. the qualifying capacity (MW) and expected energy (MWh), as well as the supply cost function of renewable resources in particular zones;
4. the extent to which the transmission element will provide additional reliability or economic benefits to the ISO grid;
5. potential future connections to other renewable resource areas and transmission elements;
6. renewable integration requirements and costs associated with the resources in particular zones;
7. the potential for a particular transmission element to provide access to generation and non-generation resources needed to support renewable integration (e.g., pumped storage); and
8. the effect of uncertainty associated with the above criteria, and any other considerations, that could affect the risk of stranded investment.

Some further detail and comment on some of these criteria is presented below.

Category 2 – Transmission Upgrades or Additions Eligible for Conditional Approval

If the renewable resource target is not achieved by counting the capacity of renewable resources made deliverable by Category 1 transmission elements, the ISO will rank transmission elements that are eligible for conditional approval, in order of risk of stranded investment, using the same criteria set forth above in Category 1, except that:

(a) transmission elements eligible for conditional approval must be designed to access renewable resources in at least one renewable resource area;
(b) there must be some level of commercial interest in the capacity of the transmission element as evidenced by signed and approved power purchase agreements and interconnection agreements.

Treatment of LGIP-Driven Upgrades

The ISO proposes that requests for interconnection in the LGIP (network upgrades in LGIAs), including any decisions to "right-size" any upgrades made in that process, will largely be incorporated into the RETPP and the renewable resources accessed by these network upgrades will be counted towards the 33% RPS target. As a starting point, as proposed in the prior paper, the ISO will distinguish between LGIP network upgrades that are considered necessary for evaluation within the RETPP and those that aren't. The threshold for inclusion in the RETPP would consist of:

(a) LGIP Network Upgrades that are new transmission lines requiring new rights of way and are 200 kV and above and have an estimated cost exceeding $50M.
(b) LGIP Network Upgrades that are new substations and are 500 kV and above and have an estimated cost exceeding $50M.

Several stakeholders and the CPUC argue that a lower threshold for moving LGIP projects into RETPP is needed to prevent delays in LGIA execution.[18] One suggestion is that only right-sized projects would be placed into the RETPP, or only a subset of right-sized projects that are considered to affect the overall RETPP planning. The ISO considered these options. As a practical matter, the ISO believes that any such delays will be minimal, while having an integrated planning approach that includes all significant transmission elements will be valuable in developing a cost-effective plan. Under the current LGIP study time line the ISO would complete the study process for the interconnection queue by October 2010. Under the RETPP time line the ISO would take the final plan, including any LGIP related upgrades that are moved into the RETPP, to the Board in December 2010, which is essentially a difference of two months for final approval of these upgrades. This minimal planning delay must be weighed against the fact that line facilities of the size described will require a CPCN and are expected to have a lead time of 5 to 7 years, so analysis within the RETPP should not significantly delay the commercial operation date. The location of the new substation facilities of the size described should be approved as part of a long-term statewide plan because they can significantly influence future bulk system transmission expansion options and costs.

The ISO proposes that the remaining LGIP upgrades, which consist largely of short lead time and incremental projects such as reconductoring projects and transmission upgrades to existing substations, should not be required to go through RETPP. That is, these upgrades would be evaluated within the existing LGIP, as described in the Executive Summary. In addition, LGIP upgrades already in the LGIA phase of the process will not be required to go through the RETPP.

Consideration of Renewable Integration Requirements and other Economic Benefits

RETPP transmission planning will consider all transmission needs to support access to, and integration of, renewable resources. Such planning will thus potentially include location and/or sizing of transmission lines to facilitate access to needed integration resources (such as pumped storage) as well as to provide congestion relief that also relieves operational constraints that would otherwise impede renewable energy production (such as generation operational constraints in Southern California) or otherwise could provide economic benefits.

The determination of renewable integration requirements will be an ongoing task for the ISO. In November 2007, the ISO released a study of the integration requirements associated with a 20% RPS achieved through wind resource development in the Tehachapi region.[19] That study pointed to expected needs for Regulation and load

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[18] Comments by CPUC at 8, CalWEA/CEERT at 4, SDG&E at 1.

[19] California ISO, "Integration of Renewable Resources: transmission and operating issues and recommendations for integrating renewable resources on the California ISO-controlled grid," (November 2007), available at http://www.caiso.com/1ca5/1ca5a7a026270.pdf.

following capacity as well as generic ramp requirements. Production simulation was subsequently used to verify the capabilities of the generation fleet to provide those capabilities. The ISO, working with the CPUC and other stakeholders, is now updating the integration study methodology to evaluate alternative 33% RPS scenarios, with initial results expected in early 2010. The ISO expects that in RETPP during 2010, such results will inform transmission planning qualitatively.

Cost-Benefit Analysis of Alternative RETPP Scenarios and Final Plan

Several stakeholders have argued that the ISO should conduct cost-benefit analysis during the development and finalization of the renewable transmission plan. For example, SDG&E recommends that the ISO use TEAM to "compare costs and benefits of various scenarios that would satisfy the state's environmental goals."[20]

As noted above, the ISO agrees that production simulation and other estimates of benefits could be used in both Phase 1 and Phase 2 of the RETPP to examine alternative resource scenarios and transmission configurations. Some of these results will be made public through the stakeholder process and provided as part of the final plan description and analytical justification. However, given the significant computational requirements of Phase 2, the ISO will attempt to limit the number of different production simulations that it conducts to a reasonable number considered sufficient to support its final plan. The ISO will also be providing information on alternative resource portfolio costs in its 33% RPS operational study, the first phase of which is due for completion in early 2010.

Additional Congestion Studies and Economic Projects

As noted above, the RETPP will first conduct a comprehensive planning process motivated by renewable generation interconnection along with consideration of renewable integration. Following that analysis, the ISO will undertake additional congestion studies to assess the potential economic benefits of transmission in addition to that proposed under RETPP. This further analysis will then provide the basis for the category of "economic" transmission projects. For the 2010 cycle of the RETPP, the ISO will evaluate the economic projects submitted in the 2008-9 TPP request windows at this stage of the process. If any of those projects are selected, the project sponsors will have the right to build and own these projects. The ISO will then allow new economic projects based on this information to be submitted into the Phase 3 project submission window for subsequent evaluation.

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[20] SDG&E comments at 1-2.

C. Phase 3 – Project Evaluation and Approval, and Plan Recalibration

Phase 3 represents another significant departure from the current ISO transmission planning process, as it seeks to translate the comprehensive plan into a large number of specific transmission projects that can be approved within the timeframes needed to achieve policy goals. Following the approval of the ISO BAA elements of the final state-wide 33% RPS transmission plan by the ISO Board at the conclusion of Phase 2, this next phase will focus on the approval and development of the specific transmission projects identified in that plan. Phase 3 will include an ongoing process for annual recalibration of the comprehensive statewide plan to reflect new developments as well as to determine if any Category 2 projects should move into Category 1 or be terminated. The Phase 3 process described here is mostly similar to that delineated in the ISO's prior proposal. In the prior paper, the ISO proposed that to facilitate project development, PTOs with service territories are offered a right of first refusal to build Phase 3 projects. This issue is explored further in this paper.

A New Project Submission Period

Following Board approval at the end of 2010 of those elements of the state-wide 33% RPS plan that would be under ISO operational control, the ISO will provide an opportunity for parties to submit project proposals to build the specific transmission elements identified in the 33% RPS plan that are within the ISO balancing authority area and that would be turned over to the ISO's operational control. This period would also be open to any new economic project proposals based on the assumptions noted above.

Submission of proposals for elements of the final Phase 2 plan will be structured in three steps. In the first step the eligible PTOs as defined above will have the first opportunity to submit proposals to build plan elements. Parties may also work with the eligible PTOs to collaborate on joint projects. The ISO will evaluate these proposals to determine which ones can be approved. To the extent the eligible PTOs have not fully exercised their rights of first refusal in the first 90 days of Phase 3, or any of their submitted proposals are not approved by the ISO, in the second step the ISO will allow other parties to submit proposals to build Phase 2 plan elements that are not accounted for by the approved PTO proposals. In the third step, after evaluating the third-party proposals submitted in the second step, if there are still some final plan elements that are not addressed in any of the submitted proposals, the ISO may assign these to the appropriate PTO under an obligation to build. The ISO expects that the first two steps of this Phase 3 process will take three to four months.

Evaluation of Competing Projects for Approved Transmission Facilities and Right of First Refusal

In the December 2 proposal, the ISO proposed that PTOs that have service territories will have both a right of first refusal to build plan elements, and an obligation to build

those elements for which no acceptable proposal is submitted in the first two steps of the Phase 3 submission window. [21] In that proposal, we provided several justifications for granting this right of first refusal, including that it ensures that PTOs are not treated in an unduly discriminatory manner as the result of joining an ISO or RTO, as well as providing the appropriate incentives for PTOs to join or retain membership in the ISO.[22]

With some modifications from the prior proposal – such as the evaluation of economic projects that would, if selected, then obtain right of first refusal for the project developer (as described above) – the ISO continues to support the right of first refusal to PTOs with service territories for renewable transmission projects. Here we provide the further clarification that under the current ISO tariff, these PTOs have an obligation to build certain facilities found to be needed by the ISO, including reliability projects, generation interconnection-related projects, and economic projects identified by the ISO.[23] Given that the ISO expects that most if not all renewable transmission to achieve 33% RPS can be justified ultimately on the basis of generation interconnection and associated planning decisions (e.g., to "right-size" those transmission lines and upgrade other elements to facilitate renewable integration), the rights proposed here are viewed as an appropriate application of the existing tariff obligations and not as a significant expansion of right of first refusal.

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[21] On this issue, the ISO has recently submitted initial comments and reply comments in response to a FERC Notice of Request for Comments regarding the development and implementation of the Order 890 transmission planning process. California ISO, "Initial Comments of the California Independent System Operator," FERC Docket No. AD09-8-000, November 23, 2009; "Reply Comments of the California Independent System Operator," FERC Docket No. AD09-8-000, December 18, 2009. For the reasons set forth in its comments, the ISO supports a narrow, carefully crafted right of first refusal for projects primarily designed to support achievement of the 33% RPS goal and the effective and reliable integration of renewable resources. The ISO's initial comments can be found at http://www.caiso.com/246f/246fd23976c0.pdf and reply comments at http://www.caiso.com/2488/2488c34f5e800.pdf

[22] The eligible PTOs are or are affiliated with load serving entities with an obligation to serve the load in their service territory. If these PTOs were not members of the ISO, they could build new transmission projects to serve their load by simply obtaining a certificate of public convenience and necessity from the state regulatory commission. They would not encounter the competition to build transmission projects that would result from being a member of the ISO absent a right of first refusal for such PTOs. Thus, the absence of a right of first refusal mechanism would serve as an unnecessary and inappropriate disincentive for PTOs to join or retain membership in the ISO. Not providing for a right of first refusal would result in unfair and unduly discriminatory treatment of PTOs that are participating members of an ISO or RTO.

[23] The parties involved in the generation interconnection process are the ISO, the PTO and the Interconnection customer. (See ISO Tariff Appendix U, Section 1.2.2; Appendix V, Section 1.2.2.) PTOs have the obligation to build reliability projects as set forth in ISO Tariff Section 24.1.2, and PTOs have the right of first refusal to construct and own ISO-proposed and approved economic projects according to ISO Tariff Section 24.1.1(c).

In the event an eligible PTO fails to submit a proposal to build a transmission element identified in the final plan and in its service territory within the Phase 3 timeline, the right of first refusal for that project will expire and the ISO will allow other project developers (including ITCs) to submit proposals to build the project.

Comments on Right of First Refusal and ISO Response

Both in comments to the ISO and in comments under the FERC Notice of Request for Comments regarding the development and implementation of the Order 890,[24] stakeholders have set forth strongly divergent positions on the right of first refusal. As noted above, the ISO feels that its decision on right of first refusal is rooted in the rights and obligations in the current tariff, and does not reflect a major expansion of those rights. Hence, our reply to comments here will be limited to selected issues and questions about the application of right of first refusal.

A number of parties, including ITCs and State regulatory agencies, argue for a rejection or substantial modification of the ISO's proposed expansion of PTO right of first refusal by allowing direct competition by ITCs.[25] CPUC argues that ITCs can offer lower cost transmission development through "additional access to capital, skilled human resources and ideas."[26] CPUC suggests that the process for selecting transmission developers should target and limit PTO right of first refusal to address "real, substantiated risks"; limit the exercise of such a right to a limited timeframe; and allow competition by ITCs where the targeted right of first refusal does not apply.[27]

Several municipal entities seek clarification that right of first refusal will not inhibit their opportunities to influence transmission solutions or enter into joint transmission projects with any developer, whether existing PTO or independent entity.[28]

The ISO continues to believe that the right of first refusal mechanism proposed here is sufficiently narrow and transparent that it will not chill or delay the development of needed transmission. Moreover, it will not unduly preclude third-parties from building transmission, including through joint projects. Under the proposed RETPP the ISO identifies at least four types of opportunities for ITCs to build and own transmission:

- ITCs may submit merchant transmission projects for consideration in Phase 2, and can build and own such projects subject to the same requirements and criteria that apply today. Such merchant projects will have the benefit of the

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[24] FERC Docket No. AD09-8-000.

[25] See, e.g., comments by DayStar Farms, Green Energy Express, IEP, LS Power Transmission, Indicated Independent Transmission Parties, Pattern Transmission, Startrans, and TANC.

[26] CPUC comments at 4.

[27] CPUC comments at 4-5.

[28] Comments by BAMx at 3, NCPA at 1-2, Six Cities at 1-2, TANC at 1-3.

Phase 1 final conceptual plan and supporting documentation to help clarify the opportunities for merchant transmission under alternative 33% RPS scenarios.

- ITCs may submit potential economic project proposals for consideration in Phase 3 in response to the ISO's economic study of the final Phase 2 plan. (For the 2010 cycle of the RETPP the ISO will consider economic projects submitted in the 2008-9 TPP request windows at this stage of the process.)
- ITCs may propose to build elements of the final Phase 2 plan in instances where the relevant PTO has not exercised its right of first refusal within the first 90 days of Phase 3.
- ITCs may develop collaborative projects with one or more of the PTOs, or may submit a proposal to the CPUC in competition with a PTO proposal if the ITC believes it can offer a superior or more cost-effective project.

The right of refusal to eligible PTOs will also ensure that multiple parties will not be incurring similar expenses in preparation to propose and build projects to meet the same transmission needs. If no party submits a project to build the transmission element, the PTO will be required to build it under its obligation to build. This revised proposal thereby ensures that necessary transmission will be built and the incurrence of duplicative costs will be avoided.

NextEra proposes in addition that PTOs offered the right of first refusal submit project milestones and timelines that allow the ISO (and presumably the relevant regulatory authorities) to determine whether they are overcommitted such that construction could be delayed.[29] The ISO notes that both in the prior proposal and in this proposal in Section III B above, it has discussed requiring submission of construction schedules and other information that could help minimize the risk of delays.

SCE suggests that a PTO that obtains right of first refusal should retain that right in the event that the scope of the particular project changes after the right is initially exercised.[30] The ISO agrees and considers that any change in project scope after the initial acceptance to construct and own the project will not alter the right of first refusal for the project. The ISO notes that the intent of the recalibration process is to ensure that the most recent information is considered when Category 2 type projects are being assessed for transitioning to a Category 1 status and that even though the initial project scope changes, the eligible PTO's right to construct that project is not affected.

Several stakeholders point out that the RETPP approach will require consideration of how rights of first refusal are allocated among projects that physically interconnect in the service territories of several PTOs, or are located entirely outside the PTO service territory or partly outside the ISO footprint but intended to help the PTO (or an LSE that does not own transmission but intends to participate in transmission development) to

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[29] NextEra comments at 3.

[30] SCE comments at 6.

meet its RPS obligations.[31] In this regard, municipal entities are concerned that right of first refusal granted to PTOs with service territories could exclude municipal entities from constructing lines that do not touch their relatively small service territories, depending on the definition of service territory.[32] NCPA asks for clarification that the right of first refusal is interpreted to preserve the existing rights of municipal entities to build lines necessary to serve load and meet their RPS obligations, regardless of where the lines are located.[33]

ISO notes that under the current tariff (section 24.1.1), the ISO has the authority to allocate development responsibility among multiple PTOs when the ISO proposes an addition or upgrade.[34] In principle, as described above, the RETPP Phase 2 final plan is intended to be an ISO proposal, rather than driven by project proposals. Hence, the ISO should be the party that assigns proportionate responsibility among all eligible entities with possibly just minor modifications needed to its current authority under the tariff in this regard.

Once the Phase 2 plan is complete, the ISO proposes that eligible PTOs will be granted the right of first refusal over transmission elements that have a terminus in their service territories. As noted above, we do not believe that a right of first refusal should inhibit opportunities for joint development of transmission, given the scale of infrastructure investment needed.

Project Approval by the ISO Board

The ISO will recommend for Board approval transmission project proposals addressing the needs identified in the final state-wide plan. The ISO will evaluate the proposed

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[31] Comments by SCE at 6, CPUC at 4, Six Cities at 1.

[32] NCPA comments at 1-2.

[33] NCPA comments at 1-2.

[34] Section 24.1.1 (c) of the Tariff states that: 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.

transmission upgrades or additions submitted during the Phase 3 request window to determine whether the project proposal:

- is consistent with a Category 1 or Category 2 transmission element;
- satisfies Applicable Reliability Criteria and ISO Planning Standards; and
- is a cost effective means by which to deliver the renewable resource capacity associated with the transmission element identified in the final renewable resource transmission plan for the ISO Balancing Authority Area or annual update to the final plan.

These project proposals will be presented to the ISO Board for approval beginning in March 2011. Category 1 projects that have been given final approval can proceed with siting and permitting. The ISO is aware of stakeholder concerns that the Category 2 conditionally approved projects will not proceed due to the risk of incurring unrecoverable costs. At the same time, because there are expectations that IOU contracts and shortlists for renewable projects will achieve or exceed the 33% RPS requirement within the coming year, especially given changes to the 2020 demand forecast, it would be imprudent to grant final approval to projects that may ultimately lead to underutilized capacity. Hence, it is appropriate to condition project approval upon further market and regulatory developments to ensure that infrastructure development is efficient. To mitigate the risks to project developers of incurring unrecoverable costs, the ISO proposes that Category 2 projects be eligible for abandoned cost recovery for activities undertaken based upon conditional approval for a project that does not ultimately receive final approval.

Annual Recalibration of the RETPP Final Plan and Final Approval of Conditionally Approved Projects

As proposed in the October 30 proposal, the state-wide 33% RPS plan will be evaluated each year based on new developments to determine whether the Category 2 projects should receive final approval, and whether any new plan elements or projects should be evaluated and conditionally approved.[35] It is anticipated that the annual recalibration study will provide the information required by project proponents to determine whether the triggers identified in the criteria have been met, although other information may be provided to the ISO in support of an application for final approval.

Specifically, the ISO proposes a process for the annual recalibration of the 33% RPS plan that replicates the three-phase RETPP on an annual cycle. Thus there would be a Phase 1 revised conceptual plan targeted for June 2011, a Phase 2 revised final plan targeted for September 2011, followed by the Phase 3 proposal submission window leading to approval of project proposals by December 2011.

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[35] In comments on the October 30 RETPP paper, there was broad support for an annual recalibration study. Stakeholders suggested that the 33% RPS study be updated to include information on renewable generation, PPAs and commercial viability, load and generation forecasts, LGIP and regional information from TEPPC/WECC/CTPG, energy policy developments and major market uncertainties.

Phase 1 would again include collaboration with CTPG beginning in the first quarter of 2011, and would consider and adopt modifications to the 33% RPS statewide conceptual plan adopted in the previous cycle.

Following the release of the revised statewide conceptual plan the ISO would establish a two-month period during which the ISO and interested parties may propose updates to the revised conceptual transmission plan for the ISO Balancing Authority Area. Such updates may include, but are not limited to:

- Information from the LGIP and the ISO Interconnection Queue;
- The status of projects approved in the prior annual renewable resource transmission plan;
- System operational information and the need for transmission projects to provide access to resources providing renewable integration capabilities;
- Technological changes; and
- Resource procurement information from the California Public Utilities Commission long term procurement proceedings.

The ISO will evaluate the new information against the existing 33% RPS plan for the ISO BAA and post recommended updates on the ISO website. Such updates may include, but are not limited to:

- Final approval for projects conditionally approved in prior plans;
- Elimination of the need for projects conditionally approved in prior plans;
- Identification of needs for transmission upgrades or additions not included in prior plans.

The ISO will hold, at a minimum, one stakeholder meeting to discuss the updated renewable resource transmission plan and provide an opportunity for stakeholder comment. The updated plan, and the stakeholder comments, will then be submitted to the ISO Board of Governors for approval.

Following approval of the updated plan, the ISO will follow the process described above for Phase 3 of the RETPP to solicit projects and designate project sponsors to meet needs not previously identified in prior renewable transmission plans for the ISO Balancing Authority Area.

On an annual basis, the ISO, in coordination with CTPG, will update the RETPP final plan until the transmission upgrades and additions needed to achieve the state RPS targets have been finally approved.

Cost Allocation

The capital costs of specific transmission projects that receive final ISO Board approval at the conclusion of Phase 3 are eligible for recovery as part of the applicable PTO's transmission revenue requirement through the ISO transmission access charge. If a non-PTO specific project is approved by the ISO Board, the non-PTO is eligible to become a PTO and to recover the capital costs of the project through the ISO transmission access charge, or may elect merchant transmission status, forego

regulated recovery of the project costs and receive congestion revenue rights commensurate with the capacity the project adds to the ISO controlled grid.

IV. APPENDIX – REVIEW OF ORDER 890 REQUIREMENTS

In Order No. 890, the Federal Energy Regulatory Commission identified the following nine principles that must be satisfied for a transmission provider's planning process to be considered compliant with Order No. 890: coordination; openness; transparency; information exchange; comparability; dispute resolution; regional participation; economic planning studies; and cost allocation for new projects. The ISO's transmission planning process (TPP) reflects these nine principles, and the Commission has found it to be compliant with Order No. 890.

The ISO's proposed 33% RPS planning process will include coordination with the California Transmission Planning Group (CTPG), as well as an ISO-specific process that runs parallel to and separately from the CTPG process. The ISO expects that many, though not all, of the nine transmission planning principles adopted in Order No. 890 will be reflected in the CTPG planning process. The dispute resolution and cost allocation principles, for example, are not applicable to CTPG because the ISO does not believe CTPG will have any final decision making authority regarding which transmission lines will be approved and built. Ultimate findings of need for a specific transmission line will occur in the separate transmission planning processes of the individual transmission operators such as the ISO and in the processes of the regulatory agencies that have siting authority.

On the other hand, the ISO anticipates that the certain key Order No. 890 principles such as transparency, coordination, and information exchange will apply to the CTPG process. Transmission providers will share information necessary to ensure effective coordination and develop any plans and base cases. CTPG's assumptions, results and recommendations will be transparent and available. Transmission providers will coordinate to identify potential joint projects and other lines that might be needed to achieve the State's RPS and other goals in a reliable, cost-effective manner, based on the assumptions utilized in the CTPG process.

Even though the CTPG process may not fully reflect all of the Order No. 890 principles, the ISO will be conducting its own separate and parallel planning process. That process will be fully compliant with all of the Order No. 890 principles. Thus, all of CTPG's assumptions, results and recommendations will ultimately be vetted in the ISO's Order No. 890-complaint process, along with other assumptions, results and proposals that the CTPG process may not have addressed. This structure will ensure maximum coordination among the transmission operators in the State, while also ensuring satisfaction of all the Order No. 890 principles. The ISO's parallel process, compliant with Order No. 890, will test the CTPG inputs and determine whether they are sustainable and appropriate for the ISO footprint. Also, it will be the ISO, not CTPG, that determines whether a specific project within the ISO footprint is needed and the project's costs should be included in the ISO's transmission access charge.