



ISO Transmission Planning Process Enhancements

Straw Proposal

September 22, 2022

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ISO Transmission Planning Process Enhancements

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1. Introduction

A core ISO responsibility is to identify and plan the development of solutions to meet the future needs of the ISO-controlled grid. Fulfilling this responsibility includes conducting an annual transmission planning process (TPP) that culminates in a ISO Board of Governors (Board) approved, comprehensive transmission plan. The ISO conducts the annual transmission planning process as set out in section 24 of the ISO's FERC Tariff.

The ISO has identified the following recommended specific enhancements to the annual transmission planning process that would require updates to the ISO tariff or business practice manual (BPM) changes.

- a. BPM change -- Adjust the timeline for releasing the draft transmission plan each planning cycle from the end of January to the end of March, targeting approval of the final comprehensive annual transmission plan in each year's May Board of Governors meetings.
- b. BPM change --Coordinate with other planning processes and enable the ISO to approve major long lead time transmission projects needed beyond the current 10 year planning horizon.
- c. Tariff change -- Retaining policy-driven transmission upgrade capacity for the resources that meet the specific policy purpose for which it was developed

2. Issue Paper: Transmission Planning Process Enhancements

The ISO developed the issue paper to provide stakeholders with the background for this initiative, the need to update the ISO's process, and the potential impacts of the proposed enhancements. The ISO will utilize future stakeholder engagement sessions to review and refine some of the proposed enhancements and to seek input from stakeholders on other potential changes.

2.1. Adjust timeline for release of draft transmission plan

The annual transmission planning process has three consecutive phases with each planning cycle identified by a beginning year and a concluding year. Each annual cycle begins in January. In March of the following year, the ISO Board of Governors approves the annual transmission plan. Phase 3 -- the competitive solicitation process -- begins after the ISO Board of Governors approves the final transmission plan.

Phase 1 includes establishing the assumptions and models the ISO will use in the planning studies, developing and finalizing a study plan, and specifying the public policy mandates that planners will adopt as objectives in the current cycle. This phase takes approximately three months, from January through March.

In Phase 2, the ISO performs studies to identify solutions to meet various needs (e.g., reliability, public policy, economic). Phase 2 takes approximately 12 months to complete. The ISO posts the draft transmission plan by January 31 for stakeholder comments prior to bringing the revised draft of the transmission plan to the ISO Board of Governors for approval. The ISO Board typically approves the transmission plan at the March ISO Board of Governors meeting. Thus, phases 1 and 2 combined take 15 months to complete.

Phase 3 involves the competitive solicitation for prospective developers to build and own new regional transmission facilities identified in the Board-approved plan. In any given planning cycle, phase 3 may or may not be needed depending on whether the final plan includes regional transmission facilities that are subject to competitive solicitation in accordance with criteria specified in the ISO tariff.

Given the increasing load and resource requirements in the California Energy Commission (CEC) high electrification demand scenarios and the associated California Public Utilities Commission (CPUC) resource portfolios, the volume and complexity of alternative analysis the CAISO must undertake, and the time it takes the ISO to develop the transmission plan has increased significantly. Given the extent of the analysis and the details the ISO must incorporate into the draft transmission plan after the reliability, policy and economic assessments have been presented to stakeholders in September and November, the ISO intends to extend posting of the draft transmission plan to March 31, hold a stakeholder meeting in April, and bring the revised draft transmission plan to the May ISO Board of Governors meeting.

2.2. Approvals for major long lead time transmission projects needed beyond the current 10 year planning horizon

The planning horizon of the ISO's transmission planning process is currently 10 years; however the ISO tariff requirement provides that the planning horizon must be a *minimum* of 10 years, *i.e.*, the ISO is not limited to a planning horizon of 10 years.¹ If the ISO identifies a need within the 10-year planning horizon and identifies additional needs in the beyond the 10-year transmission planning horizon, such as in the ISO's 20-Year Transmission Outlook, the ISO considers those additional needs in assessing alternatives and recommending transmission expansion projects for approval by the ISO Board of Governors. The ISO's processes currently do not result in the ISO approving projects if the need only emerges beyond the 10 year planning horizon. Given the long timelines associated with major transmission development and the fact the CEC's high electrification demand scenarios and the CPUC's resource portfolios are projecting increased load and resource requirements beyond the 10 year planning horizon, there may be a need for the ISO to approve specific transmission expansion projects to meet needs beyond the 10 year horizon when the ISO expects it might take more than 10-years to obtain the necessary approvals and complete the project.

¹ ISO Tariff Section 24.2.

2.3. Retain policy-driven transmission upgrade capacity for specific policy purpose for which it was developed

The ISO's transmission planning process includes a framework for developing policy-driven transmission associated with state (and federal, although that has not yet been relevant) policy requirements and direction. However, in the transmission planning process that policy direction is not directly linked with interconnection requests seeking to utilize capacity as it is being developed or with the procurement activities of the large number of load serving entities now having procurement obligations.

The ISO is examining numerous measures to improve its interconnection process in the [interconnection process enhancements \(IPE\) initiative](#). The topic of achieving greater alignment between the interconnection process, procurement activity and the ISO's transmission planning process that integrates state resource planning direction was removed from the scope of the IPE initiative and will be addressed in this initiative.

As noted above, the ISO's transmission planning process includes a framework for developing policy-driven transmission associated with state and federal policy requirements and direction. One area warranting further attention is that, although state policy direction regarding the need for additional transmission capacity can lead to, and has led to, the development of transmission upgrades, a lack of direct and effective coordination between processes can prevent policy objectives from ultimately being achieved. The ISO has identified the following concept for discussion in this initiative is as follows: building on the existing concept of developing transmission capacity for planning purposes associated with achieving specific resource development, as a further step, withholding that capacity specifically for the policy-driven processes for which it was planned rather than relying on it for any and all interconnection requests received through the generator interconnection request windows, which could "crowd out" the resources the project was developed and planned to access -- and was the basis for approving the project.

Stakeholder Comments Received on the Issues Paper Topics

The CAISO received comments from ACP - California, Bay Area Municipal Transmission group (BAMx), BHE Renewables, LLC, California Community Choice Association, California Energy Storage Alliance, California Public Utilities Commission - Energy Division, California Western Grid Development, LLC, Direct Energy, EDF-R, Golden State Clean Energy, LS Power Development, LLC, LSA, NextEra Energy, Northern CA Power Agency, Offshore Wind California, Pacific Gas & Electric, Rev Renewables, San Diego Gas & Electric, Six Cities, Southern California Edison, and the Center for Energy Efficiency and Renewable Technologies.

On the first topic, there was general support to adjust the timeline for releasing the draft transmission plan. Some comments expressed concern about potential impacts on the next planning cycle.

On the second topic, there was general support for approving long-lead time projects where the ISO has identified a need for the project beyond the 10-year planning horizon. Some comments

expressed concern regarding approval of longer-term transmission projects due to uncertainty of load or resource needs and location.

On the third topic, item of, many parties supported the concept of retaining policy-driven transmission upgrade capacity for specific policy purpose for which it was developed. Some comments noted that in addition to supporting public policy, the proposal could help to increase the amount of firm capacity available to the state. Some comments questioned whether the proposal was consistent with the undue discrimination prohibitions of Federal Power Act; but others argued that it was not inconsistent.

3. Straw Proposal: Transmission Planning Process Enhancements

3.1. Adjust timeline for release of draft transmission plan

On the topic of adjusting the timeline for release of draft transmission plan, there was general support for this change to the schedule of the transmission planning process.

PG&E and SCE expressed concerns regarding the impacts to the next planning cycle and generation interconnection processes, particularly finalizing the base cases.

- The CAISO will continue to work with the participating transmission owners on the development of the base cases. The draft Transmission Plan will be available in a similar time frame of the Board Approved Transmission Plan in March. The transmission upgrades identified draft Transmission Plan can be incorporated in base case development. If there are changes to the approved transmission in the Board Approved Transmission Plan, they will need to be updated in the finalized base cases for the planning and generation interconnection studies.

The ISO will seek a change initiate in the business practice manual (BPM) for the Transmission Planning Process to revise the schedule to reflect that the draft Transmission Plan will be posted by March 31 and that the CAISO will take the Transmission Plan for approval at the May CAISO Board of Governors' meeting.

3.2. Approvals for major long lead time transmission projects needed beyond the current 10 year planning horizon

There was general support for the ISO approving projects of long-lead time transmission enhancements with the need beyond the 10-year planning horizon.

Some commenters expressed concern with approving transmission projects in the longer-term due to uncertainty of load or resource needs and location.

- Similar to the approach the CAISO applies to transmission projects where the identified need is beyond the expected in-service date of the recommended transmission upgrade, the CAISO can assess the uncertainty, and it may not seek approval of the transmission upgrade in the current planning cycle and continue to assess it in future planning cycles.

For transmission enhancement needs beyond the 10-year planning horizon, the ISO may seek to approve a transmission upgrade enhancement if it expects the in-service date for the transmission enhancement project to be beyond the 10-year planning horizon.

The CAISO, starting with the 2023-2024 transmission planning process, will work with the CEC and the CPUC regarding input assumptions beyond the 10-year planning horizon. The CEC's current IEP-adopted forecasts look out to 2035, and they could be used along with a base portfolio from the CPUC for 2035 (in addition to the portfolio for the 10-year planning horizon).

For future planning cycles, the CAISO will continue to work with the CEC and the CPUC to regarding the development of adopted energy and demand forecasts and base portfolios that go out at least 15 years or longer that the ISO can use in its annual transmission planning process.

3.3. Retain policy-driven transmission upgrade capacity for the specific policy purpose for which it was developed

Comments regarding the proposal to retain policy-driven transmission upgrade capacity for specific policy purpose for which it was developed were generally positive; although, some commenters expressed concerns that this might unduly discriminate against other resources. The ISO below summarizes specific points raised by stakeholders.

Many stakeholders supported the approach, including (CPUC Energy Division, BHE, ACP-CA, California Western Grid, NextEra, LS Power, and Offshore Wind California). Some stakeholders noted that in addition to supporting public policy requirements, the proposal could help to increase the amount of firm capacity available to the state. BHE suggested that the policy would enable compliance with CPUC Decision 21-06-035 calling for more "firm" (greater than 80% capacity factor) resources such as geothermal.

- The CAISO agrees that the proposal helps the state achieve its public policy goals. In particular, the proposal would help increase the availability of resources that contribute to overall system capacity, improving the state's resource adequacy.

Some stakeholders stated that the proposal is consistent with the Federal Power Act's non-discrimination requirements. Offshore Wind California stated the proposal also is consistent with the recent FERC order regarding transmission and offshore wind in PJM.

- The CAISO agrees that this policy is consistent with the Federal Power Act and recent orders. The recent FERC order on PJM stated, "Other generators are not similarly situated to those designated by New Jersey because only the latter address New Jersey's Public Policy Requirements under the State Agreement Approach. As result, it is not unduly discriminatory or preferential for New Jersey, via NJ BPU, to exclude generators from the set of "future users" considered in the cost sharing provision." PJM Interconnection, L.L.C. 179 FERC ¶ 61,024 at PP 9 and 40 (2022)).

Other stakeholders expressed concerns about violating the no undue discrimination requirements of the Federal Power Act (NRG, Golden State Clean Energy, LSA, Rev Renewables, SCE). They

argued that if capacity is reserved for certain transmission customers, then other customers could be denied access.

- CAISO does believe its proposal does not violate open access. As indicated above, FERC permitted New Jersey to set aside new capacity for offshore resource, with other resources being able to access the capacity after the expiration of a specified period of time. Further, resources other than those for which a public policy transmission facility is being built still are able to obtain any necessary transmission upgrades to accommodate them through the generator interconnection process. Thus, other resources not gaining access to the public policy project capacity will still be able to access the grid through other processes. A few parties suggested limiting the applicability of the capacity reserved. ACP-CA suggested using it only in circumstances with a clear and direct public policy request from an applicable state authority. LSA suggested defining a limited set of technologies. CESA suggested defining the reservation by attribute (e.g., capacity value, dispatchability) rather than type (e.g., offshore wind) in order for the tariff to remain technology neutral. SDG&E suggested limiting it to long lead time generation resources needed for public policy. ACP-CA suggested that CAISO time-limit the duration of the reservation which they suggest is consistent with FERC Order No. 807 on merchant transmission, a relevant precedent for this approach.
- The ISO agrees that the ultimate proposal should be carefully tailored to minimize any potential impacts.
- The ISO agrees the proposal should be targeted only to circumstances with a clear and direct public policy directive from an applicable state authority.
- The ISO agrees that where possible, the tariff should be based on attributes such as capacity value rather than particular technologies. It would be beneficial if public policies were designed in technology-neutral ways. For example, public policies could call for transmission that accesses carbon-free, long lead-time resources that are expected to have capacity values in excess of some threshold in some future year. Such a definition could increase the state's access to diverse renewable resources around the Western region and offshore, in a technology neutral way. However, that is not necessarily how public policies are defined today. For purposes of implementing this policy we believe it is appropriate to specify resources as specifically as they are defined in state policy, which in some cases may involve particular technologies in particular locations.
- The ISO agrees that the set aside of capacity should be for a time-limited duration. We note that some of the intended resources are very long lead-time, with lengthy permitting and construction timelines. For such instances, we suggest a reservation period of seven years from when the transmission enhancement is available. For other resources, the duration of the reservation can be shorter.

ACP-CA suggested that the ISO consider applying the policy to existing transmission capacity as well as new capacity.

- The ISO agrees that the policy can apply to existing transmission as well as new.

BAMx suggested releasing capacity if portfolio changes in future planning cycles. LSA suggested releasing any extra capacity due to transmission lumpiness or timing gaps before designated resources are on-line.

- The ISO agrees that the tariff should provide that reserved capacity should be released if portfolio changes reduce or eliminate the need for the reservation.
- The ISO agrees that extra capacity created by lumpiness or timing gaps should be released to the market.

California Western Grid Suggested applying the policy to transmission into load pockets as well as out of generation pockets.

- The ISO agrees that transmission into load pockets is important, not only for reliability and economic purposes, but ultimately for compliance with the state's clean energy goals. However, we believe that type of transmission planning can be handled through the normal transmission planning process, without the need to reserve capacity for certain resources.

NRG suggested that the ISO consider cost allocation in the case of abandoned projects.

- The ISO suggests that cost allocation in the case of abandoned projects should be handled the same way other abandoned projects are handled.

EDF-R suggested that the ISO provide more evidence of the problem and show how much "policy tagged transmission" has been used by interconnection requests.

- The ISO provides the following specific examples of where resources needed for public policy may require transmission reservations, in order to meet the public policy objectives:
 - Offshore wind entering at [location]. If that capacity were created tomorrow, then existing projects in the interconnection queue could request to use the capacity, and the capacity could become fully subscribed and unavailable to offshore wind, which was the sole reason the project was approved in the first instance. The New Jersey situation is an example of this.
 - Out-of-state resources, such as wind, as well as resources outside the ISO balancing authority area, such as geothermal.

Golden State Clean Energy suggested that the ISO consider instead a subscriber-based model as is being proposed for TransWest.

- The ISO could consider using an open season and taking advance subscriptions for the capacity. There would still need to be a reservation specifying which resources are able to use the transmission, and it would need to address situations where the winner(s) of the capacity solicitation change their resource plans or sell the transmission capacity to another party.

In summary, the ISO proposes to set aside the capacity of policy-driven transmission upgrades that is needed for specific resources included in the CPUC portfolios.

The capacity of the portfolio resources will then be incorporated into the generator interconnection and TPD allocation studies to ensure the capacity of the transmission upgrade approved for policy resources reflected in the CPUC portfolio is not allocated to other resources than the types of resources in the policy portfolio. For resources outside the CAISO BAA, the ISO can accomplish this by increasing the maximum import capability for the resources included in the portfolio in the generator interconnection and TPD allocation studies. The ISO will need to include the ISO BAA resources identified in policy portfolios in the assessment of any area constraint regarding the approved transmission project was approved to mitigate.

4. Stakeholder Engagement

4.1. Schedule

Table 1 lists the proposed schedule for the enhancement of the ISO's transmission planning process.

Table 1 Schedule

Item	Date
Post Issue Paper	Monday, July 18, 2022
Stakeholder Call	Friday, July 22, 2022
Stakeholder Comments Due	Friday, August 5, 2022
Post Straw Proposal	Friday, September 22, 2022
Stakeholder Meeting	Friday, September 30, 2022
Stakeholder Comments Due	Friday, October 13, 2022
Post Draft Final Proposal	Thursday, October 27, 2022
Stakeholder Call	Thursday, November 3, 2022
Stakeholder Comments Du	Thursday, November 17, 2022
Post Draft Tariff Language	Wednesday, November 16, 2022
Stakeholder Comments Due	Wednesday, November 30, 2022
Post Final Proposal	Friday, December 16, 2022
Stakeholder Meeting: DTL &FP	Tuesday, January 3, 2023
Stakeholder Comments Due: FP	Tuesday, January 17, 2023
Board of Governors Meeting	Thursday, January 31, 2023

The ISO proposes to present its proposal to the CAISO Board of Governors in December. The ISO is committed to providing additional opportunities for stakeholder input as required to support the goals of this initiative. Stakeholders can submit written comments through the ISO's commenting tool.

4.2. Next Steps

The ISO will discuss the Straw Proposal during the stakeholder call on September 6, 2022. The ISO requests that the stakeholders submit written comments by September 20, 2022.