

# Memorandum

**To:** ISO Board of Governors

**From:** Keith Casey, Vice President, Market and Infrastructure Development

**Date:** March 16, 2012

**Re: Decision on Integration of Transmission Planning Process and Generator Interconnection Procedures**

---

*This memorandum requires Board action.*

## EXECUTIVE SUMMARY

The proposal described in this memorandum addresses key aspects of new generator interconnection and transmission planning that have become problematic due to the massive volume of new generator interconnection requests submitted to the California Independent System Operator Corporation in recent years in response to California's renewables portfolio standard. The problematic elements of the current generator interconnection and transmission planning process that are addressed by this proposal include:

- Today there is no single process for identifying and approving ratepayer-funded transmission expansion in a holistic manner. The transmission planning process and the generator interconnection procedures operate in parallel with very limited coordination between them.
- The current tariff provisions on generator interconnection require ratepayers to fully reimburse an interconnection customer for costs of network upgrades after the generating facility achieves commercial operation, irrespective of the customer's choice of interconnection point on the ISO grid and the cost impacts of that choice. Other ISOs and RTOs have provisions requiring interconnection customers to pay for a portion of their interconnection-related upgrade costs.
- The massive volume of current generator interconnection requests causes the ISO's interconnection studies to produce results that are unrealistic at best and too often create significant barriers to project financing. The study process is designed to identify upgrades needed for later requests based on the assumption that prior requests will culminate in commercially operating generating facilities. Yet in the current renewables portfolio standard context that assumption is not

valid; because the volume of requests is roughly four times the amount of new generation needed, three out of four requests will probably fail to materialize.

This proposal addresses these challenges by:

- (1) integrating the transmission planning and interconnection processes so that decisions to approve ratepayer-funded new transmission are made under the comprehensive transmission planning process, and
- (2) establishing rules and procedures whereby new generation projects that utilize transmission approved under the planning process to meet their interconnection needs will have their needed upgrades paid for by ratepayers, while projects whose needs are above and beyond the transmission capacity created through the planning process will be required to pay for their upgrades without ratepayer reimbursement.

In addressing these two fundamental objectives, the proposal also:

- revises the interconnection process timeline to better align with transmission planning,
- revises the interconnection study methodologies to produce meaningful results even when queue volume is very large, and
- provides an objective method for awarding the limited transmission capacity to generation projects most likely to be successfully completed, for areas of the grid where the volume of interconnection requests exceeds the capacity of transmission developed through the planning process.

For the reasons summarized above and described in greater detail in the body of this memorandum, Management recommends that the Board approve the following motion:

***Moved, that the ISO Board of Governors approves the proposal for integration of the transmission planning process and generator interconnection procedures, as described in the memorandum dated March 16, 2012; and***

***Moved, that the ISO Board of Governors authorizes Management to make all the necessary and appropriate filings with the Federal Energy Regulatory Commission to implement the proposed tariff change.***

## DISCUSSION AND ANALYSIS

A major problem with the currently limited coordination between transmission planning and generation interconnection, combined with the very large volume of the interconnection queue, is the uncertainty it creates for developers of generation projects regarding the cost of network upgrades that will require financial security postings,<sup>1</sup> the length of time it will take to construct those upgrades, and whether the regulatory body responsible for issuing permits (mainly the California Public Utilities Commission) will ultimately approve or reject the needed upgrades. These uncertainties make it difficult for the generation developer to construct bids responding to load-serving entities requests for offers for renewable energy. This uncertainty also makes it challenging for the load-serving entities and CPUC to evaluate the “all-in” costs of those bids, which should reflect their associated transmission costs.

The ISO made significant progress regarding alignment with the CPUC’s permitting decision process through the memorandum of understanding executed in May 2010, under which the CPUC now provides input on renewable resource development into the ISO’s transmission planning process. This process informs the ISO’s identification of transmission needed to support the state’s renewable portfolio standard mandate. The 2010 MOU and other transmission planning process revisions did not directly address needed changes to the generator interconnection process, however, which up to now still retains a separate track for developing transmission outside of the planning process and the MOU.

In addition, the current tariff requirement to fully reimburse the interconnection customer for network upgrades leaves only very weak incentives (i.e., via the posting requirements) for developers to make efficient use of transmission capacity in selecting their interconnection locations. With the huge volume of generation projects in the queue, it is now more important than ever for the ISO to implement provisions to limit ratepayer exposure to network upgrade costs in a manner that brings the approval of such upgrades under a single holistic planning process and makes developers responsible to pay, without reimbursement, for network upgrades that exceed the capacity approved through the transmission planning process. Such provisions have FERC-approved analogs in the tariffs of the other ISOs and RTOs.

This proposal includes modifications to the interconnection study methods to ensure that the studies produce realistic, meaningful results even when the size of the queue is extremely large. This aspect of the proposal is achieved by making use of the renewable resource development portfolios that are created by the CPUC, with input from the California Energy Commission and the municipal authorities within the ISO

---

<sup>1</sup> Even though the tariff requires ratepayer reimbursement of the costs of network upgrades after a generation project achieves commercial operation, the developer must still post financial security for 100 percent of the expected costs of the upgrades at least 90 days before construction of the upgrades begins, and then receive reimbursement over a five-year period that begins when the generation project starts commercial operation.

area, for input into the transmission planning process. The proposal also requires each generation developer to inform the ISO whether the project requires its interconnection needs to be met through ratepayer funded transmission, or can self-fund its needed upgrades without ratepayer reimbursement. The interconnection study then identifies the needs for incremental upgrades, beyond the capacity provided under the planning process, only for those projects willing to self-fund the upgrades. By also providing effective incentives for project developers to reveal their true willingness in this step of the process, the proposal enables the studies to identify realistic upgrade needs.

Finally, although this proposal is intended to apply prospectively to new generation projects entering the queue in cluster 5 (March 2012) or later, the proposal also provides for a smooth transition from the existing queue (serial projects through cluster 4) to the new paradigm. Throughout this initiative many stakeholders have raised the concern that the volume of existing queue projects is so great that it will: (i) fully utilize all of the ratepayer-funded transmission capacity and make it impossible for any new queue entrants to benefit from this capacity, and (ii) trigger ISO approval of excessive transmission upgrades at ratepayer expense. To address this concern, the proposal includes an annual evaluation by the ISO of the status of all existing queue generation projects before starting the process to allocate transmission capacity to projects in the new cluster. The ISO will then reserve transmission capacity for existing queue projects that have bilateral contracts in good standing with load-serving entities and are meeting all the milestones in their interconnection agreements, and will allocate to projects in the new cluster only the amount of ratepayer-funded transmission that remains. In this way the proposal enables the ISO to model existing queue projects realistically and thereby balance the concerns (i) and (ii) above.

## **POSITIONS OF THE PARTIES**

The stakeholder process for this initiative began as an element of the generator interconnection procedures, part 2 initiative in the spring of 2011. In June, ISO Management decided that a separate initiative was required, and since that time the ISO team has released three successive straw proposals and a draft final proposal. Stakeholder meetings were held following each proposal release. In addition the team held a stakeholder working group meeting in December to allow small-group discussions of key issues in the design of the proposal. In response to the last round of stakeholder written comments, submitted on March 1 following the February 15 draft final proposal, the ISO team made some additional modifications to the proposal and posted this as a final proposal on March 9. Finally, after releasing the March 9 final proposal, the ISO revised from \$40,000 to \$60,000 (per MW of generating capacity) the proposed upper limit on reimbursement to generators for reliability network upgrade costs. The revised \$60,000 value is the average per-MW cost of such upgrades based on a much larger and more complete historical data set than was used to obtain the previous value. On March 16 the ISO staff conducted a stakeholder conference call to discuss the March 9 final proposal and the increase in the reimbursement limit.

The stakeholder positions summarized below and detailed in the attached matrix are drawn primarily from the March 1 comments, but also capture some of the verbal responses stakeholders offered in the March 16 conference call. The matrix also indicates where Management modified the proposal in response to comments received.

Overall, stakeholders are very supportive of the objectives of this initiative, and, after the lengthy series of proposals, meetings and discussions, most recognize that the proposal provides a workable process for new generator interconnections, meaningful integration with the transmission planning process, and a fair and reasonable balance among the different parties' interests. Of the 18 March 1 comment submissions, 16 parties support the proposal with some qualifications or requested changes, and two parties oppose the proposal. In addition, the ISO's Market Surveillance Committee recommends that the Board approve this proposal; their formal opinion is attached to this memorandum.

The fact that the supporters of the proposal also identify requested changes should not be a surprise, as the transmission planning-generator interconnection integration proposal is complex and reflects a carefully-crafted balance of multiple objectives and diverse stakeholder concerns, encompassing public policy, technical engineering, economic and project finance considerations. The requested changes cover a wide range of the details of the proposal, but there were several common themes that the ISO team either addressed through modifications described in the March 9 final proposal and the revised reliability network upgrade cost reimbursement limit, or determined should not be changed because the previous proposal already reflected the best balance between competing objectives and interests.

The two parties that oppose the proposal are a developer of generation projects (Wellhead) and an association of renewable generation developers (CalWEA). These parties both raise a number of concerns about specific details of the proposal, but their overarching concern is that the proposal will impose too much cost on developers of generation projects and will excessively limit the availability of ratepayer-funded transmission capacity to meet the interconnection needs of their projects. We note that eight of the 10 parties from the generation and transmission development community that submitted comments on March 1 support the proposal with qualifications.

One lingering concern expressed by some parties is the need for better alignment with renewable procurement activities conducted by the CPUC-jurisdictional load-serving entities. CPUC staff have been fully engaged in the present stakeholder initiative, and are continuing to work closely with the ISO team to clarify the alignment between their procurement activities and the ISO's transmission planning and generator interconnection procedures.

The attached stakeholder comments matrix provides additional details on the positions expressed by the participants in this initiative, as well as Management responses to the concerns they have raised.

## **CONCLUSION**

It is important for the Board to act on this proposal expeditiously. New requests for interconnection are being submitted this month for queue cluster 5, and Management believes it is important that these new requests be processed under the new transmission planning process and generator interconnection procedures integration provisions, rather than allow the existing rules to remain in effect for another interconnection cycle. Although the stakeholders all have identified specific areas where they would like to see improvements to the proposal, the proposal reflects nearly a year of hard work by all parties involved and a careful balance of objectives and stakeholder interests, and there is broad support for moving forward and approving the proposal.