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BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Integrate and Refine Procurement Policies and Consider Long-Term Procurement Plans.	Rulemaking 12-03-014 (Filed March 22, 2012)

COMMENTS OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION ON STANDARDIZED PLANNING ASSUMPTIONS AND STUDY SCENARIOS

The California Independent System Operator Corporation (ISO) hereby submits to the California Public Utilities Commission (Commission or CPUC) comments on the standardized planning assumptions and study scenarios described in the Assigned Commissioner Ruling (ACR) issued on September 20, 2012. The ISO submitted brief technical comments regarding the proposed scenarios on September 7, 2012.

I. INTRODUCTION

The attachment to the September 20, 2012 ACR provides an explanation of the development of the standardized planning assumptions and proposed study scenarios for use in Track II of this LTPP proceeding (Revised Scenarios). Specifically, the Energy Division staff issued a straw proposal regarding planning assumptions in May 2012, with a workshop held later in the month, that then led to the June 27, 2012 ACR containing the finalized assumptions to be used in the proceeding. These assumptions formed the basis for proposed scenarios issued on August 2, 2012, which were the subject of an August 24, 2012 workshop and technical comments submitted through September 11, 2012. The ISO understands that once the comments and reply comments regarding the Revised

Scenarios have been reviewed, the Commission will issue a ruling containing the final scenarios, which is expected before year end 2012.

The Revised Scenarios impact the ISO in several ways. Starting with the 2010/2011 ISO transmission planning process (TPP) through the current cycle (2012/2013), the ISO has worked closely with this Commission and the California Energy Commission (CEC) to develop renewable generation portfolios that the ISO uses to determine whether transmission additions or upgrades will be needed to meet the state's 33% RPS goals. The standardized planning assumptions developed for the purposes of this proceeding, however, include not only assumptions about renewable development under various circumstances,[1] but also assumptions about load forecasts, demand side management and other supply-side resources. While the discussion in the ACR attachment, Appendix B and elsewhere seems to suggest that the renewable portfolio assumptions are intended for use by the ISO in the 2013/2014 TPP, the role that the various scenarios are expected to play in the ISO's TPP is less than clear.[2]

On the other hand, for the purpose of analyzing the need for new system resources that will be conducted in Phase II, the ISO is willing to use the Revised Scenarios in its studies, as long as at least one of the scenarios contains reasonable operating assumptions that can be used to provide a reference point for other visions of the future. The ISO's comments address these points as well as specific concerns about load and supply assumptions and the 20 planning horizon scenarios.

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[1] See, *e.g.*, Section VIIa.

[2] For example, the flow diagram on page 6 shows the "scenarios" feeding into the 2013/2014 TPP although footnote 9 states that while the scenarios might inform the ISO's TPP, the ISO must comply with its tariff requirements.

II. COMMENTS

A. Need for Realistic Operational Reference Case

An operational bookend scenario needs to be developed as the operational reference case for the purposes of the LTTP renewable integration needs and flexibility analysis. The ISO notes that the December 3, 2011 scoping memo issued in R.10-05-006 identified a scenario that would be used for determining need.[3] Therefore, in this proceeding, the Commission should again identify the specific case that will be used for determining the need. It is not clear which case the CPUC intends will be used to determine need and which scenarios will be studied as alternatives to any identified need. For example, if the Replicating TPP scenario identifies a net short when used to perform the flexibility analysis, will the TPP case then be used to determine alternatives for meeting the need (including potential DSM)?

In the ISO's technical comments, submitted on September 7, 2012, the ISO proposed an additional "high load" scenario with a 1-in-2 high load, without any uncommitted energy efficiency, as the case for determining need. Alternatively, the ISO can support using the TPP scenario as an operational bookend scenario for studying system level flexibility needs because the mid-level unmanaged load and1-in-5 peak weather conditions are comparable to a high level unmanaged load and 1-in-2 peak weather conditions. However, while the peak in the mid 1-in-5 load is comparable to a high 1-in 2 load level, the total energy and the load profile over the year may be sufficiently different that exploration of an explicit high load 1-in-2 may provide some operational insights that the mid 1-in-5 will not. The ISO suggests that it might be more

[3] *See* Assigned Commissioner and Administrative Law Judge's Joint Scoping Memo and Ruling; R.10-05-006, P22

appropriate to re-design the Stress Peak Case to reflect a high load scenario because the current definition of the "Stress Case" actually reflects a less "stressed" case than the TPP scenario.

The ISO believes committed energy efficiency can be an effective solution at reducing the load and thereby unloading other available flexible capacity. However, for purposes of bounding the potential needs, uncommitted energy efficiency programs should not be assumed because that could potentially mask operational issues. Rather, energy efficiency programs should be considered like a supply-side solution to any identified need, rather than as a reduction to the load forecast. As a supply-side solution, energy efficiency can then be procured and committed via a robust procurement process that considers all solutions, enabling an uncommitted energy efficiency program to become a committed resource which can then be tracked and its performance measured. The TPP case, which does not assume or rely on uncommitted energy efficiency, is an appropriate case for determining the initial potential need.

Similarly, committed incremental demand response programs may also be an effective solution for meeting some system and flexibility needs. However, high amounts of incremental demand response should not be assumed in the operational bounding scenario. In this scenario and others, demand response should be considered a supply-side solution to any identified need, rather than a reduction in the load forecast. In this way, demand response, which possesses the necessary operating characteristics, can be procured through the LTPP procurement process, which is a model the ISO encourages the Commission adopt for future demand response procurement. If the TPP scenario is accepted as the operational scenario for determining potential needs, then the ISO feels

the assumed low incremental demand response is a reasonable starting assumption. If needs are identified based on the TPP case, then additional demand response can be assessed for effectiveness of meeting the identified need. Furthermore, as the ISO studies alternative scenarios that consider incremental demand response, it is essential to consider the operational characteristics of the demand response programs. Section E of these comments describes the additional operational information needed by the model to accurately assess demand response's effectiveness in meeting any operational needs.

B. Use of the Revised Scenarios for LTPP and Interaction with the ISO's TPP

As noted above, the narrative describing the Revised Scenarios refers to the ISO's TPP and also describes possible uses for the scenarios in the TPP. The following references imply that the Revised Scenarios may inform the development of the TPP planning scenarios:

- On page 1, the guiding principles provide: "Scenarios should inform the transmission planning process and the analysis of flexible resource requirements to reliably integrate and deliver new resources to loads." Footnote 9 states that "the Revised Scenarios developed in the LTPP process may inform the development of the California ISO's TPP scenarios to the extent feasible under their tariff and adopted by their organization."
- On page 10, the first paragraph states "In the LTPP, scenarios and sensitivities have greater or lower priority based on the modeling purposes. For example, a sensitivity of different renewable generation resource locations may have more significant impact in transmission planning (e.g. power-flow) studies than in

operational flexibility studies. These different cases and priorities are also established based on the guiding principles for the LTPP."

The Revised Scenarios in this proceeding are being developed for purposes of the LTPP, not the ISO TPP. For the purposes of the TPP, the ISO develops the study plan and assumptions through a separate stakeholder process as required by the ISO Tariff. The ISO continues to work closely with the Commission and the CEC to develop renewable generation portfolios that the ISO uses to determine whether transmission additions or upgrades will be needed to meet the state's 33% RPS goals, and for that purpose will use the information about the portfolios described in Appendix B of the Assigned Commissioner's Ruling dated September 20, 2012 to develop renewable portfolios.

C. Determining Scenario Costs

In the "Building Scenarios" section of the Revised Scenario narrative, on page 9, it is unclear how the Revised Scenarios will be utilized to determine how the "mix of resources minimizes costs to customers over the planning horizon." In particular:

- How will the "preferred mix of energy-only, fully deliverable resources, and demand side resources" be assessed differently for each scenario to determine or compare the reduction in costs?
- How will the Commission assess, through the LTPP whether increased distribution-level generation will reduce overall costs? Will this assessment include distribution and transmission costs that may be associated with distributed resources?

- It is unclear what is meant by the statement "synergies exist between generation and transmission resources". What transmission resources are referred to in the statement and how will these transmission resources be assessed in the LTPP?

Ambiguities such as these make it difficult for the ISO to provide comments on the Revised Scenarios and create uncertainty as to how the Commission intends to use them.

D. Studying SONGS Outage Nuclear Retirements

The Early SONGS Retirement Sensitivity in the Revised Scenarios is only proposed on the base scenario. To assess the impact of early retirement through the LTPP process, the sensitivity should be assessed on the case the ISO has identified above as the operational bookend scenario for the operational reference case. This will align with the scenarios being used in the ISO's 2012/2013 TPP, both for evaluating the need for transmission upgrades and additions, and assessing the impacts of these retirements on the procurement requirements and impacts on operational flexibility needs.

E. Preferred Resource Assumptions

Assumptions about demand response have been included in the Revised Scenarios at low, mid and high levels, depending upon the scenario. However, to assess the impacts of demand response on the LTPP renewable integration needs assessment, the Commission must identify details about the types of and capabilities of the demand response assumed in the supply assumptions. Therefore, any additional information regarding the operational characteristics of the demand response will be important to incorporate into the study. Such operational characteristics information includes lead time to interruption, maximum number of hours of interruption, triggering events for

interruption and minimum interruption time. It is only with accurate modeling of these operational characteristics that the studies can accurately consider the extent which demand response is effective in meeting the flexibility requirements of the system. The level of operational detail associated with demand response should be on par with the level of operational characteristics that we have for generation, so that an accurate assessment of effectiveness of demand response solutions can be performed.

F. Comments on Specific Scenarios

The Revised Scenarios have identified the scenarios, and the priorities, to be used for assessing system resource need in the LTPP. The ISO has the following comments on the individual scenarios.

- While the Replicating TPP scenario generally represents the current TPP, the assumptions in the scenario may change due to stakeholder input in future planning cycles. Furthermore, staff has identified differences in the generation retirement assumptions from those utilized in the ISO current TPP. Also, in the TPP, the ISO uses the CEC's mid 1-in-5 forecast for the TPP bulk system assessment, for local assessments the 1-in-10 forecast is used, and for the economic assessments, the ISO uses a 1-in-2 forecast. Due to these differences between the scenario assumptions in the ISO TPP and the LTPP, this scenario should not be referred to as Replicating TPP. Rather, this scenario should be developed as the operational bookend scenario as discussed above.
- The High Distributed Generation Scenario uses the High assumption for Small PV and a "strong increase in incremental CHP," which reduces the load side demand. By then applying the DG resource portfolio, it appears that the

generation scenarios are double counting the levels of distributed generation being assessed.

- The High DG, High DSM and 40% RPS by 2030 is the only sensitivity assessing the 40% RPS by 2030. Thus, there is no reference to the impact of 40% RPS by 2030 on the base scenario or the ISO identified operational bookend scenario, and, accordingly, no way to compare the impacts associated with only the increase of RPS to 40% by 2030.

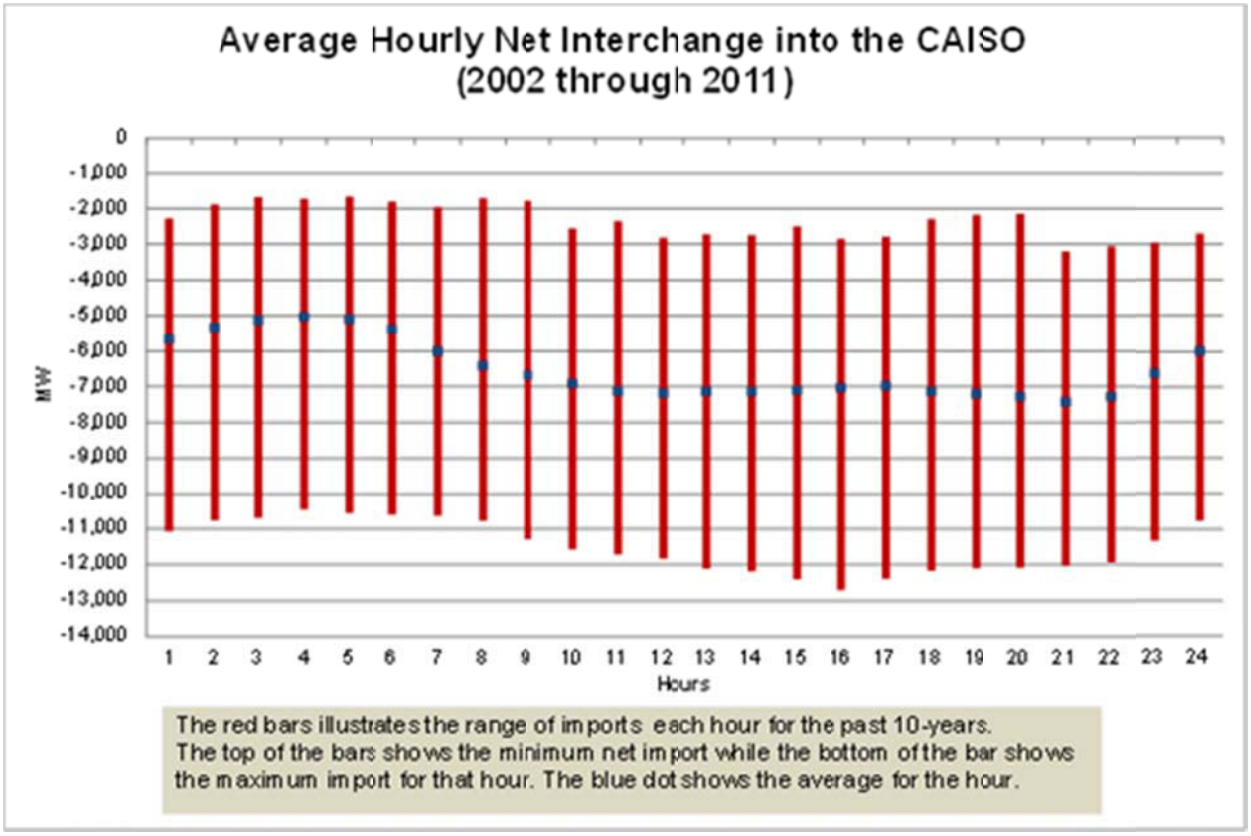
G. Second Planning Period

The Revised Scenarios include scenarios for "Second Planning Period: Years 11-22" that use simplified planning assumptions. However it is unclear as to how the second planning period will be used to "inform resource choices made today as well as shape policy discussions." How will the scenarios in the second planning period be assessed and what studies or assessments are being proposed to be assessed for this longer-term period? The ISO recommends focusing study efforts to first planning period 1-10 and only when that analysis is complete consider study efforts in the second planning period. The assumptions for the second planning period are speculative and are likely to change. Therefore, other than informing how a decision in the first planning horizon may help in the future, extensive study effort is not recommended.

H. Import Limit

The ISO recommends that the expected import assumed for the purposes of scenarios be established based on the maximum historical actual simultaneous observed imports into CAISO of 12,400MW. The ISO has not observed actual simultaneous net imports in excess of 12,400MW in the last 10 years (see figure below). For the purposes of the

flexibility need assessment, the ISO intends to calculate, similar to what is has in the past, seasonal CA Import limits that account for SCIT limitations.



III. CONCLUSION

For the foregoing reasons, the ISO requests that the Commission issue a ruling consistent with these comments.

Respectfully submitted,

By: *<u>/s/ Judith B. Sanders</u>*
Nancy Saracino
General Counsel
Anthony Ivancovich
Assistant General Counsel
Judith B. Sanders
Senior Counsel
Beth Ann Burns
Senior Counsel
California Independent System
Operator Corporation
250 Outcropping Way
Folsom, CA 95630
Tel.: (916) 608-7143
Fax: (916) 608-7222
jsanders@caiso.com

Attorneys for the California Independent
System Operator Corporation

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