

**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

**COMMENTS OF THE LARGE-SCALE SOLAR ASSOCIATION (“LSA”) IN
RESPONSE TO THE ASSIGNED COMMISSIONER’S RULING SETTING FORTH
STANDARDIZED PLANNING SCENARIOS FOR COMMENT**

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I. INTRODUCTION

The Large-scale Solar Association (“LSA”) appreciates the opportunity to comment on the revised scenarios and planning assumptions attached to the “Assigned Commissioner’s Ruling Setting Forth Standardized Planning Scenarios For Comment” issued on Sept. 20 and revised on Sept 25, 2012 (“ACR”). These comments are filed in accordance with the Commission’s Rules of Practice and Procedure and the revised ACR, which requested comments by Oct. 5, 2012.

II. DISCUSSION

A. With Two Modifications, The Revised Scenarios And Modeling Priorities Provide An Appropriate Starting Point For Addressing This LTPP’s Key Planning Questions.

For the most part, LSA supports the revised scenarios and the priority proposed for the operational flexibility studies for the reasons stated in our response to Energy Division staff’s (“Staff”) “Key Technical Questions for Parties in Response to Energy Division Proposed Scenarios for Use in the 2012 LTPP (R.12-03-014)”, a copy of which is attached. LSA is particularly pleased that the ACR takes to heart “the importance of aligning scenario planning where possible” between the Commission and the California Independent System Operator

Corporation (“CAISO”) and accordingly gives high modeling priority to the “Replicating the TPP Scenario.” LSA commends this major step forward in improving the coordination among California’s key energy resource planning efforts.

LSA endorses the revised scenarios with two modifications. First, LSA believes that alignment between the Commission and CAISO planning processes would be further improved by using transmission assumptions in the Replicating TPP Scenario that conform to the CAISO’s adopted transmission plan, as LSA recommended in its response to Staff’s technical questions. Second, LSA recommends that the 40% RPS sensitivity start with the Base Scenario rather than the High Distributed Generation, High Demand Side Management Scenario. The High DG, High DSM Scenario assumes managed net energy loads that are lower in the years following 2022 than they are in 2012, according to the chart provided at page 21 of the ACR Attachment. A 40% RPS sensitivity using the Base Scenario, which assumes increasing net energy load levels for these later years, will provide a better foundation for examining “the operational impacts associated with a higher RPS target beyond 2020”, which is the stated goal for this sensitivity.¹

LSA agrees that the “Environmental Scenario” should not be modeled in this LTPP, for the reasons explained in its response to Staff’s technical questions. However, we continue to urge that this scenario be renamed the “constrained location” scenario because it uses selection criteria to construct the RPS portfolio which do not reflect a full range of environmental considerations, such as air and GHG emissions, and because the name invites confusion with the 2010 LTPP high DG case, which was called the “environmentally constrained” scenario.

B. The Revised Import Assumption Requires Additional Clarification.

The revised planning assumptions generally reflect thoughtful and appropriate responses to party comments at the August 24, 2012 scenario workshop and in answer to Energy Division staff’s technical questions. LSA requested that the RPS net short calculation be based on the net load assumptions for each scenario, and we are glad to see this change reflected in the revised scenarios. LSA also proposed a change in the import assumption. While we are encouraged that the revised planning assumptions include a change to the import assumptions, we are concerned that the revision may not be sufficient to account accurately for the level of imports which is likely to occur during the planning horizon.

¹ ACR Attachment, p. 17.

According to the ACR Attachment at page 14, imports will be based on the “CAISO Available Import Capability for loads in their control area” which is “equal to the CAISO Maximum Imports minus Existing Transmission Contracts (ETCs) outside their control area.” First, this definition appears to refer only to imports into CAISO-controlled grid. It seems to exclude imports to other Balancing Areas inside California but outside the CAISO control area. However, the CREZs in the Resource Calculator span the entire State of California, and appear to encompass more Balancing Areas than just the CAISO’s. This apparent inconsistency could result in confusion and possibly double-counting as we move forward. Second, it is not clear that the revised assumption for imports into CAISO-controlled grid represents the sum of non-simultaneous imports on each of the transmission paths (taken one at a time) or the simultaneous imports on all paths at the time of CAISO system peak. LSA recommends use of the coincident peak approach in developing the import assumptions because the non-coincident peak approach will likely result in over-estimating the level of imports that the transmission system can actually support at the time of system peak. Third, the revised approach of adjusting import capability assumptions to exclude ETC outside the CAISO control area seems to suggest potential impacts calculated separately for each transmission path (i.e., “Branch Group”) to the CAISO Balancing Authority. We are not sure how this calculation was made and would appreciate greater clarification. In particular, LSA requests that the imports proposed for the LTPP under the revised assumption be specifically quantified by transmission path as well as by the total amounts used in developing the scenarios.

C. Additional Documentation Should Be Provided Going Forward, Particularly For Transmission and Out-Of-State Generation Assumptions.

Both the Attachment to the ACR and the material posted on Sept. 27, 2012 to the Commission’s “LTPP History” website provide additional documentation regarding the scenarios and RPS portfolios as many parties had requested. LSA commends the Energy Division staff for their responsiveness. However, some additional clarification and documentation would be beneficial going forward to help parties better understand the workings of Resource Calculator, such as a more detailed explanation of the “selection filters” and a step-by-step breakdown of how they are used to select specific renewable resources. In addition, while the notes added to the Resource Calculator’s transmission tab are helpful, independent

documentation of the transmission assumptions in the Calculator and comparison to those used in the CAISO Transmission Planning Process (“TPP”) would provide greater assistance. LSA would particularly appreciate documentation that would provide a direct comparison of the existing, minor upgrades, and new transmission projects (and their associated capacity and costs) assumed in the Calculator with the transmission projects identified in the CAISO’s TPP as supporting achievement of a 33% RPS. The documentation should include an explanation of the calculation by which the assumed transmission costs are converted into kw-year values.

Consistency of the out-of-state generation assumed in the revised scenarios with the new RPS portfolio content category requirements should also be documented. According to the portfolio summary spreadsheet posted on Sept. 27, 2012, the Base Scenario has a 33% RPS requirement of 88,160.3 GWh in 2022 and an RPS Portfolio with 13,950 GWh of out-of-state renewable generation, or slightly more than 15% of the total RPS requirement.² While this composition may well be consistent with the RPS portfolio content category requirements established by Pub. Util. Code § 399.16, and detailed in D.11-12-052, compliance with these requirements is not discussed in the ACR or accompanying documentation. LSA recommends that the supporting materials be revised to document that the RPS portfolios used in the revised scenarios comply with the portfolio content category rules.

Looking forward, LSA anticipates that the transmission assumptions may need to be modified either in this LTPP or in subsequent cycles to reflect the levels of DG that the CAISO determines can be supported at each substation. The CAISO’s determination is expected to become available in the third quarter of this year. Parties should be given an opportunity to comment on how this determination should be reflected in the planning assumptions.

D. Parties Should Have An Opportunity To Review And Comment on the Calculator’s Resource Cost Assumptions.

Finally, LSA wishes to reiterate its request for an opportunity to comment on the costs assumed for different types of generation or for transmission and distribution (“T&D”) infrastructure. Like prior rulings, the ACR states that one of the two primary questions in this proceeding is what mix of resources will minimize cost to customers over the planning horizon. The Resource Calculator contains a variety of resource cost assumptions, many of which appear

² See Tab “net shorts”, lines 8 and 10 in “Portfolio Summary” available at http://www.cpuc.ca.gov/PUC/energy/Procurement/LTPP/ltp_history.htm.

to be largely unchanged from the 2010 LTPP. At the Sept. 19, 2012, LTPP workshop on operating flexibility, a Staff member commented that parties may be given an opportunity to comment on Calculator assumptions. LSA strongly encourages the Commission to provide clarification in the near future regarding the timing and process for reviewing the Calculator assumptions, including particularly those addressing generation and transmission and distribution resource costs.

III. CONCLUSION

LSA appreciates diligent and painstaking efforts of the Commission and its staff to create appropriate standardized planning assumptions and scenarios for addressing this LTPP's major resource planning questions. We are particularly heartened by the selection of the "Replicating TPP" Scenario for high modeling priority in order to create better alignment between the Commission and CAISO planning processes, and we look forward to greater coordination in the State's overall energy resource planning.

Respectfully submitted,

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ATTACHMENT

KEY TECHNICAL QUESTIONS FOR PARTIES IN RESPONSE TO ENERGY DIVISION PROPOSED SCENARIOS FOR USE IN THE 2012 LTPP (R.12-03-014)

Questions:

1. Are there any technical errors in the proposed scenarios, scenario tool, or 33% RPS Calculator?

- **Use of the RPS portfolio developed for the base case in all of the remaining scenarios, resulting in failure to achieve 33% in the higher load scenarios:** The RPS portfolio must be adjusted in each scenario in order to achieve California's 33% RPS goals in all of the scenarios. Otherwise, this LTPP will be planning for a future in which California won't meet 33% RPS if net loads are higher than those assumed in the base case. For example, the adjusted 2022 net demand for the base case is 248,268 GWh, while 2022 net load for the "no new DSM" and "replicating TPP" cases is 265,210 GWh.³ An RPS portfolio designed to achieve the base case 33% target of 81,928 GWh would be almost 5,600 GWh shy of achieving the 33% target of 87,519 for these higher load cases.
- **Calling case 1A "environmental":** The selection criteria used to construct the RPS portfolio for case 1A do not reflect a full range of environmental considerations, such as air and GHG emissions. The name also invites confusion, since in the 2010 LTPP the high DG case was called "environmentally constrained". LSA recommends that case 1A be called "constrained location."
- **Import assumption:** At the workshop, a CAISO representative stated that the assumed imports appear to be 4,000 MW higher than the levels historically experienced and diverge significantly from imports that have been used in the ISO Deliverability Assessment. LSA is concerned with using an import assumption that diverges substantially from actual experience unless there is reason to expect that the future will be significantly different, which has not been presented. LSA recommends that the scenarios use historical expected imports as calculated by the CEC, consistent with the June 26th ACR, p. 15.

2. Staff has assumed a resource with no current COD estimate in the Energy Commission's list of siting cases (http://www.energy.ca.gov/sitingcases/ALL_PROJECTS.XLS), but meeting other criteria, would be online by 2017. Is this a reasonable assumption? If not, please provide a year and justification.

Yes.

6. Please provide a prioritization of staff's proposed scenarios and portfolios and briefly (no more than 1 page) explain the rationale for this prioritization.

Recommended Priorities: 1) Base; 2) Early SONGS Retirement; 3) Replicating TPP (high load scenario); 4) High DG

Reasons: Since the key question for this proceeding is the need for new resources to ensure adequate reliability, after the base case, the scenarios in which system reliability is most likely to be stressed should receive priority. In LSA's view, these are Scenario 1B "Early SONGS Retirement" (given that

³"Net Supply" values for 2022 for these scenarios using the "Scenario Tool" spreadsheet posted at http://www.cpuc.ca.gov/PUC/energy/Procurement/LTPP/ltp_history.htm

plant's current uncertain status) and a high load case. LSA does not believe it makes any sense to pursue Scenario 1E, as it does not differ significantly from the base case even though it is denominated as the "high load" sensitivity. Instead, LSA recommends that Scenario 2A "Replicating TPP Assumptions" should be the next priority. It offers the opportunity both to examine a high load case and to develop scenarios specifically for use in the CAISO's TPP, which is one of the identified objectives of this case. (Scoping Memo, p. 9) For this scenario, an RPS portfolio should be developed using the higher net load consistent with this case (as LSA stated in response to Question 1) and transmission assumptions consistent with CAISO's approved 2011/2012 TPP. Doing so would be consistent with the June 28th ACR adopting standardized planning assumptions, which stated that a "sensitivity case with ISO approved transmission that is not yet CPUC approved may be created." (p. 16)

Differences between the goals of the CPUC's LTPP and the CAISO's TPP justify use of differing planning assumptions to create scenarios specifically for use in the CAISO's TPP. While the LTPP resource portfolio can be planned based on an average (1 in 2 year) load projection and a reserve margin, transmission plans in the TPP need to be based on reasonably adverse system conditions to be able to deliver resources from alternative resource areas to those assumed in the LTPP. For example, in a dry hydro year, California load would likely receive more of its resources from the Desert Southwest rather than the Pacific Northwest, necessitating more transmission capacity on that path than expected in the base portfolio. In a wet hydro year the situation would likely be reverse. In addition, in any individual year within the planning horizon, there is a 50% chance that load can also be higher than the load in the base portfolio in the LTPP. Because of the long lead time in developing transmission projects, tying the CAISO TPP to the base portfolio and projected load in the LTPP can result at best in an inefficient, and at worst, in an unreliable transmission system. Therefore, LSA recommends giving priority to examining Scenario 2A "Replicating TPP Assumptions" in collaboration with the CAISO.

A high DG scenario (based on achieving Governor Brown's 12,000 MW goal) should be the next priority after these three scenarios. However, the T&D and system operating costs associated with high levels of DG are not as well developed as the transmission costs for larger scale generation. Consequently, while LSA believes a high DG scenario should be examined in connection with operational flexibility needs, it is not clear that the costs associated with this scenario can be sufficiently well developed to permit legitimate comparison with the costs of other scenarios. As LSA observed in its initial comments, the timing and manner in which resource cost assumptions will be reviewed should be defined explicitly as part of the 2012 LTPP proceeding roadmap.

The value of modeling the remaining scenarios/sensitivities is less clear, as either their results do not materially differ from other cases (e.g., "low load" and "high load"), or they are based on preliminary data that is likely to change (e.g., "environmental", which relies on preliminary DRECP data). In addition, LSA does not believe it would be useful to create a new "base load RPS" case as Green Power Institute suggested at the August 24th workshop. The RPS portfolio used for the scenarios and modeling should be based on contracted projects reflecting "sunk" or "committed" procurement decisions, consistent with the June 28th ACR's adopted standardized planning assumptions.