



May 9, 2013

Via Electronic Mail

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California Public Utility Commission
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RE: R.12-03-014: LSA Informal Comments on Preliminary 2012 LTPP Base Case Results

Dear Nathaniel:

LSA appreciates the opportunity to respond to Energy Division's request for informal comments on the ISO's presentation of its preliminary modeling results for the 2012 LTPP Base Case Scenario, provided at the workshop on April 24, 2013. We comment on some of the questions that the Energy Division supplied below, (ED's questions are repeated in bold) and, in addition, offer some other questions and comments.

1. **What assumptions should be used for recently authorized resources in Southern California Edison's service area (D.13-02-015) and San Diego Gas & Electric's service area (D.13-03-029)? See slide 16 for the current assumptions and recommendation by CEC and CPUC staff.**
 - a. **Should the current assumption (900 MW CCGT, 100 MW GT, 50 MW storage in the LA Basin, 343 MW of GT in San Diego; up to 697 MW of additional resources¹ available to meet any residual flexibility need) be maintained or changed? If changed, what is the recommendation?**
 - b. **What influence the modeling results would the proposed change have? For example, adding baseload resources may increase overgeneration in non-summer months.**
 - c. **Is this a change that should be handled in this LTPP or the 2014 LTPP?**

LSA seeks clarity on how the Track 1 authorized resources were modeled. Our understanding of Slide 16 from the workshop discussion was that only a limited subset of the Track 1 specified resources was explicitly modeled. This largely fossil-fired subset of modeled resources included all 343 MW of capacity assumed needed for SDG&E, but only 1050 MW of the local capacity that the CPUC found to be needed for SCE. As LSA understands the preliminary modeling, the ISO excluded the up to 697 MW of the additionally needed resources for local support from the data set, at the CEC and CPUC's recommendation, so as not to bias the model results toward fossil-fired generation. At least 150 MW, and as much as 600 MW, of this not-modeled capacity

¹ 1400-1800 MW were authorized for the LA Basin local capacity needs; 215-290 MW were authorized for Big Creek / Ventura local capacity needs; and 343 MW for San Diego local capacity needs.

represents generation which the CPUC in its Track 1 decision has directed to be from preferred resources.

LSA appreciates the efforts of the ISO to avoid a result that biases toward conventional generation, and understands that it is difficult to model that portion of the Track 1 authorized resources not fully specified by the CPUC's decision. However, LSA supports modeling that represents the best approximation of expected future resources for the base case. The ISO should work in concert with the CPUC to model a more complete set of generic conventional and preferred Track 1 resources approximating expected future local capacity resources.

- 2. What assumptions are appropriate for new out of state RPS resources in terms of dynamic scheduling, intra-hour scheduling, hourly scheduling and unbundled RECs? *See slide 20 for the current assumptions.***
 - a. Should each of these categories be additionally classified within the different RPS "buckets" for procurement for better clarity?**
 - b. Is this a change that should be handled in this LTPP or the 2014 LTPP?**

LSA believes the out of state RPS resources should be additionally classified into the different RPS buckets as a check that the resources meet renewable bucket rules. This should be done in this LTPP cycle.

- 3. For deeper analysis of any overgeneration assessments:**
 - a. How should exports be considered?**
 - i. Is a limit appropriate? If so, at what level?**
 - ii. What would the implications of this change be?**
 - b. Which scenarios/sensitivities from D.12-12-010 should be explored for overgeneration given limited time in this proceeding?**
 - c. Is this a change that should be handled in this LTPP or the 2014 LTPP?**

LSA believes that possible overgeneration problems should be carefully examined in this cycle, especially in the base case and the High DG/DSM case, as those two cases have the highest potential to produce overgeneration hours. To the extent possible with the Plexos model, the ISO's examination should reflect understandings being gained in other efforts, such as in the energy imbalance market modeling. Modeling the physical and economic export market realistically should be a component of this analysis.

Other LSA Comments/Questions

Preliminary Results

During the course of the workshop, the CAISO noted that a need run, not a production cost run, was conducted for March and July, and mentioned that a need run is modeled by representing each day of a given month as having the averaged 24-hour load shape for the whole month. Yet the results provided are labeled as if they are for a specific low load day in March and a peak day in July. Please clarify – do the results represent modeling loads representing the actual projected peak day and the illustrative minimum load day, or are the results slightly blunted by use of averaged days in the month?

Data Set

LSA understands that the ISO will be providing the modeling data set in the Plexos format to parties using Plexos, and a translated form for those not using the model, so that we might better understand the assumptions. LSA appreciates this offer of this translation, and in particular, hopes to be able to review in the translated data set the detailed renewable and non renewable resource assumptions for in-state and dedicated out-of-state generation, both existing and new, including capacity, forced and planned outage rates, hydro capacity and energy, ramp rates, location, and heat rates or other costs influencing dispatch.

Load Curve

Additionally, LSA would like a description of the derivation of the load duration curve used in the modeling of the base case in 2022. Was this curve developed as part of the CEC's 2012 IEPR? Does the load shape mimic those of current years, or does it reflect any forecasted behavioral or customer changes such as those that might occur from off-peak pricing, higher levels of DG, higher levels of plug-in vehicles, or changed economic conditions?

Calculation of Regulation and Load-Following on 15-minute Intervals

In Slide 37, the ISO discussed its investigation and rejection of changing its Step 1 regulation and load following requirement calculation to a 15 minute interval, which is reflective of future scheduling intervals. Please fully explain the implications in the model of not using the 15 minute net load schedules to calculate regulation and load following requirements, and why it was not considered feasible.

2018

Slide 35 indicates that the ISO plans to complete a simulation of 2018. Why was this year chosen? Is the ISO also considering modeling an illustrative year in the second decade of the LTPP, when more conventional generation may be retired?

Modeling Outputs


Slides 32 and 33 provide model results for a sample low load day, on an hour by hour basis, showing net exports and upward reserve capacity for each hour. Will these be the dominant output metrics for examining flexible operating concerns across the different deterministic cases? Are there other metrics in development?

Solar with Storage

LSA supports and recommends that the ISO coordinate with industry technical experts to more accurately model the operational capabilities and limitations of the 150MW Solar Thermal with Storage plant identified in the list of resources represented in the LTPP model. This effort will not only improve the overall model accuracy currently, but also serve to create a base framework for modeling solar generators co-located with energy storage that may be included in future LTPPs.

LSA thanks the Energy Division and the ISO for the opportunity to provide these comments, and looks forward to reviewing the data set and Base Case results as they become available.

Sincerely,

A rectangular area containing a handwritten signature in cursive script that reads "Kathy Treleven". The signature is written in black ink on a light-colored, textured background.

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