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)

Track II Informal Comments to the Energy Division of the California Environmental Justice Alliance and Sierra Club California

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 resources available to meet any residual flexibility need) be maintained or changed? If changed, what is the recommendation?

The current assumptions should be maintained with the exception of increasing the energy storage value. The California Environmental Justice Alliance (CEJA) and Sierra Club California (Sierra Club) agree with staff that the Local Capacity Requirements' assumptions should not bias the modeling towards one resource especially natural gas which has been traditionally favored in the modeling. The current assumption provides the resource choice flexibility that was built into the LCR decision.[1] This assumption allows 697 MW of additional resources to be filled with preferred or energy storage resources.

CEJA and Sierra Club believe that 50 MW of storage resources is a very low assumption given the current development of storage projects in Southern California. Additional LCR needs can be met by storage resources. Storage also can provide other services to the grid including backing up renewable energy. SCE has stated that "storage is two to three times more effective than conventional generation in meeting ramping requirements."[2] In addition, the Commission's Energy Storage Proceeding may be developing procurement targets for storage relevant to the LTPP time period, and even if the Commission chose not to adopt storage targets, the proceeding still has a mandate to produce policies that will facilitate storage. The model should be designed to increase the anticipated procurement of storage resources.

[1] Decision 13-02-015 at p. 81 ("there is a strong likelihood that additional preferred and energy storage resources not included in our maximum procurement authorization (and potential changes to the transmission system) will be available to effectively meet or reduce LCR needs by 2021").
[2] *See* Southern California Edison, Moving Energy Storage From Concept to Reality, at p. 14 (May 20, 2011), *available at* http://www.edison.com/files/WhitePaper_SCEsApproachtoEvaluatingEnergyStorage.pdf.

b. What influence the modeling results would the proposed change have? For example, adding baseload resources may increase overgeneration in non-summer months.

n/a

c. Is this a change that should be handled in this LTPP or the 2014 LTPP?

This LTPP should continue the Commission's directive to emphasize strict and maximum compliance with the loading order to not bias the model towards more natural gas generation.

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.*
   d. Should each of these categories be additionally classified within the different RPS "buckets" for procurement for better clarity?
   e. Is this a change that should be handled in this LTPP or the 2014 LTPP?

The assumptions for each of the three procurement categories should initially be defined as fitting within one of the three portfolio categories, as defined in Senate Bill 2 (1X) and articulated in Section 399.16 and Decision 11-12-052. For example, a part of the criteria to potentially fit within the first category (or "bucket") is that the RPS generation resources "[h]as an agreement to dynamically transfer electricity to a California balancing authority."[3] This will provide greater clarity to how these plans comply with the RPS requirements.

After fitting the proposed procurement into these categories, the procurement should be consistent with the minimum and maximum limits defined in Section 399.16(c). For example, for the category that includes Renewable Energy Credits (RECs), the Code provides that not more that not more than 10% of eligible procurement in the 2020 compliance period.[4] These types of considerations do not appear to be an issue for the current assumptions due to the low percentage of renewables that are assumed to be located out of state.[5] Although these changes should be completed to assure consistency with RPS requirements, these changes can wait until the next 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?

A high priority should be placed on analyzing energy storage when considering overgeneration. The fact that overgeneration is even an issue is indicative of the lack of energy

[3] Cal. Public Util. Code Section 399.16(b)(1)(B).
[4] Cal. Public Utility Code Section 399.16(c)(2).
[5] *See* Slides 19-20 of April 24, 2013 presentation.

storage analyzed in the model. "Additional energy storage systems can optimize the use of the significant additional amounts of variable, intermittent, and offpeak electrical generation from wind and solar energy that will be entering the California power mix on an accelerated basis."[6] Although the scenario has considered accelerated wind and solar development, it has not considered the likely energy storage development.

It appears that the model only includes 50 MW of energy storage from the LCR requirement for the LA Basin and an energy storage unit associated with a 150 MW solar thermal plant.[7] This is not a reasonable forecast of the energy storage resources that are likely to be online in ten years. Energy storage projects are being developed throughout the state, and the utilities have included energy storage in their smart grid plans. In addition to the Commission's Energy Storage Proceeding, the Governor's Clean Jobs Plan calls for accelerated development of storage.[8] Although CAISO explained that additional updates will include "more detail modeling of solar thermal with storage," this is insufficient to adequately address the lack of storage considered in the model and the related potential overgeneration issue. CAISO should at least run a sensitivity that evaluates the amount of energy storage needed to absorb any overgeneration and also analyze the other system effects of including more energy storage on the system. Energy storage can provide additional benefits to the system that are environmentally and operationally superior to the performance of natural gas plants, but these benefits are not sufficiently considered in the model. In the last LTPP, the CAISO modeling found a load following down issue could arise, but CAISO explained that this situation could be addressed by storage among other options.[9] This new iteration of the modeling should further analyze how energy storage can provide a solution to certain system needs.

c. Is this a change that should be handled in this LTPP or the 2014 LTPP?

The change should be made in the LTPP and further refined, if necessary, in 2014 LTPP.

Other Comments:

GHG Emissions:

In D.12-12-010, the Commission decided that "[s]cenarios should be designed to form useful policy information including tracking greenhouse gas reduction goals."[10] Tracking greenhouse gas reduction goals is critical for informing the State's progress toward meeting these requirements.

California law recognizes that "[g]lobal warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California."[11] To limit these impacts, California has made its commitment to reduce GHG emissions clear: AB 32 mandates

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[6] A.B. 2541, Section 1(b).
[7] Power Point, slides 16, 20.
[8] CEC, Renewable Power in California: Status and Issues at p. 11 (Dec. 2011).
[9] *See* Track I Opening Testimony of Mark Rothleder in R.10-05-006 at p. 43.
[10] D.12-12-010 at Attachment, p. 8.
[11] Cal. Health & Safety Code § 38501(a).

that California reduce GHG emissions to at least 1990 levels by 2020,[12] and Executive Order S-3-05 requires an 80 percent GHG reduction below 1990 levels by 2050.[13] Achieving these reductions will require significant emission reductions in the utility sector.[14]

Commission decisions have an enormous impact on greenhouse gas and pollution levels in the State, but GHG goals and requirements do not appear to be considered in the scenario development. This is inconsistent with the Assigned Commissioner's Ruling and the Scenario decision, which requires consideration of GHG policies.[15] Critically, the Commission has committed to study "AB 32 constraints on investor owned utilities' electricity portfolios" in the long term planning proceeding.[16] The Commission has also found that "[s]ince AB 32 was enacted . . . reduction in GHG emissions is a key policy objective for the utility industry."[17] Thus, meaningful consideration of the States' GHG goals and requirements should be evaluated in these scenarios. Otherwise, the significant modeling work done in this proceeding will not be a useful tool for assisting policy-makers with measuring these goals.

Existing Resources:

The ancillary capability of existing resources needs to be accurately defined in the model to not overestimate the need for procurement. It is not clear if this is being done. The Commission's decision on the Scenarios did not describe how ancillary capability for existing resources would be defined. The decision stated that "[v]ariable resources shall include or utilize a generic production profile; there is significant value in choosing a specific data source (and historical year if stochastic modeling is not utilized) for these production profiles."[18]

In the last LTPP, a generic value was used to account for many of the existing resources ancillary capacity. At least one company complained that these values were "overly conservative" and did not reflect the true capability of new and existing resources.[19] It does not appear that these overly conservative assumptions were cured in this current modeling effort. By not reflecting the true capabilities of existing resources, any results will overestimate a procurement need. It is important to refine this data before authorizing unnecessary procurement.

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[12] Cal. Health & Safety Code § 38550.
[13] *See* Executive Order S-3-05 (June, 2005) available at http://www.dot.ca.gov/hq/energy/ExecOrderS-3-05.htm.
[14] Health & Safety Code § 38505(i); Health & Safety Code § 38561(b) (AB 32 requires "direct emission reduction measures" from sources such as utilities).
[15] Planning Assumptions ACR, Attachment at p. 8; D.12-12-010 at Attachment, p. 8.
[16] *See* CPUC and CEC Final Opinion on Greenhouse Gas Regulatory Strategies, at p. 88, http://www.energy.ca.gov/2008publications/CEC-100-2008-007/CEC-100-2008-007-F.PDF
[17] D.10-12-035 at p. 38, *citing* D.07-12-052 at pp. 2-5, 243; D.08-10-037 at pp. 2-3.
[18] *See* D.12-12-010 at Appendix p. 27.
[19] *See* Calpine January 14, 2011 Comments in R.10-05-006; DRA January 14, 2011 Comments in R.10-05-006 at p. 4; Pacific Environment January 14, 2011 Comments in R.10-05-006 at pp. 7-8.

May 9, 2013

Respectfully submitted,

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