Community Environmental Council technical comments on proposed scenarios

Tam Hunt, J.D.

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Staff have presented the following questions to parties and we provide our brief responses below:

1. Are there any technical errors in the proposed scenarios, scenario tool, or 33% RPS Calculator? For any alleged errors, please be very specific in your comments including the location of the error and the correct value, including the source for the revised value. If appropriate, please provide a revised spreadsheet showing any corrected values. Some example questions to consider in identifying factual errors are:

The Council feels that the 19% capacity factor assumption for small PV (described in question 5 below) is too low and we comment further below.

The Council also agrees with the Green Power Institute's technical comments (Sept. 7, 2012) that the discounted core amount used by staff is too large. We agree that a 60% factor (40% reduction from projects in development queue) for calculating the discounted core is more appropriate, given the history of contract failure among RPS projects.

We also agree with CEJA (technical comments, p. 3) that at least one of the scenarios should include the Governor's 12,000 MW DG goal – and none currently do. This is clearly an error that should be corrected.

a. Are any resources double counted or inappropriately left out of the analysis?

No response at this time.

b. Are any numbers cited in the proposed scenarios or spreadsheets inaccurate relative to the intended sources?

No response at this time.

c. Are there any errors in the renewable generation project data in the 33% RPS Calculator?

No response at this time.

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.

This is reasonable as a general assumption.

3. If Staff could not locate a COD for an existing resource, Staff assumes a COD of 1/1/1980. Is this a reasonable assumption? If not, please provide a year and justification from a public source.

This is a reasonable assumption.

4. Is it appropriate to group renewable resources such as geothermal or biomass in with conventional generators for purposes of estimating resource retirements?

No, it's not appropriate because geothermal and biomass facilities can often have far higher capacity factors than conventional generators.

5. Is a 19% conversion from nameplate small PV capacity to peak production appropriate? If not, what data source and method publically available should be used for this calculation?

This question appears to use the phrase "peak production" when it should use "average production." If so, 19% is too low for average production (and far too low for peak production). "Small PV capacity" is defined as 5 MW or below. As such, the large majority of these facilities will probably consist of ground-mount single-axis tracker facilities with good insolation because facilities 500 kW and above are almost always single-axis trackers and ground-mounted nowadays – and will be even more so moving forward – because there is an approximately

25% increase in production, when compared to fixed-tilt systems, from using single-axis trackers. The Council recommends using a 22% state-wide average production figure rather than 19%. This is the case because average production can be as high as 30% in very sunny places like the Mojave Desert and as low as 20% in more cloudy areas, even for single-axis trackers, and as low as 15% for roof-mount systems that don't use trackers. NREL's SAM (System Advisor Model) software includes public insolation data and systems using trackers or without can be modeled for a variety of locations around California. The 22% figure is an estimate that reflects the Council's expert opinion on the likely mix of project types and locations for the 5 MW and below market segment over the coming years.

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

Scenario 3, the High Distributed Generation scenario, should be prioritized for a variety of reasons. First, the economic and environmental benefits of this scenario have been shown to be superior to other scenarios in past LTPP modeling. Second, the state is trending in this direction in recent years, due to both policy support and natural market development, driven in particular by the dramatic price reductions in solar PV technology.

The second highest priority should be given to Sensitivities 1B and 1C (Nuclear Retirement). As the state proposal states, SONGS has been shut down since earlier this year and it is unclear when, if ever, it will come back online. There is also a growing pressure to shut down all California nuclear plants due the Fukushima accident and concerns that a similar disaster could befall California.

Scenario 2 (No new DSM) should be the lowest priority scenario, or better yet removed entirely because it doesn't meet the Assigned Commissioner's Ruling from July 27, 2012, which requires that all assumptions be realistic. The first two guiding principles in this ruling state:

A. **Assumptions** should take a realistic view of expected policy-driven resource achievements in order to ensure reliability of electric service and track progress toward resource policy goals.

B. **Assumptions** should reflect real-world possibilities, including the stated positions or intentions of market participants.

It is simply not realistic that the state won't pursue additional DSM and the staff proposal itself states that this scenario is a "worse case scenario," which clearly violates the guiding principles.

The Council recommends instead a preferred 40% RPS by 2025 scenario, which was part of the 2008 LTPP but was never completed and has since been dropped in subsequent LTPPs (we were happy to see Green Power Institute's suggestion at the end of their technical comments supporting the 40% RPS scenario, and NRDC's support also (pp. 1-2 technical comments)).