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**POST WORKSHOP COMMENTS OF THE OFFICE OF RATEPAYER
ADVOCATES ON THE CALIFORNIA ENERGY COMMISSION WORKSHOP ON
RENEWABLE PROGRESS, CHALLENGES, AND OPPORTUNITIES**

Additional submitted attachment is included below.

BEFORE THE CALIFORNIA ENERGY COMMISSION
OF THE STATE OF CALIFORNIA

In the matter of,
2015 Integrated Energy Policy Report
(2015 IEPR)

Docket No. 15-IEPR-06
RE: Renewable Progress,
Challenges, and Opportunities

**POST WORKSHOP COMMENTS
OF THE OFFICE OF RATEPAYER ADVOCATES ON THE
CALIFORNIA ENERGY COMMISSION WORKSHOP ON
RENEWABLE PROGRESS, CHALLENGES, AND OPPORTUNITIES**

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May 26, 2015

BEFORE THE CALIFORNIA ENERGY COMMISSION
OF THE STATE OF CALIFORNIA

In the matter of,
2015 Integrated Energy Policy Report
(2015 IEPR)

Docket No. 15-IEPR-06
RE: Renewable Progress,
Challenges, and Opportunities

**POST WORKSHOP COMMENTS
OF THE OFFICE OF RATEPAYER ADVOCATES ON THE
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RENEWABLE PROGRESS, CHALLENGES, AND OPPORTUNITIES**

I. BACKGROUND

In response to Governor Brown's 2010 Clean Energy Jobs Plan, the 2012 Integrated Energy Policy Report (IEPR) Update included a Renewable Action Plan to expedite permitting of renewable generation and transmission projects. The Renewable Action Plan was based on five overarching strategies to support renewable development:

- Prioritize geographic areas of renewable development;
- Evaluate costs and benefits of renewable projects;
- Minimize interconnection and integration costs and time;
- Promote incentives for projects that create in-state jobs and economic benefits; and
- Promote and coordinate existing financing and incentive programs.

On May 11, 2015, the California Energy Commission (CEC) conducted a workshop to discuss progress on actions identified in the 2012 IEPR Update's Renewable Action Plan and to solicit stakeholder input on issues and potential solutions for reaching Governor Brown's goal of 50 % renewable energy in California by 2030. The workshop discussed five questions on new issues and challenges associated with a 50% renewable target. The Office of Ratepayer Advocates (ORA), the independent consumer advocate

within the California Public Utilities Commission (CPUC), provides its responses to these five questions below.

II. DISCUSSION

On March 6, 2015, the CPUC opened Rulemaking (R.) 15-02-020 to address various issues remaining in R.11-05-005 (the former RPS proceeding) to consider raising the RPS target, the relationship of the RPS program to the state's greenhouse gas (GHG) reduction goals, the integration of GHG reduction goals and metrics into RPS procurement methods, and to implement any new statutory requirements relation to the RPS program. To the extent that the information collected herein is relevant to the CPUC proceeding, parties should be directed to file comments in R.15-02-020 regarding the areas where they believe the current policy framework should be corrected or modified.

A. Question 1: *What should a 50% renewable policy framework look like? How much should it rely on what is already in place versus a complete redesign of the existing policy structure? Should it replace the current Renewables Portfolio Standard (RPS) requirement or work in tandem with it?*

A 50% renewable policy framework should build upon the current 33% RPS policy framework. The current policy framework contains certain flaws—as further discussed below in response to Question 2—but is a good starting point and basis for developing a 50 % renewable framework. For example, maintaining the current policy framework would provide regulatory certainty for utilities and generators. In addition, these same entities have already spent years working with the current policy framework and developing their portfolios to meet its requirements. The multi-year compliance periods help accommodate fluctuations in year-to-year weather patterns and give the utilities more flexibility in meeting their RPS requirements, reducing the incentive for overprocurement beyond a minimum margin of overprocurement.

B. Question 2: *What are the operational challenges of a 50% renewable policy framework?*

Achieving a 50% renewable target requires changes to the renewable policy framework, grid operations and energy market participation rules. A 50% renewables target presents grid flexibility and reliability challenges, such as fast ramping constraints, and voltage and frequency fluctuations. These challenges might be met with emerging technologies and programs such as smart inverters, energy storage and load-shifting demand response. The California Independent System Operator (CAISO) is in the process of developing rules for how these programs and products may participate in the various energy markets (e.g. markets for flexible resource adequacy, ancillary services). As technologies evolve, these rules may need to be revisited.

Exploration of whether encouraging neighboring states to establish renewable energy goals will further California's goals and consideration of how the CAISO's EIM might engender a multi-state solution might prove useful. Additionally, according to the current RPS rules, the necessary technology and reporting requirements for behind-the-meter distributed generation customers to be able to sell their renewable energy credits (RECs) are prohibitive. These deficiencies may need to be modified to allow California to meet its renewable targets in an efficient and cost-effective manner.

Increasing the renewables target to 50% might also exacerbate the overgeneration challenge and the potential for curtailment. The current least-cost best-fit (LCBF) valuation methodology does not assign a cost to curtailment, which leads to skewed contract selection. Curtailment represents a real opportunity cost, as this would-be renewable generation cannot be used to meet a retail seller's RPS requirement and so the retail seller must procure additional renewable generation to make up for the curtailed generation. Contract valuation should accurately value a generator's expected curtailment.

- C. Question 3:** *Should a 50% renewable policy maintain the current RPS policy of technology neutrality, or should it favor technologies that provide specific benefits to the system?*

It is essential for different technologies to compete head-to-head so respective costs and benefits may be compared. Currently, contracts are evaluated according to the LCBF methodology which accounts for various costs and benefits such as energy cost, energy value, transmission cost, and capacity value. However, as the supply mix on the grid and grid operations evolve, metrics need to be updated or added to ensure that accurate values are assigned to each contract. For example, some changes are already occurring, such as the development of an integration cost adder and a switch from net qualifying capacity to effective load carrying capacity to determine capacity value. Other metrics may need to be updated on an ongoing basis, such as each utility's time-of-day factors. To the extent that the CEC, CPUC and/or CAISO identify specific system needs, the utilities can be directed to solicit contracts with specific characteristics or to apply qualitative preferences during contract selection.

- D. Question 4:** *Should renewable procurement under a 50% renewable policy framework differ from current procurement practices? If so, how?*

Renewable procurement under a 50% renewable policy framework should continue to utilize the LCBF valuation methodology, with updates or additions as described in response to Question 3. In addition, the utilities should continue to solicit renewable energy contracts through competitive solicitations in which all technologies compete head-to-head. Competitive solicitations ensure that the utilities are selecting renewables with the best value amongst the available options.

- E. Question 5:** *What are the roles of DG, energy efficiency, demand response, storage, microgrids, electric vehicles, and electrification of the building heating sector in achieving a 50% renewable target?*

There are challenges to achieving a 50% renewable target. Several programs (discussed below) will play an important role in reaching the 50 percent renewable goal.

However, as mentioned in Question 3 above, it is essential for these technologies to compete head-to-head so respective costs and benefits may be compared.

Distributed Generation (DG): DG can play a valuable role in achieving a 50% renewable target, especially in the case that its construction does not require development of undisturbed land and existing infrastructure is utilized. However, the CPUC needs to be careful when designing net-metering rules, to ensure that ratepayers without behind-the-meter DG are not subsidizing those ratepayers with behind-the-meter DG who may not be paying for the full cost of service they still receive from the grid.

Energy Efficiency: In the case that a dollar spent on energy efficiency results in greater than or equal to a dollar saved, ORA supports energy efficiency efforts. Overall reduced load will also reduce the amount of energy that needs to be procured to meet a 50% target, which will result in lower program costs.

Demand Response: Demand response programs can continue to help ensure system reliability during instances of unusually high peak demand, and offset grid fluctuations caused by wind farms and other renewable technology. To cope with the challenges presented by a 50% renewables target, California will need cost-effective demand response solutions that are load-shifting, in addition to load-reducing. Load-shifting may be achieved through energy storage or time-varying rate structures. Third party aggregators may play a role in maximizing the potential of these solutions.

Storage: Energy storage has the potential to solve many of the challenges associated with high renewable penetration. ORA supports the storage framework of competitive solicitations across all energy storage technologies as a means to explore the possibilities of storage while procuring the most cost-competitive energy storage offers.

Microgrids: Microgrids have the potential to provide ancillary services and support services to the grid which would help enable a 50% renewable target. However, the CPUC must also ensure that microgrid users are paying their fair share for grid back-up needs, in the case that they need service from the utility.

Electric Vehicles (EVs): EVs have the potential to help California meet its ambitious greenhouse gas (GHG) reduction goals. Whether or not they can be aggregated and controlled to help manage load and grid operations is yet to be seen. Whether or not EVs are a cost-effective tool to help achieve a 50% target is contingent upon the costs of EV infrastructure build-out.

Electrification of the Building Heating Sector: Electrification of the building heating sector can help California meet its GHG reduction goals. Thermal energy storage has the potential to both electrify building heating and also to provide load-shifting services.

Respectfully submitted,

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