

**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.

R.13-12-010  
(Filed Dec. 19, 2013)

**REPLY COMMENTS OF THE CALIFORNIA ENVIRONMENTAL JUSTICE ALLIANCE, SIERRA CLUB, AND THE UNION OF CONCERNED SCIENTISTS ON KEY TECHNICAL QUESTIONS FOR PARTIES IN RESPONSE TO DECEMBER 18<sup>TH</sup>, 2013 WORKSHOP ON PLANNING ASSUMPTIONS AND SCENARIOS FOR USE IN THE CPUC 2014 LONG TERM PROCUREMENT PLAN PROCEEDING AND THE CAISO 2014-2015 TRANSMISSION PLANNING PROCESS**

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Pursuant to the December 19, 2013 email ruling of Administrative Law Judge Gamson, California Environmental Justice Alliance (“CEJA”), Sierra Club, and the Union of Concerned Scientists (“UCS”), respectfully submit these timely reply comments on Key Technical Questions for Parties in Response to December 18th, 2013 Workshop on Planning Assumptions and Scenarios for Use in the Commission’s 2014 Long Term Procurement Plan proceeding (“LTPP”) and the CAISO 2014-2015 Transmission Planning Process. As these reply comments discuss, the Commission should include a scenario that will evaluate how the State will meet greenhouse gas (GHG) goals and requirements. These reply comments also discuss the importance of assuming realistic values of preferred resources to best assess future needs.

**I. The Commission Should Include a Greenhouse Gas Scenario that Complies with California’s Greenhouse Emission Reduction Goals and Evaluate the GHG Reduction Potential of Each Scenario.**

The Commission should use the 2014 LTPP as an opportunity to evaluate the degree to which each planning scenario will reduce GHG emissions, and include at least one scenario that significantly reduces GHG emissions consistent with Executive Order (“EO”) S-3-05. Opening comments provided by at least fourteen sets of stakeholders explicitly supported analyzing at

least one scenario that is designed to make deep and necessary reductions in GHG emissions consistent with EO S-3-05.<sup>1</sup> Therefore, CEJA, Sierra Club, and UCS continue to request that the Commission evaluate the potential of each scenario to reduce GHG emissions and model at least one scenario that is specifically designed to make deep GHG reductions.<sup>2</sup> The data in past LTPPs has been insufficient to adequately analyze and compare the GHG implications of different scenarios. This LTPP should ensure that there is sufficient information to fully evaluate the projected contribution of the electricity sector to California greenhouse gas emissions.

Pacific Gas and Electric (“PG&E”) appears to suggest that scenario analysis as currently proposed in the LTPP is either not appropriate or a sufficient venue for the State to explore different electricity investment pathways that result in deep GHG reductions and that the State must approach this task is by conducting an economy-wide analysis of GHG reductions: “the proposed scenarios cannot provide the Commission with sufficient information to evaluate long-term energy policy issues such as the comparison of alternative pathways to achieve greenhouse gas [GHG] reduction in the state.”<sup>3</sup> While CEJA, Sierra Club and UCS recognize that the LTPP is about future plans for the electricity sector only, there is no better venue to explore emission reductions associated with that sector. In addition, a published analysis indicates that the electricity sector will need to play a central role in any economy-wide effort to drastically reduce

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<sup>1</sup> These include comments from the California Environmental Justice Alliance, Union of Concerned Scientists and Sierra Club, Environmental Defense Fund, California Wind Energy Association, Clean Coalition, Eagle Crest Energy Company, the Center for Energy Efficiency and Renewable Technologies, the Natural Resources Defense Council, California Energy Storage Alliance, Brookfield Renewable Energy Partners, The Vote Solar Initiative, the Office of Ratepayer Advocates, the Large-scale Solar Association, and EnerNOC, Inc.,

<sup>2</sup> See Comments of the Union of Concerned Scientists and Sierra Club on Key Technical Questions for Parties in Response to December 18th, 2013 Workshop on Planning Assumptions and Scenarios for use in the CPUC 2014 Long Term Procurement Plan Proceeding and the CAISO 2014-2015 Transmission Planning Process (“UCS/Sierra Club Comments”) pp.4-6 (discussing Expanded Preferred Resources/Aggressive Climate Scenario); Comments of California Environmental Justice Alliance on the Proposed Standardized Planning Assumptions for the 2014 LTPP (“CEJA Comments”), pp. 1-6.

<sup>3</sup> Comments of the Pacific Gas and Electric Company (U 39 E) on the Energy Division’s December 18, 2103, Workshop Materials (“PG&E Comments”), p. 3.

GHG emissions and the State will need to dramatically decarbonize its electricity supply. CEJA, Sierra Club, and UCS urge the Commission to use the LTPP to begin the process of analyzing the GHG emission reduction implications of future electricity scenarios and, to the extent that PG&E's comments suggest that the Commission should not take on this task in the LTPP, to reject their request.<sup>4</sup>

## **II. The High Load Scenario Should Not be Used to Justify New Procurement Decisions**

CEJA, Sierra Club and UCS agree with the Natural Resources Defense Council (“NRDC”) that the Commission should prioritize modeling the Trajectory and Preferred Resources scenarios before running the High Load scenario.<sup>5</sup> If the Commission decides to run a High Load scenario, the Commission should ensure that results are not used to make public statements about system need, or justify additional procurement decisions. As NRDC points out, the California Energy Commission (“CEC”) load forecasts have consistently over-estimated actual load in the ten-year planning horizon.<sup>6</sup> The Commission should approach this scenario with the understanding that the assumptions in the High Load scenario are extremely conservative and should not be confused with a realistic expectation of future load levels.

Since 2004, the Commission has rejected reliance on a high load scenario for system planning.<sup>7</sup> In the 2006 LTPP proceeding, the Commission reaffirmed the position announced in 2004, and rejected calls to use other forecasts for procurement decisions: “[w]e find it prudent to review load forecast sensitivities, but for purposes of granting procurement authority, need determination should be based on the CEC’s base forecast under baseline (1-in-2) temperature

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<sup>4</sup> See J. Williams, et. al., The Technology Path to Deep Greenhouse Gas Emissions cuts by 2050; The Pivotal Role of Electricity, Vol. 335, no. 6064 at p.53-59 (Jan. 2012)

<sup>5</sup> Comments of the Natural Resources Defense Council (NRDC) on Planning Assumptions and Scenarios for the 2014 Long Term Procurement Plan (LTPP) (“NRDC Comments”), p. 14.

<sup>6</sup> *Id.*

<sup>7</sup> D.04-12-048, p.197 at Finding of Fact # 11.

conditions pursuant to D.04-12-048.”<sup>8</sup> CEJA, Sierra Club and UCS believe this settled position should not be reconsidered.

### **III. Additional Modeling Conducted by Parties Besides the Commission Should Adhere to Strict Transparency Requirements**

Other parties have requested the ability to perform their own modeling in this proceeding.<sup>9</sup> CEJA, Sierra Club, and UCS believe that any data and outputs from modeling performed by other parties in this proceeding should be made available to the Commission and stakeholders in a format that allows parties to compare results of Commission studies to those of outside parties. This will provide for the most useful and transparent analysis and decision-making. In particular, Senate Bill (“SB”) 1488 requires the Commission to ensure that its practices pursuant to Section 454.5 of the Public Utilities Code provide for “meaningful public participation and open decision-making.”<sup>10</sup> Consistent with this requirement, the Commission has explicitly and repeatedly favored transparency in energy procurement procedures.<sup>11</sup>

Further, the Commission’s Rules of Practice and Procedure explicitly require transparency when modeling is utilized. Rule 10.3 requires that parties who sponsor testimony based on modeling provide:

- (1) A description of the source of all input data;
- (2) The complete set of input data (input file) as used in the sponsoring party’s computer run(s);
- (3) Documentation sufficient for an experienced professional to understand the basic logical processes linking the input data to the output. . .
- (4) A complete set of output files relied on to prepare or support the testimony or exhibits; and
- (5) A description of post-processing requirements of the model output.

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<sup>8</sup> D.07-12-052, pp. 28-29 (Dec. 20, 2007).

<sup>9</sup> *See, e.g.*, Opening Comments of Southern California Edison Company (U 338-E) on Standardized Planning Assumptions (“SCE Comments”) at p. 5.

<sup>10</sup> 2004 Cal. Stats., Ch. 690, § 1.

<sup>11</sup> *See, e.g.*, D.06-06-066, at p. 2 (“This decision implements Senate Bill (SB) No. 1448 . . . (which) expresses a preference for open decision making, a policy directive we embrace.”); D. 07-12-052, at p. 155 (“The evaluation criteria used in competitive solicitations must be clear, transparent, and available to potential bidders”).

In past LTPP proceedings, parties have had to submit data requests to obtain much of the information required under Rule 10.3. At times, parties have not obtained complete, responsive information to their data requests which has greatly limited their ability to fully participate and evaluate the other stakeholders' testimony. In this LTPP, if other parties do complete their own modeling, CEJA, Sierra Club, and UCS request that the parties provide all information required by Rule 10.3 in a clear, accessible format when or before testimony is provided.

#### **IV. The Commission Should Include Energy Storage in Scenario Modeling Assumptions**

CEJA, Sierra Club and UCS provided the Commission with recommendations on how to approach storage assumptions in the 2014 LTPP planning scenarios.<sup>12</sup> In short, CEJA, Sierra Club, and UCS agree with the Office of Ratepayer Advocates (“ORA”) that “[w]hile the distribution and customer-connected storage may not be able to provide effective system or local capacity at 100% of the installed peak output, it is unreasonable to assume 0% for its contribution to system capacity, especially for the aggregate of storage resources being modeled for the future LTPP year 2024.”<sup>13</sup> SCE and SDG&E argue that there is insufficient information about how energy storage will be deployed and thus, energy storage should be excluded from the modeling.<sup>14</sup> CEJA, Sierra Club, and UCS acknowledge that there is uncertainty regarding what types of storage technologies will ultimately be procured through the D.13-10-040 mandate. But given the likelihood that a relatively large amount of storage will be deployed in the 2014-2024 timeframe, perhaps in amounts even exceeding the 1.3 GW target in D.13-10-040, it makes sense to begin integrating storage assumptions into the LTPP now. Making reasonable assumptions about energy storage deployment in the 2014 LTPP scenarios will provide valuable information

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<sup>12</sup> See CEJA Comments, pp. 6, 7-8; UCS/Sierra Club Comments, pp.15-16.

<sup>13</sup> ORA Comments on Assumptions and Scenarios for the CPUC’s 2014 Long Term Procurement Plan Proceeding and the CAISO’s 2014-2015 Transmission Planning Process (“ORA Comments”), p. 5.

<sup>14</sup> SCE Comments, pp. 4-5; Response of San Diego Gas & Electric Company (U 902 E) to Questions Regarding Workshop Held December 18, 2013 (“SDG&E Comments”), pp. 7-8.

about the future grid, and the knowledge stakeholders will gain from this process outweighs the uncertainty associated with assuming storage performance characteristics in the LTPP scenarios.

In addition, if the Commission assumes that the storage technologies deployed by 2024 provide no value to the system, procurement need assessments will most likely overestimate the need for new flexible resources on the system and potentially result in overprocurement and additional cost to ratepayers.

**V. Energy Efficiency Adjustments Should be Based on Reasonable Reductions in Load**  
CEJA, Sierra Club, and UCS agree with Clean Coalition and NRDC that the Commission should use *at least* the mid-case estimates for AA-EE in most of the scenarios; and with Clean Coalition, NRDC, and ORA that the Commission should make specific assumptions about additional energy efficiency savings in local areas by using AA-EE assumptions based on reasonable reductions for locational uncertainty rather than using the mid-low AA-EE case as a blanket solution in the Local Area Reliability Scenario (1A).<sup>15</sup> For the San Diego region, for example, SDG&E should use the mid-case AA-EE amount of energy efficiency “to address the specific local area vs. service territory uncertainty” since its local area is the same as its service territory.<sup>16</sup>

California requirements and policies mandate the reduction of GHG emissions. AB 32 requires the reduction of GHG emissions to 1990 levels by 2020 and executive orders further increase those reduction targets to 80% by 2050.<sup>17</sup> In a recommendation to the California Air Resources Board, the Commission and the CEC stressed the importance of EE and renewable

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<sup>15</sup> Clean Coalition’s Comments in Response to Questions on the December 12, 2013 LTPP Scenarios Workshop (“Clean Coalition Comments”) at pp. 3-4; NRDC Comments at pp. 4-12; ORA Comments at pp. 10-11.

<sup>16</sup> *Id.*

<sup>17</sup> Cal. Health & Safety Code § 38550 (2006); Cal. Exec. Order S-3-05.

energy in reducing GHG emissions.<sup>18</sup> The Commission has further emphasized the central importance of the Loading Order in implementing the goals of AB 32.<sup>19</sup> Since the Loading Order identifies energy efficiency as the state’s top priority resource,<sup>20</sup> the Commission should seek to procure all cost-effective and reliable energy efficiency before procuring any supply-side resources in order to put California on the path to meeting its GHG goals.

## **VI. The Commission Should Include Realistic Growth Assumptions for Demand Response in the Scenario Modeling Assumptions**

CEJA, Sierra Club and UCS agree with EnerNOC, Environmental Defense Fund (“EDF”), the California Large Energy Consumers Association (“CLECA”) and PG&E that the 2014 LTPP planning assumptions should be adjusted to reflect additional growth in demand response (“DR”) deployment over the next ten years.<sup>21</sup> State policy requires that the Commission prioritize DR above all other resources, except energy efficiency. The Integrated Energy Policy Report, which the State relies on to develop future energy policy, identified a need for more DR resources to maintain grid reliability and to ensure that renewable resources are fully utilized.<sup>22</sup> The Commission’s demand response rulemaking aims to expand the use of DR in the State.<sup>23</sup> Yet, these planning assumptions presume that there will be no growth in DR resources over the next decade. CEJA, Sierra Club, and UCS request that the Commission

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<sup>18</sup> D.08-10-037 at pp. 3, 6.

<sup>19</sup> D.12-04-045, at p. 11.

<sup>20</sup> CPUC/CEC, Energy Action Plan II, Implementation Roadmap for Energy Policies (October 2005). Available at: <http://docs.cpuc.ca.gov/published/REPORT/51604.htm>; Cal. Public Util. Code §454.5(b)(9)(C).

<sup>21</sup> Comments of Environmental Defense Fund on the Long-Term Procurement Planning Docket Workshop Held on December 18, 2013 (“EDF Comments”), pp. 6-7; Comments of EnerNOC, Inc. on December 18, 2013 Workshop Materials (“EnerNOC Comments”), p. 3., Comments of the California Large Energy Consumers Association On the Planning Assumptions and Scenarios for Use in the CPUC 2014 Long-Term Procurement Plan Proceeding and the CAISO 2014-15 Transmission Planning Process (“CLECA Comments”), p.2, PG&E Comments, p.13.

<sup>22</sup> EnerNOC Comments, p. 4.

<sup>23</sup> *Id.*



increase its assumptions for DR in all scenarios, with a higher projected increase in the Expanded Preferred Resources/Aggressive Climate scenario.

EnerNOC's proposal for the DR assumption provides the "sensible growth estimates" referenced by UCS and Sierra Club in opening comments.<sup>24</sup> The Commission should adjust assumptions based on load impact reports such that the low range of DR resources is represented by the current reports, the mid-range is represented by a 20% increase above the current reports, and the high range is represented by a 30% increase above the current reports.<sup>25</sup> In addition to the adjusted assumptions for load impact reports, the Expanded Preferred Resources scenario should include additional DR that is available at times of peak net load. This will be important as peak net load shifts into early evening hours due to the installation of large amounts of solar PV. The Brattle Group's analysis, cited in UCS and Sierra Club's opening comments, shows large amounts of potential for DR in California and could serve as a starting point for the Commission's DR assumptions.<sup>26</sup> Finally, CEJA, Sierra Club, and UCS do not agree with PG&E that a 10% increase in DR resources above what is assumed in the Trajectory scenario represents an adequately aggressive assumption for the Expanded Preferred Resources case.<sup>27</sup>

## **VII. The Baseline Forecast for Demand-Side PV is Too Conservative**

In opening comments, CEJA and UCS / Sierra Club noted that the forecast of incremental demand-side PV is too low.<sup>28</sup> The substantial deployment of rooftop PV in California and other countries as well as falling prices for solar PV and the recent removal of the net-metering cap via

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<sup>24</sup> UCS/Sierra Club Comments, p. 20.

<sup>25</sup> EnerNOC Comments, p. 6.

<sup>26</sup> The Brattle Group. (Jun. 19, 2012) WECC 20-year Demand Response Forecast, slide 4. Retrieved from: <http://www.westgov.org/sptsc/workgroups/dsmwg/documents/2012/06-20-12WECCdrf.pdf>.

<sup>27</sup> Comments of Pacific Gas and Electric Company (U 39 E) on the Energy Division's December 18, 2013, Workshop Materials ("PG&E Comments"), p. 13.

<sup>28</sup> CEJA Comments at pp. 9-10; UCS/Sierra Club Comments at pp. 21-23.

AB 327 should all contribute to significant growth in the deployment of PV systems.<sup>29</sup> NRDC additionally pointed out that the CEC's energy forecast model "assumes *zero* residential PV growth from 2016 to approximately 2020."<sup>30</sup> This zero PV assumption makes little sense in light of the fact that California is presently adding a significant amount of PV per month and there is no reason to believe it will decrease all the way to zero by 2020.<sup>31</sup> Therefore, CEJA, Sierra Club, and UCS support NRDC's recommendation to increase the amount of demand-side PV in the baseline forecast because it is unreasonable to assume no growth in residential PV from 2016-2020.

### CONCLUSION

CEJA, Sierra Club and UCS look forward to working with the Commission to address the issues discussed in our opening and reply comments before the final scenarios are adopted.

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Respectfully submitted,

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<sup>29</sup> *Id.*

<sup>30</sup> NRDC Comments at pp. 15-16.

<sup>31</sup> *Id.* at pp. 16-17.

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