BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Oversee The Resource Adequacy Program, Consider Program Refinements, and Establish Annual Local Procurement Obligations.

Rulemaking 11-10-023 (Filed October 20, 2011)

COMMENTS OF THE CENTER FOR ENERGY EFFICIENCY AND RENEWABLE TECHNOLOGIES ON PROPOSED DECISION ADOPTING 2014 RA OBLIGATIONS, FLEXIBLE CAPACITY FRAMEWORK, AND PROGRAM REFINEMENTS

June 17, 2013

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The Center for Energy Efficiency and Renewable Technologies (CEERT) respectfully submits these Comments on the Proposed Decision of Administrative Law Judge (ALJ) Gamson Adopting Local Procurement Obligations for 2014, a Flexible Capacity Framework, and Further Refining the Resource Adequacy (RA) Program ("Proposed Decision"). The Proposed Decision was issued in R.11-10-023 on May 28, 2013. These Comments are timely filed and served pursuant to Article 14 of the Commission's Rules of Practice and Procedure and the instructions accompanying the Proposed Decision.

I. INTRODUCTION

CEERT appreciates and applauds Administrative Law Judge (ALJ) Gamson for squarely addressing and fairly considering the complex issue of providing "more specificity in procurement for RA purposes," in particular, defining and identifying any need for "flexible" capacity resources to "meet changing reliability needs," in the Proposed Decision.¹ The Proposed Decision correctly observes that "[r]eliability needs are changing over time because of a number of factors," including the timeline for "once-through cooling (OTC) plants to shut down or significantly change their operations" and "the state's 33% Renewable Portfolio

¹ Proposed Decision, at p. 12.

Standard (RPS) [that] might change the reliability characteristics of the grid over the next several years."²

In CEERT's Opening and Reply Comments filed in April 2013 on the then-pending "flexible capacity procurement" proposals, CEERT agreed that these policies could potentially impact reliability. To that end, CEERT concluded that "because a need for flexible resources in the next 3 years *may be* established, the highest value of the June 2013 RA Decision [for the 2014 RA Year] is to set out a roadmap to address how best to identify and procure flexible capacity resources in a manner that is consistent with the Commission's Loading Order of 'preferred resources' (energy efficiency, demand response, and renewable generation)."³ In furtherance of this recommendation, CEERT stated:

"Such an approach would recognize the value of affording a transition to procurement that anticipates changing needs of the grid going forward and, in turn, necessarily sets new RA precedent and rules. [¶] Thus, as part of that transition, a starting point for the June 2013 RA Decision [2014 RA Year] should be to authorize the investor-owned utilities (IOUs) to procure only *some* limited 'flexible capacity' through reliance on an *interim* procurement mechanism, which would be in effect for one RA year only (e.g., 2014) and could only apply after that time upon a decision by the Commission supported by a full evaluation of its results. Such a 'pilot' approach is the only one supported by the current record."⁴

As to the two pending flexible capacity proposals before the Commission for this

Proposed Decision – one offered by the "Joint Parties" (CAISO, Southern California Edison Company (SCE), and San Diego Gas and Electric Company (SDG&E) and the other a "revised" proposal by the Commission's Energy Division – it was CEERT's conclusion that neither could be adopted except on an "interim" basis and then only if the formula for calculating flexible capacity procurement need was modified as recommended by CEERT.⁵ CEERT further

² Proposed Decision, at p. 12.

³ CEERT Opening Comments on Flexible Capacity Procurement (April 5, 2013), at p. 5; emphasis original.

⁴ <u>Id</u>.; emphasis original.

⁵ <u>Id</u>., at pp. 5, 14-15.

recommended that the Commission should "use its annual RA decisions from 2013 through 2017 to design, *refine, and test* an admittedly new, dramatically overhauled RA protocol to deal with the evolving nature of grid reliability," using the current decision (2014 RA Year) "to lay out the tasks to be accomplished during the next three to four years, set targets to achieve some portion of these objectives in 2014, and commit to a full, formal process of review and analysis, including evidentiary hearings, on the results of this cycle's efforts."⁶ CEERT urged the completion of its recommended "steps," especially those needed to ensure inclusion of preferred or use-limited resources in flexible capacity procurement, as "conditions precedent to authorizing any mechanism to be adopted or continue in place for the following RA years (2015 – 2017) or beyond."⁷

CEERT welcomes the Proposed Decision's determinations, based on the record to date, that "there is no compelling need to adopt a flexible capacity requirement for the 2014 Resource Adequacy (RA) year" and that the determination of flexible capacity need in 2015 through 2017 must be refined to ensure that "a wide range of use-limited, preferred, and other resources can qualify to meet flexible capacity needs."⁸ Further, the Proposed Decision correctly concludes that it is "necessary to take proactive steps now to ensure that system needs are available to ensure safe and reliable service," finding that "there is a reasonable likelihood that additional flexible resources will be needed," a determination to be made for 2015 and beyond in "future proceedings."⁹

With that understanding, the Proposed Decision focuses on paving the way for those "future proceedings" to ensure that meeting any identified flexible capacity need *will* comply

⁶ CEERT Opening Comments on Flexible Capacity Procurement (April 5, 2013), at p. 6; emphasis original.

⁸ Proposed Decision, at pp. 3, 25, 39.

⁹ Proposed Decision, at p. 42.

with California's energy procurement policies. Among other things, the Proposed Decision recognizes and specifically lists CEERT's recommended steps for how the Commission can "best…identify and procure flexible capacity resources in a manner consistent with the Commission's Loading Order."¹⁰ In turn, the Proposed Decision commits to "further discussion about modifying the counting and bidding rules, as necessary and in alignment with operational needs, for use-limited resources such as storage and demand response."¹¹

While all of these statements and conclusions have high policy value, CEERT believes that modifications are still required in the Proposed Decision to ensure that these policies become reality. It is also important to ensure that the Proposed Decision's adopted "Flexible Capacity Framework" does *not* become permanent or create a set of expectations and entitlements that will be difficult to unwind. Instead, this framework should only be adopted if modified as recommended by CEERT in its April 2013 comments and here and if it clearly remains subject to change with information and input to be provided over the next year.

Thus, as addressed further below and reflected in CEERT's Appendix A (Proposed Findings of Fact, Conclusions of Law, and Ordering Paragraphs), the Proposed Decision must be modified in the following three areas. These recommendations are addressed further below and reflected in Appendix A hereto:

- The Proposed Decision should be modified to revise the formula for calculating any flexible capacity need for a given month as recommended by CEERT, and
- The Proposed Decision should be modified to make clear that the adopted "framework" is authorized only on an interim basis and to create a specific path for inclusion of Loading Order preferred resources (energy efficiency and demand response) and use-

¹⁰ Proposed Decision, at p. 50.

¹¹ Proposed Decision, at p. 52.

limited resources such as energy storage in the RA program in that framework before the 2015 RA year, and

• The Proposed Decision should be modified to direct that a significant portion of the RA payments be used during the interim period in a manner that leads to retrofitting the existing fleet of gas combined cycle plants to reduce minimum load and start up time, improve ramp rate, and shrink "forbidden zones."

II. THE PROPOSED DECISION SHOULD BE MODIFIED TO REVISE ITS ADOPTED FLEXIBLE CAPACITY FRAMEWORK AS RECOMMENDED BY CEERT.

CEERT does not contest the formula used for calculating the overall quantity of "flexibility" required to reliably operate the grid included in the Joint Parties' Proposal and adopted in the Proposed Decision. However, as CEERT pointed out in its April 2013 Comments and Reply Comments, it is not appropriate to leap to the conclusion that 100% of that need must be formally procured in advance, explicitly compensated with RA payments, and made available for formal CAISO dispatch in real time.¹² That determination defies logic and common sense and ignores over 100 years of history of successful grid operations.

In this regard, many "flexible" resources have historically supplied "flexibility" to the grid without explicit real time dispatch instructions from the CAISO and are capable of stepping up that contribution in the future. These include price responsive demand (a subset of DR), out of state imports/exports of economy energy, the emerging Energy Imbalance Market (EIM) in WECC, limited self-scheduling of resources not capable of submitting to full dispatch by the CAISO, and spot purchases and sales from other California balancing authorities. ¹³ Significantly, however, none of these resources would have an "Effective Flexible Capacity"

¹² See, e.g., CEERT Opening Comments on Flexible Capacity Procurement (April 5, 2013), at pp. 10-16.

¹³ E.g., Los Angeles Department of Water and Power and Sacramento Municipal Utility District, whose systems are much more "flexible" than the CAISO.

(EFC) value and thus be eligible to be procured and receive RA payments under the Proposed Decision's adopted "Flexible Capacity Framework" based on the Joint Parties' Proposal.¹⁴

In this regard, all of these resources rely more or less on price signals from existing CAISO energy and ancillary services markets for guidance in making real time dispatch decisions. It is only because parties' fear that, in the future, this price signal alone will not be strong enough to ensure adequate grid flexibility that this discussion of EFC is even taking place at all. However, this "fear" is not a reason to exclude these resources from counting towards meeting grid flexibility needs or from receiving RA payments in some form.

From the beginning of this proceeding, CEERT has accepted the fact that additional, new measures will be required at some point in the future, but it makes no sense to *totally* ignore the contribution of these existing "organic" resources to meeting grid flexibility requirements. Almost by definition, unless the PD is modified, the result will be structural over-procurement of flexible RA resources and artificial depression of energy prices that will only further suppress the natural price signal from existing CAISO markets and drain more flexibility from the grid. The result will be even more over-procurement and over-compensation of RA resources that happen to meet the strict definition of EFC in the adopted Flexible Capacity Framework.

Perhaps an even more important source of "flexibility" are represented by those resources that bid into the RA auction with an established EFC value, but do not win the auction. It is *not* reasonable to assume that *none* of these resources will submit economic bids to the CAISO energy markets and none will contribute *any* flexibility in response to price signals from the established energy and ancillary services markets. Yet that is the position taken in the Joint Parties' and Energy Division proposals and, in turn, at least implicitly adopted in the Proposed Decision.

¹⁴ See, e.g., Proposed Decision, at pp 17-18; Appendix A, at p. 3.

To avoid this outcome, CEERT renews its recommendation in its April 2013 Comments on the Joint Parties' and Energy Division proposals to revise the proposed formula (now adopted in the Proposed Decision) for calculating the monthly flexible capacity procurement need.¹⁵ Specifically, CEERT recommends that the Proposed Decision modify this formula (Conclusion of Law 11, at page 66 and Appendix A at page 1) as to the use of the epsilon term in the equation used to determine monthly flexible capacity need and, initially, explicitly authorize procurement of only 70% of the total flexibility requirement through the RA program.¹⁶ These recommendations are supported by CEERT's April 2013 Opening and Reply Comments, have merit, and are reflected in CEERT's Proposed Findings of Fact, Conclusions of Law, and Ordering Paragraphs in Appendix A hereto.

III.

THE PROPOSED DECISION SHOULD BE MODIFIED TO PROVIDE A SCHEDULE FOR ADOPTION OF RULES AND METRICS TO ENSURE THE INCLUSION OF PREFERRED RESOURCES IN MEETING LOCAL CAPACITY NEEDS IN 2015.

The Loading Order preferred resources (energy efficiency and DR), along with energy storage, may be "non-traditional" in the sense that they do not precisely mimic a conventional natural gas plant. Yet, these resources are nevertheless very capable of reliably and costeffectively supplying capacity and grid flexibility on an equivalent basis and must be squarely addressed as a priority issue in the Proposed Decision and not simply deferred to unspecified further action.

On this point, in its April 2013 Comments and Reply Comments, CEERT recommended a coordinated CAISO/CPUC process to appropriately define, calculate EFC values, procure that EFC, and develop tariff language for measurement, verification, and non-performance penalties

¹⁵ CEERT Opening Comments on Flexible Capacity Procurement (April 5, 2013), at pp. 14-15. See, Proposed Decision, at p. 66.

¹⁶ CEERT Opening Comments on Flexible Capacity Procurement (April 5, 2013), at pp. 14-15.

for these resources.¹⁷ CEERT repeats those recommendations here and urge their express adoption in the Proposed Decision.

In fact, the significance of these recommendations has been recently underscored by the CAISO's issuance of a multi-year Draft DR "Roadmap" on June 12, 2013.¹⁸ According to this roadmap, the actual formal integration of DR resources into the modeling and forecasting system of the CAISO for calculating EFC need is expected by 2016.¹⁹

CEERT applauds this effort and urges full-on cooperation between this Commission, the CAISO, and the California Energy Commission (CEC) in achieving this goal. However, CEERT strongly believes that the "interim" RA process as outlined in this Proposed Decision must also accommodate procurement of targeted, significant amounts of DR on a less than fully integrated basis in the early years of this multi-year effort. Otherwise, the necessary operating experience, program redesign, and customer involvement will never occur, and future fully integrated DR will be crowded out of consideration for RA purposes by near term gas procurements.

It is CEERT's position that the best way to accomplish this goal is to, at a minimum, use the preferred resource procurement (up to 600 MWs) authorized by the Commission in D.13-02-015 in Phase 1 (local capacity requirements) of the Long Term Procurement Plan (LTPP) Rulemaking (R.) 12-03-014 as a virtual "set aside" for the 2014 RA year.²⁰ By making a formal, concerted effort to procure these preferred resources in *this* RA cycle, the two Commission procurement authorization programs (RA and LTPP) and the long term CAISO Roadmap can be harmonized. If SCE and/or SDG&E are not successful in achieving reliable and cost-effective DR resources totaling up to 600 MW this summer/fall, any residual amount of required

¹⁷ CEERT Opening Comments on Flexible Capacity Procurement (April 5, 2013), at pp. 6-9, 16-18.

¹⁸ CAISO DRAFT Demand Response and Energy Efficiency Roadmap: Making the Most of Green Grid Resources (6-12-13) (<u>http://www.caiso.com/Documents/Draft-ISODemandResponseandEnergyEfficiencyRoadmap.pdf</u>)
¹⁹ Id., p. 18

 $^{^{20}}$ D.13-02-015, at p. 128.

procurement can be met from conventional resources either in the 90% year ahead showing or during the true up to 100% of the required monthly showing.

This "interim set-aside" would be utilized for the 2014 RA year and the process repeated for the 2015 RA year building on the early experience next year. Then, as the Roadmap tasks are completed by 2016, the need for a "set-aside" would diminish significantly and all resources could compete on an equal basis. CEERT's proposed modifications to the Proposed Decision to accomplish these goals are included in Appendix A hereto.

IV.

THE PROPOSED DECISION SHOULD BE MODIFIED TO REQUIRE AND FACILITATE COST EFFECTIVE RETROFITS TO ENHANCE FLEXIBLE ATTRIBUTES OF EXISTING RESOURCES RELIED UPON TO MEET RA NEED.

Finally, throughout the proceeding, many parties have acknowledged that extremely cost effective retrofits can be made to existing resources, especially the fleet of relatively recent combined cycle natural gas plants, to lower minimum loads, reduce start times, improve ramp rates and shrink forbidden zones. In its April 2013 Comments and Reply Comments, CEERT recommended that RA payments during this "interim" period be specifically directed towards those plants with the proviso that the money be used to justify the private investment in those cost effective retrofits.²¹

Virtually all of the ratepayer dollars spent during the "interim" period will be for RA payments to support the operation of existing resources. It would be, at a minimum, an obvious missed opportunity if all or substantially all of those dollars went to resources already slated for retirement in the next 3-5 years, and none was used to justify improving the existing infrastructure that will be an important piece of the CA resource stack for decades.

²¹ CEERT Opening Comments on Flexible Capacity Procurement (April 5, 2013), at p. 17.

CEERT believes that the specifics of how to accomplish that goal should be left to the bilateral RA procurement process on a plant-by-plant basis, but strongly believes that Commission direction to accomplish this task must be included in this PD. Again, recommended modifications to the Proposed Decision to this end are included in Appendix A.

V. CONCLUSION

As stated above, CEERT appreciates the steps taken by the Proposed Decision to achieve a measured and reasonable approach to flexible capacity procurement. However, CEERT urges the Commission to make specific modifications to the Proposed Decision related, in particular, to the adopted "interim" flexible capacity framework and the specific next step tasks to be accomplished before the 2015 RA Year. To that end, CEERT asks that any final decision include CEERT's Proposed Findings of Fact, Conclusions of Law, and Ordering Paragraphs contained in Appendix A hereto.

Respectfully submitted,

June 17, 2013

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APPENDIX A

PROPOSED FINDINGS OF FACT, PROPOSED CONCLUSIONS OF LAW, AND PROPOSED ORDERING PARAGRAPHS

CEERT recommends that the following modifications be made to the Findings of Fact, Conclusions of Laws, and Ordering Paragraphs of the Adopting Local Procurement Obligations for 2014, a Flexible Capacity Framework, and Further Refining the Resource Adequacy (RA) Program (Proposed Decision). Please note the following:

- A page citation to that Proposed Decision is provided in brackets for each Finding of Fact, Conclusion of Law, and Ordering Paragraph in the Proposed Decision for which a modification is proposed.
- Any proposed additional Finding of Fact, Conclusion of Law, or Ordering Paragraph is not numbered, but is identified as a "ADDED FINDING OF FACT," "ADDED CONCLUSION OF LAW," or "ADDED ORDERING PARAGRAPH."
- <u>Added language</u> is indicated by **bold type**; <u>removed language</u> is indicated by **bold strikethrough**.

PROPOSED FINDINGS OF FACT:

13. [63] The Joint Parties' Proposal for a flexible capacity framework **ignores important sources of flexibility that are not part of that proposed framework and, in turn,** would result in **structural over-procurement** only the procurement of the amount of flexible capacity necessary to fill actual flexible capacity needs, as determined by the Commission with input from the ISO.

17. [64] The Joint Parties' Proposal provides a **fully detailed** flexible capacity framework **that is useful for interim application only, with any permanent framework to reflect and include rules and metrics that will incorporate Loading Order preferred resources and energy storage to meet such need, and only with modification to its formula for calculating monthly flexible capacity need.**

<u>ADDED FINDING OF FACT</u>: On June 12, 2013, the CAISO published a multi-year Draft Roadmap for fully integrating preferred resources into the RA process with a significant milestone in this integration process occurring in 2016. A multi-agency public effort is required to achieve this important policy goal as identified by the Draft Roadmap and initiated with a CEC Integrated Energy Policy Report (IEPR) Hearing held on June 17, 2013.

<u>ADDED FINDING OF FACT</u>: A significant opportunity exists to cost effectively retrofit existing resources, especially the fleet of recently built combined cycle natural gas plants, to enhance their flexible attributes. Ratepayer dollars will be saved and policy goals will be easier to accomplish if these retrofits are made early in the process.

PROPOSED CONCLUSIONS OF LAW:

11. [66] Flexible capacity should be defined, on an interim basis, as the quantity of flexible capacity identified needed by the ISO to meet ramping and contingency reserves. The flexible capacity need for a given month should be calculated by the following formula:

Need MTHy= Max {[(3RRHRx)MTHy]+ Max(MSSC, 3.5%*E(PLMTHy))} $x \pm \epsilon^{22}$

In this formula:

Max[(3RRHRx)MTHy] = Largest three hour continuous ramp starting in hour x for month y

E(PLMTHy) = Expected peak load in month y

MSSC = Most Severe Single Contingency

Max(MSSC, 3.5%*E(PLMTHy)) is the Maximum of MSCC or 3.5%* E(PLMTHy)

 ϵ = Fraction of overall flexible capacity need that should be procured in advance and made available for CAISO dispatch through a formal Must Offer Obligation. Annually adjustable error term to account for uncertainties such as load following

ADDED CONCLUSION OF LAW: Initially, epsilon should be set at 0.7 for RA year 2014 and adjusted annually based on operating experience.

²² Please note that the "+" in this line of the formula has been stricken, so that the formula should read: "Need MTHy= Max {[(3RRHRx) MTHy]+ Max(MSSC, 3.5%*E(PLMTHy))} x ϵ "

16. [67] The Commission should use the time between now and June 2014 to refine a flexible capacity framework for mandatory implementation in RA year 2015. However, beginning as soon as possible in 2013 (with workshops to commence no later than August 2013), the flexibility framework should incorporate enhancements to utilize significant quantities of preferred resources in accordance with the Loading Order of preferred resources and should ensure procurement of such resources up to the 600 MWs authorized in D.13-02-015.

<u>ADDED CONCLUSION OF LAW</u>: Timely retrofits of existing resources to enhance their flexible attributes should be encouraged in the 2014 and 2015 RA year. Load serving entities (LSEs) should be required to report on their efforts to facilitate these retrofits as part of their 2014 RA showing. RA payments to resources slated for early retirement should be minimized and limited to only what is absolutely necessary to bridge operations until that retirement.

PROPOSED ORDERING PARAGRAPHS:

5. [69] The Resource Adequacy (RA) program is modified by adoption of a flexible capacity framework as shown in Appendix A for all Load Serving Entities, as defined by Public Utilities Code Section 380 (j), on an interim basis only. The flexible capacity framework, revised and updated with metrics, rules, and information provided on Loading Order preferred resources, will be only become permanent and mandatory starting with RA compliance year 2015 through RA compliance year 2017 on further Commission order. The adopted framework shall be in effect through RA compliance year 2017.

6. [69] Each Load Serving Entity (LSE), as defined by Public Utilities Code Section 380(j), shall make a year ahead and month-ahead showing of flexible capacity for each month of the compliance year. Each LSE shall report all its qualified flexible resources in its required annual and monthly Resource Adequacy filings. These showings will include explanations of how the procurement furthers Commission adopted policy goals to fully integrate preferred resources consistent with the Commission adopted Loading Order and to encourage retrofits of existing long term resources to enhance their flexibility attributes.

<u>ADDED ORDERING PARAGRAPH</u>: Southern California Edison Company and San Diego Gas and Electric Company shall conduct their RA procurement to include targeted procurement of preferred resources up to the 600 MW authorized by the Commission in Decision (D.) 13-02-015 issued in Phase 1 (local reliability) of the Long Term Procurement Plan (LTPP) Rulemaking (R.) 12-03-014.