BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

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Order Instituting Rulemaking to Develop an Electricity Integrated Resource Planning Framework and to Coordinate and Refine Long-Term Procurement Planning Requirements.	Rulemaking 16-02-007 (Filed February 11, 2016)

COMMENTS OF THE CENTER FOR ENERGY EFFICIENCY AND RENEWABLE TECHNOLOGIES ON THE RULING OF ASSIGNED COMMISSIONER AND ADMINISTRATIVE LAW JUDGE SEEKING COMMENT ON POLICY ISSUES AND OPTIONS RELATED TO RELIABILITY

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For: CENTER FOR ENERGY EFFICIENCY AND RENEWABLE TECHNOLOGIES

Dated: December 20, 2018

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The Center for Energy Efficiency and Renewable Technologies (CEERT) respectfully submits these Comments on the Ruling of Assigned Commissioner and Administrative Law Judge Seeking Comment on Policy Issues and Options Related to Reliability, issued November 16, 2018 (November 16 Ruling). These Comments are timely filed and served pursuant to the Commission's Rules of Practice and Procedure and the November 16 Ruling.

I. OVERVIEW

By the November 16 Ruling, parties were invited to comment on the Ruling and respond to questions regarding the reliability issues in the near-to-medium term. CEERT offers comments focused on the need to transition from dependence on gas-fired resources for reliability, specifically local capacity requirements utilizing non-emitting resources to meet reliability needs. While there are near- and medium-term reliability issues to address, it is essential to envision how California will meet reliability needs in the long-term to inform these decisions to avoid long-term investments only needed for the short-term or it will result in missed emission targets.

II.
CEERT'S COMMENTS ON THE NOVEMBER 16 RULING

CEERT agrees that the IRP process has not adequately focused on reliability, but sees addressing short term and medium-term reliability issues as integral to meeting the State greenhouse gas (GHG) goals, not as a separate issue. Achieving California's GHG goals requires a transition of the fleet to reliance on non-emitting resources to provide reliability as there is an effective, declining limit on generation GHG emitting resources. However, there needs to be a strategy to provide residual, interim capacity and reliability services from the GHG emitting resources that no longer have a place in the portfolio of California Load-Serving Entities (LSEs). Thus far, California state policy as been solely focused on replacing energy from GHG emitting resources, through the Renewables Portfolio Standard (RPS) and not on replacing the other attributes, such as local capacity, provided by those resources. With the passage of Senate Bill (SB) 100 (DeLeon) and SB 1136 (Hertzberg), there is clear guidance that the issue of transitioning the grid to dependence on clean resources for capacity and reliability services must be addressed in order to meet the State policy goals.

III.
CEERT RESPONSES TO QUESTIONS

1. Does the California electricity system face a near-or medium-term reliability challenge? If so, describe how you see the nature of the problem.

California's electricity system faces a challenge of transitioning to relying on low carbon resources for reliability with a framework designed for building and maintaining fossil fuel-fired generation. As California strives towards its clean energy goals, there is an inherent need to "let go" of capacity that emit GHG emissions and replace that capacity with a combination of clean energy resources for energy, capacity, and reliability services. Currently, there is only a strategy

to add clean energy resources for energy, through the RPS, but not for capacity (system or local) and reliability services. This transition will take years, if not decades, and must begin now.

There is also no strategy for an orderly retirement of gas generators that currently serve for capacity and reliability services. As prices from wholesale energy markets have fallen due to low marginal cost clean energy resources and existing resource capacity factors due to the competition with new clean resources, gas generators are more reliant on "out of market" Commission jurisdictional local capacity contracts. Not all generators needed for "sub-sub-local" needs are being picked up in local resource adequacy (RA) solicitations, resulting in backstop procurement and "double-buying" of resources for capacity requirements. An orderly retirement strategy should identify the most challenging gas-fired capacity to replace and address market power.

In order to achieve the goals set out in SB 100 in a reliable and cost-effective manner, the Commission needs to develop a comprehensive strategy to simultaneously identify how and when to deploy clean energy resources, particularly for local capacity needs. The Commission must also identify which areas of the grid will continue to need gas capacity and for what period of time.

2. Is the resource adequacy or the IRP proceeding (or a mix of both) the appropriate venue for addressing these types of reliability concerns? Explain your rationale.

The challenge of transitioning the grid to relying on low carbon resources needs to be addressed in both the RA and Integrated Resource Plan (IRP) proceedings, although neither the current RA framework nor the current IRP process are currently adequate to support the transitioning the grid to low carbon reliability. In order to address the transition for low carbon local capacity, CEERT views the RA proceeding as the most immediate venue for consideration.

However, due to its necessity to reach long term goals, it should be considered in the IRP proceeding as well. The primary immediate challenge for the transition to low carbon local RA is addressing the challenge of procuring, counting, dispatching and financially settling preferred resource hybrids.

Within the IRP process, the locational granularity of local capacity needs should be more comprehensively integrated into planning. Without deployment of local preferred resources, goals set forth by SB 100 and Executive Order B-55-18 will not be met as otherwise unnecessary gas capacity will still be required for reliability. Much of this capacity will be dispatched out of market through reliability constructs such as Residual Unit Commitment (RUC). Even if only idling at minimum load if there is an outage that creates a local load pocket or a system cascading outage, the energy generated by these fossil reliability resources will complicate achievement of GHG emission targets.

3. Are potential solutions to the problems you describe in answer to Question 1 already under consideration? If so, where?

No. The Commission should undertake both a proactive and a reactive approach to the transition to low carbon local reliability. A proactive approach should build on the California Independent System Operator (CAISO) Local Capacity Requirement (LCR) Reduction Study from the 2018-19 CAISO Transmission Planning Process (TPP).[1] In this study, CAISO evaluated both transmission upgrades and preferred resources for their ability to replace the need for gas capacity for LCR within LCR areas and subareas in Pacific Gas & Electric (PG&E) and San Diego Gas & Electric (SDG&E) territory. CAISO will be studying the Los Angeles (LA) Basin in the 2019-20 TPP cycle. CEERT strongly urges the Commission to evaluate the initial short-

[1] Preliminary Policy and Economic Assessments, 2018-2019 Transmission Planning Process Stakeholder Meeting, November 16, 2018 at p113-226: http://www.caiso.com/Documents/Presentation-2018-2019TransmissionPlanningProcessMeeting-Nov16-2018.pdf

and medium-term solutions identified by CAISO and determine which ones are cost competitive with gas capacity and which ones fit into the policy goals of the State.

In addition to the proactive approach, the Commission should take a reactive approach to replace gas capacity that becomes uneconomic, seeking backstop procurement, and in the event of gas pipeline outages, creating a tight fuel market for gas generators. CEERT recommends the Commission develop a program modelled on the "Reliability Threshold Mechanism" presented in the Southern California Edison (SCE) IRP.[2] SCE proposes that in the event of LCR shortfalls, a CAISO Stage 2 emergency, or reduction in natural gas capacity or pipeline constraints, that an expedited reliability assessment would be conducted and if needed, either a transmission upgrade or procurement of energy storage would be conducted. CEERT, however, recommends that any procurement would include all preferred resources, including hybrid resources, as the load shape of the deficiency may be more cost effectively met by resources other than simply stand-alone batteries.

4. **If your preferred solutions are not already under consideration, describe what else is needed, why, and where. In making your recommendations, please address issues of cost allocation, cost minimization, environmental justice, impacts on existing LSE procurement processes, ability to support achievement of state policy goals, and any other topics relevant to your recommendations.**

Please refer to the response to Question 3.

5. **Is the CAISO market structure equipped to handle the challenges you identified in response to Question 1? Why or why not?**

No. CEERT believes the CAISO is actively undertaking efforts to ensure reliable operation of the grid as it transitions to reliance on low carbon resources. Through the Day Ahead Market Enhancements and Extended Day Ahead Market stakeholder processes, CEERT anticipates greater flexibility in the CAISO market. The scope of the RA Enhancements

[2] SCE IRP, filed August 1, 2018, at pp. 4, 20-21, 120-135, et seq.

stakeholder process has yet to be released but based on the Issue Paper, will address needed tariff changes to reflect the shift to "use-limited" resources, including most preferred resources. However, CEERT believes that the current effort only begins to address the long-term issue.

CEERT believes that the Commission's RA program has not begun to address the issue and needs a fundamental reset. A significant challenge in the transition to preferred resources for LCR is how to count the distributed and hybrid resources, which is dependent on the ability to aggregate, dispatch and settle if and when a reliability event occurs. The CAISO market is not currently equipped for this paradigm and cannot simultaneously "optimize" dispatch in both the load pocket and the system as a whole. Attempts to exclusively use the one size fits all FERC tariff to dispatch and settle these resources stifles innovation, distracts the system operators from their mission and results in lower quantities and higher prices for these resources. The CAISO and Commission should jointly develop a framework for the distribution system operator to operate and settle resources in load pockets during a reliability event.

Provision of a balanced portfolio however is essential for operation of the grid, regardless of changes made to the CAISO markets and operation. CEERT urges increased coordination between the Commission and CAISO within the IRP proceeding and TPP to ensure a balanced, reliable low carbon portfolio is deployed on the CAISO grid.

6. Are there more global solutions available via Commission coordination with the CAISO and/or beyond the reach of the Commission on its own? What are they are how should they be addressed?

CEERT believes that the Commission must encourage the CAISO TPP to take a longer, more holistic view of reliability services from the future grid by transmitting long term deep GHG reduction scenarios to the CAISO for sensitivity studies in each annual Transmission Plan.

7. **How can the Commission and the public monitor market behavior by generation owners? For example, offering capacity in LSE solicitations, receiving contracts in any Commission-mandated or LSE-sponsored venue, making public data on CAISO market bid prices, or requests for special designation by the CAISO. What types of reporting should be required and what types of entities should report? Should generators seeking contracts be required, via the Commission's procurement rules, to attest that they have or will offer their other available capacity into any solicitations from Commission-jurisdictional LSEs?**

CEERT has no comment at this time, but reserves the right to respond in reply comments.

8. **What challenges do the advent of 40+ LSEs present for near-and medium-term reliability investments, particularly to support renewable integration?**

CEERT has concerns around the ability of LSEs to procure the necessary large-scale resources to support renewable integration. In the 2017-18 Reference System Plan development process, if GHG discrepancies had been accounted for, it appears that higher capital cost resources to support renewable integration, such as bulk storage and geothermal, would have an overall cost effective pathway to reaching the State's GHG goals and reliability needs.[3] There is still an open question of how these resources will be procured, assuming they are indeed selected with the updated modelling in the 2019-20 IRP Reference System Plan. CEERT recommends the Commission evaluate options for coordinated procurement of high capital cost resources and residual GHG-free resources that are too large and require too much development lead time to be procured by individual LSEs meeting short term needs but are required to cost effectively and reliably meet the State's GHG goals.

9. **Provide any other information you think would be relevant to the Commission's consideration of these issues.**

CEERT has no comment at this time, but reserves the right to respond in reply comments.

[3] Preliminary RESOLVE Modeling Results for Integrated Resource Planning, at p 45 and Comparison of GHG Emission Between CAISO 2017 and RESOLVE 2018, at p 7

IV.
CONCLUSION

In conclusion, CEERT urges the Commission to develop a strategic plan to replace capacity needs from GHG-emitting resources in order to address short-, medium-, and long-term reliability needs. This effort is essential to meeting the goals of SB 100 and will take greater coordination between the IRP and RA proceedings.

Respectfully submitted,

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