

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA



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Rulemaking 17-09-020
(Filed September 28, 2017)

Order Instituting Rulemaking to Oversee the
Resource Adequacy Program, Consider
Program Refinements, and Establish Annual
Local and Flexible Procurement Obligations
for the 2019 and 2020 Compliance Years.

**OPENING COMMENTS OF THE
CENTER FOR ENERGY EFFICIENCY AND RENEWABLE TECHNOLOGIES
ON ORDER INSTITUTING RULEMAKING R.17-09-020**

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For: CENTER FOR ENERGY EFFICIENCY AND RENEWABLE TECHNOLOGIES

Dated: October 30, 2017

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OF THE STATE OF CALIFORNIA

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The Center for Energy Efficiency and Renewable Technologies (CEERT) respectfully submits these Opening Comments on the Order Instituting Rulemaking (OIR) R.17-09-020 (Resource Adequacy (RA)). These Opening Comments are timely filed and served pursuant to Rule 6.2 of the Commission's Rules of Practice and Procedure and the instructions accompanying the OIR.

**I.
DESCRIPTION OF CEERT**

CEERT is a nonprofit public-benefit organization founded in 1990 and based in Sacramento, California. CEERT is a partnership of major private-sector clean energy companies. CEERT designs and fights for policies that promote global warming solutions and increased reliance on clean, renewable energy sources for California and the West. CEERT is working toward building a new energy economy, including cutting contributions to global warming and reducing dependence on fossil fuels.

CEERT has long advocated before the Commission for increased use of preferred resources and for California to move towards a clean energy future. CEERT was a party to and previously actively participated in the most recent resource adequacy (RA) rulemaking (R.14-10-010). CEERT has also been a party to numerous other Commission proceedings, including, but

not limited to, the Long-Term Procurement Plan (LTPP) rulemakings (i.e., R.12-03-014; R.13-12-010), Demand Response rulemaking (R.13-09-011), Renewables Portfolio Standard rulemakings (i.e., R.11-05-005; R.15-02-020), Integrated Distributed Energy Resources rulemaking (R.14-10-003), and the Integrated Resources Plan rulemaking (R.16-02-007).

II. COMMENTS ON ISSUES TO BE CONSIDERED IN THIS PROCEEDING.

The year 2017 has witnessed significant challenges to all aspects of the RA program. In the spring, the long-term trend of overgeneration in the middle of the day and steep afternoon ramps reached new heights. However, the Flexible RA (Flex RA) provisions of the RA program provided no discernable value in dealing with the issue. Flex RA supply wildly exceeded demand causing prices to be essentially zero while the CAISO continued to claim system stress due to lack of available operational flexibility. Over one-third of the resources nominated to provide “flexibility” are among the least flexible resources in the portfolio – the obsolete 50-70 years old long start, slow ramping, high minimum load coastal steam plants subject to retirement in the next few years. Roughly one half of the afternoon ramp was actually met with imported resources that are effectively not eligible for Flex RA.

The summer was exceedingly hot with at least two greater than one year in ten heat events.¹ Throughout the summer, the CAISO issued several Flex Alerts and Restricted Maintenance Operations Notifications² indicating low operating reserve margins even though the CAISO website shows a planning reserve margin of over 40% before accounting for imports.³

This Fall, as these comments are being written, a combination of an extraordinarily warm Indian Summer plus a pipeline explosion near the California/Arizona border plus planned

¹ June 25-27, 2017 and Aug 31-Sept 1, 2017.

² <http://www.caiso.com/informed/Pages/Notifications/Flex-Alerts.aspx>

³ Historic peak demand of 50,270 MW and installed capacity of 71,4127 MW (*See* <http://www.caiso.com/Pages/TodaysOutlook.aspx>).

procurement obligations that must be determined before the Commission asks for information about the specific LCR and FCR needs for the 2019/2020 RA compliance years.⁷

To begin with, before making 2019/2020 RA compliance years determinations, the Commission must first begin a process for re-evaluating and redefining flexible RA and specifically whether the RA program should continue to include a FCR requirement at all. There is no evidence that the fledgling FCR requirement has resulted in additional “flexibility” being available to the grid operator or incentives to construct new resources to supply “missing” flexibility. In fact, the market signal from FCR is that “flexibility,” as defined, has no incremental value because the grid is awash in that attribute. In the final RA decision, D.17-06-027, from the previous RA rulemaking (R.14-10-010) the Commission stated, “[i]n future RA proceedings the Commission may re-examine whether a durable FCR program should continue to be a prerequisite to adoption of a multi-year RA requirement.”⁸

CEERT believes that this re-examination should occur immediately and believes that the correct answer will be to drop the FCR procurement entirely and rely on CAISO ancillary services markets, whether existing or enhanced, to provide operational flexibility. The evidence is clear – if there are enough resources to meet system RA needs located in the right locations to meet LCR needs, there is plenty of flexibility in the steel in the ground and that steel is already under a must offer obligation. FCR is redundant, confusing and a distraction from the purpose of the RA program. Year in advance procurement and designation of resources to provide flexibility to the exclusion of other resources simply because that is the way we procure system and local RA is no answer to the very real issue of sufficient operational flexibility. There are no

⁷ OIR, at p. 3.

⁸ D.17-06-027, at p. 18.

comprehensive fixes for the broken FCR program even in the idea stage much less ready for implementation.

In addition, there have been issues that previously occurred regarding the LCR needs studies that must be resolved before making specific procurement obligations determinations. To begin with, D.17-06-027 addressed that, in the past, the California Independent System Operator (CAISO) was unable to meet the Commission’s deadline for submission of the final LCR studies which did not allow the parties or the Commission to “have adequate opportunity to address issues raised by the final LCR and FCR studies.”⁹ Furthermore, the “Commission’s Energy Division did not issue the ‘2015 Resource Adequacy Report’ until January 2017, and that Report did not contain complete information, thereby preventing reasoned analysis of current programs to inform program redesign.”¹⁰ The Commission, again, must resolve these issues before going forward with determining specific local obligations.

B. Changes to the RA Program

CEERT wholeheartedly agrees with the OIR’s contention “it may be worthwhile to re-examine the basic structure and processes of the Commission’s RA program.” CEERT believes that over-reliance on natural gas for reliability is the root cause of the serious issues encountered this year. The picture going forward is significant further reduction in natural gas burn to produce electricity. With coal out of the equation, the only way to reduce greenhouse gas (GHG) emissions from the electric sector is to reduce gas burn. The resulting fall in capacity factor of the existing gas fleet as renewable resources increase will be dramatic.

⁹ D.17-06-027, at p. 14.

¹⁰ Opening Comments of CEERT on Proposed Decision Adopting 2018 Local and Flexible Capacity Obligations and Refining RA Program, dated June 14, 2017 (June 14, 2017 CEERT Opening Comments), at p. 3.

Economic pressure on the fleet will intensify. Construction of new gas generation will only increase this economic pressure and result in no new net capacity as retirements increase apace with new construction. There is no reasonable investment in gas infrastructure that can convert a delivery system designed and built from the core on use of alternative liquid fuels and curtailment of gas use for electric generation to deal with contingencies into an “N-1” reliable delivery system. The planned phase out of the Aliso Canyon in-Basin storage facility seals the deal. As the gas burn decreases, it will become more concentrated in urban load centers and demand will become more volatile as units stops and starts increase, to deal with “reliability backup” duty only -- putting more pressure on inadequate infrastructure. The air quality and environmental justice implications are significant.

The only viable answer is to nurture non-fossil alternatives for reliability purposes. For system RA, this means procuring a diverse RPS portfolio with real capacity value including new bulk storage, arranging capacity for energy swaps with Northwest hydro ensuring market participation of California hydro resources from both the State and Federal Water Projects, and reinventing utility programs for energy efficiency and demand response to deliver on peak energy and capacity with a broader definition of value than is currently practiced.

For LCR, this means adapting to the reality that preferred resources including “rooftop” solar, “local” utility scale solar, hybrid storage/demand response projects, stand alone voltage support devices, and targeted energy efficiency programs all lubricated by relatively short duration batteries will become the dominant supplier of LCR capacity. For LCR purposes, solar will have very high capacity value as it did when overall penetration was small. By definition, all the system solar that causes midday overgeneration is blocked by the transmission contingency. The maximum start time (20 minutes) and minimum run time (4 hours) currently

required of demand response will be moot. Batteries will supply the spinning reserves and peak capacity. The demand response will function to recharge the batteries.

This is not a six-month sprint to a new grid order but a gradual, well thought out transition to a cost effective, resilient decarbonized grid. While most of the procurement will be an issue for future IRP cycles, the process needs to start right here in this RA cycle. Procurement targets, counting rules and performance metrics need to flip to assume preferred resources instead of gas generation. Simple recognition of the new reality and a dedication to the process are the critical actions in this RA cycle. Picking off some low hanging fruit such as arranging for capacity for energy swaps with the Pacific Northwest and simplifying procurement by eliminating FCR requirements represent easy near-term targets.

The template for this transformation was sketched out by the recent CAISO Study on preferred resource alternatives for the identified Moorpark sub-area LCR need¹¹ In its filed comments on that study, the CAISO stated:

The Moorpark Study demonstrates that preferred resource alternatives are technologically feasible to meet local capacity requirements in the Moorpark sub-area. Several parties raised concerns regarding the specific resource portfolios studied by the CAISO, but these concerns do not detract from the central finding that a combination of preferred resources and/or reactive power devices can meet the local capacity requirements of the Moorpark sub-area if procured and implemented in a timely manner ... The Moorpark Study establishes a baseline quantity of resources that should be targeted in any new request for offer (RFO) conducted in the Moorpark sub-area, but it did not seek to optimize the specific suite of preferred resources that should be targeted in a new RFO. Should the new RFO be conducted, the CAISO can then study the actual resources procured to determine whether local capacity requirements have been met. With the baseline needs established in the Moorpark Study, no additional analysis is necessary to determine that preferred resources represent a technologically feasible solution to meet Moorpark local capacity needs.¹²

The next step is simply to hold that RFO. Learning by doing is the appropriate action.

¹¹ Moorpark Sub-Area Local Capacity Alternatives Study, www.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=15-AFC-01 TN 220813, August 16, 2017.

¹² CAISO Comments Regarding Puente Power Project, www.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=15-AFC-01 TN221345, Sept 29, 2017.

C. Refinement of RA Program Elements

CEERT recommends several refinements to the RA program elements and, as requested by the OIR, identifies them in the following order of priority:

- 1. The process to transition away from near exclusive reliance on natural gas fired generation to supply RA must begin in this cycle:** For all the reasons stated above, system over-dependence on natural gas for reliability can and must be mitigated. At the same time, however, the RA process needs to ensure that the declining fraction of gas resources required for reliability be financially viable during the long transition ahead. These two simple concepts must be fleshed out during this RA cycle. With the exception of the Moorpark sub-area in (2) below, procurement of new resources should be left to the IRP process, but the groundwork must be laid here and now.
- 2. The Moorpark Sub-Area should be the template for preferred resource procurements to meet LCR needs:** There is no need for further analysis of generic parameters for preferred resource characteristics to supply LCR need. Rather, the Commission should authorize Southern California Edison to conduct an RFO for preferred resources in the Moorpark sub-area and use these results to further refine metrics and Net Qualifying Capacity (NQC) counting rules for preferred resources. To be clear, procurement will target not simply traditional NQC to meet a needle peak, but on-peak energy, reactive margin and short circuit current duty as well. NQC of preferred resources will be judged on a portfolio basis not by individual elements.
- 3. Flexible RA Must be Re-Evaluated and Redefined:** CEERT argues that Flexible RA should be removed entirely from the RA program and that CAISO ancillary service markets be relied upon to supply operational flexibility from the suite of available

resources including those procured to satisfy system and local RA requirements. In the absence of this result, “[T]here needs to be a robust, immediate process that recognizes that the existing flexible RA construct is broken and needs to change.”¹³ At the least, the Commission must provide direction on how to begin this process. Furthermore, any “new definition for flexible RA should ensure that imports including resources from the Pacific Northwest are able to qualify for FCR procurement.”¹⁴ The Energy Division, CAISO and stakeholders should work together through workshops or working groups to re-evaluate flexible RA and prepare future implementation proposals. These workshops or working groups would also clarify the definition of “dispatchable” and find that it is not necessary that 100% of all RA resources be dispatchable if that definition is submitting bids into the CAISO real time energy market subject to 5-minute dispatch instructions.

4. LCR and FCR Studies (if any) Must Be Transparent, Timely and Complete: As

noted above, there have been issues in the past with studies that are neither transparent nor timely. Furthermore, these studies did not provide complete information, including clarity of prices and comparisons of actual results to forecasted needs. These issues with the studies must be remedied and cannot continue. Load forecasting must improve. There is no need to revisit interpretations of NERC protocols, but the way these are translated into equations and numbers for modeling and study needs to be reexamined using data from the remarkable 2017 year as a guide. The climate is changing, the load shapes are shifting, and longer-term advisory forecasts need to be expressed as ranges and reserve margins. Opaque, ad hoc “load shift” adjustments to outdated historic load

¹³ Id., at p. 4.

¹⁴ Id., at p. 4.

shapes are unacceptable. As such, any refinement to the RA program should require that LCR and FCR studies meet certain requirements in order for the Commission and stakeholders to be able to adequately address any issues raised in these studies.

**III.
COMMENTS ON CATEGORY, NEED FOR HEARING, AND SCHEDULE.**

CEERT does not, at this time, comment on category, need for hearing or schedule, but reserves the right to comment on these items at a later time.

**IV.
CONFIRMATION OF PARTY STATUS**

Pursuant to Section 9 of R.17-09-020, Section 9, at page 7: “Persons who file responsive comments become parties to the proceeding (*see* Rule 1.4(a)(2)) and will be added to the “Parties” category of the official service list upon such filing.” By filing these “responsive comments,” therefore, CEERT requests “party status” and inclusion on the service list of R.17-09-020 as a party as follows:

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Respectfully submitted,

October 30, 2017

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