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**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 and Flexible Procurement Obligations for the 2019 and 2020 Compliance Years.

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

**NRG ENERGY, INC. REPLY COMMENTS ON
TRACK 3 PROPOSALS**

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In accordance with Assigned Commissioner Liane Randolph’s January 29, 2019 *Amended Scoping Ruling and Ruling of Assigned Commission* (“Amended Scoping Memo”), NRG Energy, Inc.¹ (“NRG”) hereby submits these reply comments on Track 3 proposals.

I. INTRODUCTION AND SUMMARY

NRG’s reply comments:

- Agree with parties’ comments questioning Energy Division’s proposal to allocate Effective Load Carrying Capability (“ELCC”)-based storage diversity benefits to solar resources, but urge the Commission to promptly move forward to implement

¹ NRG Energy, Inc. is the parent of NRG Power Marketing LLC, Sunrise Power Company, LLC, and Long Beach Generation LLC, each of which owns and operates or markets generating resources in California. Because the focus of this proceeding is on California issues, NRG Energy, Inc. appears on behalf of these entities.

rational ELCC values, given the reliability implications of the currently-overstated Resource Adequacy (“RA”) values;

- Recommend prioritizing considering how use-limited resources can meet local capacity requirements (“LCR”);
- Discuss CEERT’s portfolio approach proposal;
- Oppose seasonal LCR;
- Point out a flaw in AReM’s proposal for aligning the California Independent System Operator (“CAISO”) backstop and RA procurement processes;
- Support Southern California Edison Company’s (“SCE’s”) second proposal for assigning RA capacity values to third-party demand response resources and support recommendations to renew the Demand Response Auction Mechanism (“DRAM”) Working Group to address testing and verification processes; and
- Offer priorities with regards to parties’ call for additional working groups and workshops.

II. REPLY COMMENTS

1. Reply Comments on Energy Division’s Proposal for Setting RA Values for Wind and Solar Resources Through ELCC Analysis

Several parties express concern regarding Energy Division’s proposal to allocate to solar resources a “diversity benefit” resulting from inclusion of energy storage within the portfolio of resources to which ELCC analysis is applied to set RA Qualifying Capacity (“QC”) values for wind and solar resources.

SCE strongly cautioned against transferring the storage-enabled benefits to wind or solar resources, noting that doing so would overstate the reliability values of those resources and observing that the “diversity” benefit is already captured in the QC assigned to the storage

resource.² LS Power questioned the logic of transferring benefits from one resource type that has invested capital to achieve a market benefit (i.e., storage) to another resource that has not (i.e., solar or wind).³ Wellhead observes simply that it is a distortion to allocate a portfolio benefit to a particular class of resources.⁴ Pacific Gas and Electric Company (“PG&E”) indicated that Energy Division’s method for surfacing a loss of load expectation in months when there is a robust amount of system capacity results in assigning unusually high ELCC values to storage in those months.⁵

In its opening comments, NRG questioned allocating the diversity benefit to wind and solar resources, presenting information that showed that solar provided a relatively modest amount of the energy that would be assumed to be charging storage in the middle of the day. Still, NRG urged the Commission to adopt Energy Division’s proposed ELCC-based RA values for wind and solar despite the concerns about the allocation of the diversity benefit because the current values significantly overstate the RA values of those resources.

The CAISO similarly expresses concern with the current ELCC-based RA QC values for wind and solar resources, noting that “Continuing to use [the initial] transitional ELCC values inappropriately and problematically inflates the resource adequacy capacity provided by wind and solar resources and increases the risk that marginal resources retire because they are unable

² *Comments of Southern California Edison Company (U 338-E) on the Track 3 Proposals and March 12-13, 2019 Workshop* (“SCE Comments”) at 13.

³ *Comments of LS Power Development, LLC to the Ruling of Administrative Law Judge on Effective Load Carrying Capacity Seeking Comments and Proposals to be Incorporated in Track 3 Comments* (“LS Power Comments”) at 1-2.

⁴ *Wellhead Electric Company, Inc. Comments on Track 3 Workshop and Party Proposals* at 4.

⁵ *Comments of Pacific Gas and Electric Company (U 39 E0 on Track 3 Proposals and Workshops and Energy Division’s Effective Load Carrying Capacity Proposal* (“PG&E Comments”) at 22.

to secure resource adequacy contracts.”⁶ Overstated RA values that displace other resources and do not reflect resources’ ability to reliably meet the peak demand-focused reliability needs of the RA program should not be left in place for another RA procurement season. NRG agrees with the CAISO’s recommendation: “The CAISO recommends that the Commission discontinue using the transitional values to avoid inefficient and potentially harmful procurement practices that could jeopardize reliability.”⁷

The CAISO proposes that Energy Division re-do the ELCC analysis using the methodology adopted in D.17-06-026 but with updated wind and solar values. NRG supports re-doing the ELCC analysis, but not with the methodology adopted in D.17-06-026, which created the present inflated values. Instead, given the concerns about allocating the storage-enabled diversity benefit to wind and solar resources, NRG proposes that Energy Division simply strip out the storage diversity benefit from its most recent ELCC analysis and use the resulting wind and solar values without that proposed storage-enabled benefit.

The Commission, as the CAISO recommends, should act to implement rational ELCC-based RA QC values immediately, before the next RA procurement cycle. Citing other concerns about the analysis, PG&E proposed that the Commission hold a workshop on Energy Division’s methodology at the end of April.⁸ NRG supports the April ELCC workshop suggested by PG&E if it does not delay, but instead facilitates, the Commission addressing the overstated RA values before the next procurement cycle.

⁶ *California Independent System Operator Track 3 Proposal Comments* (“CAISO Comments”) at 3.

⁷ *Id.* at 3-4.

⁸ *Id.* at 22-23.

2. Reply Comments on Use-Limited Resources

In its comments, SCE responded to the CAISO's Track 2 proposal, discussed at the March 13 workshop, to use the CAISO's hourly load and resource adequacy analysis to determine how use-limited resources can meet LCR needs. SCE discussed how local needs can be expressed in terms of both MW and MWh and agreed that the MWh need must be considered. SCE interpreted the CAISO's proposal to exclude any resource with less than a four-hour duration from being eligible to meet the local need and did not support that exclusion.⁹

The importance of energy duration in terms of assessing a resource's suitability for meeting a local need is an important topic; as evidence of this importance, CEERT provided a proposal on this topic (discussed below) and PG&E proposed RA counting rules for use-limited resources, including hydro and thermal units. NRG agrees with SCE that resources with less than a four-hour duration should not be excluded from meeting local needs, though NRG notes that aggregating many short-duration resources to meet the MW and MWh LCR will pose significant challenges, including state-of-charge and forecasting challenges. In any case, assessing how use-limited resources can meet LCR (and system and flexible requirements as well) is a topic that should be given a high priority in this proceeding.

3. Reply Comments on CEERT's Portfolio Approach

CEERT offers comment on its proposal for calculating an ELCC-based capacity value for a portfolio of resources to determine that portfolio's ability to meet LCR. CEERT begins by offering that "[i]t is still perfectly reasonable to establish a precise capacity value for a resource in a 'worst case' dispatch that ensures that procurement of this resource (or, more likely, a set of resources) will result in a reliable system in the real world by whatever metric one

⁹ SCE Comments at 10-12.

chooses.”¹⁰ CEERT continues: “ELCC modeling for LCR should focus on the ‘portfolio capacity value’ of a specific set of resources in a specific load pocket with a specific load shape at a specific time of the year that defines a reasonable ‘worst case.’”¹¹ CEERT then suggests that the “worst case” be defined as “...occurring in late September/early October during a 1 in 10 heat storm where solar output and hydro runoff are lower due to the season, and ambient temperature is still high derating both solar output and gas turbine capacity.”¹²

CEERT’s proposal for how to establish a “worst case” portfolio value that can count for meeting LCR *in September or October* is reasonable, but it is not an ELCC-based methodology. ELCC analysis is a stochastic process that evaluates the ability of an increment of a resource to serve some additional amount of demand across a time period – for example, Energy Division’s ELCC methodology spans a month. Instead, CEERT’s proposal focuses on evaluating resource performance under a set of instantaneous conditions – an approach that could be considered, but not an ELCC approach. Moreover, while the portfolio capacity value established as proposed by CEERT under these “worst case” conditions would be valid for September, it would not be valid for February, when the sun angle and resulting solar production for any solar resources within the portfolio would be very different. CEERT’s “worst case” approach might establish a conservative value appropriate for some months, but not for others. Given that LCR are applied uniformly across all twelve months, any approach for assigning local RA value to a portfolio of resources must produce valid and reliable values in every month.

¹⁰ *Opening Comments of the Center for Energy Efficiency and Renewables Technologies on Track 3 Proposals and Workshop and on Administrative Law Judge’s Ruling on Effective Load Carrying Capacity* (“CEERT Comments”) at 5.

¹¹ *Id.*

¹² *Id.*

NRG reiterates that the current design of the RA program, which imposes uniform LCR across all twelve months of the year (except in months in which an entity's system peak demand is less than its LCR), not only ensures that the resources that meet those LCR recover their costs across the same period over which the costs are incurred, but provides the CAISO with local area capacity that allows the CAISO to ensure the transmission system and supply resources within the local areas can be maintained without putting reliability at risk. Implementing a more granular LCR period would hugely complicate the LCR analysis and the CAISO's outage coordination efforts but would not change the amount of revenue that resources require to remain in operation, whether they are needed in one month or in twelve.

It is wrong to think that, because the CAISO sets LCR based on contingency analysis under peak demand conditions, local area resources serve a need only under those studied contingency and peak demand conditions – which appears to be the assumption underlying CEERT's "snapshot" method of assigning portfolio capacity value. On the contrary, local area resources ensure reliability in all months of the year, as their presence enables essential maintenance. NRG agrees with CEERT that preferred resources will be an increasingly prevalent source of capacity needed to meet LCR. It is therefore critically important to design a way to reliably count those resources towards meeting LCR in all months, consistent with the RA program design's purpose of maintaining local capacity in all months, not just at the time of peak demand.

4. Reply Comments on Seasonal LCR

A few parties support PG&E's proposal to implement seasonal LCR.¹³ In contrast, the CAISO opposes implementing seasonal LCR, explaining:

[A]dopting seasonal local resource adequacy requirements would present serious implementation challenges, and would radically affect the local resource adequacy process, while providing, at best, only minimal benefits.¹⁴

The CAISO's 2013 off-peak local capacity study illustrates that calculating a seasonal local capacity requirement is both complex and subject to significant error. In any event, instituting a seasonal local requirement limits the ability of resource adequacy resources to take maintenance outages.¹⁵

NRG opposed PG&E's proposal for implementing seasonal LCR, and concurs with the CAISO's opposition. Given the CAISO's critical role in developing LCR, its opposition should be afforded extra weight when considering this matter.

5. Reply Comments on AReM's Proposal for Aligning the CAISO Backstop and RA Procurement Processes

NRG notes that it failed to address in its opening comments AReM's proposal for aligning the RA procurement process timelines with the CAISO's capacity backstop process timelines.¹⁶ AReM had proposed the following changes to the CAISO and RA timelines:

- Final Revised RARs Issued to LSEs – September 4-6 (instead of September 18-20).
- Annual RA Showing Deadline by LSEs – September 30 (instead of October 31).
- CAISO Conditional Approval of RMR Extensions – mid-October (instead of early to mid-September).
- CAISO Final RMR Approval Letter – November 1 (instead of October 1).

¹³ *Comments of the California Community Choice Association on Track 3 Workshop and Proposals* ("CalCCA Comments") at 2-3; *Comments of the Alliance for Retail Energy Markets on Track 3 Proposals* ("AReM Comments") at 14-15.

¹⁴ CAISO Comments at 8.

¹⁵ CAISO Comments at 11.

¹⁶ *Track 3 Proposals of the Alliance for Retail Energy Markets* at 3-5.

Shell supported AReM's proposal.¹⁷ While the goal of aligning the CAISO and CPUC processes is admirable, NRG does not support AReM's proposal. When a generating unit is designated as an Reliability Must-Run ("RMR") unit, the owner of that unit must file, with 60 days' notice as required by Section 205 of the Federal Power Act, a rate schedule at the Federal Energy Regulatory Commission that will take effect on January 1 of the following year. The RMR owner could not possibly comply with that requirement if they are not finally notified of the final disposition of their RMR contract until November 1, as AReM proposes and Shell supports. NRG sympathizes with the desire to better align the CAISO and RA processes, but the AReM proposal does not provide the RMR owner with the time required to prepare and submit to FERC a complicated set of rate schedules within the required time frame after the resource is officially notified of its RMR status.

6. Reply Comments on Demand Response Proposals

Several parties commented on proposals for establishing the RA value for DRAM third-party resources. CLECA supported SCE's proposals to either (1) use the Load Impact Protocols ("LIPs") or (2) use the contract capacity, subject to the application of "back-end" testing and verification controls.¹⁸ The Joint DR Parties opposed using the LIPs and supported SCE's proposal to use the contract value with back-end controls, while suggesting that those back-end controls need to be developed in the DRAM proceeding (A.17-01-012 et al.).¹⁹ Ohm Connect suggested punting this issue to the DRAM proceeding.²⁰ PG&E expressed a preference for

¹⁷ *Opening Comments of Shell Energy North America (US), L.P., on Track 3 Proposals* ("Shell Comments") at 5-6.

¹⁸ *Comments of the California Large Energy Consumers Association on Resource Adequacy Track 3 Proposals* at 9.

¹⁹ *Comments of CPower, ENEL X North America, Inc., and EnergyHub ("Joint DR Parties") on Track 3 Proposals and Workshop and Staff ELCC Proposal* at 6-7.

²⁰ *Comments of OhmComment, Inc. to Parties' Track III Proposals* at 2.

using the LIPs but suggested using SCE’s proposal for using contract capacity and back-end controls as a transition to using the LIPs.²¹ Finally, while San Diego Gas & Electric Company (“SDG&E”) expressed support for SCE’s second proposal, it also reiterated its Track 2 proposal to use simplified LIPs and indicated it preferred SCE’s proposal to use the LIPs.²²

NRG acknowledges concerns with assigning reliable RA capacity values to DRAM resources, which likely stem from, among other things, the 20% set-aside for residential programs, the difficulty in getting customer data to be able to project resource performance, and DRAM participation requirements. That said, NRG does not support applying the LIPs to set DRAM RA values. The LIPs were designed for use with utility DR programs, not third-party DR programs.

Instead, NRG supports the SCE approach to use contract capacity and “back-end controls.” The DRAM Working Group is the right forum for that work, and NRG supports Energy Division’s recommendation to resume the DRAM Working Group to facilitate that effort.²³

7. Reply Comments on Additional Working Groups and Workshops

NRG notes that parties suggested convening further workshops or working groups to deal with several issues:

- A working group to examine the relationship between local RA requirements and RA resource obligations, including how local RA requirements are determined,

²¹ PG&E Comments at 17.

²² *San Diego Gas & Electric Company (U 902 E) Opening Comments on Track 3 Proposals* (“SDG&E Comments”) at 15-16.

²³ *See January 4, 2019 Energy Division’s Evaluation of Demand Response Auction Mechanism, Final Report [Public Report – Redacted]* at page 103. This report is available at <http://www.cpuc.ca.gov/WORKAREA/DOWNLOADASSET.ASPX?ID=6442460092>.

how RA performance is assessed, and how local RA backstop procurement occurs;²⁴

- A working group to consider how to establish RA values for combined storage and renewable resources;^{25,26,27}
- A workshop on Energy Division’s ELCC proposal;²⁸
- A workshop on considering how Distributed Energy Resource (“DERs”) can better meet RA requirements;²⁹
- A two-day forum regarding the state of the RA program, the role and limitations of capacity showings, and other high-level strategic assessments of the RA program, including consideration of CEERT’s “portfolio” approach;³⁰ and
- A working group to consider treatment of BTM solar.³¹

All the working groups and workshops suggested deal with topics that are both important to the RA program design now and important for transitioning the RA program to follow the current and future changes to the nature of electric supply. Some of the work proposed, however, is more focused on issues that directly impact the RA program now, while others deal more with matters that do not yet have the same impact on the RA program. As NRG noted in its opening comments, however, D.19-02-022’s mandate to engage in a year-long series of workshops to explore a central buyer structure will take up much staff’s and parties’ available

²⁴ PG&E Comments at 7.

²⁵ PG&E Comments at 16.

²⁶ *Comments of the California Energy Storage Alliance on Track 3 Proposals Workshop and Energy Division Proposal on Effective Load Carrying Capacity in Response to the Amended Scoping Memo and Ruling of Assigned Commissioner and Administrative Law Judge’s Ruling on Effective Load Carrying Capacity* (“CESA Comments”) at 6.

²⁷ *Sierra Club, California Environmental Justice Alliance and Union of Concerned Scientists’ Opening Comments on Track 3 Proposals* at 3.

²⁸ PG&E Comments at 22-23.

²⁹ CESA Comments at 12-13.

³⁰ CESA Comments at 11-12.

³¹ *Comments of the Public Advocates Office on Resource Adequacy Track 3 Proposals and Energy Division’s Effective Load Carrying Capability Proposal* at 12.

bandwidth for the year ahead. To that end, to the extent the Commission is open to convening additional workshops and working groups to address the topics listed above, NRG suggests the Commission prioritize the topics in this fashion:

- ELCC analysis, to move away from overstated values as soon as possible. While NRG supports treating behind-the-meter (“BTM”) resources as supply-side resources in ELCC analysis, a more in-depth evaluation of BTM resources should not delay replacing the current inflated wind and solar RA capacity values with more rational values;
- Work to address how energy-limited resources and DERs meet LCR; and
- Work to assign RA capacity values to combined storage and renewable resources.

CESA’s idea of a multi-day forum to review the fundamental structure and assumptions underlying the RA program is intriguing, and should be considered. Such a forum, which would afford parties a chance to “see the forest and not just the trees,” could be valuable time spent before scoping the next track of the RA proceeding.

III. CONCLUSION

NRG appreciates the opportunity to provide these reply comments on Track 3 proposals and respectfully requests that the Commission incorporate these reply comments in its deliberation on the Track 3 issues.

Respectfully submitted,

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