

**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

R.11-10-023
(Filed October 20, 2011)

**REPLY COMMENTS OF NRG ENERGY, INC. ON
2013 LOCAL CAPACITY TECHNICAL ANALYSIS**

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For
NRG ENERGY, INC.

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In accordance with the December 27, 2011 *Phase 1 Scoping Memo and Ruling of Assigned Commissioner and Administrative Law Judge*, NRG Energy, Inc.¹ (“NRG”) hereby submits these reply comments to the California Public Utility Commission (“CPUC” or “Commission”) on the 2013 Local Capacity Technical Analysis of the California Independent System Operator Corporation (“CAISO”).

I. INTRODUCTION

In their initial comments in this proceeding, two parties urge this Commission to override the reliability judgment of the CAISO and instead substitute its own judgment of system reliability needs for the operational expertise of the CAISO by adopting a lower level of system reliability. Specifically, the parties request that the Commission disregard the CAISO’s conclusion that it needs to maintain a certain amount of generating capacity in the Greater San Diego Area in order to meet applicable reliability criteria. The CAISO specifically considered these same recommendations during its Local Capacity Requirements (“LCR”) stakeholder

¹ NRG Energy, Inc. is the parent of Cabrillo Power I LLC, Cabrillo Power II LLC, El Segundo Power LLC, Long Beach Generation LLC and NRG Solar Blythe LLC, each of which owns and operates generating resources in California. Because the focus of this proceeding is on California market issues, NRG Energy, Inc. appears on behalf of these entities, referred to here as the NRG Companies.

process and concluded that “[t]he safety net SDG&E has proposed to be in service for the summer of 2012 is not acceptable under existing criteria for mitigating Category C contingencies. Further, the ISO’s decision to plan its system . . . without reliance on a Special Protection Scheme will minimize the risk of cascading outages due to disturbances on the grid and unreliable system conditions such as those that have occurred in recent years in the San Diego area.”² Further, this Commission itself has previously held that planning to a “Category C” contingency is the right reliability standard to adopt for planning purposes.

The two parties advocating that the CPUC ignore the CAISO’s recommendations and overturn prior CPUC precedent - The Utility Reform Network (“TURN”) and San Diego Gas & Electric Company (“SDG&E”) - cite ratepayer concerns and the possibility that a yet-to-be developed and approved firm load shedding program could substantially reduce the San Diego LCR. Not only did the CAISO expressly find that these recommendations were inconsistent with system reliability, but NRG questions whether the Commission should adopt involuntary firm load shedding schemes as a viable alternative to contracting with generation within the local capacity areas.

II. BACKGROUND

The CAISO’s 2013 Local Capacity Technical Analysis identified two large local capacity areas in the San Diego region. The first, which has existed since the inception of the Resource Adequacy (“RA”) program, is the greater San Diego area. Prior to the addition of the 500-kV Imperial Valley-Suncrest (“Sunrise”) line, the LCR for this local capacity area was driven by the outage of the 500-kV Imperial Valley-North Gila line (the “Southwest Power Link”, or “SWPL”)

² See CAISO’s “Response to SDG&E comments regarding CAISO’s 2013 Local Capacity Technical Study Results,” included in TURN’s initial LCR comments, at p. 3 of Attachment 1.

concurrent with the outage of the largest generating resource within the area (a “G-1/N-1” Category B contingency).

However, for 2013, the CAISO has determined that the LCR for this existing local capacity region is driven by the overlapping outages of the Sunrise and SWPL 500-kV lines (a “N-1-1” Category C contingency). As determined by the CAISO, for 2013, the greater San Diego LCR for the Category B contingency is 2,192 MW.³ The greater San Diego LCR for the Category C contingency is 2,570 MW.⁴

The addition of the Sunrise line, as well as the addition of the ECO substation, have created, for 2013, a new, larger local capacity area – the “San Diego – Imperial Valley” area.⁵ The LCR of 2,938 MW for this new region is driven by the outage of SWPL and the Otay Mesa combined cycle plant (G-1/N-1). The greater San Diego local capacity area is now a wholly-contained sub-area of the San Diego-Imperial Valley local capacity area.

Comments submitted on May 7, 2012 by TURN⁶ and SDG&E⁷ asserted that the Commission should (1) adopt the lower of two LCR values developed by the CAISO for the greater San Diego local capacity area for 2013, and/or (2) remain silent on the LCR for the greater San Diego area and instead enforce only the LCR for the new San Diego – Imperial Valley local capacity area. During the CAISO stakeholder process leading up to the CAISO’s

³ *April 30, 2012 2013 Local Capacity Technical Analysis Final Report and Study Results*, submitted to the Commission by the CAISO on May 2, 2012 in the above-captioned proceeding (“CAISO Final 2013 LCTA”) at 104.

⁴ *Id.*

⁵ CAISO 2013 LCTA at 98,

⁶ *Comments of The Utility Reform Network on the CAISO’s 2013 Local Capacity Technical Analysis Final Report and Study Results*, submitted May 7, 2012 in the above-captioned proceeding (“TURN Comments”).

⁷ *Opening Comments of the San Diego Gas & Electric Company (U-902-E) on the Final 2013 Local Capacity Requirements Technical Study*, submitted May 7, 2012 in the above-captioned proceeding (“SDG&E Comments”).

filing of its recommended LCR values, it considered and rejected the alternatives proposed by TURN and SDG&E again in this proceeding.

III. REPLY COMMENTS

The Commission should maintain its deference to the operational expertise of the CAISO in establishing a LCR for the San Diego region. Neither SDG&E nor TURN has adequately justified its proposed recommendation. For the reasons listed below, NRG respectfully urges the Commission to adopt the CAISO's 2013 LCR without modification or condition.

A. The Commission Should Not Override The CAISO's LCR Determination

In essence, TURN and SDG&E are asking the Commission to do something it has never done before – over-ride the CAISO's determination of local capacity need. For the reasons set forth below, the Commission should reject this request to over-ride the CAISO's findings.

i. The Commission Should Defer to the CAISO's Determination of Local Area Need.

The success of the RA program has hinged on a careful separation of powers and responsibilities. As the Commission described this relationship, “[t]he CAISO conducts its LCR study annually, and this Commission resets local procurement obligations each year based on the CAISO's LCR determinations.”⁸ From the start of the RA program, the Commission recognized the unique role of the CAISO in maintaining system reliability:

In particular, the CAISO is responsible for ensuring “efficient use and reliable operation of the transmission grid consistent with achievement of planning and operating reserve criteria...” [Citation and footnote omitted.] In pursuit of these objectives, the CAISO must each day ensure that sufficient generating capacity is on-line and available to meet the forecast system load. This means not only a sufficient amount of on-line generating capacity to

⁸ D.08-06-031, p. 5; D.09-06-028, p. 5; D.10-06-036, p. 4; D.11-06-022, p. 6.

satisfy the total system load, but also whether that capacity is in the right place. The CAISO, for example, must have a minimum amount of on-line generation available in certain locations in order to address transmission constraints or other specific operating requirements, such as maintaining proper voltage and other system-stability related requirements. Absent satisfaction of the CAISO's location-specific operating requirements, the CAISO may be unable to operate the grid reliably.⁹

While the Commission has set the overall system RA requirements, the Commission has routinely deferred to the CAISO to perform the study that determines the local capacity requirements. At the start of the RA program, parties debated whether the CAISO or another independent entity should perform the 2007 LCR studies. The Commission ruled that “[a]t this time, the CAISO—which, as the grid operator, has direct knowledge of system conditions and operations—appears to be particularly well positioned (if not uniquely so) to determine where load pockets exist and what their associated LCRs are.”¹⁰ The Commission also declared, “[f]or 2008 and beyond, we expect that we will continue to rely on the CAISO to perform annual LCR studies or study updates to identify load pockets and associated LCRs.”¹¹ The CAISO's role in performing the LCR study has gone unchallenged since then.

There is sound reasoning behind the Commission's deference to the CAISO: it is the CAISO, not the Commission, which has the technical staff and expertise needed to conduct the complex analyses needed to establish the LCRs. While Commission staff has actively and influentially participated in the CAISO process for establishing and reviewing the LCRs, the Commission has always accepted the CAISO's determination of local capacity need.¹² The case for moving away from that process has not been demonstrated.

⁹ D.04-07-028, p. 3.

¹⁰ D.06-06-064, p. 14.

¹¹ D.06-06-064, p. 27.

¹² The Commission has asked the CAISO to re-do portions of the study to correct for input errors. See D.07-06-029, p. 26.

ii. Remaining Silent on the San Diego “Sub-Area” LCR Runs Counter to the Fundamental Intent of the RA Program.

SDG&E urges the Commission to remain silent on the San Diego “sub-area” need and instead require load-serving entities to procure local capacity to meet the San Diego-Imperial Valley requirement.¹³ This recommendation runs counter to the fundamental intent of the RA program, namely, to provide the CAISO with the operational capacity – both from local and system perspectives – it requires to operate the system under its operational control to applicable reliability standards.

Remaining silent on the sub-area local capacity requirements developed by the CAISO begs the question - “*Why would the CAISO develop, and continue to develop, sub-area requirements unless they were critical to system reliability?*” The answer is that all local capacity requirements, whether they apply to a large or small area, are intended to ensure there is adequate generation within that area to meet applicable reliability criteria and provide the CAISO the operational flexibility it needs. The size of the area is immaterial; the key is to make sure there is sufficient generation within the defined area. As the Commission explained, “[i]n simplest terms, the LCR study is the process of identifying the specific areas within the CAISO Controlled Grid that have local reliability problems due to transmission constraints and, for each area so defined, determining the generation capacity, in megawatts (MW), that would be required to mitigate these local reliability problems.”¹⁴

¹³ From the SDG&E Comments at 3-4: “The Commission historically has only determined the total LCR need for defined local areas and has not determined Sub-area needs. [...] SDG&E recommends the Commission remain silent on the SD Sub-area [LCR] until the load-shedding issue is resolved between SDG&E and the ISO.”

¹⁴ D.06-06-064, p. 14.

The Commission faced similar objections when the CAISO's 2008 LCR study identified a new local reliability area, the Big Creek/Ventura Area. Rejecting those objections, the Commission stated:

SCE's objection to the establishment of the Big Creek/Ventura Area is based on the contention that the CAISO has changed the LCR study approach by using the contingency of an intertie outage. This objection does not appear to be well-founded, since the potential universe of transmission outages that may be considered for purposes of identifying the most severe contingency has consistently encompassed any transmission line, including interties. We find no substantial grounds for invalidating the LCR study, and therefore find that the Big Creek/Ventura Area should be established without a phase-in or blanket penalty waivers as proposed by SCE.¹⁵

The second question this premise begs is – “*What happens if the sub-area requirements are not met?*” The answer is clear – the CAISO should and will engage in backstop procurement to ensure that those sub-area requirements are met. The CAISO cannot disregard its responsibility to ensure that it meets applicable reliability requirements. Section 43 of the CAISO Tariff authorizes the CAISO to engage in backstop procurement when RA requirements, be they system or local, are not met.

There is no meaningful distinction between whether an LCR applies to an “area” or a sub-area”. In either case, the CAISO has identified a need for a specific amount of capacity within that area. Failure to procure that amount of capacity within that area will leave the CAISO without sufficient resources to meet applicable reliability criteria. Asserting that the Commission has historically determined or enforced only the area – but not sub-area – requirements – elevates a meaningless distinction between “areas” and “sub-areas” to a misguided reason for ignoring the purpose of the RA program.

¹⁵ D.07-06-029, p. 21.

In sum, it would be inappropriate for the Commission to adopt LCR targets that would leave the CAISO without the capacity needed to ensure it complies with applicable reliability criteria.

iii. The Load Shedding Scheme that Would Presumably Allow the Use of the Category B LCR Value for the San Diego Area Has Not Been Sufficiently Evaluated or Approved.

SDG&E proposes that it should be allowed to use a controlled load-shedding scheme to mitigate the potential for voltage collapse following the Category C contingency without (i) addressing the CAISO's concerns about this scheme, and (ii) prior to getting WECC approval of this scheme.¹⁶ Adopting a lower LCR value prior to addressing the CAISO's concerns, or obtaining WECC approval for the use of such a scheme, would presume facts not yet in evidence. Only after the CAISO's concerns about such a scheme are fully addressed, and WECC approves of the use of such a scheme, should the Commission even consider adopting the lower value. Relaxing the timing for this issue would negate the work and attention to detail the Commission has expended in developing the RA schedule. For these reasons alone, the Commission should reject these recommendations as premature.

Moreover, if the Commission does address these recommendations on their merits, it should still reject them. There are good reasons to ensure thorough CAISO and WECC review and approval of the proposed load-shedding scheme. Five of the twenty-seven findings and recommendations of the recently-released report of the North American Electric Reliability Council and the Federal Energy Regulatory Commission on the September 8, 2011 Southwest outage are concerned with such remedial action schemes, including concerns that the interactions (including the inadvertent triggering) of such remedial action schemes are not well studied,

¹⁶ SDG&E Comments at 2 (“The ISO’s concerns about using controlled load drop for the S[an]D[iego] Sub-area should be addressed only after this SPS is in place.”)

understood or coordinated.¹⁷ In light of these findings, reducing the San Diego area LCR before the effects of any necessary load shedding scheme are well vetted and understood would disregard the lessons learned from this disturbance.

iv. Adopting the Category B LCR Value Contradicts CPUC Precedent Regarding how the CAISO should Establish LCR Values.

This Commission has traditionally agreed with the CAISO that the ISO should plan to the more stringent Category C reliability criteria, as opposed to the more lenient Category B reliability criteria, for the purposes of the LCR study. The Commission previously eliminated any ambiguity over this issue, finding that the Category C criteria represents the correct planning standard: “[t]he most persuasive information before us is the CAISO’s conclusion that a decision to adopt Category B criteria for purposes of local procurement obligations would likely result in substantial load interruptions when N-1 conditions occur. No party has presented information that would lead us to conclude that the risk of such interruptions is acceptable if that risk can be avoided or mitigated.”¹⁸ The Commission later affirmatively adopted the Category C reliability standard for setting local procurement obligations.¹⁹

Further, while NRG understands the arguments that allowing for firm load shedding instead of additional procurement appears to TURN and SDG&E to be economically advantageous, these savings are unlikely to exist in practice. First, the economic argument underestimates the value of lost load and ignores the potential impact of avoidable rolling blackouts on the local economy. Second, if the Commission were to decrease the LCR in San Diego to a level below which the CAISO determined was needed for it to comply with applicable reliability criteria, it is likely that the CAISO would be forced to step in and issue capacity

¹⁷ Arizona-Southern California Outages on September 8, 2011, Findings 19-23.

¹⁸ D.06-06-064, p. 21.

¹⁹ D.07-06-029, p. 24.

contracts to the local units it needs – likely at a higher cost than the cost of contracting with these units under the RA Program. Clearly no party is advocating for a less reliable system, but the TURN and SDG&E recommendations are unlikely to achieve cost savings or a more reliable system.

Based on the CAISO’s assessment of the amount of generation in the San Diego sub-pocket in its 2013 Local Capacity Technical Analysis, only a small amount of generation at Encina – something less than 100 MW - would be needed to meet the Category B LCR for the San Diego sub-area. This projection, however, does not align well with present reality. Most, if not all, of the steam turbine units at Encina have been operating since the beginning of February 2012. In fact, the net generation produced at Encina in the first four months of 2012 nearly equals the amount of net generation produced at that facility in all of 2011.

v. Adopting the Category B LCR Value Simply Because it Better Aligns with Prior Expectations is Wrong and Contradicts CPUC Precedent.

TURN asserts that the Commission should adopt the lower Category B LCR value because doing so would “properly account for the impact of SDG&E’s new Sunrise Powerlink (Sunrise) transmission line.”²⁰ TURN goes on to warn the Commission that it should not rely on CAISO projections of local capacity needs to guide future investment because “...it is very risky to allow ratepayer dollars to be invested based on presumed future LCR benefits because CAISO projections of LCRs in future years are not stable.”²¹

TURN’s warning would seek to put the Commission on notice that the Commission can make no investment decision which involves a CAISO assessment of future need. This warning does not advance the cause of developing a reliable and cost-effective electric supply system for

²⁰ TURN Comments at 1 (emphasis added).

²¹ TURN Comments at 4.

California, nor does it do anything to improve the vital relationship between the Commission and the CAISO. TURN may be disappointed that the CAISO-proposed San Diego 2013 LCR is not what it wanted it to be, but to then assert that the Commission should forever disregard CAISO analysis of need because of the possibility that assessment may change renders all future assessments of need meaningless. When the 2008 LCR study showed a higher LCR figure than the 2007 study for the LA Basin Area due to an improved evaluation, several parties advocated rejecting the new figure, capping the annual increase, or phasing in the increase. Rejecting those proposals, the Commission concluded that “now that more current information regarding the path rating is available, it would be unreasonable to adhere to an understated LCR determination that was made a year ago in connection with the 2007 study.”²²

At the end of 2012, the Commission, as part of its Long-Term Procurement Plan proceeding, will be called upon to authorize procurement based on expert predictions of future system conditions and needs – predictions that are highly unlikely to materialize exactly as formulated. The CAISO will be among those parties providing their expert advice. Some of this advice will hinge on new, cutting edge analyses seeking to understand and quantify the implications of adopting a 33 percent renewable portfolio standard – work that was not undertaken before the standard was adopted. The Commission may choose to disregard that advice, or any other advice provided by the CAISO, but it would do so at some risk. The CAISO is directly responsible for the real-time reliability of the electric supply system on which California’s economy and the livelihood and lifestyle of its citizens depends. To date, to its credit, the Commission has neither simply accepted the CAISO’s assertions of need, nor disregarded those assessments, but has participated actively and responsibly in the CAISO processes seeking to quantify those needs. For the Commission to now ignore the CAISO’s

²² D.07-06-029, p. 22.

recommendations on a matter as technically complex as LCR requirements and impose its own will would mark a new and not especially helpful or hopeful chapter in the evolving story of the electric supply industry in California.

IV. CONCLUSION

NRG appreciates the opportunity to submit these reply comments and respectfully asks the Commission take action consistent with the discussion herein.

Respectfully submitted,

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