UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

CXA La Paloma, LLC	)	
v.	)	**Docket No. EL18-177-000**
California Independent System Operator Corporation	)	

COMMENTS OF NRG IN SUPPORT OF COMPLAINT

Pursuant to Rule 211 of the Rules of Practice and Procedure of the Federal Energy Regulatory Commission ("Commission"), 18 C.F.R. §§ 385.211, NRG Power Marketing LLC ("NRG") hereby files these comments in support of the complaint filed by CXA La Paloma, LLC ("La Paloma"), a generator located in the footprint of the California Independent System Operator Corporation ("CAISO"), regarding the sufficiency of the Resource Adequacy ("RA") program administered by the California Public Utilities Commission ("CPUC") and the CAISO.

I. Introduction

For over a decade, the Commission has largely deferred to the CPUC's RA program to ensure reliability and to set rates for suppliers of capacity. The meticulously researched La Paloma complaint provides the Commission with ample evidence that the existing resource adequacy framework has not provided access to just and reasonable rates for some time. NRG writes separately to highlight some of the recent events clearly demonstrating the steady deterioration of the existing RA framework. Over the past twelve months:

- CAISO has issued multiple Reliability Must Run contracts for local area resources;
- The CAISO has been forced to use its emergency backstop procurement authority on multiple occasions, including the first-ever use of annual designations to backstop the failure of the RA program to meet local area reliability needs;

- The RA program has failed to secure the necessary resources to maintain adequate capacity in the "sub-areas" within the local areas; and

- The CAISO is in the process of conducting an emergency procurement for September to meet a 1,250 MW forecast deficiency, with another deficiency of over 4,000 MW for October already announced.

The CAISO's reliability must-run ("RMR") agreement and Capacity Procurement Mechanism ("CPM") were never intended to be used as primary reliability procurement tools, and the repeated triggering of these "emergency" measures is compelling evidence that the RA framework is not working. As explained further in the attached Affidavit of Mr. Robert Stoddard ("Stoddard Affidavit"), all of these events are indicative of market failure and suggest that the long-term reliability of the system is being degraded.

While Mr. Stoddard does not repeat many of the details highlighted in the Affidavit of Mr. Jeffrey Tranen and Mr. Joseph Cavicchi (the "Tranen/Cavacchi Affidavit"), Mr. Stoddard specifically notes three separate areas that most undercut the proper functioning of a RA market: price discrimination between similarly situated units, including units with comparable environmental characteristics; the pay-as-bid nature of the market; and the unchecked exercise of buyer-side market power.

Notably, NRG appreciates the State of California's ambitious greenhouse gas and environmental objectives and acknowledges concerns about federal regulators disrupting those efforts. However, the Commission has a statutory obligation to ensure the long-term reliability of the Western Interconnection. The specter of the unraveling of the RA program calls into question the reliability, not only of the California grid, but also neighboring states that have voluntarily entered the CAISO, as well as the reliability of the entire Western Interconnection. The Federal Power Act gives this Commission the exclusive authority to address these quintessentially interstate matters. Faced with compelling evidence that the existing RA

framework is not just and reasonable and unduly discriminates between otherwise similarly situated units, NRG recommends that the Commission establish an expedited process to work with regulators in California and Nevada, as well as other relevant Stakeholders, to craft a resource adequacy structure that meets the statutory requirements of the Federal Power Act *and* accommodates the energy policies of the State of California.

II. Communications

All correspondence and communications related to this proceeding should be addressed to the following individuals:

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III. Comments

The flaws in the RA program have been masked by historical reserve margins often in excess of 30 percent in the not-too-distant past. However, the reserve margin is dropping fast and is laying bare many of the flaws in the RA program. As the market has tightened, prices have increased, particularly for resources in local reliability zones, many of which happen to be located in coastal portions of California, where high operating costs, aggressive environmental requirements, and even higher property values that accelerate retirements and thwart incremental investment in the California generation fleet. In total, the CAISO has provided out-of-market support to approximately 10% of the local generating capacity in California over the past two years. Moreover, when reserve margins were high, the CAISO's main backstop procurement mechanism, the CPM, was generally perceived (perhaps incorrectly) as sufficiently more

expensive than the market price for RA, such that it encouraged appropriate bilateral contracting behavior, even taking into account the CPUC's $40/kW-year "soft cap" on local capacity prices. Even assuming that this market structure was just and reasonable in the past, it is no longer. The California market has tightened considerably over the past several years and the market price for capacity has approached – and in some cases, even exceeded – the cost of exercising the backstop mechanism. Further, as the generation fleet has aged, the costs of maintaining existing resources have increased, and energy market revenues continue to be challenged by increasing renewables penetration. The increased volatility of gas costs, largely driven by the impairment of Aliso Canyon, has dramatically increased the risk of operating gas-fired resources in California, since the energy market does not allow generators to reflect intraday gas volatility into their energy offers. Thus, gas-fired generators often struggle to break even, even on the highest load days and when Locational Marginal Prices are high.

And, unfortunately for the functioning of the RA market, the CPUC has recently waived the requirement that certain load serving entities ("LSEs") meet local reliability requirements. As a result, the CAISO is again forced to play the *primary* role in securing local capacity, but without a fully-fleshed out capacity market designed to provide just and reasonable rates, and provide revenue opportunities to similarly situated resources without undue discrimination.

A. The RA Program is Not Securing the Resources Necessary to Ensure the Reliability of the Western Interconnection.

Over the past decade, the Commission has preferred to play a relatively passive role in its oversight of the CAISO markets. Recent events, however, suggest that the Commission will have to play a more active role to ensure the proper functioning of California's RA program, and, by extension, the reliability of the Western Interconnection. After all, given the nature of the Western Interconnection, reliability deficiencies in one area, particularly an area like California

through which the 500 kV backbone extends from north to south, threaten the entirety of the entire interconnection, not just California. This includes the balancing authorities that have joined the CAISO footprint, but are located outside of California, as well as neighboring states that would potentially suffer the reliability consequences of inadequate resource procurement by California.

As Mr. Stoddard notes, "[s]ystematic and frequent use of out-of-market procurements is a hallmark of a failing market design"[1] and notes that "California today is heading in the same direction that New England was 15 years ago."[2] As this chart of out-of-market capacity procurements demonstrates, the CAISO has been forced to take an alarming number of emergency actions to backstop the failures of the RA program over the past twenty four months:

	CPM	RMR	Unit	Start	End
Mandalay 2	20		215	11/8/2016	1/6/2017
Delta	114		835	12/14/2016	2/11/2017
Los Medanos	90		572	12/14/2016	2/11/2017
Moss Landing 1	141		510	12/18/2016	1/17/2017
Mountainview	36		525	12/19/2016	2/16/2017
Pio Pico 2	50		106	2/6/2017	3/7/2017
Otay Mesa	155		604	5/22/2017	5/31/2017
Mandalay 1	20		215	6/18/2017	6/30/2017
Mandalay 2	20		*	6/18/2017	6/30/2017
El Cajon	25		48	7/27/2017	8/31/2017
Mandalay 3	119		130	10/24/2017	11/22/2017
Mandalay 1	215		*	12/5/2017	2/2/2018
Mandalay 2	215		*	12/5/2017	2/2/2018
Mandalay 3	130		*	12/5/2017	2/2/2018
Metcalf Energy Center		593	593	1/1/2018	12/31/2018
Feather River		48	48	1/1/2018	12/31/2018
Yuba City		48	48	1/1/2018	12/31/2018
Moss Landing 1	510		510	1/1/2018	12/31/2018

[1] Stoddard Affidavit at ¶ 13.

[2] Stoddard Affidavit at ¶ 14.

Encina 4	272		300	1/1/2018	12/31/2018
Encina 5	273		330	1/1/2018	12/31/2018
TOTAL	**2405**	**689**	**5589**		

Note: * indicates that, while the unit was designated as CPM more than once, its capacity is only counted once in the "total" column.

This list includes RMR contracts for retiring units,[3] annual CPM designations to units in local reliability areas that were not procured as part of the IOU's "mandatory" year-ahead reliability showing,[4] and emergency monthly CPM designations.[5] And recently, the California Energy Commission announced that its load forecasting estimates were off by more than 1,250 MW for September and more than 4,000 MW for October, again leading to emergency procurements which are not even reflected in this list.[6] In total, this means that approximately 10% of the generating capacity in California has received financial support for at least some portion of their fixed cost recovery from outside the RA market.

"The monthly designations were in some cases made for force majeure events, such as a local transmission outage or wildfires, but in other cases simply because load was higher than forecast or unit outages,"[7] while the "annual designations made in December 2017 were for 1,055 MW from three units needed to meet a 'material sub-area deficiency.'"[8] As Mr. Stoddard explains, the total resources designated under the RA program "did not result in sufficient resources to operate the system reliably, even at the local level," which required the CAISO to "use its backstop authority to find that amount of capacity located where it could actually meet

[3] *See* CAISO 2017 Annual Report on Market Issues and Performance, p. 240.

[4] *Id.*, p. 240-241.

[5] *Id.*, p. 241.

[6] *See* http://www.caiso.com/Documents/Presentation-CapacityProcurementMechanismSignificantEvent.pdf

[7] Stoddard Affidavit at ¶ 15.

[8] Stoddard Affidavit at ¶16 (citations omitted).

local system reliability needs."[9] Mr. Stoddard explains that "[t]his inefficient mechanism has two direct consequences":[10]

> First, other RA Resources in the South Bay-Moss Landing sub-area and the San Diego-Imperial Valley Local Capacity Area were likely not being paid the same prices of $6.19/kW-month and $6.31/kW-month, respectively, for their capacity, although they were providing the same RA value as the CPM-designated units.
>
> Second, consumers were paying too much for capacity because of a redundant 1,055 MW procured through their SCs' RA plans. At the typical RA contract prices of about $30/kW-year, this excess procurement cost customers about $32 million.

The Commission's precedent on the use of RMR contracts is clear: "RMR contracts suppress market-clearing prices, increase uplift payments, and make it difficult for new generators to profitably enter the market. … In short, extensive use of RMR contracts undermines effective market performance."[11] Further, that "RMR agreements should be a last resort and that the proliferation of these agreements is not in the best interest of the competitive market" and discriminate against "other suppliers participating in this market, especially those suppliers operating within the same [Designated Congestion Area]."[12] The Commission should direct CAISO, "rather than focusing on and using stand-alone RMR agreements, to incorporate the effect of those agreements into a market-type mechanism," just as it directed in ISO New England more than a decade ago.[13]

[9] Stoddard Affidavit at ¶ 17.

[10] Stoddard Affidavit at ¶ 32.

[11] *Devon Power et al.* 103 FERC ¶ 61,082 at P 29 (2003).

[12] *Id.* at P 31 (2003).

[13] *Id.* at P 29 (2003).

B. Historical Flaws in the RA Program Render Rates Unjust and Unreasonable.

The Tranen/Cavacchi Affidavit presents a comprehensive history of the systematic flaws in RA market. Mr. Stoddard's Affidavit focuses in on three of the most problematic aspects of the existing RA program.

First, the RA program price discriminates not only between carbon-free power production and conventional generation, but also price discriminates between otherwise comparable conventional generation resources. "Price discrimination between new and existing resources has been a pervasive issue in developing just and reasonable capacity markets elsewhere in the country."[14] While the Commission may wish to defer to the choice by California policy-makers to differentiate between "preferred resources" (a catchall term which includes renewable generation, energy storage technologies, demand response and other environmentally-advantaged technologies),[15] there is no economic or policy justification for allowing a state to price discriminate between otherwise comparable conventional generators.

Mr. Stoddard finds that the Commission's "hands-off" policy decision that has allowed California to price discriminate "may have short-run payoffs, [but] in the long run it results in substantial inefficiencies. The recent RMR designation by CAISO of three fairly new gas-fired units, totaling 700 MW, is tangible evidence that price discrimination is ultimately quite costly."[16] Mr. Stoddard concludes that:[17]

> If existing capacity retires because RA payments were too low, but that capacity was actually needed for reliable system operations, then new capacity must be built under high-cost contracts to replace the lower-cost existing units, or that the

[14] Stoddard Affidavit at ¶ 23.

[15] For example, in its recent Competitive Auctions with Sponsored Policy Resources, or "CASPR" decision, the Commission approved a program designed to accommodate state environmental policies. *ISO New England Inc.*, 162 FERC ¶ 61,205 (2018).

[16] Stoddard Affidavit at ¶ 23.

[17] Stoddard Affidavit at ¶ 23.

> volume of RMR contracts will mushroom. Either outcome is extremely inefficient, which is why the capacity markets in the northeast all provide equal payments to similarly situated capacity, regardless of whether it is new or existing.

Second, the use of monthly, or, at best, annual procurement targets results in many generating resources only receiving a short-term stream of RA payments, even though these generators incur costs on yearly, or in the case of major maintenance, multi-year cycles.[18] For example, several units threatened to retire due to the inability to recover the costs of major maintenance needed to safely and reliably operate the units. A hot gas path inspection, for example, is generally required in multi-year cycles, and can cost tens of millions of dollars. The short-term nature of the market makes it very difficult to recover the costs of such cyclical maintenance through short-term RA contracts. Further, as the recent emergency procurement for September (and potentially, again for October) demonstrates, a month-by-month RA procurement schedule magnifies the consequences of load forecast errors in any particular month as generators appropriately attempt to plan and schedule yearly maintenance. By contrast, an annual capacity market (or even seasonal market, such as New York) would be unlikely to experience the need for emergency intra-year procurements and better aligns with the annual costs of operating a generating unit

Third, as Tranen/Cavaccchi also note, the threat of buyer-side market power is rampant throughout the RA market design, which renders a compensatory return on investment effectively impossible to achieve. The situation only gets worse when the CPUC aggregates sub-area requirements for small load serving entities because of buyer/supplier-side market power concerns, as it does in the PG&E system due to concerns that PG&E would control all of

[18] *See, e.g.*, letter from Calpine Corporation to the CAISO, explaining that its Metcalf 570 MW 2x1 combined cycle was anticipated to incur $20 million in major maintenance. *Available at*: https://www.caiso.com/Documents/CalpineLetter_CAISO_MetcalfEnergyCenterRetirementAssessment.PDF.

resources in smaller local capacity sub-areas. This could leave other load serving entities unable to procure the capacity they required in that sub-area. Rather than enforce compliance with local reliability criteria, the CPUC instead allowed capacity procured in one sub-area to meet reliability requirements in a different, electrically independent sub-area. These type of "shortcuts" put increasing pressure on the CAISO's backstop procurement mechanisms, but equally important, put a "soft" cap on all RA procurements equal to the price of the CAISO's CPM program. As Mr. Stoddard explains the problem, "[t]o guard against sellers' market power in these areas, the CPUC allows its LSEs to not procure local capacity if the price is higher than a threshold, currently $40/kW-year."[19] Any resources "actually needed for local reliability . . . must seek a CAISO CPM designation or cost-based RMR contract, resulting in over-procurement of capacity generally."[20] Thus, the potential exercise of buyer-side market power not only puts artificial downward pressure on RA contract prices, but also again forces the CAISO to assume the primary role in RA procurement – something it is ill-equipped to do.

C. Any Remedy Ordered by the Commission can Accommodate State Policy Preferences.

NRG is sensitive to the need to balance respect for California's authority over generation with the Commission's authority over reliability, transmission, and wholesale markets. As Mr. Stoddard notes, accommodating California's statutory mandate of 50% renewable power by 2030, "…while maintaining the integrity of CAISO's wholesale markets will require fresh thinking about an appropriate market design."[21] However, the Commission has ample authority to work with California stakeholders to craft a market design that "accommodates" California's energy policies, addresses the growing challenges presented by the explosive growth of

[19] Stoddard Affidavit at ¶ 25.

[20] Stoddard Affidavit at ¶ 25.

[21] Stoddard Affidavit at ¶ 30.

Community Choice Aggregation and the potential expansion of the Direct Access retail choice program, and ensures reliability for the wider Western Interconnection as well as just and reasonable rates for suppliers.

Indeed, the Commission recently embraced an accommodate strategy in New England and has requested briefing on various accommodate strategies in PJM. Were the Commission to provide appropriate guidance, the CAISO could convene a stakeholder discussion to develop an appropriate remedy. By contrast, California may want to move past an accommodate strategy directly to an "achieve" type strategy, where the State's renewable and other goals are "hardwired" into a centralized procurement of resources. As an example (and there are many other ways to structure an "achieve" strategy), California may elect to require that a certain percentage of load is met by a particular technology type. The centralized procurement authority would then hold an auction to establish a transparent price for all resources of that type. Such a system would ensure that California meets its environmental goals, at the least possible cost, while ensuring that shareholders – not ratepayers – bear the financial risk of their investments.

A move to a centralized procurement structure is particularly timely given the transition of the California retail market from one dominated by the IOUs, to one in which customers are allowed to shop for competitive retail supply, such as by joining a Community Choice Aggregation ("CCA") or through the expansion of Direct Access, which is currently being evaluated by the California legislature and by the CPUC.[22] As CCAs expand, the ability (and willingness) of the IOUs to contract with new resources will wane and Californians will need a new way of financing energy infrastructure.

[22] *See California Customer Choice: An Evaluation of Regulatory Framework Options for an Evolving Electricity Market*, available at http://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/Utilities_and_Industries/Energy_-_Electricity_and_Natural_Gas/Cal%20Customer%20Choice%20Report%208-7-18%20rm.pdf

IV. Conclusion

NRG respectfully requests that the Commission grant the La Paloma complaint. History has now demonstrated that the Commission's hands-off policies have led to serious reliability and financial challenges for generation in California that must be addressed.

Respectfully submitted,

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Certificate Of Service

I hereby certify that I have served a copy of the foregoing document upon the Commission compiled service list in this proceeding.

Dated at Princeton, New Jersey this 24th day of August, 2018.

/s/ *Abraham Silverman*
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