

Docket: Rulemaking 20-11-003

Exhibit No. _____

Date: September 10, 2021

Witness: Sandeep Arora

**PREPARED PHASE 2 REPLY TESTIMONY OF SANDEEP ARORA
ON BEHALF OF LS POWER DEVELOPMENT, LLC**

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I am Sandeep Arora, Senior Vice President for REV Renewables, an LS Power company. Rev Renewables owns, operates and develops renewable and storage projects in California and other markets in the US. I have been with LS Power since 2010 and in my role have represented the company in various proceedings at the Commission related to Resource Adequacy (RA) and procurement, Integrated Resource Plan (IRP) and various RA proceedings. In addition to actively participating in Commission proceedings related to planning and procurement, I have participated in the various proceedings at the California Energy Commission (CEC) and stakeholder initiatives at California Independent System Operator (CAISO) on matters affecting generation development, resource planning, and transmission in California and the West.

I. BACKGROUND/OVERVIEW

LS Power continues to support the California Public Utilities Commission's (Commission) efforts to investigate actions to increase peak and net peak supply resources in 2022 and 2023. LS Power appreciates the proposals and comments from other parties in opening testimony, and responds to a few issues in this Reply Testimony. LS Power respectfully requests the Commission's prompt review and approval of actions to increase resources for 2022 and 2023 to ensure grid reliability.

In Section II of this testimony, I discuss support of the CAISO's proposal to set an additional system RA requirement to meet 8 p.m. demand for 2022 and 2023. Additionally, I reiterate the suggestion to authorize procurement of proxy RA and provide suggested parameters for it to be limited to resources that can be online in 2022 and 2023. Finally, I suggest that, if the

Commission authorizes utility-owned storage at utility properties, it should broaden that consideration to similar non-utility sites.

II. THE COMMISSION SHOULD EXPEDITIOUSLY SUPPORT ACTIONS TO INCREASE PEAK AND NET PEAK SUPPLY RESOURCES IN 2022 AND 2023

A. LS Power Supports Setting a Temporary Additional System Resource Adequacy Requirement to Meet the 8:00 p.m. Demand

LS Power supports CAISO’s proposal for the Commission to set system RA requirements to meet demand and the planning reserve margin at 8:00 p.m., which is a proxy for net demand peak period, for June through October. CAISO’s testimony shows that setting the existing planning reserve margin of 15% to meet net demand peak at 8 p.m. results in a 972-1,951 MW deficiency for May-September 2021 eligible RA showings.¹ The August 2020 heatwave illustrated the challenge of meeting net demand peak period, with both rotating outages occurring after the gross peak demand when solar generation declines as the sun goes down.² Given the increased frequency of extreme weather events including heatwaves and wildfire driven transmission de-rates this deficiency during the net demand peak puts California at risk of further outages and harm to residents. Therefore, LS Power supports setting this RA requirement to meet 8 p.m. demand. However, LS Power suggests this requirement be temporary and limited to 2022 and 2023. The RA proceeding R.19-11-009 is currently evaluating structural changes to the RA program in Track 3B.2 and any longer term changes should be determined in that venue.

¹ Opening Testimony of CAISO, witnesses Jeff Billinton & Abdulrahman Mohammed-Ali. Pages 2-11, Table 3.

² CAISO, CEC, CPUC, “Root Cause Analysis: Mid-August 2020 Extreme Heat Wave.” January 13, 2021. <http://www.caiso.com/Documents/Final-Root-Cause-Analysis-Mid-August-2020-Extreme-Heat-Wave.pdf>

B. The Commission Should Authorize Procurement of Proxy RA Resources as an Emergency Procurement Resource

In LS Power’s Opening Testimony, I proposed that the Commission authorize procurement of proxy RA resources that can be available for dispatch to meet the net peak but that do not meet all of the RA capacity obligations.³ The California Energy Storage Alliance (CESA)⁴, San Diego Gas & Electric (SDG&E)⁵, and California Wind Energy Association (CalWEA)⁶ proposed similar concepts to proxy RA in Opening Testimony as well. Proxy RA can be a cost-effective way to add more resources to meet the target and improve reliability if the Commission identifies a need for resources and particularly if it adopts CAISO’s proposal to apply the planning reserve margin to 8 p.m.

Western Power Trading Forum (WPTF) expressed concern that some of the Energy Division Staff’s proposals for new procurement (e.g. non-RA firm energy products) could in effect create a new construct where energy-only contracts are authorized as a substitute to RA contracts for summer resource adequacy for 2022 and 2023, and that a new class of “reliability” energy products could affect the market.⁷ LS Power understands those concerns and below suggests parameters for the proxy RA resources to ensure the product is a temporary solution to bring resources online quicker and have characteristics as similar to full capacity deliverability status (FCDS) RA product as possible. As stated in section II.A, LS Power agrees that any longer term changes to the RA program should be determined in the RA proceeding R.19-11-009.

LS Power recommends the Commission allow LSEs to contract with Energy-Only (EO) or Partial Capacity Deliverability Status (PCDS) resources only if those resources can be

³ Opening Testimony of LS Power, witness Sandeep Arora, pages 5-6.

⁴ Opening Testimony of CESA, witness Jin Noh, pages 27-34.

⁵ Opening Testimony of SDG&E, witness Habibou Maiga, page 10.

⁶ Opening Testimony of CalWEA, witness Dariush Shirmohammadi, pages 2-7.

⁷ Opening Testimony of WPTF, witness Gregory Klatt, pages 1-2 and 6.

operational by summer 2022 or summer 2023. While the resources should achieve Commercial Online Date (COD) by summer 2023, the LSEs should be encouraged to enter into long-term (e.g. 10+ year) contracts for these resources in order provide the financial security for the resources to be developed. These resources should have the ability to respond to CAISO dispatch instructions at all times including during the net demand peak period, e.g. at 8 p.m. which CAISO suggests as the proxy for net demand peak, when the grid is at greatest risk. Energy storage resources, for example, can reliably be available during the net demand peak period particularly if they are at an interconnection point with complementary resources such as solar. These resources can also be required to have must-offer obligations to be available and bid into CAISO markets just like RA resources, which would effectively make these as valuable for reliability as RA resources. To qualify as proxy RA under this emergency procurement, I recommend that the Commission encourage LSEs to consider projects that have an executed Interconnection Agreement, issued a Notice-to-Proceed to interconnecting utility and have a scheduled COD of June 2023 or sooner.

C. If the Commission Allows Utility-Owned Storage at Utility Properties it Should Broaden Consideration to Similar Non-Utility Sites.

The investor owned utilities (IOUs) supported allowing new utility-owned storage and suggest it may have a higher chance of coming online by the summers of 2022 and 2023.⁸ LS Power is not opposed to utility-owned storage, however LS Power does not think there is an inherent advantage of locating storage on existing utility sites that should lead the Commission to prefer utility-owned storage over independent ownership. If the Commission allows utility-owned storage, it should ensure that these resources are procured through a competitive

⁸ Opening Testimony of PG&E, witnesses Gillian Clegg and Martin Wyspianski, page 9-10; Opening Testimony of SDG&E, witness Jenell McKay, page 3.

solicitation process. While LS Power understands the need to move quickly to ensure reliability, it is also important to maintain competition and that cost-effective resources are procured.

III. CONCLUSION

LS Power appreciates the Commission's consideration of this testimony.

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VERIFICATION

I, Sandeep Arora, prepared the attached “Prepared Phase 2 Reply Testimony of Sandeep Arora on Behalf of LS Power Development, LLC.” The factual material in this testimony is true and correct to the best of my knowledge, and statements of opinion or judgment express my expert opinion and best judgment.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on this 10th day of September, 2021, at Pleasanton, California.

/s/ Sandeep Arora

Sandeep Arora