

Docket: Rulemaking 20-11-003

Exhibit No. _____

Date: September 1, 2021

Witness: Sandeep Arora

**PREPARED PHASE 2 OPENING 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 appreciates the California Public Utilities Commission's (Commission) efforts to investigate actions to increase peak and net peak supply resources in 2022 and 2023. As Governor Newsom stated in his Proclamation of State of Emergency, California is experiencing the impacts of climate change first hand, with increasingly frequent extreme weather events such as heatwaves, droughts and wildfires.¹ These impacts are creating tremendous strain on the state's electricity system, as conditions lead to low hydro power supply, transmission outages due to wildfires, and increased net peak demand from heatwaves. The California Energy Commission's preliminary summer 2022 supply analysis that factors in these climate change

¹ Governor Gavin Newsom, Executive Department State of California, Proclamation of State of Emergency, July 30, 2021. <https://www.gov.ca.gov/wp-content/uploads/2021/07/Energy-Emergency-Proc-7-30-21.pdf>

impacts projects an additional 600 MW to 5,200 MW of resources may be required to ensure electric system reliability for peak and net-peak hours.² This state of emergency and projected supply shortages point to a need for action by the Commission to ensure grid reliability.

In Section II of this testimony, I highlight actions the Commission should take to increase peak and net peak supply resources in 2022 and 2023, and I comment on the Energy Division Staff Concept Paper issued August 16, 2021. In particular, the Commission should ensure that actions to support 2023 supply are included in its final decision and not limit actions to 2022. The Commission could avoid being in a similar situation next year by acting now to streamline the procurement process and accelerate procurement to 2023. Additionally, the Commission should authorize procurement of proxy Resource Adequacy (RA) that can provide energy during net peak demand times in 2022 and/or 2023. I explain the concept of proxy RA in Section II of this testimony. Finally, Load Serving Entities (LSEs) should not face new or increased penalties for delays in projects that were already on short construction timelines.

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

A. The Commission Should Include 2023 Procurement in Scope and Authorize an Accelerated Procurement Approval Process

The Amended Scoping Memo and Ruling for Phase 2 includes in scope issues to ensure there is adequate supply and demand management to achieve electrical system reliability in 2022 and 2023. LS Power emphasizes the need to include 2023 in the Commission's Phase 2 decision. While it will likely be extremely challenging to bring new, unplanned supply or accelerate projects to be online in 2022, it could be possible to accelerate some project timelines to 2023 with timely approval processes. Such a short time to implement a project would be challenging

² California Energy Commission, "Draft Preliminary 2022 Summer Supply Stack Analysis", August 12, 2021. <https://efiling.energy.ca.gov/GetDocument.aspx?tn=239251&DocumentContentId=72701>

in any environment, but given Covid-19, global supply chain issues, and almost all Tier 1 battery suppliers having already sold out of product for Q1 and Q2 2022, projects at any serious scale are all but impossible. Therefore, I recommend the Commission should include 2023 procurement in the scope. The Commission could allow this 2023 procurement to count towards the Integrated Resource Planning (IRP) Mid-Term Reliability procurement authorized in D.21-06-035 if analysis shows additional supply beyond the 11.5 GW between 2023 and 2025 is not needed.

For battery storage projects, which is typically the fastest technology that can be brought online, it generally takes at least 12-14 months after final Commission approval of a procurement advice letter to achieve Commercial Operations Date (COD). A developer typically provides Notice-to-Proceed for construction only after procurement, contracting, and regulatory approvals are complete; and typically it takes at least 12 months after a Notice-to-Proceed to complete construction, testing, commissioning and the CAISO New Resource Implementation process needed to bring a utility scale resource online. While Community Choice Aggregators (CCAs) may not be subject to the Commission approval process, they still have solicitation and local approval processes that take time. The Scoping Memo schedule notes the Phase 2 decision is expected to be issued in November 2021. Working from this timeline, if LSEs ambitiously filed for and received approval the day after the decision, the earliest a new project is likely to come online is December 2022. With a more realistic timeline, the LSE will need time to conduct a solicitation and then file a Tier 3 advice letter, which typically takes 6 months for approval, pushing the earliest online date to June 2023 or later. Therefore, LS Power suggests the Commission also authorize an accelerated approval process for 2023 supply in addition to 2022 supply, such as a Tier 2 advice letter, to give supply a reasonable chance to get online by summer

2023. Unless this is done as part of this proceeding it will likely be too late if acceleration is requested next year for 2023 supply.

The Commission must act now to look further ahead and include 2023 if the state wants to get resources online quicker than currently planned.

B. The Commission Could Encourage and Incentivize, but Not Require, Accelerated Procurement Ordered in IRP Mid-Term Reliability Decisions

The Commission could encourage and/or incentivize LSEs to accelerate procurement ordered in the IRP Mid-Term Reliability decision D.21-06-035 from a 2023 online date to 2022 as proposed in the Staff Concept paper³, but this acceleration should not be required. As discussed above, accelerating projects to come online in summer 2022 will be extremely difficult. While some new supply may come online with these efforts, it is typically extremely difficult to accelerate and bring new capacity on with a less than one year's notice. Given the recent tight supply conditions and extreme weather that the grid has been experiencing, it is widely expected that the shortages will continue for next several years, therefore the Commission should also consider 2023 reliability issues as part of this proceeding. I recommend Commission encourage and/or incentivize acceleration of 2024 and 2025 procurement to 2023. This idea of moving 2024 and 2025 procurement to 2023 is raised in the IRP Preferred System Plan Ruling from August 17, 2021, but should also be considered here given the scope of this proceeding.

Accelerating procurement should not be a requirement, especially for existing contracts. Implementation schedules are already tight, and many long lead-time items (for example global shipping delays for materials or time to build interconnection facilities) are controlled by third parties and currently experiencing delays. Additionally, there is a global battery supply shortage

³ Energy Division Staff Concept Paper, "Proposals for Summer 2022 and 2023 Reliability Enhancements", section C.3, August 16, 2021.

that is expected to impact 2022 supply availability⁴, again an item that is beyond the control of project developers or LSEs. While some developers may be able to come online early, given supply chain limitations and existing contractual arrangements, there should not be a requirement to accelerate timelines.

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

LS Power supports the Staff Concept Paper proposal for potential emergency procurement resources, specifically for firm supply resources that can be available for dispatch to meet the net peak but that do not otherwise meet RA capacity obligations.⁵ Further, LS Power supports the Staff proposal to include new resources that can be depended upon to provide energy dispatch in response to alerts, warnings, and any stage of emergency. LS Power recommends that the Commission develop and encourage LSEs to procure resource under a proxy RA concept as proposed below.

The California Energy Storage Alliance (CESA) and San Diego Gas & Electric (SDG&E) raised a similar idea related to proxy RA earlier in this proceeding, which LS Power supported.⁶ LS Power recommends the Commission allow LSEs to contract with Energy-Only (EO) or Partial Capacity Deliverability Status (PCDS) resources that can be operational by summer 2022 or summer 2023 and if these have the ability to respond to CAISO dispatch instructions at all times including during the critical evening peak hours when reliability of the grid is at greatest risk. These resources can be required to be available and bid into CAISO markets just like RA

⁴ Spector, Julian. “The grid battery boom has triggered a supply shortage.” Canary Media. July 19, 2021. <https://www.canarymedia.com/articles/the-grid-battery-boom-has-triggered-a-supply-shortage/>

⁵ Energy Division Staff Concept Paper, “Proposals for Summer 2022 and 2023 Reliability Enhancements”, section C.4.c.i, August 16, 2021

⁶ Opening Testimony of Jin Noh on behalf of CESA, pp. 43 and 44; Opening Testimony of Cyndee Fang on behalf of SDG&E, pp. 6 and 7.

resources which would allow CAISO to rely on these resources to maintain grid reliability. While these PCDS or EO resources currently may not have Full Capacity Deliverability Status (FCDS), which is required to provide Resource Adequacy, but these resources could be considered “proxy RA” if they operate in the CAISO market consistent with RA must-offer obligations and are able to provide energy during the net peak demand period, which would effectively make these as valuable for reliability as RA resources.

For example, a storage resource located at an interconnection point that also has a large amount of solar interconnected may not be able to attain FCDS without new transmission upgrades because CAISO deliverability assessment modelling that simultaneously dispatches these resources during day time peak hours. In reality this storage resource would generally not face transmission constraints and be fully dispatchable and able to discharge during the evening peak when solar generation declines, therefore CAISO should be able to rely on these resources to deliver energy. 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 the interconnecting utility and have a scheduled COD of June 2023 or sooner. As noted by SDG&E, these energy-only resources can provide immediate incremental benefit of additional energy while providing resource adequacy capacity at a later date.⁷

With or without the Proxy RA concept, the Commission should encourage LSEs to sign long term energy contracts with these resources, especially for deliveries during evening peak hours, which would help make these resources nearly as valuable as RA resources in addressing grid reliability.

⁷ Opening Testimony of Cyndee Fang on behalf of SDG&E, pp. 6-7.

D. The Commission Should Not Introduce Penalties for Delays to D.19-11-016 Procurement or Increase RA Penalties

LS Power does not support the Staff Concept paper proposal to introduce penalties for delays to D.19-11-016 procurement.⁸ The paper notes there are currently no penalties imposed on LSEs for failure to meet online dates with new resources per D.19-11-016. Penalties should not be imposed after contracts are already in place, as parties will have little to no ability to change schedules and terms. LSEs and developers are already acting to ensure supply is online as quickly as possible. Additionally, Tranche 1 and Tranche 2 resources were already under tight timelines to meet these near-term online dates, and this past year have been subject to global shipping delays and staffing challenges due to the pandemic. Any LSE penalties are likely to be passed on to developers as additional pressure or penalties, depending on contract terms. The Commission could chill procurement efforts moving forward if it imposes after-the-fact penalties to projects that are taking considerable risk to move quickly to be online for near-term dates.

LS Power also does not support the Staff Concept proposal to increase RA penalties for 2022⁹. Given the known supply shortages, it would be unfair to increase penalties for inability to secure scarce supply. These additional penalties would also be a burden to ratepayers that are already paying for additional actions to increase grid reliability.

The Staff Concept paper also noted that, as detailed in D.20-12-044, the Commission intends to consider whether to order backstop procurement and allocate the cost of that backstop procurement to one or more LSEs. LS Power is not opposed to this but urges the Commission to

⁸ Energy Division Staff Concept Paper, “Proposals for Summer 2022 and 2023 Reliability Enhancements”, section C.1, August 16, 2021.

⁹ Energy Division Staff Concept Paper, “Proposals for Summer 2022 and 2023 Reliability Enhancements”, section C.2, August 16, 2021.

consider whether this would lead to duplicative procurement and therefore adding costs to ratepayers.

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 Opening 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 1st day of September, 2021, at Pleasanton, California.

/s/ Sandeep Arora

Sandeep Arora