Order Instituting Rulemaking to Establish Policies, Processes, and Rules to Ensure Reliable Electric Service in California in the Event of an Extreme Weather Event in 2021

Opening Testimony of Diamond Generating Corporation

Before the California Public Utilities Commission

Sacramento, California
September 1, 2021
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I. INTRODUCTION

Diamond Generating Corporation (hereinafter referred to as “Diamond” or “Diamond Generating LLC”) submits this written testimony in response to Administrative Law Judge Brian Stevens’ August 16, 2021 E-Mail Ruling Issuing Commission Developed Staff Concepts Proposal Document And Seeking Comment In Opening Testimony Due September 1, 2021.

II. TESTIMONY OF PAUL SHEPARD ON BEHALF OF DIAMOND

A. Description of Party and Witness

My name is Paul Shepard. I am the Chief Operating Officer of Diamond Generating LLC. I have over 20 years of experience in the power industry with a comprehensive background in Asset Management, financial planning & analysis, and EPC managing power projects for Fluor, Duke Energy North America, Constellation Energy and Diamond Generating LLC. I have been the direct asset manager for multiple projects across a diverse technology range including coal, biomass, geothermal, hydro, wind, solar and gas-fired generation. I have performed commercial functions ranging from structuring for production tax credits to leading the construction of a power plant in Alberta Canada. I hold a Master’s and Bachelor’s degree in Chemical Engineering and an MBA from the University of Southern California.

Diamond owns and operates several existing fast starting, firm capacity, peaking facilities. These facilities have strong operational histories, making capacity available to grid operators when needed, such as during system emergencies and during net peak demand periods. As such, these facilities provide necessary reliability insurance to the grid.

Diamond’s assets have performed especially well during the times of greatest system need. One example of importance of our peaking facilities was identified by California’s energy agencies and the California Independent System Operator (“CAISO”) Final Root Cause Analysis of the September reliability events. In response to projected supply-side shortfalls during the
August 16 through 19 extreme heat event, Sentinel Energy Center contributed an additional 45 MW to cover projected supply-side shortfalls beyond what was already committed through the Resource Adequacy program.\(^1\) As discussed below, the Commission should use this proceeding to not only ensure that new capacity is available, but also ensure that existing facilities remain available to grid operators.

**B. Purpose of My Testimony**

The purpose of my testimony is to respond to ALJ Stevens’ August 16, 2021 ruling seeking comments on the Energy Division Staff Concept Paper Proposals for Summer 2022 and 2023 (hereinafter “Concept Paper”). Additionally, the topics of this testimony are consistent with the expanded scope for Phase 2 of this rulemaking provided in the Assigned Commissioner’s Amended Scoping Memo and Ruling for Phase 2, issued August 10, 2021, and which calls for consideration of an increase in peak and net peak supply resources in 2022 and 2023. Herein, I address certain supply-side issues. In particular, Diamond supports regulatory measures that open pathways for thermal resources to transition to integrate decarbonization solutions, such as renewable natural gas (“RNG”) and blending hydrogen (“H\(^2\)”) into the fuel supply.

**C. Existing Natural Gas Generation Resources and Untimely Risk of Retirement Due to Restrictive or Untimely Procurement Directives**

Existing firm capacity resources face risks of retirement prior to their assumed 40-year lifetimes when there is not a clear signal or opportunity for longer term contracting. The existence of this risk and need to protect the CAISO system from retirement of existing firm capacity resources is inherent in the CAISO’s backstop capacity procurement programs. CAISO attempts to address this risk through its reliability must run mechanism, which allows CAISO to

\(^1\) Final Root Cause Analysis Mid-August 2020 Extreme Heat Wave, January 13, 2021, p. 68. Please note that the Sentinel Energy Center is identified as CPV Sentinel Energy Project in the report.
procure retiring or mothballing generating units still needed to ensure compliance with applicable reliability criteria. For example, in 2021, CAISO has denied retirement or mothball requests from generators needed for system-wide reliability.\textsuperscript{2} However, relying on CAISO for procurement from generators is not ideal from a ratepayer perspective, and does not incentivize the project owner/operator to make environmentally beneficial plant modifications, such as efficiency improvements that add capacity to an existing plant with an improved GHG profile.

\textbf{D. The CPUC Should Protect System Reliability While Progressing Toward California’s Carbon Reduction Goals by Encouraging Integration of Hydrogen and Renewable Gas Technologies at Generators Capable of Serving Net Peak Demand.}

As opposed to relying on CAISO’s Reliability Must Run (“RMR”) contracting mechanism, the CPUC should be focused on creating pathways for existing facilities that are crucial to maintaining system reliability to convert their operations to preferred technologies to the greatest extent possible. Consideration of this conversion is currently a topic in the Integrated Resource Planning rulemaking where use of a blend of renewable hydrogen at existing gas plants is a possible capacity solution in the IRP proceeding.\textsuperscript{3} While Diamond does not support the entirety of the ruling’s proposal, we do support the discussion around permitting procurement from natural gas resources using a blend of renewable natural gas or hydrogen. In particular, converting existing facilities to use hydrogen or renewable natural gas provides an immediate opportunity to ensure that capacity from these existing peaking facilities remains available to grid operators through the mid-term, while at the same time reducing their overall emissions profile within the 2022 and 2023 timeframes set forth in the Ruling.


Integration of RNG is also consistent with the CPUC’s work in the pipeline biomethane proceeding, which has declared capture and use of RNG in the public interest.\(^4\) Diamond is ready and willing to take measures and investment in its existing facilities to allow the use of up to 30 percent hydrogen. Based on our discussions with technology providers, 30% hydrogen blending is feasible within the 2022 and 2023 timeframes. Higher levels of hydrogen blending will likely not be available by 2022 and 2023 due to the need for more significant changes to the generating facilities. This type of technology option (i.e., procuring RNG and/or blending 30% hydrogen) should be prioritized in any procurement authorizations that may be made in Phase 2 of this rulemaking. At a minimum, these types of technology solutions should not be excluded from any longer-term procurement authorizations adopted in this phase of the OIR.

### E. Procurement from Existing Power Plant Sites May Avoid Barriers to Deliverability Associated with the Interconnection Process

The expanded scope for Phase 2 includes consideration of how interconnection issues could impact efforts to increase peak and net peak supply resources in 2022 and 2023.\(^5\) In that regard, the CPUC must recognize that capacity deliverability delays due to the lengthy transmission interconnection process, and possibly necessary system upgrades, are avoided or unlikely when utilizing existing interconnections and deliverability capability present at existing generator sites. This is a particularly important consideration for the 2022-2023 timeframe.

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\(^4\) D.20-08-035, Decision Adopting the standard Renewable Gas Interconnection Tariff, p. 9.

\(^5\) Assigned Commissioner’s Amended Scoping Memo and Ruling for Phase 2, Aug. 10, 2021, p. 4.
III. VERIFICATION

I, Paul Shepard, hereby certify under penalty of perjury that this testimony was prepared by me or at my direction, and that this testimony is true and correct, to the best my knowledge.

Signed:  /s/  
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