BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to
Continue Electric Integrated Resource
Planning and Related Procurement
Processes.

Rulemaking 20-05-003
(Filed on May 7, 2020)

REPLY COMMENTS OF THE GREEN HYDROGEN COALITION ON THE
ADMINISTRATIVE LAW JUDGE’S RULING SEEKING FEEDBACK ON MID-TERM
RELIABILITY ANALYSIS AND PROPOSED PROCUREMENT REQUIREMENTS

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April 9, 2021
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In accordance with the Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”), the Green Hydrogen Coalition (“GHC”) hereby submits these reply comments on the Administrative Law Judge’s Ruling Seeking Feedback on Mid-Term Reliability Analysis and Proposed Procurement Requirements (“Ruling”), issued by Administrative Law Judge (“ALJ”) Julie Fitch on February 22, 2021. In an E-Mail Ruling issued by ALJ Fitch on March 12, 2021 that granted the deadline extension for reply comments submission, CESA is timely filing and serving these opening comments on April 9, 2021.

I. INTRODUCTION.

GHC appreciates the opportunity to provide feedback and responses to the opening comments submitted by parties on March 26, 2021. In general, GHC welcomes the Commission’s intention to ensure the continued reliability of California’s electrical grid by directing the procurement necessary to cure identified capacity shortfalls in the coming five years. As California advances towards the decarbonization of the electric sector per Senate Bill (“SB”) 100, GHC considers the Commission should undertake a holistic consideration of the resources and characteristics necessary to expedite this transition and ease the decarbonization of other sectors
adjacent to the energy industry. As such, GHC is pleased with the Staff’s recommendations to (1) require fossil-fueled capacity used to count toward the procurement recommended in the Ruling to burn a percentage of green hydrogen or biomethane; and, (2) set aside 1 gigawatt (“GW”) of the total Mid-Need case incremental procurement target for long duration energy storage (“LDES”) technologies capable of absorbing energy for later dispatch for periods equal to or over eight hours.

Hence, in these reply comments, GHC offers clarifications and recommendations in response to the comments, for and against, the inclusion of green hydrogen within the Ruling. As such, GHC’s reply comments can be summarized as follows:

- Requiring fossil-fueled capacity counted for the purposes of this procurement to burn a percentage of green hydrogen is aligned with California’s policy targets.
- Green hydrogen is a technologically and economically viable means of LDES and should be considered for the compliance of the 1 GW LDES procurement target.

II. REQUIRING FOSSIL-FUELED CAPACITY COUNTED FOR THE PURPOSES OF THIS PROCUREMENT TO BURN A PERCENTAGE OF GREEN HYDROGEN IS ALIGNED WITH CALIFORNIA’S POLICY TARGETS.

In opening comments, several parties offered support for the Staff’s recommendation to require fossil-fueled capacity counted for the purposes of the Ruling’s procurement to burn a fraction of green hydrogen.\(^1\) On the contrary, the Public Advocates Office (“Cal Advocates”) argues that it is premature to require fossil-fuel capacity to burn a percentage of green hydrogen because that technology is under-developed, and the state is currently exploring green hydrogen in research initiatives.\(^2\) Moreover, Cal Advocates argues that green hydrogen is an expensive

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\(^1\) See Shell comments at 6, San Diego Gas & Electric (“SDG&E”) comments at 13-14, Electrochaea comments at 8, and Calpine comments at 11.

\(^2\) Cal Advocates comments at 21.
technology, noting that the California Energy Commission (“CEC”) is conducting a research proposal to evaluate its potential with regards to SB 100 implementation plans. Similarly, Sierra Club and the California Environmental Justice Alliance (“CEJA”) advised against the requirement to burn a fraction of green hydrogen noting that surplus renewable energy is a prerequisite for generating sufficient volumes of truly green hydrogen.

GHC urges the Commission to acknowledge that green hydrogen is commercially produced today from renewable electricity in a cost-effective manner, even for the purposes of electric generation. This trend is only expected to increase, particularly in California given its ambitious climate targets that, according to the Joint Agency Report on SB 100, will result in the deployment of 70 GW of incremental installed solar generation capacity by 2045. Considering that California’s formal long-term planning venues have identified that a resource mix reliant primarily on solar and wind generators for energy sufficiency, it is clear that the State will face a high frequency of periods with substantial renewable overgeneration. This, in fact, already occurs today. According to the California Independent System Operator (“CAISO”), the total amount of wind and solar energy curtailed has increased from 0.1877 terawatt-hours (“TWh”) in 2015, to 1.587 TWh in 2020.

Given the unprecedented availability of renewable energy in periods of low demand, GHC considers the arguments of Cal Advocates, Sierra Club and CEJA are without merit. The current and future availability of renewable generation is adequate to support the usage of green hydrogen,

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3 Ibid at 21-22.
4 Sierra Club and CEJA comments at 31-32.
5 CEC et al., “2021 SB 100 Joint Agency Report: Achieving 100 Percent Clean Electricity in California”, at 75.
lowering its costs, and enabling decarbonization beyond the electric sector. Thus, GHC requests the Commission to adopt Staff’s recommendation to require fossil-fueled capacity counted for the purposes of the Ruling’s procurement to burn a fraction of green hydrogen, as it is aligned with the goals of the State, it is technically feasible, and it is adequate considering the potential for future renewable overgeneration.

III. **GREEN HYDROGEN IS A TECHNOLOGICALLY AND ECONOMICALLY VIABLE MEANS OF LDES AND SHOULD BE CONSIDERED FOR THE COMPLIANCE OF THE 1 GW LDES PROCUREMENT TARGET.**

GHC supports parties that have advocated in favor of explicitly affirming the eligibility of green hydrogen to comply with the LDES procurement target. GHC considers this affirmation is warranted as green hydrogen is able to qualify as an energy storage technology, it can meet the minimum duration requirement of eight hours, and its development is aligned with the growing need for flexible, dispatchable resources that are able to provide resiliency for several days, a growing concern given the increased reliance on public safety power shut-off (“PSPS”) events during wildfire season. Moreover, green hydrogen offers a means for the State to hedge against the risks of adverse weather effects, particularly those related with the probability of an extended low solar irradiance period. Since green hydrogen is the byproduct of the effective utilization of renewable energy that would be otherwise curtailed, this technology offers a pathway to maximize the use of grid resources while enabling the decarbonization of adjacent sector such as transportation and industry. Thus, GHC requests the Commission explicitly affirm the eligibility of green hydrogen for the purposes of LDES procurement targets.

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7 See Bioenergy Association of California (“BAC”) comments at 3, Diamond Generating Corporation comments at 7, EDF Renewables Inc. comments at 3-4, and Environmental Defense Fund (“EDF”) comments at 3-4.
IV. CONCLUSION.

GHC appreciates the opportunity to submit these reply comments to the Ruling and looks forward to working with the Commission and stakeholders in this proceeding.

Respectfully submitted,

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Janice Lin
President
GREEN HYDROGEN COALITION

Date: April 9, 2021