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CHBC Comments to 22-RENEW-01 Incentive Option 3

Please see the submitted letter

Additional submitted attachment is included below.

May 11, 2023

California Energy Commission
Docket Unit, MS-4
715 P Street
Sacramento, CA 95814

RE: Docket No. 22-RENEW-01: Demand Side Grid Support (DSGS) Program Guidelines, Second Edition- Incentive, Option 3: Market-Aware BTM Storage

California Energy Commissioners and Staff,

The California Hydrogen Business Council (CHBC)¹ appreciates the opportunity to provide comment on the Demand Side Grid Support (DSGS) Program Guidelines. With over 140 member companies, agencies, and individuals involved in the business of hydrogen, the CHBC's mission is to support the commercialization of hydrogen in the energy and transportation sectors to achieve California's climate, air quality, and decarbonization goals.

The CHBC enhances market commercialization through effective advocacy and education of the public sectors; is the go-to resource on Hydrogen and Fuel Cell technology for policymakers and policy influencers; and accelerates market growth via networking opportunities and information exchange for the industry and its customers.

During the April 26, 2023, DSGS Program Staff Workshop, specifically in the portion around Incentive Option 3: Market-Aware Behind-the-Meter (BTM) Storage, it was noted that hydrogen was not included as a form of long-duration energy storage. CHBC respectfully submits that this is inconsistent with the legislative intent and policies embraced in AB 1369², which defined "green electrolytic hydrogen as one of these energy storage technologies to be targeted for increased use." The legislature underscored this legislative intent in the amendment to Public Utilities Code Section 400.3 that was adopted in AB1369:

"The Commission, State Air Resources Board, and Energy Commission shall consider green electrolytic hydrogen an eligible form of energy storage and shall consider other potential uses

¹ <https://californiahydrogen.org/>

² https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB1369

of green electrolytic hydrogen in their decarbonization strategies. For purposes of this section, “decarbonization strategies” means actions undertaken to reduce or eliminate emissions of greenhouse gases.”

Additionally, AB 205³ which passed last session, further confirms the legislative intent to support hydrogen as an eligible form of energy storage by amending Section 25640 of the Public Resources Code⁴ to define “hydrogen demonstration projects” as one of the “Eligible project” types as part of a new CEC “Long Duration Energy Storage Program”. This bill requires that the CEC provide financial incentives/grants for projects that have power ratings of at least 1 MW and that:

- Increase the reliability and resiliency of the electrical grid.
- Add electrical grid services when the electrical grid is stressed or anticipating pending energy challenges.
- Increase the use of renewable energy and reduces the impact of climate change on the electrical grid or on connected facilities or communities, including by improving air quality, reducing emissions of greenhouse gases, or providing under-resourced communities with increased reliability and resiliency.
- Lower energy costs and provide employment opportunities for residents of under-resourced communities.
- Interconnect to the electrical grid and is commercially operational by 2028.

Further, there is data which demonstrates the cost-effectiveness of hydrogen as long-term energy storage. Colbertaldo, et al.⁵ examine getting to 100% renewable electricity for California. Based on other cited studies and their modeling, they conclude that a “[Power to Power] P2P storage system based on hydrogen technology may be orders of magnitude less expensive than a [battery energy storage system] BESS system. Even if one assumes a halving of the BESS cost and a doubling of the P2P cost, the hydrogen-based system would still show a 14x lower cost.”

And finally, under GFO-15-305 the CEC awarded several long duration hydrogen projects, including CHBC member DasH2energy’s, project titled: “Demand Based Renewable Hydrogen Power-to-Power Project”. Under this GFO the CEC requested projects, that *“Develop and validate green electrolytic hydrogen storage systems in customer side of the meter applications with an electricity-in and electricity-out capability”*

DasH2energy specifically will demonstrate the following:

- *Time-of-Use Bill Management:*
- *Demand Charge Reduction:*

³ https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202120220AB205

⁴ [Section 25640 of the Public Resources Code](#)

⁵ <https://www.sciencedirect.com/science/article/abs/pii/S0360319918336449>

- *Reliable Backup Power: The project will demonstrate how green hydrogen can be used as a long duration solution and provide reliable power for 24-hours*
- *Distribution Deferral*

For the forgoing reasons, CHBC respectfully requests that that hydrogen be included as a behind-the-meter long-term storage option in Incentive Option 3 of the DSGS Program Guidelines, consistent with the legislative intent that has consistently been expressed in California on this subject.

Sincerely,

/S/ JENNIFER HAMILTON

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