DOCKETED	
Docket Number:	22-ERDD-03
Project Title:	Clean Hydrogen Program
TN #:	248101
Document Title:	San Diego Gas & Electric (SDG&E) Comments - Comments on the Staff Workshop Regarding Implementation of the Clean Hydrogen Program
Description:	N/A
Filer:	System
Organization:	San Diego Gas & Electric (SDG&E)
Submitter Role:	Public
Submission Date:	12/15/2022 9:49:33 AM
Docketed Date:	12/15/2022

Comment Received From: San Diego Gas & Electric (SDG&E)
Submitted On: 12/15/2022
Docket Number: 22-ERDD-03

Comments on the Staff Workshop Regarding Implementation of the Clean Hydrogen Program

Additional submitted attachment is included below.

Victor Cervantes
Director, Hydrogen Business Development

8326 Century Park Ct.
San Diego, CA 92123

Tel: (619) 823-3526
Email: vcervantes@sdge.com

December 15, 2022

California Energy Commission
Docket Unit, MS-4
Docket No. 22-ERDD-03
715 P Street
Sacramento, CA 95814-5513

Submitted via electronic mail to docket@energy.ca.gov

RE: Comments on the December 1, 2022, Staff Workshop Regarding Implementation of the Clean Hydrogen Program (Docket No. 22-ERDD-03)

San Diego Gas & Electric Company (SDG&E) appreciates the opportunity to respond to the Request for Comments from the California Energy Commission (CEC) December 1, 2022, Staff Workshop on the Implementation of the Clean Hydrogen Program. In this submission, SDG&E provides feedback on program scope and requirements specific to the category *Onsite/Distributed Clean Hydrogen Production and Use*.

SDG&E is in the concept stage of forming a consortia of hydrogen early-adopters committed to establishing grid-connected electrolyzers across San Diego County to establish and grow a hydrogen economy in our region. This distributed hydrogen generation model enables more rapid project implementation utilizing existing grid infrastructure, and avoids emissions associated with road transportation of hydrogen. Potential consortia projects span diverse geography and use cases in our territory, including representation of remote, Tribal, and disadvantaged communities. Through information sharing between projects, we envision opportunities for enhanced learning, identification and development of new hydrogen demand, and hydrogen skill and job development.

I. Comments on the Proposed Technical Scope of the Onsite Hydrogen Production and Use Program Component

A. Related to on-site/distributed generation of hydrogen, SDG&E recommends the program focus on electrolytic hydrogen generation and storage at point of use, in a production range of 0.1 to 5 metric tons per day. At this scale, estimated funding

requirements per project are in the range of $4-10M. We agree that to deliver this scale, projects must be, at minimum, at a pilot scale or Technology Readiness Level (TRL) of 6 or higher. However, we also recommend the projects incorporate commercially established or pre-commercial hydrogen generation and storage technologies (TRL 8) because use of known technologies de-risks further implementation and accelerates replicable project opportunities.

B. Regarding energy generation for electrolytic hydrogen production, projects should not be limited to on-site energy generation. The Clean Hydrogen Program should also allow for the use of grid power. **In the near term, the Clean Hydrogen Program should allow for the use of RECs to reduce carbon intensity of generation used to produce hydrogen**. SDG&E agrees the energy generation source should not replace nor result in duplicative offset/renewable energy credits, or other forms of compliance credits. We also agree that projects must demonstrate pathways with lower global warming potential (GWP). However, considering the number of potential hydrogen projects that do not have the capability to build new capacity or have access to on-site renewable generation, we believe additional flexibility will be helpful in developing the hydrogen economy.

Because California frequently has surplus grid electricity available during certain times of day, when renewable generation is highest, the ability to use grid power to support electrolytic hydrogen production is both a technologically efficient and cost-effective way to optimize use of existing resources. Presently, approximately 40% of the electricity delivered by SDG&E is from renewable sources[1] and the mandate as per SB 100 is to achieve 100% clean, RPS-eligible, and carbon-free electricity by 2045. To achieve the lowest possible emissions intensity, SDG&E potential consortia projects will utilize RECs to reduce carbon intensity to the greatest extent possible in the near term, with an understanding that an increasing proportion of our regions' grid electricity will transition to renewable energy. **SDG&E recommends the Clean Hydrogen Program should allow the use of grid electricity, paired with RECs, as a clear option in the program and alternative to onsite generation for electrolytic hydrogen production.**

C. To facilitate alignment with federal funding opportunities and allow stakeholders to maximize project impact and benefit by leveraging awards, the Clean Hydrogen Program scope should align with the approach set forth by the US Department of Energy by evaluating clean hydrogen based upon its carbon intensity. Akin to the requirements of the hydrogen hubs,[2] the Clean Hydrogen Program should be

[1] https://www.sdge.com/more-information/environment/americas-best-energy-company#
[2] https://www.energy.gov/oced/regional-clean-hydrogen-hubs

required to demonstrably aid achievement of reduced carbon intensity by mitigating emissions across the supply chain to the greatest extent possible.

II. Comments on the Proposed Requirements and Considerations

SDG&E offers the following recommendations for the CEC's consideration in scoping program requirements and evaluation criteria that align with the state policy objective of promoting a clean, equitable, and resilient energy future.

A. **SDG&E agrees the primary evaluation criteria should include technology readiness, levelized cost of hydrogen, and reduction in lifecycle emissions.** This approach is consistent with one of the primary intended outcomes of the Clean Hydrogen Program; to de-risk and accelerate the adoption of hydrogen at larger scale.

B. **In support of providing community benefits and addressing equity, the CEC should prioritize projects which serve disadvantaged communities.** SDG&E recommends mapping each candidate project within the Federal Energy Justice Disadvantaged Communities Reporter[3] burden indicator and CalEPA SB 535 map[4] as a gauge of the potential impact of the project to the community.

C. **Projects which incorporate resiliency benefits, such as hydrogen-based back up or critical power, should also be considered in the evaluation.** Although California's electricity grid is becoming increasingly decarbonized, back-up generators and critical power are not subject to the same clean transition. California is experiencing record electricity demand to support the electrification of buildings and transportation. At times, this presents challenges for the electric grid – and in these instances, back-up generators play a critical role. Using hydrogen-based back-up generation can help reduce emissions associated with these generators, which typically rely on diesel fuel. Further, hydrogen acts as a long duration energy storage source in the event of a potentially prolonged outage, for example related to a Public Safety Power Shutoff.

D. **The scoring criteria should consider projects that deliver a measurable community benefits plan including local hydrogen skill development and job retention/creation.**

III. Conclusion

Thank you for your consideration of SDG&E's comments. We welcome further discussion of our comments and believe that our project will deliver high value to the Clean Hydrogen Program.

[3] https://energyjustice.egs.anl.gov/
[4] https://oehha.ca.gov/calenviroscreen/sb535

Please do not hesitate to contact me or Sarah Taheri at staheri@sdge.com or (916) 708-7409 should you have any questions or wish to discuss the above recommendations.

Sincerely,

/s/ Victor Cervantes

Victor Cervantes
Director, Hydrogen Business Development