

**DOCKETED**

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## **CEERT Written Comments on IEPR Hydrogen Workshop**

*Additional submitted attachment is included below.*



August 11, 2021

California Energy Commission  
Docket No. 21-IEPR-05

**Written Comments of The Center for Energy Efficiency and Renewable Technologies (CEERT) on the Integrated Energy Policy Report (IEPR) Commissioner Workshop on Hydrogen to Support California's Clean Energy Transition**

The Center for Energy Efficiency and Renewable Technology (CEERT) respectfully submits these written comments to better understand the environmental footprint of various forms of hydrogen. CEERT thanks the California Energy Commission (CEC), the California State Senate Select Committee on Hydrogen Energy,<sup>1</sup> and other bodies for creating dialogue about the future of hydrogen in California. As reducing carbon emissions becomes a more pressing issue, the importance of expanding renewable and carbon neutral energy sources is critical. CEERT encourages the state to better understand the environmental footprint of various forms of hydrogen, as this resource will be essential to California's economy-wide decarbonization.

During the CEC's IEPR Workshop on Hydrogen to Support California's Clean Energy Transition, CEERT found it useful to see presentations on current hydrogen energy projects that have been constructed such as the German wind farms, and how they might be applied here in California with its tremendous offshore wind capacity. While initial analysis and reports on hydrogen are promising, CEERT believes there are a few prominent issues that require resolving before hydrogen can be considered fully market ready. More attention to reliability of hydrogen fueling stations is necessary as well as more distributed production of hydrogen. While more stations will help improve infrastructure, making current stations operate with high reliability should be a priority. Second, CEERT has concerns about the potential of hydrogen leakage in production and transport. More monitoring and testing to prevent leakage is needed, as hydrogen is highly flammable and is a short-lived climate pollutant, CEERT is cautious. Additionally, CEERT cautions about the practice of blending hydrogen with natural

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<sup>1</sup>The Select Committee held an informational hearing providing an Overview of the State and the Progress of the Hydrogen Industry on July 27<sup>th</sup>, 2021.

gas in existing pipelines. CEERT believes better data and assessment of risk is needed.

The CEC, in consultation with the California Air Resources Board (CARB), should develop and publish a life cycle greenhouse gas (GHG) and criteria pollutant assessment for each of the major feedstocks for hydrogen (steam reformation of natural gas, electrolytic hydrogen from grid electricity or electrolytic hydrogen from direct biogas, and electrolytic hydrogen from renewable electricity). The CEC should also examine the basis of claims of ‘renewable hydrogen’, e.g., through purchase of credits from out of state methane recovery. Additionally, the CEC, in consultation with CARB, should develop and publish an assessment of the most important and beneficial end uses of hydrogen, and the availability, cost, and emissions of alternatives, including multi day and seasonal energy storage, oil refining, ammonia and fertilizer production, backup power generation, and light, medium, and heavy-duty transport. Also, the CEC should develop a reporting and tracking methodology of hydrogen energy to monitor new and existing hydrogen plants, that displays the level of hydrogen being produced at each plant to provide transparency and verification of claims of ‘green hydrogen’ and requires disclosure of the source of hydrogen. This allows companies and consumers to be aware of the emissions, footprint, and impacts of the hydrogen which they consume. CEERT also recommends that the CEC develop and support incentives to produce distributed green hydrogen from renewable electricity and develop and propose targets for increasing the share of renewable hydrogen utilized in California, which will help advance the future of hydrogen in the state.

Sincerely,

A handwritten signature in black ink, appearing to read "V. John White". The signature is fluid and cursive, with the first name "V. John" and last name "White" clearly distinguishable.

V. John White  
Executive Director

Center for Energy Efficiency and Renewable Technologies

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