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Comment Received From: Michael Colvin
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Comments of Environmental Defense Fund

Additional submitted attachment is included below.



August 17, 2022

Comments of Environmental Defense Fund on Hydrogen Leakage

On behalf of Environmental Defense Fund (EDF), I respectfully submit the following comments on hydrogen leakage to the Energy Commission's docket 22-IEPR-05 on emerging topics.

EDF is one of the world's leading international non-governmental organizations and creates transformational solutions to the most serious environmental problems. To do so, EDF links science, economics, law, and innovative private-sector partnerships. With over 3 million members and activists and offices in the United States, China, Mexico, and the European Union, EDF's scientists, economists, attorneys, and policy advocates are working in 23 countries around the world to turn our solutions into action. EDF has over 500,000 members and activists in California.

EDF has recently published a peer reviewed study in the journal Atmospheric Chemistry and Physics on hydrogen leakage. I attach the paper to these comments. Hydrogen, when leaked into the atmosphere, acts as an indirect greenhouse gas. As a result, hydrogen is not a completely carbon neutral fuel. As the smallest molecule possible, **hydrogen is a leak-prone gas which itself has a potent warming effect that is widely overlooked.** Based on the latest science, the actual warming power of hydrogen in the atmosphere is two- to six times higher than standard estimates (depending on the timeframe).

EDF encourages the state to require more hydrogen leakage data gathering and monitoring. EDF notes that making hydrogen itself is an energy intensive endeavor. It will be an expensive fuel; California should prioritize the fuel for hard to decarbonize parts of the economy such as cement and steel manufacturing where there are no viable other decarbonization options. The Energy Commission will play an important role to ensure that this more expensive product is integrated into our energy future with customer protections and safeguards against environmental harm.

Sincerely,

A handwritten signature in black ink, appearing to read 'Michael Colvin', written over a light blue horizontal line.

Michael Colvin
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