



# UNIVERSITY OF HAWAII SYSTEM

## Legislative Testimony

---

Testimony Presented Before the  
House Committee on Finance  
Tuesday, April 5, 2022 at 2:30 p.m.

By  
Richard Rocheleau, Director  
Hawai'i Natural Energy Institute  
And  
Michael Bruno, PhD  
Provost  
University of Hawai'i at Mānoa

SB 2283 SD2 HD1 – RELATING TO THE HAWAII HYDROGEN STRATEGIC PLAN

Chair Luke, Vice Chair Yamashita, and members of the committee:

SB 2283 SD2 HD1 requires the Hawai'i Natural Energy Institute (HNEI) to conduct a study to examine the potential for the production and use of renewable hydrogen in the State and the potential role of renewable hydrogen in achieving a local, affordable, reliable and decarbonized energy system and economy.

This bill directs that the Hawai'i Natural Energy Institute shall, as appropriate, consult with the Department of Business, Economic Development, and Tourism; Hawai'i State Energy Office; Public Utilities Commission; or any other applicable state or county agency; and shall further consult with electric and gas utilities and other industry stakeholders.

HNEI strongly **supports the intent** of this bill. The study results, when used for informing other integrated planning efforts as summarized in Section 1(11 b) *“The results of the study shall be used to inform energy planning, which may include a Hawaii hydrogen strategic plan, decarbonization efforts, and other ongoing work being undertaken by the Hawaii state energy office”* will provide critical information needed to fully evaluate the potential for hydrogen to contribute to an affordable, reliable, decarbonized energy system and economy for Hawai'i.

However, HNEI is concerned that some aspects of the requested study cannot be adequately addressed as a stand-alone study but rather needs to be included in the more complete integrated energy analysis efforts and respectfully offers the following comments.

Section 1 (5) asks HNEI to consider *“Costs, benefits, and impacts compared to other fuel sources”*. We believe that the costs, benefits and impacts compared to other fuel sources can only be developed in the context of the specific uses of the hydrogen in an

integrated energy system. We respectfully suggest that this line be deleted or amended to ask HNEI to consider “the expected range of costs from different production methods and to identify potential benefits and impacts for consideration in ongoing integrated energy analysis efforts”

Similarly, Section 1 (8) asks HNEI to consider “Use cases in which hydrogen would provide the most benefit, including considering power supply and transportation sectors” The benefits of various possible use cases cannot be determined absent information on the use of competing technologies. We respectfully suggest that this line be deleted or amended to ask HNEI to consider “a range of potential use cases including both power supply and transportation for consideration in ongoing and future integrated energy analysis efforts”

Section 1 (c) states that “renewable hydrogen” means hydrogen produced entirely from renewable sources that have lifecycle emissions of no more than fifty grams of carbon dioxide per kilowatt hour. While agreeing fully with the need to minimize GHG emissions we believe that this definition is too restrictive to allow a full assessment of the renewable options that may be available to decarbonize the State’s energy system and recommend this section be amended to “renewable hydrogen” means hydrogen produced entirely from renewable sources as defined in HRS 269-91. ~~that have lifecycle emissions of no more than fifty grams of carbon dioxide per kilowatt hour.~~

Thank you for the opportunity to submit testimony on SB 2283 SD2 HD1.