

September x, 2021

Bruce Appelgate, PhD
Associate Director
Scripps Institution of Oceanography
University of California San Diego
9500 Gilman Drive
La Jolla, CA 92093

Subject: Letter of Support for Scripps Hydrogen-Hybrid Coastal Research Vessel Project.

Dear Dr. Appelgate,

The Portside Community Steering Committee (CSC) supports funding for UC San Diego's Scripps Institution of Oceanography (Scripps) hydrogen-hybrid coastal research vessel project. This vessel will advance the CSC's efforts to reduce criteria pollutants and greenhouse gas emissions from ships, while demonstrating the viability of clean, nonpolluting zero-emission shipboard power systems to the maritime industry. The vessel will feature an innovative hybrid propulsion system that will use hydrogen fuel cells to enable true zero-emission operations for 75 percent of the ship's expeditions, supplemented by a conventional diesel-electric power plant when additional range is required offshore.

Bold and transformational solutions such as this are urgently needed to improve the health of the Portside Community by reducing and eliminating emissions from port-related activities. The CSC led the development of the Community Emissions Reduction Plan (CERP), which contains detailed information and strategies intended to reduce community exposure to air pollution emissions. The recently approved CERP notes NO_x emissions in the Portside Community are driven by off-road mobile sources, with the major contributors being ocean-going vessels and commercial harbor craft. The Scripps hydrogen-hybrid vessel supports CERP implementation by advancing the utilization of zero-emission technologies in port operations, while demonstrating to the global maritime industry an operationally viable pathway for decarbonizing ocean-going vessels.

As federal and state governments seek to expand access to hydrogen fuel infrastructure, the CSC supports strategies to establish the broad availability and adoption of green hydrogen (hydrogen derived from low-carbon sources) for maritime hydrogen fuel systems. The CSC supports measures to defray the cost of green hydrogen used on ships to effectively compete with lower-cost diesel fuel. Access to affordable green hydrogen will incentivize and accelerate the expanded use of hydrogen fuel technology within the maritime industry, supporting federal and state carbon reduction goals and enabling a zero-carbon well-to-wake energy pathway.

The CSC understands Scripps is in the early phase of project development. The following timeline provided by Scripps gives a high-level overview of forthcoming project milestones:

- 2021: Establishment of project office and kickoff
- 2022: Development of detailed vessel engineering and design
- 2023: Final engineering review and construction preparation
- 2024: Keel laying and construction
- 2025: Christening, sea trials, and delivery to Nimitz Marine Facility
- 2026: Commissioning and commencement of science operations

Once in San Diego, we understand the hydrogen-hybrid coastal research vessel will have significant localized benefits. Hydrogen fuel cell power enables zero emissions at the point-of-use, meaning this ship will not exhaust any criteria pollutants or CO₂ into San Diego's air. Unlike hydrocarbon fuels, hydrogen fuel poses no risk of oil spills -- if spilled, liquid hydrogen cleans itself up in less than 30 seconds and heads towards space at 30 knots as a nontoxic, non-greenhouse gas. Vessel operations involving hydrogen fuel cells are also much quieter than diesel engines, resulting in fewer noise impacts to port-adjacent neighborhoods. By establishing this vessel in our bay, we recognize that San Diego will be at the forefront of demonstrating to the global maritime community that clean, quiet, nonpolluting zero-emission ocean-going vessels are operationally feasible, which is an important first step in decarbonizing the maritime industry.

The CSC is committed to fostering a thriving and sustainable seaport that protects the health and wellbeing of Portside Community residents. We appreciate the opportunity to express our support for the Scripps hydrogen-hybrid coastal research vessel and look forward to the opportunity to collaborate on this important project.

Sincerely,

Portside Community Steering Committee