NATIONAL HYDROPOWER ASSOCIATION

MARINE ENERGY: FY 2024 FEDERAL RESEARCH, DEVELOPMENT, AND DEPLOYMENT FUNDING

SUPPORT $212 MILLION FOR THE U.S. DEPARTMENT OF ENERGY WATER POWER PROGRAM

MARINE ENERGY WILL HELP ACHIEVE CARBON REDUCTION GOALS

Marine Energy Benefits: Marine energy (power from currents, tides, waves, conduits, ocean thermal, and salinity gradients) is a widespread and consistent renewable resource that has great potential to help decarbonize the domestic energy portfolio. Marine energy's benefits include proximity to demand loads and population centers, relative predictability, energy density, generating profiles, reliability, and resiliency.

Marine Energy's Untapped Potential: The U.S. has significant underutilized marine energy resources. The National Renewable Energy Laboratory has calculated the total marine energy resource in the fifty states to be 2,300 terawatt hours per year (56% of all U.S. electricity generated in 2021). Utilizing just one-tenth of these resources would be equal to 5.6% of all U.S. electricity generated that year, twice as much as all 2021 solar production (2.8%) and equal to powering 22 million homes.

Opportunity for U.S. Leadership: Marine energy technologies are currently undergoing rapid innovation, with a number of systems at or nearing commercialization. Examples include the full range of applications and power needs, from remote offshore power and other Blue Economy markets, off-grid communities and native lands, to mainland grid-connection. Unfortunately, the U.S. has fallen behind the leading global competitors with several systems at the point of market entry and commercial scaling in grid-connected farms. Without increasing support for private sector led innovation and early commercial activities, the U.S. will become an importer, not exporter, of these technologies.

FEDERAL FUNDING RECOMMENDATIONS FOR COMMERCIALIZATION SUPPORT

Deployment Targets: NHA urges Congress and the Biden Administration to adopt the recommendations included in NHA's 2021 Marine Energy Commercialization Strategy. A critical first step is setting deployment targets of 500 MW by 2030 and 1 GW by 2035 which will help spark the domestic sector. Significant and sustained federal technology RD&D support is necessary to accelerate demonstrations and deployments, reduce costs, and increase adoption along a similar trajectory of more mature renewables.

DOE Water Power Funding Recommendations: NHA supports the FY 2024 bipartisan authorization level of $137 million for marine energy. With multiple domestic marine energy technologies having reached a higher TRL with past assistance from DOE, it is critical to now focus on consistent, larger funding opportunities that support the optimization, commercialization, and scale-up of these more mature systems. Other funding recommendations include increased support for design advancement, testing, and validation of systems, subsystems, and components; testing infrastructure; the TEAMER program; foundational research and operations at the National Marine Energy Centers; and, the University Marine Energy Research Community.