

Division 6000 Accomplishments

Division 6000 | Center 6100 Wave Energy Converters

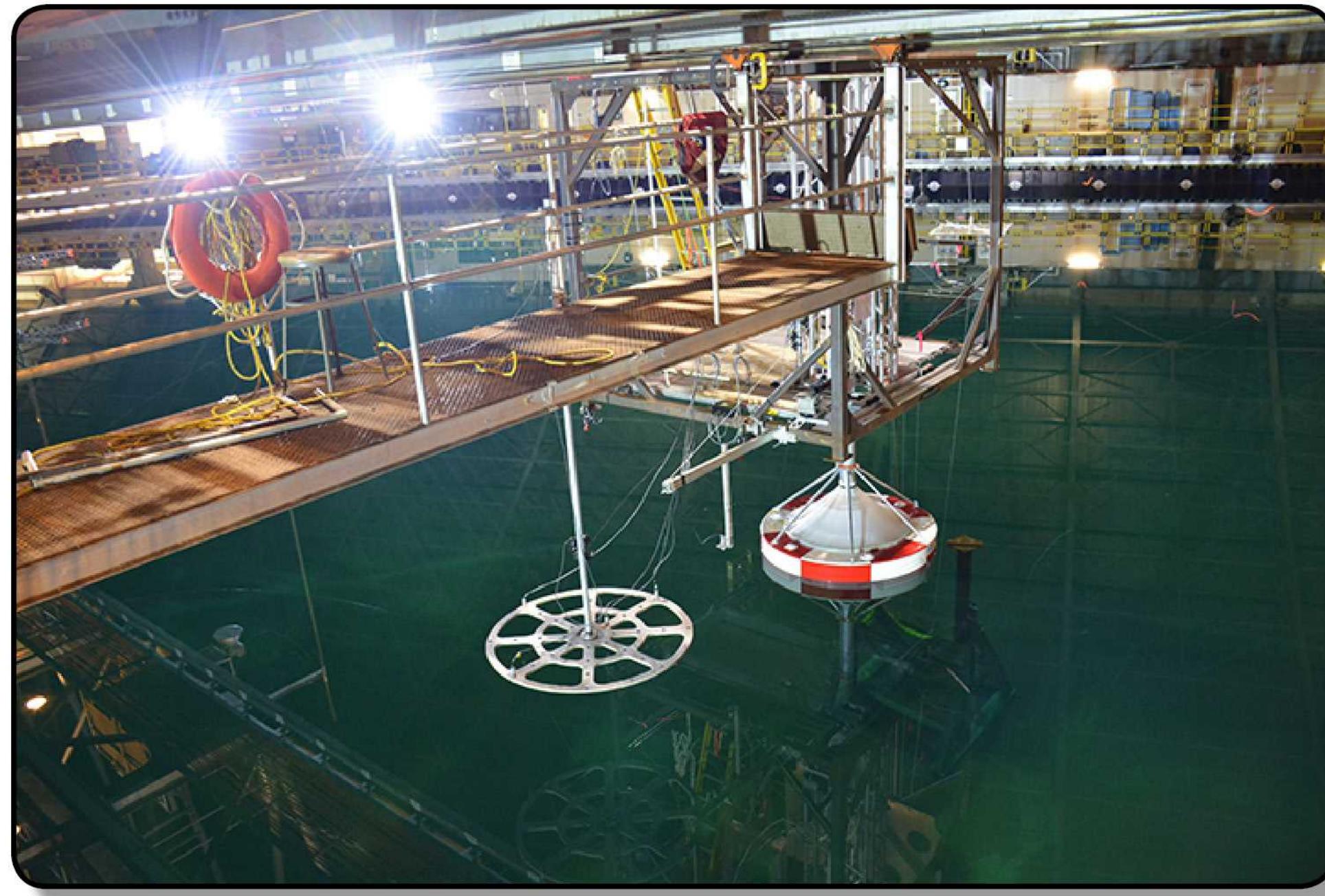
Wave energy converters (WECs) harness ocean wave motion to generate clean power. To increase WEC efficiency, Sandia is developing and validating control strategies. Sandia successfully tested its 1/17-scale advanced WEC system at the U.S. Navy's Carderock maneuvering and seakeeping (MASK) facility, a simulated open-ocean environment. By studying scale models and simulating the open ocean environment, Sandia researchers learn how to design better controls to optimize energy generation. Some preliminary studies have shown that advanced control of WECs could more than double the energy obtained with current approaches.



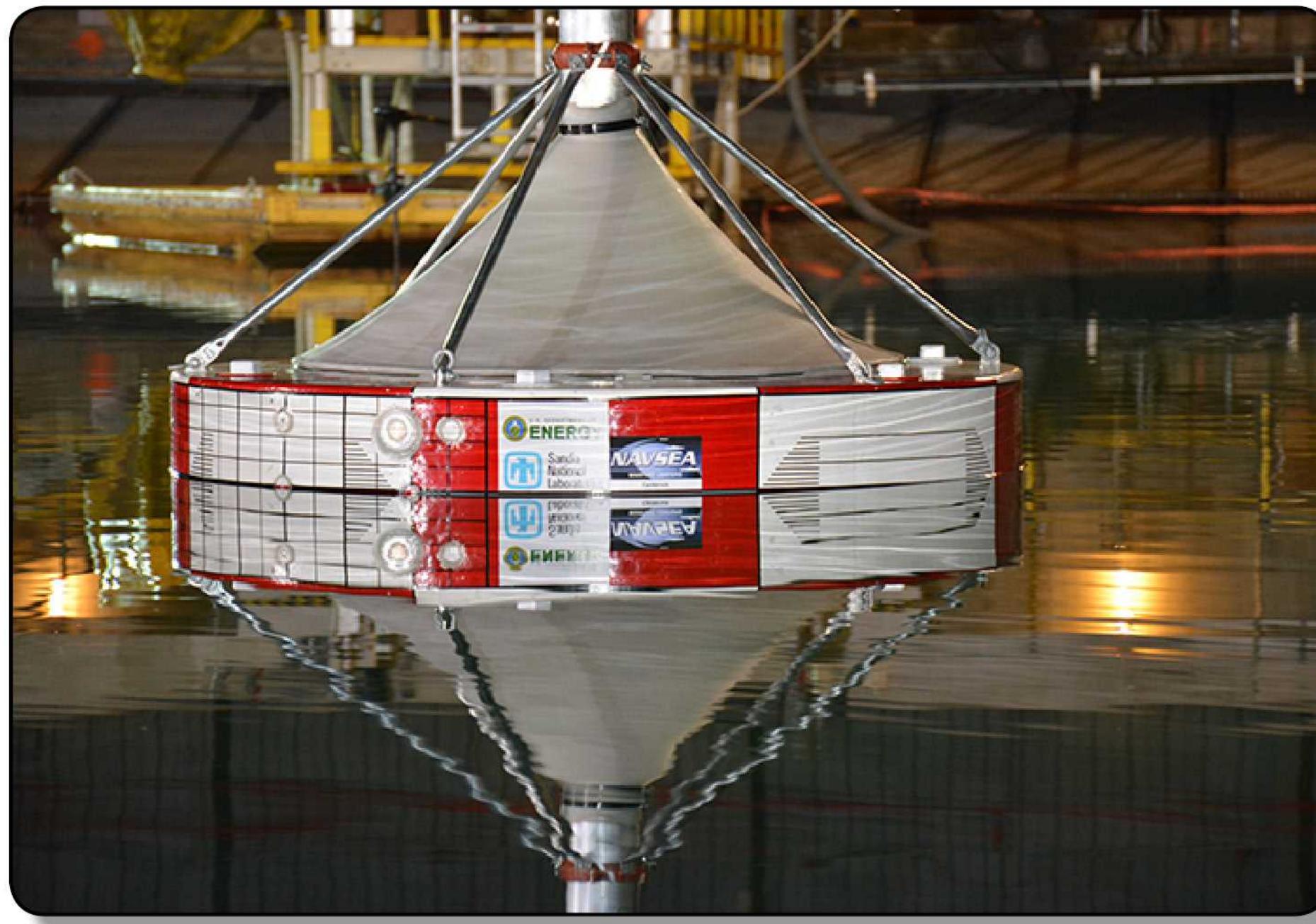
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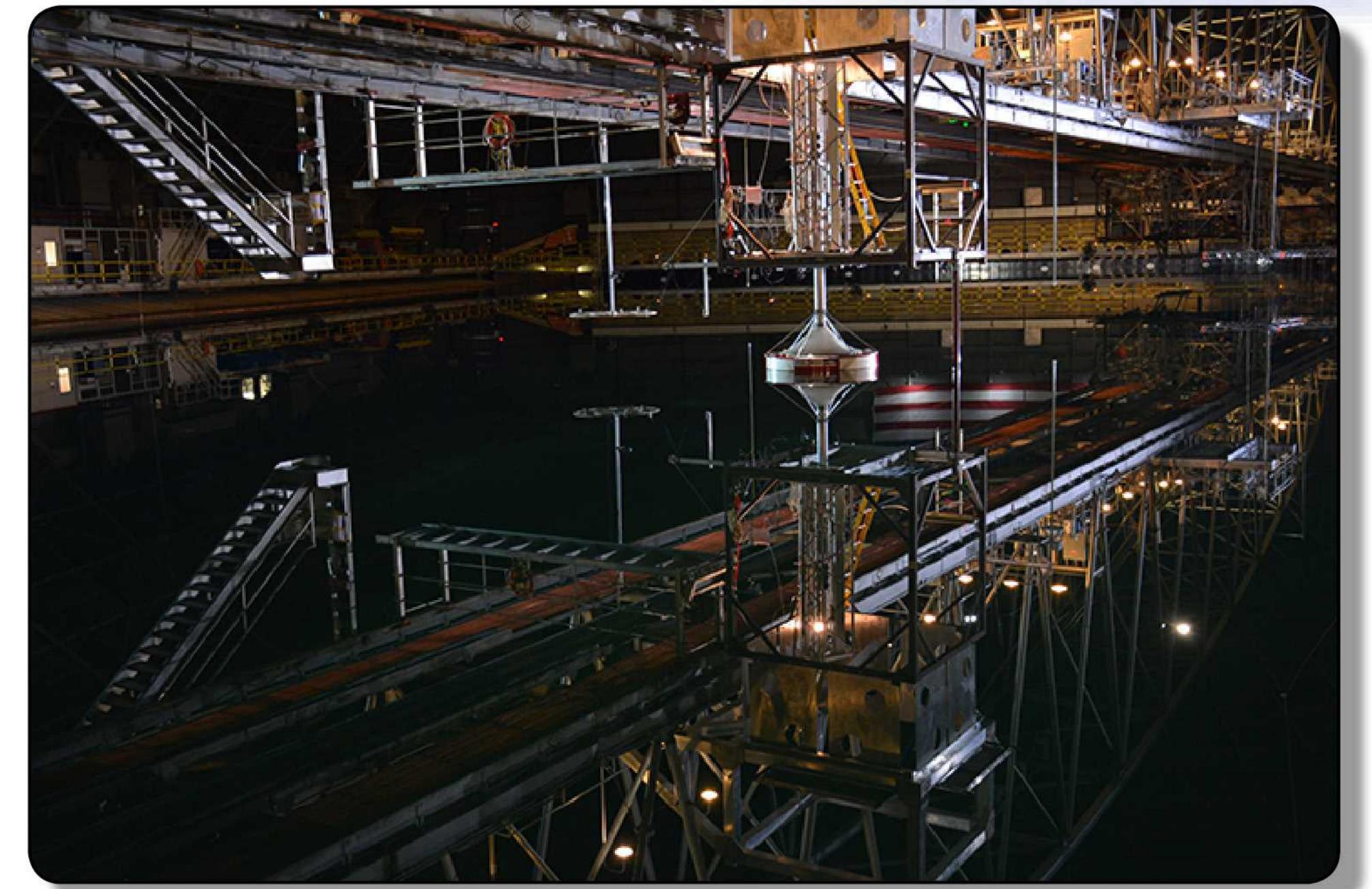
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Wave energy converter (WEC) installed in Carderock's MASK basin; array of wave sensors is visible in the foreground.



Wave energy converter (WEC) float shown from side; pressure transducer ports are visible on the left side of the hull.



The MASK basin was built in 1962 and is one of the world's premier wave tank facilities. The 6-meter-deep tank measures 106 x 76 meters.