BOARD MEETING DATE: October 3, 2025 AGENDA NO. 4

PROPOSAL: Execute Contracts to Demonstrate Plug-In Hybrid Tugboat and Install Supporting Charging Infrastructure

SYNOPSIS: In June 2023, the Board recognized U.S. EPA FY22 Targeted Airshed Grant award of $10,000,000 including administrative funds of $500,000, to demonstrate a plug-in hybrid tugboat and develop innovative supporting charging infrastructure. The Board also approved transferring up to $1.5 million from the Air Quality Investment Program Fund (27) - Rule 1111 into Fund (83) for the cost-share of the plug-in tugboat project and executing a contract with Crowley Maritime Corporation (Crowley). Since then, Crowley withdrew from the project and South Coast AQMD staff subsequently received a proposal from Baydelta Maritime, LLC (Baydelta) and Arc Boat Company Inc (Arc). Baydelta is proposing to develop plug-in hybrid tugboats and Arc will provide the supporting marine charging system. These actions are contingent upon U.S. EPA's final awards, to execute contracts with Baydelta and Arc for a total of $11 million from the Clean Shipping Technology Demonstration Special Revenue Fund (83) for the plug-in hybrid tugboat and the supporting infrastructure project.

COMMITTEE: Technology; September 19, 2025; Recommended for Approval

RECOMMENDED ACTION:
Authorize the Executive Officer to execute the following contracts for a total of $11 million from the Clean Shipping Technology Demonstration Special Revenue Fund (83), contingent upon U.S. EPA's final awards:

a. Baydelta Maritime, LLC (Baydelta) for the plug-in hybrid tugboat conversion project for up to $7,020,743; and
b. Arc Boat Company Inc. (Arc) for the installation of a marine vessel rapid charging system for up to $3,979,257.

Background
Tugboats are one of the largest emitters in the commercial harbor craft category. Reducing emissions from the marine sector requires the development of new technologies to transition to cleaner engine technologies. Tugboats typically operate on short routes but experience significant idling times and rely on high horsepower diesel engines. The use of electric battery powered propulsion systems can deliver instantaneous and efficient power for a wide range of tugboat operations. With California's newly amended commercial harbor craft regulation, the marine industry is seeking feasible emission reduction technologies and a pathway to decarbonize. A zero-emission technology solution for tugboats will significantly reduce the emissions from this category.

In June 2023, the Board approved the execution of a contract with Crowley Maritime Corporation (Crowley) to demonstrate a plug-in hybrid tugboat and innovative supporting charging infrastructure. However, Crowley withdrew from the project due to business decisions. An alternative proposal was then received from Baydelta to convert an existing Tier 2 or Tier 3 diesel -powered port ship assist/escort tugboat into a zero-emission capable, plug-in ready battery electric hybrid tugboat and Arc to install a 4.8MW marine vessel rapid charging system including megapacks, a transformer, and charger cabinets at Berth 60 (AltaSea) in the Port of Los Angeles.

Proposal
Baydelta will convert a Tier 3 or lower diesel-powered port ship assist/escort tugboat to a zero-emission capable, plug-in hybrid tugboat. This tugboat will be a fully mission-capable ship assist/escort tugboat that is capable of up to 40 percent zero-emissions operation. The proposed tugboat will also be outfitted with the cleanest available Tier 4 Final main engines and battery technology, resulting in improved air quality for impacted communities around the ports, while still meeting the required bollard pull and safety standards for ship-assist/escort tugboats in the Port complex. Arc will design and install a 4.8MW marine vessel rapid charging system at AltaSea in the Port of Los Angeles. The charging solutions will facilitate maritime industry operators who are voluntarily building and deploying zero-emission capable technology, including Baydelta, in efforts to reduce port related emissions. The charging site will primarily serve the tugboats and tow industry whose operations span both the Port of Los Angeles and Port of Long Beach.

Sole Source Justification
Section VIII.B.3 of the Procurement Policy and Procedure identifies four major provisions under which contracts funded in whole or in part with federal funds may be made as a sole source award. The request for sole source awards for the Baydelta and Arc contracts is made under provision B.3.c, which states the awarding federal agency or pass-through entity expressly authorizes non-competitive proposals in response to a written request from the non-federal entity.

Benefits to South Coast AQMD
The South Coast Air Basin is classified as an "extreme" nonattainment area for ozone under the federal Clean Air Act. Projects to support the development and demonstration of a plug-in hybrid tugboat and the development of innovative supporting charging infrastructure are included in the Technology Advancement Office Clean Fuel Program 2024 Plan Update under the Category "Develop and Demonstrate Medium-Duty and Heavy-Duty On-Road and Off-Road Battery Electric and Hybrid Vehicles and Equipment." Successful demonstration of these projects helps reduce ozone and PM2.5 air pollution. The plug-in hybrid tugboat will reduce 80 tons of NOx emissions per year and 1.5 tons of PM2.5 emissions per year, respectively.

Resource Impacts
The contracts with Baydelta and Arc will not exceed $11 million from the Clean Shipping Technology Demonstration Special Revenue Fund (83), which consists of $10 million, including $500,000 in administrative funds from the EPA and $1.5 million of South Coast AQMD cost-share. Sufficient funds are available in Fund 83 for our cost share. The total project cost is $38.1 million, with funding sources as shown below:

Funding Source	Funding Amount	Percent
U.S. EPA FY 2022-23 Targeted Airshed Grant	$10,000,000*	26
San Pedro Bay Ports (cost-share)	$12,940,000	34
Baydelta & Arc (cost-share)	$13,640,639	36
South Coast AQMD (cost-share)	$1,500,000	4
Total	**$38,080,639**	**100**

*Pending EPA Final Approval