

AGREEMENT NO. _____

MEMORANDUM OF UNDERSTANDING BETWEEN
THE CITY OF LOS ANGELES AND THE CITY OF LONG BEACH
FOR THE CARB LOS ANGELES MARINE EMISSION REDUCTION PROJECT

This Memorandum of Understanding (“MOU”) is made and entered into by and between the CITY OF LOS ANGELES, a municipal corporation, acting by and through its Board of Harbor Commissioners (“POLA”) and the CITY OF LONG BEACH, a municipal corporation, acting by and through its Board of Harbor Commissioners (“POLB”). The aforementioned parties to this MOU shall be referred to individually herein as a “Party” and collectively herein as “the Parties.”

WHEREAS, the California Air Resources Board (“CARB”) awarded the City of Los Angeles Harbor Department (“Department” or “Port”) \$30,980,376 under its Fiscal Years 2021-22 and 2022-23 Advanced Technology Demonstration and Pilot Projects Solicitation, Grant Number G22-ATDP-03 (“Grant Agreement”) for the Department to implement the Los Angeles Marine Emission Reduction Project (“LA MER Project” or “Project”) as set forth in the Department’s CARB Grant Application (“Grant Application”);

WHEREAS, POLA included with the Grant Application a letter of support from POLB staff detailing POLB’s proposed contribution of staff expertise and financial support in evaluating and showcasing the technology to be developed under the Project (“Support Letter”);

WHEREAS, this MOU affirms POLB’s contribution to the Project as set forth in the Support Letter and its agreement to comply with applicable terms and conditions of the CARB Grant Agreement;

WHEREAS, POLA agrees to provide financial support and administrative management services for the Project and comply with the terms and conditions of the CARB Grant Agreement.

NOW, THEREFORE, IT IS MUTUALLY AGREED AS FOLLOWS:

1. PARTICIPATION REQUIREMENTS FOR THE PROJECT

A. POLB Requirements and Obligations

i. POLB will contribute staff expertise as POLA may request from time to time to assist with Project technology evaluation as set forth in Task 4 of the Grant Agreement.

ii. POLB will reimburse POLA for Grant Agreement Task 4 expenditures as set forth in more detail in Section 3 herein.

HD-25-0171

iii. POLB will assist POLA in completing Grant Agreement Task 6 by engaging Project Partner Harbor Breeze Cruises for harbor tours to the extent required to expend the funds set forth in Section 3 herein and provide staff assistance as necessary to complete any reports required for Task 6.

B. POLA Requirements and Obligations

i. POLA will perform the administrative management services and tasks as assigned to POLA as set forth in the Grant Agreement.

ii. POLA will engage a consultant for the performance of Grant Agreement Task 4 and be responsible for such contract administration. POLA shall pay all monies due to the consultant for work performed and thereafter request reimbursement from POLB pursuant to the provisions of Section 6 herein.

iii. POLA will make expenditures for any Project match funds as set forth and assigned to POLA in the Grant Agreement.

C. Mutual Requirements and Obligations of the Parties

i. The LA MER Project Grant Application is attached hereto as Exhibit A and is made a part of this MOU. The CARB Grant Agreement is attached hereto as Exhibit B and is made a part of this MOU. The Parties shall comply with all terms, conditions, and "Pass-Through Obligations" set forth in the Grant Agreement. The Parties agree that CARB shall have the authority to make any determination as to the applicability of Grant Agreement terms to either Party.

ii. In the event of any conflict between the terms of the CARB Grant Agreement and this MOU, the terms of the CARB Grant Agreement shall prevail.

iii. In the event that CARB and POLA amend the Grant Agreement, the Parties agree to enter into an amendment to this MOU as needed for the MOU to comply with the Grant Agreement.

iv. The Parties shall be subject to, and perform the Project in accordance with, the terms and conditions set forth in this MOU, the Grant Agreement and the Grant Application. Unless specifically provided for elsewhere in this MOU or the Grant Agreement, each Party will bear all costs and expenses incurred by it in connection with this MOU and the transactions contemplated herein, including travel, entertainment, marketing, promotions, legal fees, consulting fees, accounting fees and taxes which are or may be imposed upon that Party based upon its activities hereunder.

v. The Parties shall meet in good faith through their respective staff to discuss progress for Task 4 and Task 6 and resolve any questions or disputes which may arise. The Parties agree that each will absorb its respective staff costs

necessary to implement and meet the obligations of the Grant Agreement and this MOU.

vi. The Parties agree that CARB shall have the authority to make final decisions with respect to satisfactory performance of each Party in accordance with the terms and requirements of the Grant Agreement.

2. EFFECTIVE DATE, TERM AND TERMINATION

A. The Effective Date of this MOU shall be the date of last signature by one of the Parties.

B. This MOU shall be in full force and effect commencing from the Effective Date and shall continue until the earlier of the following occurs:

i. Three (3) years have lapsed from the Effective Date of this MOU, unless amended in writing to extend said term;

ii. CARB terminates the Grant Agreement, in which case the Parties shall comply with the terms of the Grant Agreement as directed by CARB to complete their respective obligations to comply with the Grant Agreement;

iii. Either party may terminate this MOU by giving the other Party thirty (30) days' advance, written notice. In the event of termination, the Parties agree to comply with their respective obligations under the Grant Agreement except to the extent such obligations are modified or waived in writing by CARB. In the event of termination, POLB shall pay POLA for any match fund expenditures made by POLA to fulfill POLB's assigned tasks in the Grant Agreement up to the total amounts set forth in Section 3, less both of 1) any amounts expended by POLB and approved as a match fund by CARB and 2) the amount of POLB's match fund requirements waived by CARB, if any. After termination, the Parties shall remain responsible for complying with any continuing obligations under the Grant Agreement applicable to each Party.

3. REIMBURSEMENT AND IN-KIND SERVICES FOR THE PROJECT

A. POLB shall reimburse POLA an amount not to exceed Two Hundred Fifty Thousand Dollars (\$250,000) for expenditures made by POLA to a third-party consultant for completion of Task 4 of the Grant Agreement Project. POLA shall be responsible for paying all monies due to the third-party consultant under the terms of a contract with such entity. POLB shall reimburse POLA its share of the contracting costs actually paid by POLA to the consultant within 45 days of the receipt of a billing statement or invoice from POLA. POLB shall not be responsible for reimbursement to POLA for any expenditures made by POLA that are not for Task 4 of the Project.

B. As set forth in Task 6 of the Project, and under such schedule as set forth in the Grant Agreement or as agreed to by CARB and the Parties, POLB shall engage Harbor Breeze Corp. for harbor tours using the Project's demonstration excursion boats. POLB shall expend an amount not to exceed Ninety Thousand Dollars (\$90,000) for such boat tours.

C. POLA shall be responsible for its match funds and in-kind services as set forth in the Grant Agreement.

4. INDEMNIFICATION

POLB undertakes and agrees to defend, indemnify and hold harmless the State of California, CARB, and CARB officers, Board members, employees, agents, representatives and successors-in-interest and POLA and its Board, Officers, Agents, Employees, Assigns, and successors-in-interest from and against all suits and causes of action, claims, losses, demands and expenses, including, but not limited to, attorney's fees (both in house and outside counsel) and cost of litigation (including all actual litigation costs incurred by the State and POLA, including but not limited to, costs of experts and consultants), damages or liability of any nature whatsoever, for death or injury to any person, or damage or destruction of any property of either Party hereto or of third parties, arising in any manner by reason of any actions, inactions, negligent acts, errors, omissions or willful misconduct incident to the performance of the Grant Agreement or this Agreement by POLB or its subcontractors of any tier. This indemnification shall include, but not be limited to, the operation of any equipment, vessels, vehicles, or engines purchased, acquired, developed, modified or used with Grant Agreement Grant Funds in whole or in part. Rights and remedies available to the State and POLA under this provision are cumulative of those provided for elsewhere in this MOU and those allowed under the laws of the United States and the State of California.

POLA undertakes and agrees to defend, indemnify and hold harmless POLB and its Board, Officers, Agents, Employees, Assigns, and successors-in-interest from and against all suits and causes of action, claims, losses, demands and expenses, including, but not limited to, attorney's fees (both in house and outside counsel) and cost of litigation (including all actual litigation costs incurred by POLB, including but not limited to, costs of experts and consultants), damages or liability of any nature whatsoever, for death or injury to any person, or damage or destruction of any property of either Party hereto or of third parties, arising in any manner by reason of any actions, inactions, negligent acts, errors, omissions or willful misconduct incident to the performance of the Grant Agreement or this Agreement by POLA or its subcontractors of any tier. Rights and remedies available to POLB under this provision are cumulative of those provided for elsewhere in this MOU and those allowed under the laws of the United States and the State of California.

5. INSURANCE

The Parties shall comply with all Grant Agreement insurance requirements as set forth therein and as applicable to each Party.

6. MISCELLANEOUS PROVISIONS

A. Notices In all cases where written notice is to be given under this MOU, service shall be deemed sufficient when said notice is either 1) sent by registered or certified mail, on the third Business Day after deposit in the United States mail, properly addressed, postage prepaid, return receipt requested or 2) sent by other means of physical delivery (e.g., hand delivery or courier service), one business day after delivery to the appropriate address. For the purposes hereof, unless otherwise provided by notice in writing from the respective parties, notices shall be addressed as follows

POLA: Los Angeles Harbor Department
425 S. Palos Verdes Street
San Pedro, CA 90731
Attention: Director of Environmental Management

With a copy to:

Los Angeles City Attorney
425 S. Palos Verdes Street
San Pedro, CA 90731
Attention: General Counsel, Harbor Division

POLB: Long Beach Harbor Department
415 W. Ocean Blvd, 11th Floor
Long Beach, CA 90802
Attention: Director of Environmental Planning

With a copy to:

Principal Deputy City Attorney, Harbor Division
411 W. Ocean Blvd., 9th Floor
Long Beach, CA 90802

B. Grant Agreement Pass Through Obligations The Parties agree that any terms and conditions of the Grant Agreement that are considered by CARB to be "Pass-Through" Obligations to third-party agreements shall apply to this MOU. The Parties agree that whether and to what extent any Grant Agreement term is a Pass-Through Obligation shall be at the sole determination of CARB.

C. Entire Agreement This MOU and its exhibits contain the entire understanding and agreement between the Parties hereto with respect to the matters referred to herein. No other representations, covenants, undertakings, or prior or contemporaneous agreements, oral or written, regarding such matters which are not specifically contained, referenced, and/or incorporated into this MOU by reference shall be deemed in any way to exist or bind any of the Parties. Each Party acknowledges that

it has not been induced to enter into the MOU and has not executed the MOU in reliance upon any promises, representations, warranties or statements not contained, referenced, and/or incorporated into the Agreement. THE PARTIES ACKNOWLEDGE THAT THIS AGREEMENT IS INTENDED TO BE, AND IS, AN INTEGRATED AGREEMENT.

D. Severability Should any part, term, condition or provision of this MOU be declared or determined by any court of competent jurisdiction to be invalid, illegal or incapable of being enforced by any rule of law, public policy, or city charter, the validity of the remaining parts, terms, conditions or provisions of this MOU shall not be affected thereby, and such invalid, illegal or unenforceable part, term, condition or provision shall be treated as follows: (a) if such part, term, condition or provision is immaterial to this MOU, then such part, term, condition or provision shall be deemed not to be a part of this MOU; or (b) if such part, term, condition or provision is material to this MOU, then the parties shall revise the part, term, condition or provision so as to comply with the applicable law or public policy and to effect the original intent of the parties as closely as possible.

E. Construction of MOU This MOU shall not be construed against the party preparing the same, shall be construed without regard to the identity of the person who drafted such and shall be construed as if all parties had jointly prepared this MOU and it shall be deemed their joint work product; each and every provision of this MOU shall be construed as though all of the parties hereto participated equally in the drafting hereof; and any uncertainty or ambiguity shall not be interpreted against any one party. As a result of the foregoing, any rule of construction that a document is to be construed against the drafting party shall not be applicable.

F. Amendments in Writing This MOU may be modified only by written agreement of the Parties. Any such modifications are subject to all applicable approval processes required by, without limitation, each Party's City Charter and City Administrative Code.

G. Waiver A failure of either Party to this MOU to enforce the MOU or the Grant Agreement upon a breach or default shall not waive the breach or default or any other breach or default. All waivers shall be in writing.

H. Counterparts This MOU may be executed in any number of counterparts, each of which shall be deemed an original and all of which shall constitute together one and the same instrument.

I. CARB Third-Party Beneficiary As set forth in Section 13.10 of the Grant Agreement, the Parties acknowledge and agree that CARB is a third-party beneficiary to this MOU.

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IN WITNESS WHEREOF, the parties hereto have executed this MOU on the date to the left of their signatures.

THE CITY OF LOS ANGELES, by its Board of Harbor Commissioners

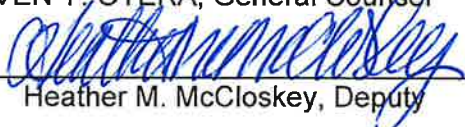
Dated: _____, 2025

By _____
EUGENE D. SEROKA
Executive Director

Attest: _____
Secretary

APPROVED AS TO FORM AND LEGALITY

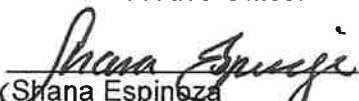
March 13, 2025
HYDEE FELDSTEIN SOTO, City Attorney
STEVEN Y. OTERA, General Counsel

By 
Heather M. McCloskey, Deputy

THE CITY OF LONG BEACH, by its Board of Harbor Commissioners

Dated: Feb 12, 2025

By 
MARIO CORDERO
Chief Executive Officer

Attest 
Shana Espinoza
Executive Officer to the Board

APPROVED AS TO FORM:

Date: February 12, 2025
DAWN MCINTOSH, Long Beach City Attorney

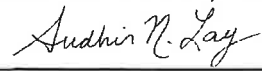
By 
Sudhir N. Lay, Deputy City Attorney

Exhibit A

Los Angeles Marine Emission Reduction Project (LA MER)

October 2023



Submitted to:
FY 2021-22 and FY 2022-23 GRANT SOLICITATION
Advanced Technology Demonstration and Pilot Projects

Submitted by:
City of Los Angeles, Harbor Department



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ATTACHMENT 1: PROJECT EXECUTIVE SUMMARY AND PROJECT SUMMARY FOR PUBLIC POSTING

Executive Summary

This multi-faceted project will demonstrate two different harbor craft emission-reduction technologies in different vessel types and in different duty cycles and formally evaluate the next generation of harbor craft. The technologies include commercialized low-emission combustion engines using renewable diesel, and plug-in hybrid-electric near-zero-emission (ZE) technology.

Project Team

Port of Los Angeles (POLA) is the applicant with Catalina Channel Express (CCE) and Harbor Breeze Cruises as the demonstrators and end users. The Port of Long Beach (POLB) is also a participant. POLA has nearly 20 years of experience managing advanced technology projects and harbor-craft replacement and repower projects. For 40 years CCE has transported passengers and freight to Catalina Island via high-speed ferries. Harbor Breeze has nearly 20 years of experience providing harbor excursions in Long Beach and Los Angeles.

Project Description

The project consists of three major components:

- *Passenger Ferry with Tier 4 Engines and Diesel Particulate Filter (DPF)*. Design, construct, and demonstrate a high-capacity passenger ferry with Tier 4 propulsion engines and a California Air Resources Board-verified, US Coast Guard-approved DPF.
- *Zero-Emission Capable Excursion Boats*. Design, construct and demonstrate two ZE-Advanced Technology (ZEAT) hybrid excursion boats.
- *Next Generation Harbor Craft Technology Evaluation*. Evaluate the commercial status of emission-reduction technologies, to assess the feasibility of marinizing DPFs, to request information from engine manufacturers on future low-carbon fuels and technologies, to identify infrastructure gaps for zero-emission harbor craft, and to understand workforce development needs specific to tugs, ferries, and pilot boats operating in the San Pedro Bay.

Project Objectives

LA MER balances the need to immediately reduce air-quality and health-risk impacts on nearby disadvantaged communities with the long-term goal of facilitating the adoption of carbon-neutral, ZE harbor vessels.

Potential Benefits and Outcomes

Project benefits will accrue to the high-priority populations where the vessels are domiciled/operate. Emission benefits include annual reductions of 62.75 tons oxides of nitrogen, 5.8 tons reactive organic gases, 2.42 tons diesel particulate matter and 1,503 metric tons of CO₂e, and will demonstrate clean harbor craft technology for expanded application throughout California.

Workforce Training

LA MER also includes a robust workforce plan, training harbor-craft workers in new engine technologies and advanced battery-electric solutions while supporting recruitment programs that draw from the local, underserved community.

Project Budget

The total project cost is \$62,590,932. Of this amount, POLA is requesting \$30,980,378 in grant funds with \$31,610,554 to be provided as match (51% cost share), as shown below.

| Grant Request | Match Funding | | | | | Total Project Cost |
|---------------|---------------|---------------|-----------|-----------|--------------|--------------------|
| | CCE | Harbor Breeze | POLA | POLB | Match Total | |
| \$30,980,378 | \$15,370,554 | \$15,250,000 | \$650,000 | \$340,000 | \$31,610,554 | \$62,590,932 |
| 49% | 25% | 24% | 1% | 0.5% | 51% | 100% |

Project Summary for Public Posting

Port of Los Angeles (POLA), with the Port of Long Beach (POLB) and Catalina Channel Express (CCE) and Harbor Breeze Cruises – is undertaking the Los Angeles Marine Emission Reduction project (LA MER) to immediately reduce emissions for disadvantaged communities while advancing the understanding of cutting-edge harbor-craft technologies for the future. The total project cost is \$62,590,932. Of this amount, POLA is requesting \$30,980,378 in grant funds with \$31,610,554 to be provided as match.

This multi-faceted project will demonstrate two different emission-reduction technologies in different vessel types across many duty cycles. Additionally, POLA will work with Port of Long Beach, harbor craft operators, regulators, engine manufacturers, technology developers, and the US Coast Guard (USCG) to evaluate next-generation technologies that could be feasible for the tugboats, ferries, and pilot vessels operating in San Pedro Bay. Project components include:

Passenger Ferry with Tier 4 Engines and Diesel Particulate Filter (DPF). Design, construct, launch, and demonstrate a high-capacity passenger ferry with Tier 4 propulsion engines and a diesel particulate filter (DPF), assuming a DPF has been verified by the California Air Resources Board and approved by USCG at time of engine installation. The new ferry, operated by CCE, will operate on renewable diesel and replace three smaller ferries with Tier 2 and Tier 3 engines, which enhances the efficiency of regional ferry service and thus increases the emissions benefits.

Zero-Emission Capable Excursion Boats. Design, construct, launch, and demonstrate two zero-emission capable hybrid excursion boats in partnership with Harbor Breeze. The vessels are expected to exceed the definition of Zero-Emission Advanced Technology (ZEAT) vessel under the Harbor Craft Regulation. Each boat will have renewable-diesel-powered Tier 4 propulsion engines for safety, resiliency, and added range, but will be able to operate a minimum of 30% of the time in zero-emission mode with some trips operating as much as 100% of the time in zero-emission mode depending on duty cycle and route length. Although not part of this project, Harbor Breeze also will install shore power at a public wharf to serve the zero-emission capable excursion boats.

Next Generation Harbor Craft Technology Evaluation. Develop a report to evaluate the commercial status of emission-reduction technologies, to assess the feasibility of marinizing DPFs, to request information from engine manufacturers on future low-carbon fuels and technologies, to identify infrastructure gaps for zero-emission harbor craft, and to understand workforce development needs specific to tugs, ferries, and pilot boats operating in San Pedro Bay.

Project benefits will accrue to the disadvantaged, high-priority populations in which the vessels will be domiciled and spend nearly all of their time. Emission benefits include 1,503 MT CO₂e and 113 weighted tons of criteria and toxic emissions per year.

LA MER also includes a robust workforce plan, training harbor-craft workers in new engine technologies and advanced battery-electric solutions while supporting recruitment programs that draw from the local, underserved community. The LA MER project balances the need to immediately reduce air-quality and health-risk impacts on nearby disadvantaged communities with the long-term goal of carbon-neutral, zero-emission harbor vessels.

ATTACHMENT 2: PROJECT NARRATIVE AND WORK PLAN

| | |
|--|---|
| Project Title: | Los Angeles Marine Emission Reduction Project (LA MER) |
| Total Budget: | \$62,590,932 |
| Funding Request: | \$30,980,378 |
| Applicant: | City of Los Angeles, Harbor Department (Port of Los Angeles, POLA) |
| Demonstration Partners/End Users: | Catalina Channel Express (CCE) Harbor Breeze Cruises |
| Data Collection and Analysis Partner: | University of California, Riverside, Center for Environmental Research & Technology (CE-CERT) |

The demonstration partners will also be the legal owners of the project equipment after completion of the project.

The entire project team affirms that each partner helped develop the work plan for their respective project and has read the Sample Grant Agreement.

Project Narrative

Port of Los Angeles (POLA), in partnership with two harbor craft operators, is proposing the Port of Los Angeles Marine Emission Reduction project (LA MER) to immediately reduce emissions for disadvantaged communities while advancing the understanding of cutting-edge harbor-craft technologies for the future.

This multi-faceted project will demonstrate two distinct emission-reduction technologies in different vessel types with varying duty cycles. The technologies include commercialized low-emission combustion engines using renewable diesel, and plug-in hybrid-electric near-zero-emission technology. The technologies have been chosen to match the duty cycles of the operators – cleanest available combustion and aftertreatment devices for ferries that must cross miles of choppy ocean waters, and near-zero-emissions battery-assisted technology for excursion boats that run shorter routes within and near a protected harbor. LA MER will demonstrate the ability to maximize emission reductions while balancing operational suitability.

As part of this project, POLA also will work with the Port of Long Beach (POLB), harbor craft operators, regulators, engine manufacturers, technology developers, and the US Coast Guard (USCG) to evaluate next-generation harbor-craft technologies that could be feasible for the tugboats, ferries, and pilot vessels operating in San Pedro Bay.

Specific components include:

Passenger Ferry with Tier 4 Engines and Diesel Particulate Filter (DPF). Design, construct, launch, and demonstrate a high-capacity passenger ferry with Tier 4 propulsion engines and a DPF, if a DPF has been verified by the California Air Resources Board (CARB) and approved by the USCG at the time of engine installation. Catalina Channel Express (CCE), the project partner, is designing the ferry with space to accommodate installation of a CARB-verified, USCG-approved DPF in the future, if one cannot be installed during the time period for this grant. The new ferry will run on renewable diesel and take the place of three smaller ferries with Tier 2 and Tier 3 engines, which enhances the efficiency of regional ferry service and thus increases the emissions benefits.

Zero-Emission Capable Excursion Boats. Design, construct, launch, and demonstrate two zero-emission capable hybrid excursion boats in partnership with Harbor Breeze. The vessels are expected to exceed the definition of Zero-Emission Advanced Technology (ZEAT) vessel under the CARB Harbor Craft Regulation. The vessels will provide harbor tours of San Pedro Bay for schools, the public, and the Ports, dinner cruises, and whale watching expeditions daily throughout the year. Each boat will have renewable-diesel-powered Tier 4 propulsion engines for safety, resiliency, and added range, but will be able to operate at least 30% of the time in zero-emission mode (though 40% is expected and assumed for our benefits analysis) with some trip types operating 100% of the time in zero-emission mode depending on duty cycle and route length. Although not part of this project or grant request, Harbor Breeze also will install shore power at a public wharf to serve the zero-emission capable excursion boats.

Next Generation Harbor Craft Technology Evaluation. Develop a report to evaluate the commercial status of emission-reduction technologies, to assess the feasibility of marinizing DPFs, to request information from engine manufacturers on future low-carbon fuels and technologies, to identify infrastructure gaps for zero-emission harbor craft, and to understand workforce development needs specific to tugs, ferries, and pilot boats operating in San Pedro Bay.

Project benefits will accrue to the disadvantaged, high-priority populations in which the vessels will be domiciled and spend nearly all of their time. Annual emission reduction benefits include:

- 1,503 Metric Tons (MT) gCO₂e
- 62.75 tons of oxides of nitrogen (NO_x)
- 5.8 tons of reactive organic gases (ROG)
- 2.42 tons of diesel particulate matter (DPM/PM₁₀/PM)
- 2.38 tons of DPM less than 2.5 micron (PM_{2.5})

LA MER also includes a robust workforce plan, training harbor-craft workers in new engine technologies and advanced battery-electric solutions while supporting recruitment programs that draw from the local, underserved community. The LA MER project balances the need to immediately reduce air-quality and health-risk impacts on nearby disadvantaged communities with the long-term goal of carbon-neutral, zero-emission harbor vessels.

POLA is applying for this project under AB 179 Commercial Harbor Craft Regulatory Compliance funding. That said, the LA MER Project ultimately aims to advance harbor-craft technology beyond combustion-based compliance, with technology evaluations and checkpoints along the way to ensure maximum benefits for disadvantaged communities. The ZEAT vessels to be deployed under the second component of the LA MER project include advanced zero-emission

technologies that are not yet fully commercialized, and the vessels are expected to exceed regulatory requirements by operating 40% to 75% of the time in zero-emissions mode. Thus, these vessels could also qualify for funding under the Advanced Technology section of the solicitation.

No other grant or incentive funds are being used for this project, and the stated emissions benefits are solely attributable to the Advanced Technology Demonstration and Pilot Projects program. The following sections describe how LA MER meets the solicitation criteria.

Criterion 1: Applicant General Qualifications

POLA, the lead applicant, is a public port authority with ample experience in implementing large-scale air quality projects and collaborating with vessel operators, technology providers, and other stakeholders to reduce emissions and to advance clean-air technologies. Since 2006, POLA has successfully managed nearly \$103 million in grants for emission-reduction and advanced-technology projects, including many projects for harbor craft repowers and technology demonstrations. POLA's experience, relevant to this project, includes:

- San Pedro Bay Ports Technology Advancement Program (TAP). In conjunction with POLB, POLA manages the TAP, which provides funding to technology providers and operators for emerging clean-air technology projects. POLA and POLB work closely with CARB, South Coast Air Quality Management District (South Coast AQMD), California Energy Commission (CEC), and other stakeholders to evaluate, fund, and certify clean technologies. Since its inception in 2007, the TAP has managed and/or partnered on roughly 55 projects, including three harbor-craft projects.
- Harbor Department Air Quality Mitigation Incentive Program (AQMIP). POLA administered a \$20 million mitigation program to reduce port-related emissions. The five-year incentive program, which ran from 2005 to 2010, repowered and replaced harbor craft, on-road trucks, and terminal equipment and funded ocean-going vessel projects.
- San Pedro Bay Ports Feasibility Assessments. POLA and POLB collaborate with other stakeholders to develop feasibility assessments for drayage-truck and terminal-equipment technologies. These assessments are helping to identify ways of accelerating zero-emission deployments in the port complex.

The LA MER project falls under AB 179 Commercial Harbor Craft Regulatory Compliance Funding. POLA will work with POLB and two harbor-craft operators, each of whom also has experience managing grants and conducting major repowers, replacements, or technology demonstrations.

POLA will need to enter into subagreements with CCE and Harbor Breeze to pass through the grant funds. Subagreements must be approved at a public meeting by the Board of Harbor Commissioners following execution of the grant agreement between POLA and CARB. POLA is not able to enter into subagreements until the primary grant agreement has been signed. This process ensures that all terms and conditions in the primary contract between POLA and CARB are included in the subagreements. Subagreement approvals typically take eight weeks to 12 weeks following approval of the primary grant agreement.

Criterion 2: Project Team Capabilities and Degree of Industry Collaboration

This project entails a high degree of industry collaboration among several very capable partners. All project participants are in place today. The roles, work to be performed, and qualifications of each key partner are described below.

Port of Los Angeles, Lead Applicant

POLA will serve as the lead applicant and recipient of the grant funding should the project be awarded. POLA will coordinate with CARB, the operators, and the data collector to ensure timely completion of all deliverables according to the grant terms and conditions. POLA also will lead development of the Next Generation Harbor Craft Technology Evaluation and coordinate technology showcase efforts, community outreach, and workforce development. As described in Criterion 1, POLA has ample experience overseeing advanced-technology and emission-reduction projects, including harbor craft repower and replacement projects, and has managed or is currently managing more than \$100 million in clean-air grants, including several large-scale CARB grants.

Catalina Channel Express (CCE), End User

CCE has provided continuous ferry service to Catalina Island since 1981, operating 365 days a year. CCE employs over 275 people year-round (325 seasonally) who handle everything from passenger ticketing to marketing. CCE is the sole source of ferry transportation to Catalina Island from Los Angeles County. CCE will oversee design, construction, USCG certification, commissioning, deployment, and demonstration of the ferry, and it will also assist with development of the technology evaluation and final report. Since 2005, CCE has successfully managed eight grants to repower ferries in partnership with POLA and South Coast AQMD.

Harbor Breeze Cruises, End User

Harbor Breeze Cruises has been providing public whale watching, educational Port, and charter cruises for over 18 years in the Los Angeles and Orange County areas. Harbor Breeze will be the end user of the two ZEAT excursion boats. Harbor Breeze will oversee design, construction, USCG certification, commissioning, deployment, and demonstration of the boats, and it will also assist with development of the technology evaluation and final report. Harbor Breeze has successfully managed several Carl Moyer grants for engine repowers.

Port of Long Beach, Supporting Entity

POLB will work with POLA and the harbor craft operators to develop the technology evaluation, providing data on port duty cycles, input on the analyses, and funding. POLB has significant experience overseeing advanced-technology and emission-reduction projects, including harbor craft repower and replacement projects, and developing technology assessments. POLB has managed or is currently managing more than \$200 million in clean-air grants, including several large-scale CARB grants.

Center for Environmental Research & Technology (CE-CERT), Data Collection Partner

CE-CERT is a leader in environmental education, a collaborator with industry and government to improve the technical basis for regulations and policy, a creative source of new technology, and a contributor to a better understanding of the environment. Established in 1992 and now operating as the largest research center at the University of California at Riverside, CE-CERT brings together multiple disciplines throughout campus to address society's most pressing environmental challenges in air quality, climate change, energy, and transportation. CE-CERT has conducted numerous emissions testing programs in San Pedro Bay.

POLA has relationships with all of the partners, specifically, a lease agreement with CCE for berth space, a contract with Harbor Breeze to provide educational harbor tours, and a contract with CE-CERT (via Tetra Tech) for technical support. POLA and POLB have long worked together on joint clean-air strategies, including their landmark Clean Air Action Plan. POLA will facilitate collaboration among all of the partners. There are no anticipated business alliances or partnerships involved in commercializing these vessels.

Table 1 identifies the key personnel, their organization, and their administrative and technical qualifications and capabilities.

Table 1: Key Personnel

| Key Personnel | Organization | Qualifications |
|---|---------------------|---|
| Jacob Goldberg, Marine Environmental Supervisor | POLA | Nearly 10 years of experience developing and managing air-quality programs, advanced-technology demonstrations, grants, and feasibility assessment development. |
| Greg Bombard, President/CEO | CCE | Oversees the company and its fleet of eight modern, high-speed vessels; has led major business initiatives for 40+ years and has been a captain for 50 years. |
| Anthony J. Ross, Vice President, Vessel Engineering | CCE | Nearly 30 years supporting CCE's engineering department and vessel operations; has served on the Board of Governors for the Society of Port Engineers for Los Angeles & Long Beach |
| Matt Vaughan, Training, Safety and Compliance Manager | CCE | Four years with CCE; more than 23 years in the United States Coast Guard; oversees regulatory and USCG compliance and vessel safety. |
| Dan Salas, President and Founder | Harbor Breeze | Oversees the company and its fleet of excursion vessels; more than 10 years as a tugboat captain. |
| Dr. Wayne Miller, Researcher | CE-CERT | More than 20 years measuring the emissions from ocean-going vessels, commercial harbor craft, locomotives and terminal equipment; Ph.D. in Chemical Engineering from the California Institute of Technology |

Criterion 3: Project Objectives and Work Plan

For more details on tasks and specific activities, please see the Work Plan following the narrative.

Project Goals

This project supports CARB's goals under the Advanced Technology Demonstration and Pilot Project Solicitation by immediately reducing harbor-craft emissions in disadvantaged communities – thus supporting the State's equity and emission-reduction goals – and by furthering the understanding of advanced harbor-craft technologies to exceed regulatory compliance. This project will be transformative in California, nationally, and internationally by deploying, testing, and evaluating a spectrum of clean harbor-craft technologies specific to San Pedro Bay's tough duty cycles and unique operations.

Project Tasks

A detailed breakdown and description of tasks can be found in the Work Plan. The project consists of several major activities, as follows:

Build the CCE Tier 4+ ferry. CCE is the lead entity and will work with a qualified boat yard (preliminarily identified as Gladding-Hearn Shipbuilding) to design, build, deploy, and demonstrate a

525-passenger ferry with Tier 4 engines and a DPF. This task includes design; ordering equipment components, including the engines; constructing the hull, deck, and cabin, including welding and metal work; and installing the engines and a CARB-verified, USCG-approved DPF, if available.

Build the two Harbor Breeze ZEATs. Harbor Breeze is the lead entity and will work with a qualified boat yard (preliminarily identified as All American Marine) to design, build, deploy, and demonstrate two hybrid-electric excursion boats. This task includes design in partnership with BAE Systems; ordering equipment components; constructing the hull, deck, and cabin, including welding and metal work; outfitting the boats and finishing the interiors; and installing the on-board power systems and back-up generators. BAE Systems and All American Marine have worked together on previous vessels.

Demonstrate the new vessels for one year. Each new vessel will be demonstrated for at least one year, which exceeds the three-month minimum demonstration period for AB 179 compliance funding. CCE and Harbor Breeze are the lead entities for operating their respective vessels in normal revenue service during the demonstration and for collecting performance data.

Data collection and emissions testing. This task includes emissions testing on a representative diesel ferry and excursion boat (total of two vessels) as baselines and on the new Tier 4+ ferry and one new ZEAT boat. Because the new ZEATs have the same exact design, emissions testing is only needed for one of the vessels. POLA understands that emissions testing is not required for EPA-certified engines required for compliance, such as those on the ferry; however, if a CARB-verified, USCG-approved DPF can be installed, the emissions testing may yield valuable insights for future commercialization. Thus, POLA included emissions testing on the ferry. CE-CERT will oversee data collection and emissions testing in partnership with the operators. Data collection will conform to Appendix F and may include other data metrics requested by CARB. Exact emissions testing methods will be determined as part of a CARB-approved test plan but may include a gas analyzer, portable emissions measurement system (PEMs), and a partial dilution system with a micro soot sensor.

"[Harbor Breeze's] efforts align perfectly with the City of Long Beach's values, and I speak on behalf of my constituents and our elected officials when I say that [they have] our full support."

- Mayor Rex Richardson
City of Long Beach

Develop the Next Generation Harbor Craft Technology Evaluation. POLA is the lead entity for this task, with direct support from POLB, and will work with various stakeholders to assess harbor-craft technologies for ferries, tugboats, and pilot boats operating in San Pedro Bay. This task includes a commercial technology market summary, a DPF marinization review, engine manufacturer Request for Information (RFI), zero-emission infrastructure assessment, and stakeholder roundtable.

Conduct workforce training and collect workforce development outcomes data. POLA is the lead entity in collecting the workforce data, but all partners will play a role in implementing some aspect of the workforce development plan, described in more detail under Criterion 13.

Showcase these new technologies. POLA is the lead entity in showcasing these new technologies through community events, industry meetings, and on public harbor tours aboard the ZEAT vessels. Direct support will be provided by both CCE and Harbor Breeze in operating the vessels and providing materials and documentation for POLA's showcase efforts.

Renewable Fuel

The CCE ferry will use renewable diesel (RD-99) throughout the demonstration and its entire useful life. The Harbor Breeze ZEATs will use renewable diesel in their engines throughout the demonstration and their entire useful lives. The ZEATs will receive much of their power from grid energy. Today, roughly 31% of Southern California Edison's (SCE) energy mix is renewable,¹ but that percentage is expected to climb to at least 50% renewable by 2030. The Los Angeles Department of Water and Power (LADWP) is working towards a goal of achieving 100% renewable power by 2035.

The Technology Evaluation will explore the feasibility of harbor vessels using other renewable fuels, such as green methanol or green ammonia, to achieve greater greenhouse gas reductions and to support the broader market for such fuels.

Milestones

The project is comprised of 22 milestones representing major decision points and/or activities for which grant disbursements are requested. Not all tasks are milestones. The milestones are identified by number, title, and requested disbursement amount in Attachment 4. Information about each milestone's planned completion date, general duration, and associated deliverable can be found in the Work Plan.

POLA is proposing at least two Critical Project Review (CPR) meetings. One meeting will be held prior to CCE installing the engines in the new ferry to validate whether a CARB-verified, USCG-approved DPF is available. POLA and CCE will share the results of the DPF Marinization Review with CARB to discuss the options. POLA proposes to hold a second CPR meeting just before Harbor Breeze starts construction on the vessel to ensure there are no issues with the proposed hybrid-electric design and/or infrastructure. Other CPR meetings can be scheduled as needed.

Vessel Users and Data Collection

CCE and Harbor Breeze will use all of the equipment specified in this grant. POLA will ensure that data are collected in the following ways: (1) monthly meetings with the data collector and operators to validate data collection, (2) subgrant agreements for the funds will contain data collection requirements, and (3) a portion of the grant funds will be withheld until the demonstrations are complete and all data have been obtained. The proposed budget withholds \$10,000 in grant funds from the operators until the Final Report has been approved by CARB.

Post-Grant Equipment Disposition

Funded assets will continue to be used in their normal business practices after the project term.

Available Resources

All measurement equipment and materials for emissions testing (baseline and new-vessel) is available. CE-CERT, one of the data collection partners, also has laboratory facilities to facilitate testing and data collection. Other resources will be secured with grant funds.

Infrastructure

There is no hydrogen or mobile refueling as part of this project. The CCE ferry does not require infrastructure.

The Harbor Breeze ZEATs require new charging infrastructure, not already in place, in order for the vessels to operate in full zero-emissions mode. Harbor Breeze, working with a technology partner,

¹ <https://www.energy.ca.gov/filebrowser/download/4676>

Bellingham Marine, will install two shore power connections of 480 volt, three-phase power, at 200 amps at the wharf at an estimated cost of \$20,000. The shore power infrastructure will charge the Auxiliary Power and Control Systems on board the vessels, which each can draw at a rate of 200 kW (Figure 1). It is estimated the vessels will be able to recoup battery recharge replenishment in one to two hours using this system. Harbor Breeze will use this infrastructure during the demonstration and for the remaining life of the ZEAT vessels. No grant funds are requested for infrastructure. The infrastructure installations are being incorporated into ongoing development efforts at POLA, including the West Harbor Development Project.²

Figure 1: Auxiliary Power and Control System



The shore power infrastructure will charge the Auxiliary Power and Control Systems on board the vessels, shown here, which can draw at a rate of 200 kW.

It is estimated the vessels will not draw more than 400 kW from the grid, even if they are simultaneously drawing power at the maximum charging rate. This peak load is relatively small and there are no concerns with impacting the grid. If there are peak-demand times in which the vessels are precluded from connecting, the vessels can recharge the batteries via the on-board gensets. Harbor Breeze and BAE have had conversations with Southern California Edison, the utility, about these plans.

The infrastructure will be installed at the public wharf where Harbor Breeze domiciles its vessels. Although it will be used exclusively for the ZEAT vessels during the demonstration and for the duration of Harbor Breeze's wharf lease, the shore power infrastructure could be available in the future to a new lessee or other non-project entities.

Scalability

This project can easily be scaled down by removing one of the vessel projects or removing one of the ZEAT vessels.

Reporting and Monitoring

Pursuant to the grant agreement, POLA will provide quarterly progress reports and hold Critical Project Review meetings prior to major milestones. POLA also will provide informal updates to CARB throughout the project to ensure good communication. All data collection shall conform to the requirements specified in Appendix F and in any other format prescribed by CARB. POLA will hold monthly meetings with the operators, and more frequently as needed, to monitor progress.

² <https://www.westharborla.com/>

Criterion 4: Budget, Match Funding, and Financial Capabilities

The total project cost for LA MER is \$62,590,932. Of this amount, \$30,980,378 is requested from CARB and \$31,610,554 will be provided as match funding from the partners for a cost-share percentage of 51%, which exceeds the minimum requirement. POLA is not requesting administrative fees for this project. All grant funds will be used to support direct project costs associated with building the new vessels and collecting data, including emissions testing.

Table 2 indicates the source and amount of funding for each task and what entity is providing the match. All match is cash, far exceeding the 10% minimum. There are no other incentive funds that are being used, or pursued, in order to complete this project. Each partner is financially capable of providing their match obligation, as detailed in their Letters of Commitment. A more detailed budget can be found in Attachment 4.

Table 2: Project Budget by Task and Source of Funding

| Task | Grant Request | Match Funding | | | | Total | % Total Project Cost |
|---|---------------------|---------------------|---------------------|------------------|------------------|---------------------|----------------------|
| | | CCE | Harbor Breeze | POLA | POLB | | |
| Task 1 - Project Administration | \$0 | | | | | \$0 | 0% |
| Task 2 - Catalina Channel Express Ferry | \$15,044,128 | \$15,370,554 | | \$125,000 | | \$30,539,682 | 49% |
| Task 3 - Harbor Breeze ZEAT Vessels | \$15,926,250 | | \$15,250,000 | \$125,000 | | \$31,301,250 | 50% |
| Task 4 - Technology Evaluation | \$0 | | | \$250,000 | \$250,000 | \$500,000 | 1% |
| Task 5 - Workforce Data Collection | \$0 | | | \$25,000 | | \$25,000 | 0.0% |
| Task 6 - Technology Showcase | \$0 | | | \$90,000 | \$90,000 | \$180,000 | 0.3% |
| Task 7 - Final Report | \$10,000 | | | \$35,000 | | \$45,000 | 0.1% |
| Total | \$30,980,378 | \$15,370,554 | \$15,250,000 | \$650,000 | \$340,000 | \$62,590,932 | 100% |
| % Total Project Cost | 49% | 25% | 24% | 1% | 0.5% | 100% | |

Criterion 5: Potential for Widespread Emission Reduction Benefits

Below is a summary of key results from the detailed greenhouse gas (GHG), criteria pollutant and toxic air contaminant emission reduction and cost-effectiveness evaluation for the LA MER project. More details are provided in Attachment 3.

In addition to the direct GHG and criteria pollutant and toxic air contaminant emission reductions that will be achieved from LA MER, the advanced technology vessel demonstrations will provide robust, real-world operational experience, including comprehensive emissions testing to ensure the technology exceeds expectations in terms of reducing emissions while meeting the demanding duty cycles of the marine environment. Successful demonstration of the project ferry and excursion vessels will accelerate deployment of these technology beyond the San Pedro Bay Ports.

For the CCE ferry project component, the emissions of the new project vessel were deducted from the total emissions of three existing ferries that are being removed from California service. For the Harbor Breeze ZEAT excursion vessels, a hybrid factor of 40% was used to conservatively assess project benefits. Table 3 presents these results. As discussed in Attachment 3, the project team anticipates the demonstration will document results that far exceed this target.

Table 3: Anticipated Project Emission Reductions

| Total Project Results for Different Periods | | | | | |
|--|---|------------------------------------|--|---|----------------|
| Project Period | NO_x Reductions (short tons) | ROG Reductions (short tons) | PM/DPM/PM10 Reductions (short tons) | PM_{2.5} Reductions (short tons) | MT CO2e |
| One Year (Demonstration Period) | 62.749 | 5.804 | 2.421 | 2.3148 | 1,503 |
| Two Years | 125.498 | 11.608 | 4.842 | 4.6296 | 3,006 |
| Ten Years | 627.49 | 58.04 | 24.21 | 23.148 | 15,030 |

Criterion 6: Cost-Effectiveness

Building on the discussion in Criterion 5, Table 4 provides a summary of the detailed greenhouse gas (GHG), criteria pollutant and toxic air contaminant cost-effectiveness evaluation for the LA MER project. Full details are provided in Attachment 3.

Table 4: Anticipated Project Cost-Effectiveness

| Cost-Effectiveness Results (Each Project and Combined Total) | | | | |
|--|--|---|--|---|
| Project Component | Air Pollutant Cost-Effectiveness (2-year) | Air Pollutant Cost-Effectiveness (10-year) | GHG Cost-Effectiveness (2-year) | GHG Cost-Effectiveness (10-year) |
| CCE Tier 4+DPF Ferry (3-for-1 Replacement) | \$112,301 | \$23,433 | \$9,365 | \$1,954 |
| <u>Component #2</u> HB Excursion ZEAT Vessel #1 (40% Hybrid ³) | \$3,916,582 | \$817,240 | \$52,330 | \$10,919 |
| <u>Component #2</u> HB Excursion ZEAT Vessel #2 (40% Hybrid) | \$3,916,582 | \$817,240 | \$52,330 | \$10,919 |
| Combined Project (3 Vessels) | \$241,137 | \$50,316 | \$18,761 | \$3,915 |

The full three-vessel project is very cost-effective, although admittedly, most of the benefits are achieved by the advanced ferry project. ZEAT technology is very expensive as noted by the Carl Moyer Program's zero-emission cost-effectiveness limit of \$522,000 per weighted ton of emissions reduced, compared to \$34,000 per weighted ton for conventional technology. Significant investment

³ This is a conservative assumption since the energy requirements analysis for the primary duty cycles indicate that zero-emission operation is feasible as much as 80% of the time, depending on how much of the operation is in the whale watching duty cycle (which requires some diesel engine operation 1/3 of the time).

is needed to achieve the last portion of emissions and this is costly. In the context of Moyer Program investment, POLA considers the LA MER project to be very cost-effective. Also, the Harbor Breeze project benefits are presented for a very conservative scenario of 40% hybrid utilization. Due to the lighter duty cycles expected to be operated by these vessels a majority of the time, POLA anticipates the demonstration will document far better reductions than presented in Attachment 3.

Criterion 7: Benefits to Priority Populations

As detailed in Attachment 5, the LA MER project fully benefits both low-income and disadvantaged community priority populations, as follows:

- The vessels have a domicile address in a census tract that contains a priority population, and 100 percent of population-adjacent operational time is within census tracts that contain a priority population.
- The project will provide real, surplus and quantifiable criteria air pollutant, toxic air contaminant and greenhouse gas emission reductions in census tracts that contain priority populations.

The demonstration vessel(s) are docked within identified priority population communities as summarized below in Table 5. The ferry will operate between the San Pedro Bay’s dock locations and Avalon, CA, located in a low-income priority population on Catalina Island, and the ZEAT vessels spend nearly all their time near priority populations. All project vessels will spend 100 percent of population-adjacent operational time in these census tracts.

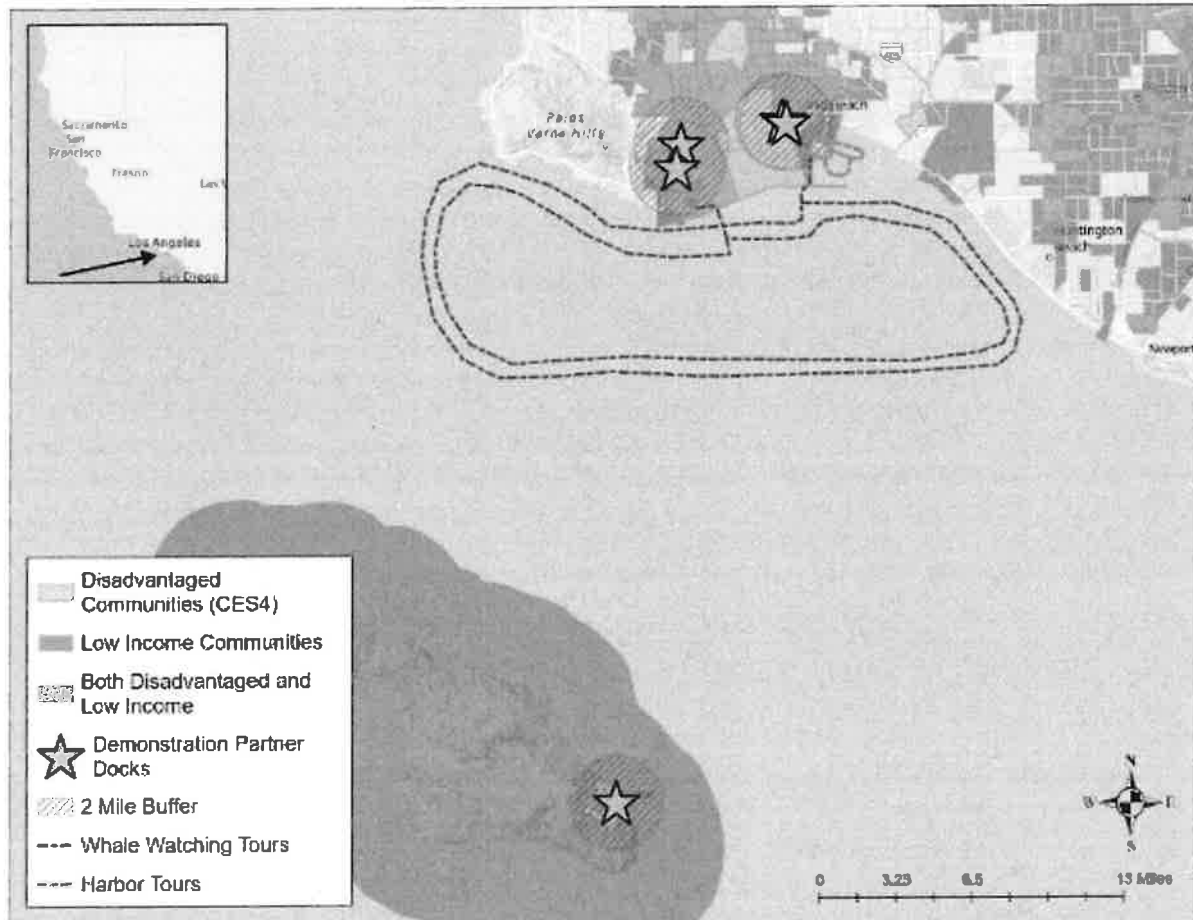
Table 5: Priority Population Status for the Proposed Project

| Vessel Berth Location | Census Tract | Priority Population Identified (CCI Tool) | Reason the Criteria is Satisfied |
|--|-------------------------|---|---|
| Berth 95, San Pedro, 90731 | 6037980031 & 6037296210 | Disadvantaged Community: CES 4 & Low-income Community | Located and operates within identified Census Tract |
| 320 Golden Shore, Long Beach, 90802 100 Aquarium Way, Long Beach, 90802 | 6037576001 & 6037980033 | Disadvantaged Community: CES 4 | |
| Avalon Bay, Avalon, 90704 | 6037599000 & 6037599100 | Low-income Community | |
| 1150 Nagoya Way, Berth 79, San Pedro, 90731 | 6037980031 & 6037297110 | Disadvantaged Community: CES 4 & Low-income Community | |
| | | | |

Figure 2, showing data drawn from the California Climate Investment (CCI) Map, further accentuates this point, showing the high number of census tracts identified as low-income (as defined by AB 1550), disadvantaged (as defined by SB 535), or both within two miles of the

project's berths. The project benefits will accrue directly to these low-income and disadvantaged communities that surround San Pedro Bay and that live on Catalina Island.

Figure 2: Low-Income Census Tracts Around the Project Site



Source: [California Climate Investments \(CCI\) Priority Populations Map](#), California Climate Investments (June, 2023); Disadvantaged Communities designations per Senate Bill (SB) 535 (De León, Chapter 830, Statutes of 2012); Low-income definitions per Assembly Bill (AB) 1550 (Gomez, Chapter 369, Statutes of 2016)

Significant benefits will result from successful implementation of this project to these communities. These benefits are discussed under Criterion 5 and 13 summarized below:

- 1,503 MT/year gCO₂e
- 62.75 tons per year (tpy) NO_x
- 5.8 tpy ROG
- 2.42 tpy PM
- 2.38 tpy PM_{2.5}
- Accelerated validation and introduction of clean harbor craft technology that can be implemented throughout California and the nation.
- Workforce programs aimed at recruiting and training members of the local community, which are classified as disadvantaged and have above-average unemployment rates.

Criterion 8: Technology and Innovation

The LA MER Project takes commercialized emission-reduction harbor craft technologies to the next level. The vessel designs build upon widely available, EPA-certified engines, but then incorporate cutting-edge aftertreatment devices and on-board battery storage systems to maximize emission benefits. This approach results in vessels that can handle tough duty cycles and maintain operator and passenger safety while improving air quality.

Technological Innovations

The LA MER project includes two major technological innovations: (1) marine DPF for Tier 4 engines, if CARB-verified and USCG-approved at the time of deployment, and (2) a battery-electric hybrid power system to achieve greater than 30% of operating time in zero-emissions mode. These technologies will be deployed earlier than required under the harbor craft regulation, helping to accelerate technological progress.

Marinized Diesel Particulate Filter (DPF). Tier 4 engines can be obtained, but no standard option currently exists with the capability to include a DPF. While DPF technology is well refined in many use cases, with fully documented potential benefits, the system has not been deployed in marine applications, largely due to concerns about passenger safety. DPFs work by trapping exhaust in a filter and then heating it to very high temperatures, resulting in ash that can later be safely removed. This heating process can trigger a fire if the heat source comes into contact with combustible material. DPFs were associated with three fires in heavy-duty vehicles between 2011 and 2012, which led to a CARB investigation. CARB ultimately determined that DPFs were safe, but the agency recalled the DPF model responsible for the increased fire risk.⁴

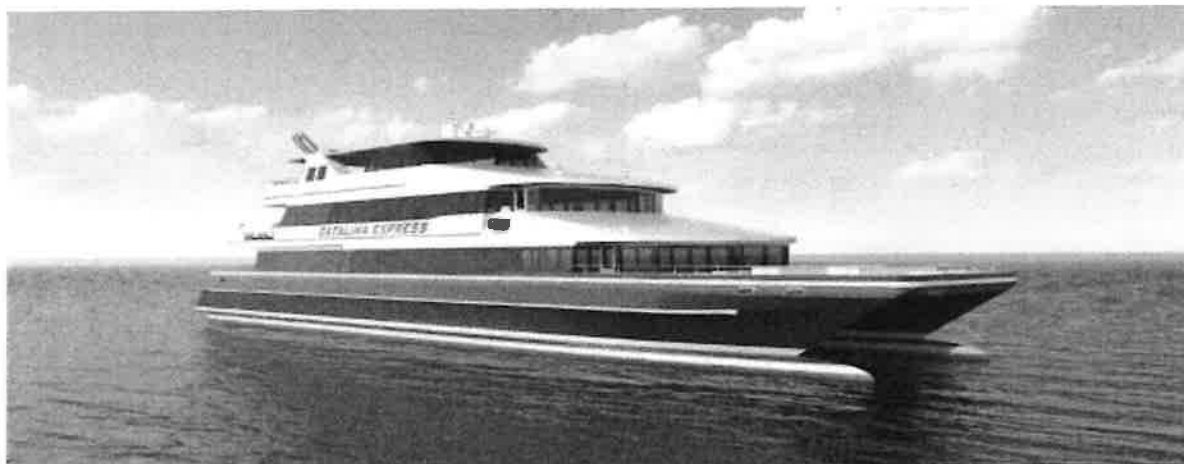
A fire on a truck is dangerous. A fire on a vessel, particularly one with up to 525 human passengers, could be catastrophic. For that reason, ferry and excursion vessel operators have been cautious about including DPFs onboard their vessels. CCE's harsh duty cycle of long runs through choppy ocean is a tall task for any system, and the USCG has expressed concern that DPFs could be a fire hazard. POLA and CCE will need to work closely with the USCG, CARB, and system designers to develop a DPF that is proven safe and verified for marine use. If successful, the LA MER project likely will be the nation's first deployment of a marinized DPF.

This DPF will work in concert with a series of other aftertreatment devices. For CCE's new vessel, the customized Tier 4 engines include features to lower the levels of NOx emissions and to control PM emissions, such as integrated selective catalytic reduction (SCR), exhaust gas recirculation (EGR), and high-pressure common rail fuel injection systems. While each of these technologies are understood well on their own, the innovative element of this project is to bring this all together into one ultra-clean vessel. The system represents the best possible diesel vessel and will bring much needed emissions reductions to priority populations on both ends of its journey while even cleaner technologies can be developed for the future.

Figure 3 presents an artist rendering of the proposed Tier 4+ Ferry.

⁴ California Air Resources Board, "Evaluation of Particulate Matter Filters in On-Road Heavy-Duty Diesel Vehicle Applications." May 8, 2015. https://ww2.arb.ca.gov/sites/default/files/2020-08/dpfeval_0.pdf

Figure 3: Rendering of New Catalina Channel Express Tier 4+ Ferry

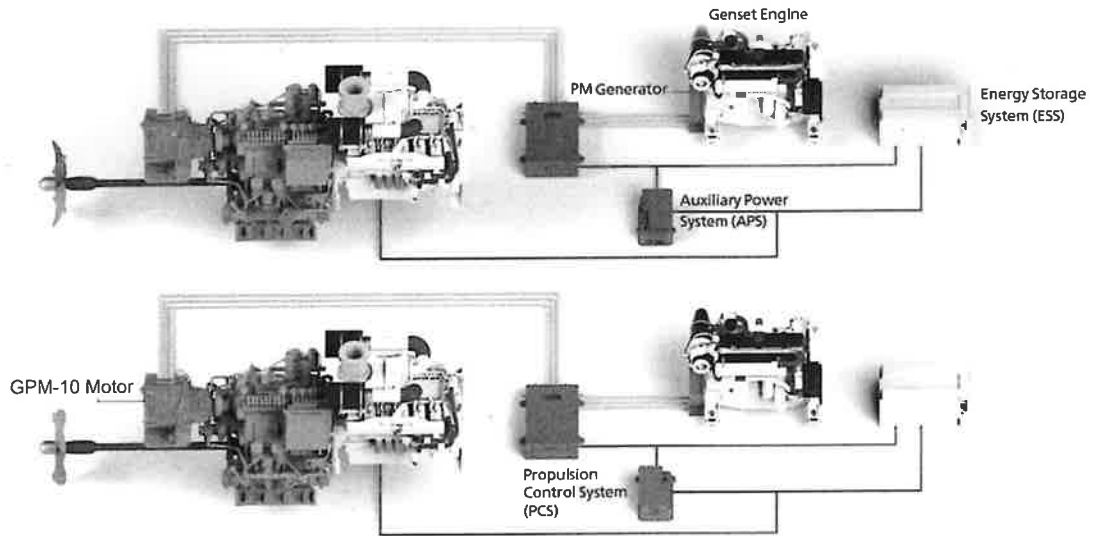


Hybrid-Electric Assist Power System: The development of zero-emission capable vessels is a logical first step towards fully zero-emission harbor craft fleets. Excursion vessels represent a particularly well-suited duty cycle for pushing the envelope. The two Harbor Breeze excursion vessels will often run on low-speed tours with breaks in between to facilitate at least a partial recharge. The BAE Systems HybriGen technology takes advantage of that opportunity to maximize emissions reductions while maintaining the reliability of standard diesel power in the event of emergency or traversing long distances. The system uses a parallel hybrid architecture comprised of five major components, as shown in Figure 4:

- *Propulsion Motor.* The electric propulsion motors provide full power over a wide speed range with low-end torque and a high power-to-weight ratio. The motors have a power rating of 150 kW, which is about 202 horsepower (hp), with a maximum speed of 4,000 rpm.
- *Propulsion Control System (PCS) and System Control Unit (SCU).* The PCS is the power processing and power management center for the entire system. The PCS works in conjunction with the SCU, which provides the operator interface, system monitoring, and control. These systems control the optimal flow of power to and from the traction motor, generator, and energy storage system.
- *Auxiliary Power System (Aux PCS).* The Aux PCS provides AC power for vessel hotel loads and can act as a variable frequency drive that can be used for integrated bow or stern thruster control. When the vessel connects to shore power to recharge, it will draw power through the Aux PCS.
- *Energy Storage System (ESS).* The ESS consists of four strings of eight packs of batteries with 77 kW hours per string for a total of 308 kW in stored energy capacity. The ESS can be fully recharged from shore power via the Aux PCS or from the diesel gensets. When connected to shore power, the ESS is expected to fully recharge in two hours. The shore power system is described in more detail under Criterion 3.
- *Genset.* The system includes Tier 3 gensets. The gensets can recharge the ESS and/or provide propulsion for longer and higher speed trips outside the harbor. The gensets will be powered by renewable diesel.

The vessel also will have Tier 4 diesel-powered main engines for longer routes with tougher duty cycles, such as across the Catalina Channel, and for emergencies. The vast majority of trips are not expected to use these engines.

Figure 4: HybriGen Hybrid-Assist System Architecture



The technology is designed to be automated and intuitive, and the captain should be able to fully focus on piloting the vessel. The HybriGen system comes with easy-to-use controls and intuitive displays, and it is integrated with safety alarms and a diagnostic software system for troubleshooting (Figure 5). Each HybriGen system also comes with data loggers and telematics capability so that BAE Systems can provide remote analysis of system performance or aid in troubleshooting.

Figure 5: HybriGen Systems and Controls



- System Ignition Switch
- Mode Switch
 - Automatic
 - Force Genset OFF
 - Force Genset ON
- Maintenance Switch
- Emergency Stop

With this system, the vessels will be able to operate at least 30% of the time in zero-emission mode (40% is expected) with some trips operating as much as 75% of the time in zero-emission mode depending on route length. These are first-of-their-kind vessels with specific innovations dedicated passenger safety and comfort, such as dual-cable charging to enable faster recharge speeds while loading and unloading passengers and a carefully designed system interface for the ship's captain.

Beyond these specific technologies, POLA , in partnership with POLB and the harbor craft operators, will produce the Next Generation Harbor Craft Technology Evaluation that will address outstanding issues associated with lower-emission marine engines and will foster better understanding of the future clean harbor craft ecosystem in San Pedro Bay. The evaluation will consider the current and projected future status of emission-reduction technologies and fuels for ferries, excursion vessels, tugboats, and pilot vessels. The goal will be to assess potential innovations beyond the proposed deployments and to provide the Ports with guidance in developing supporting infrastructure and facilitating the use of future harbor craft.

Safety

Safety is a number one concern for all equipment and alternative fuel technology operating at the Port and a particular concern for vessel operators transporting passengers. At sea, an emergency can be catastrophic. For that reason, both vessel operators are required to adhere to stringent permitting and safety-approval channels in coordination with State agencies, USCG, and local first responders.

All vessels will be certified and licensed under all applicable regulations for vessels carrying public passengers. CCE is a private entity regulated by the California Public Utilities Commission and has a unique structure of safety and security procedures to which the new vessel must adhere. The Harbor Breeze hybrid system will come with an audible safety alarm and emergency-stop switch seamlessly integrated into the captain's displays. The new technologies either have been or will be proven safe to the standards of all relevant permitting authorities, including the USCG, before deployment. In the event of an emergency, the Ports maintain a fleet of fire boats that can be deployed for rescues and assistance.

The Next Generation Harbor Craft Technology Evaluation will assess safety issues around new technologies, including DPFs.

Technical Advantages

These technologies have been carefully vetted to suit the duty cycles of these vessels. CCE ferries must be able to cross rough ocean waters multiple times a day carrying hundreds of passengers per trip. Today, combustion engines with a CARB-verified, USCG-approved DPF are the only suitable technology for this demanding duty cycle. The new CCE vessel also will significantly increase passenger capacity, allowing CCE to use this one vessel to replace three smaller ones, which is itself an innovation.

The Harbor Breeze vessels have been designed with flexibility in mind. These excursion boats often take passengers on leisurely strolls around the harbor, but sometimes travel deeper into the ocean for whale watching or even across the channel to Catalina Island. Harbor Breeze needs vessels capable of handling various route lengths in different ocean conditions. It needs vessels that are fast enough to catch up to a pod of whales but stable enough for a slow dinner cruise. Harbor Breeze is also mindful of noise. Quieter vessels will not scare off whales and will make dinner cruises and private events more enjoyable. The hybrid-electric system provides a quieter, all-zero-

emissions experience for whale watching, Port tours, and dinner cruises within the harbor with more powerful propulsion for longer routes and Catalina Channel crossings.

Emissions Testing

All vessels will use Tier 4 engines that have been certified by the EPA. Emissions testing on the DPF and hybrid-electric system will take place during the demonstration.

Criterion 9: Potential for Market Penetration and Commercialization of the Technology

These technologies are well poised to achieve commercialization within three years of the project end date, well before 2030, if the demonstrations are successful. Further, there is a ready-made California market for these technologies, owing to regulatory requirements, and the potential for out-of-state markets because of the technological innovations, which are expected to improve the passenger experience.

Target Market and Interest in New Technologies

The target market consists of operators of high-speed ferries and excursion boats, primarily in California, but also more broadly. The California Commercial Harbor Craft regulation requires high-speed ferries to transition to Tier 4 engines plus DPF and excursion boats to transition to zero-emission-capable systems beginning in 2024 with phased-in compliance dates based on the existing vessel's engine model year. All of these operators would adopt these technologies pending successful demonstration because they need to comply with the regulation. Further, many of the technological innovations will be attractive to out-of-state markets. The ZEAT excursion vessels, for example, are quieter, able to operate in zero-emissions mode, and have flexibility for different duty cycles, which creates a more comfortable passenger experience.

Targeted End Users

The end users for these technologies are high-speed ferry operators and excursion boat operators.

Market Size and Growth Potential

Within San Pedro Bay, there are eight ferries and 25 excursion boats, according to the 2022 Port of Los Angeles emissions inventory. Statewide, there are 75 high-speed ferries and 420 excursion boats, according to CARB data.⁵ All of these vessels will need to transition to these technologies over the next decade, which provides a significant growth opportunity beyond San Pedro Bay.

Moreover, the market could grow even more as the California tourist industry expands. The CCE ferry will be a critical transportation link to Catalina Island, which receives more than one million visitors per year, and the Harbor Breeze excursion boats serve tourists on whale-watching expeditions and harbor cruises. The California tourism industry grew 32% in 2022 and is on track to fully recover to pre-pandemic levels by 2025, opening up new opportunities to grow the market for clean harbor craft using these cutting-edge technologies.

Barriers to Entry or Expansion

These technologies will be required in California, which eases the barriers to entry. That said, there are still concerns with safety and technological suitability beyond these specific vessels in their very specific routes. As noted previously, the DPF could pose a safety risk if not marinized appropriately, which would present a significant barrier to broader acceptance. For that reason, the project team will work closely with CARB and the USCG throughout design and prior to deployment to ensure these concerns are addressed. Also, a successful demonstration here does not guarantee success in other vessels with different duty cycles, which is a barrier to expansion. As described under

⁵ <https://ww2.arb.ca.gov/resources/fact-sheets/chc-fact-sheet-ferries>

Criterion 11, POLA plans to share lessons learned from this project to help other harbor craft operators understand how these technologies might work for their particular situation.

Commercialization Plan/CARB Certification

These technologies are well poised to achieve commercialization within three years of the project end date pending successful demonstrations. Both vessel projects begin with commercialized EPA-certified Tier 4 engines, which accelerates the commercialization pathway.

BAE Systems, the ZEAT technology developer, has installed more electric propulsion systems in USCG-inspected passenger vessels than any other manufacturer. Further, it has partnered with All American Marine shipyard – where the Harbor Breeze vessels will be built – on several previous projects, and the shipyard is familiar with the system technology, experienced in component level installation, and is well versed in the system operation, all of which supports rapid commercialization.

CARB and USCG will need to approve the technologies before any of the vessels can be deployed. CARB will need to verify the DPF system working in conjunction with the Tier 4 engines aboard the CCE ferry. To facilitate this verification, the project team will work closely with CARB staff to validate data collection and to develop an emissions testing plan that supports verification. All vessels will need to secure a certificate of inspection from the USCG prior to demonstration. The process requires a vessel inspection by a local USCG Sector Officer in Charge of Marine Inspections or an approved third-party surveying entity. The certificate process will be managed by each respective vessel operator based on past experience in obtaining USCG certifications for previous and current vessels.

Economic Benefits or Costs

The technologies are not expected to generate economic benefits for operators. According to CARB's Standardized Regulatory Impact Assessment for the Harbor Craft Regulation, Tier 4 engines with SCR could result in annual maintenance cost savings or increases up to \$5.20 per hp. Fuel for regenerating the DPF may add \$2.10 to \$7.90 per hp, and electricity costs associated with charging the ZEATs are likely to be higher than diesel fuel costs, at least at current estimated power and diesel costs.

Special Training

The technologies will require additional training for crew and vessel engineers as described under Criterion 13.

Criterion 10: Ability to Implement Project with Equity Considerations

Equity is at the forefront of this project, and the community will be engaged throughout implementation. POLA has worked closely with the local community for many years on environmental improvements in and adjacent to this project, and this project reflects the community's demands to reduce emissions and health risk.

LA MER aligns directly with the 2017 Clean Air Action Plan Update (CAAP), which was developed through an exhaustive community engagement process. POLA and POLB held meetings in neighborhoods impacted by port operations at times convenient for residents and provided Spanish translation services to serve diverse groups. Public comments received during that time stressed the importance of accelerating the deployment of cleaner equipment, which is achieved by this project. The CAAP contains several harbor-craft strategies calling for cleaner diesel engines and advanced fuels and technologies to reduce greenhouse gases and criteria pollutants. POLA will continue to integrate community feedback and equity considerations throughout implementation.

POLA has developed a community engagement plan to share project updates and to give the community a chance to offer ways of further incorporating equity into this project, such as through workforce development programs and/or greater emission reductions. The plan includes the following strategies:

- Provide updates on the project's status through the CAAP Implementation Stakeholder Advisory Group, which is open to everyone, in order to meaningfully incorporate future community feedback.
- Provide updates at City of Los Angeles Neighborhood Council meetings in the disadvantaged areas of Wilmington and San Pedro. These Neighborhood Councils report directly to the full City Council.
- Offer free public harbor tours aboard the new Harbor Breeze excursion boats, giving Harbor Breeze and POLA staff an opportunity to describe the technology benefits to residents in the project location.
- Engage community-based and environmental-justice organizations, such as Coalition for Clean Air, Earthjustice, and Natural Resources Defense Council, through informal meetings and direct conversations.
- Share emission reductions associated with this project through POLA's annual emissions inventory, whose methodologies and assumptions have been approved by a task force of regulatory and technical stakeholders. The inventory incorporates fleet data provided by the terminals and calculates greenhouse gas and criteria pollutant emissions. The emissions inventory is made public on POLA's website and presented at the CAAP Implementation Stakeholder Advisory Group.

This community engagement plan is iterative and will be updated throughout project implementation in response to community input.

Criterion 11: Potential of Project to Act as a Showcase of Technology

The LA MER project offers a rare opportunity to showcase transformative emission-reduction technologies directly to the public, including residents of the disadvantaged communities surrounding San Pedro Bay. CCE transports more than 1 million passengers each year to Catalina Island, and many of these passengers will experience first hand the new Tier 4 ferry with a CARB-verified, USCG-approved DPF. The Harbor Breeze ZEATs will be used for public whale-watching tours and harbor excursions, plus free 45-minute Port tours during the summer. The Port tours are narrated by POLA and POLB staff, who will describe the transformative nature of the very vessel the passengers are sitting in. More than 10,000 residents take these tours each year. Giving the public a chance to ride in these new vessels is an unparalleled way to showcase technology, and it helps build public support for clean-air programs.

POLA and POLB also will showcase these technologies to other harbor-craft operators, the industry, and regulatory agencies. Project updates will be shared at TAP meetings, which are held every six weeks and include representatives from CARB, South Coast AQMD, and CEC. Updates also will be shared at CAAP Implementation Stakeholder Advisory Committee meetings, which include industry representatives and community groups. Also, POLA participates in port associations, such as the International Association of Ports and Harbors and American Association of Port Authorities. These organizations convene ports from across the world to learn about cutting-edge technologies. POLA will share technical information and lessons learned to accelerate more widespread adoption of these vessel technologies

Criterion 12: Timeline for Project Completion

Table 6 illustrates the project schedule by major task. All work will be completed by March 15, 2027, to allow timely processing of final invoices before the June 30, 2027 liquidation date of the additional funding from the CEC. Time to secure materials and construction services is included in the task duration. CCE and Harbor Breeze have already identified boat yards and technology providers, which accelerates the contracting process. Figure 6 presents the schedule in GANTT chart format.

Table 6: Project Schedule (Tabular)

| Task/Milestone | Duration | Start Date | End Date |
|---|-----------------|-------------------|-------------------|
| 1.1 – Kick-Off Meeting | 1 day | December 31, 2023 | December 31, 2023 |
| 1.2 – Quarterly Reports | 39 months | December 31, 2023 | March 15, 2027 |
| CCE Ferry | | | |
| 2.1 – Boat Yard Procurement | 15 days | December 15, 2023 | December 31, 2023 |
| 2.2 – Equipment Component Orders | 30 days | December 31, 2023 | February 1, 2024 |
| 2.3.1 – Hull Construction | 8 months | February 1, 2024 | October 1, 2024 |
| 1.3 – CPR Meeting | 1 day | June 1, 2024 | June 1, 2024 |
| 2.3.2 – Superstructure | 4 months | October 1, 2024 | January 1, 2025 |
| 2.3.3 – Metal Work | 3 months | January 1, 2025 | April 1, 2025 |
| 2.4.1 – Vessel Launch | 5 months | April 1, 2025 | September 1, 2025 |
| 2.4.2 – Vessel Acceptance and Delivery | 3 months | September 1, 2025 | December 31, 2025 |
| 2.5 – Vessel Demonstration | 12 months | December 31, 2025 | December 31, 2026 |
| 2.6 – Data Collection and Emissions Testing | 14 months | December 31, 2025 | February 1, 2026 |
| ZEAT Excursion Boats | | | |
| 3.1 – Boat Yard Procurement | 15 days | December 15, 2023 | December 31, 2023 |
| 3.2 – Equipment Component Orders | 30 days | December 31, 2023 | February 1, 2024 |
| 1.3 – CPR Meeting | 1 day | February 1, 2024 | February 1, 2024 |
| 3.3.1 – Hull Construction | 4 months | February 1, 2024 | June 1, 2024 |
| 3.3.2 – Superstructure | 3 months | June 1, 2024 | September 1, 2024 |
| 3.3.3 – Metal Work | 2 months | September 1, 2024 | November 1, 2024 |
| 3.3.4 – Outfitting and Finishes | 2 months | November 1, 2024 | January 1, 2025 |
| 3.4.1 – Vessel Launch | 6 months | January 1, 2025 | July 1, 2025 |
| 3.4.2 – Vessel Acceptance and Delivery | 4 months | July 1, 2025 | November 1, 2025 |
| 3.5 – Vessel Demonstration | 12 months | November 1, 2025 | November 1, 2026 |
| 3.6 – Data Collection and Emissions Testing | 14 months | November 1, 2025 | December 31, 2026 |
| Technology Evaluation | | | |
| 4.1 – Commercial Market Summary | 5 months | December 31, 2023 | May 1, 2024 |
| 4.2 – DPF Review | 6 months | December 31, 2023 | June 1, 2024 |
| 4.3 – Manufacturer RFI | 4 months | September 1, 2024 | December 31, 2024 |
| 4.4 – Infrastructure Assessment | 10 months | January 1, 2025 | November 1, 2025 |
| 4.5 - Roundtable | 2 months | November 1, 2025 | January 1, 2026 |

- Workforce assessment as part of the Next Generation Harbor Craft Technology Evaluation to identify the job skills and trainings needed to support cleaner tugboats, ferries, and pilot boats in San Pedro Bay.

Each project partner will lead at least one component of the workforce plan. CCE and Harbor Breeze will lead the technology-specific trainings. POLA, in collaboration with POLB, the harbor-craft operators, labor unions and State workforce development agencies, will lead the industry-wide workforce component through the Goods Movement Training Campus. All project partners will contribute to the workforce assessment.

Affected Personnel and Classifications

The transition to cleaner harbor-craft technologies is expected to directly affect these positions:

- Captain: The primary focus of the captain is to ensure the safety and security of passengers, vessel and crew; maintain situational alertness of passenger activity, vessel condition and monitoring crew performance while maintaining security program protocols. They are responsible for the safe navigation of the ship, speed and location.
- Second Operator (Second Captain): The primary focus of the Second Operator is to create a communication bridge between the Captain and the crew; maintain situational alertness of passenger activity, vessel condition and monitoring crew performance.
- Engineer: Engineers are responsible for performing routine maintenance on the fleet as directed by the Port Engineer. They also perform inspections of vessels for repair and implement maintenance standards and procedures, working with other company engineers as needed. They must ensure that the vessels are safe for passengers and crew before embarkation. Engineers often work in collaboration with the operations team in the event that a mechanical issue arises.
- Safety & Compliance Manager: The primary focus of this position is to oversee compliance with environmental and USCG regulations.

Proposed Training and Curricula

Due to the nascency of the vessel technologies, not all of the training requirements are known today. A key component of the Next Generation Harbor Craft Technology Evaluation is to identify workforce skills and trainings that might be required for marinized emission-reduction technologies, such as selective catalytic reduction (SCR), DPFs, and batteries, and for advanced low- and no-carbon fuels, such as methanol, ammonia, and hydrogen.

At present, the project team recognizes the need for opacity testing training and compliance oversight. CCE engineers will be required to attend Opacity Testing Certification classes and to maintain that certification. CCE Safety & Compliance managers will need training in Helm Operations, which digitalized CCE's USCG regulatory compliance across all company assets. This software system provides daily tracking and management oversight that has generated a near perfect annual inspection record during the renewal of USCG issued certificates of inspection. It also provides records and reporting analysis for more than 1,300 individual certifications and asset safety equipment.

Engineers at both harbor-craft companies will need to learn how to maintain the new emission-reduction technologies, such as SCRs, DPFs, batteries, and shore power, including safely connecting and disconnecting the hybrid-electric excursion vessels from shore power. All harbor craft personnel are required to participate in safety and security drills. USCG requires monthly emergency response drills for man overboard, shipboard fire, abandon ship, and security.

The Goods Movement Training Campus will offer education and job-specific trainings for clean-air technologies, such as batteries and advanced emission-control systems.

Training Plan

Most trainings for the harbor-craft operators will take place in person and often on the vessel itself, using hands-on approaches. The engine manufacturers will provide maintenance training for engines, SCR, and DPF. At this time, because the systems are so new, those exact requirements are not yet known. BAE Systems, the hybrid-technology provider for the ZEATs, offers comprehensive training on the system components, operation, troubleshooting, maintenance, and safety procedures. The training will take place during commissioning.

Once the vessel engineers have been trained by the manufacturers, they will train other engineers and personnel using a “train-the-trainer” model. The Next Generation Harbor Craft Technology Evaluation will help identify training needs and plans for advanced harbor-craft technologies in collaboration with CCE, Harbor Breeze, and other harbor craft operators.

Training and development will take place largely in the communities served by the harbor-craft operators. The Goods Movement Training Campus strives to increase workforce diversity and to draw new workers from port-adjacent communities, which are considered high-priority populations.

Hiring Plan

Because the new vessels are replacing existing vessels – and in the case of CCE, multiple vessels – the operators plan to use the current crews, thus ensuring no job loss during the transition to cleaner technologies. The Goods Movement Training Campus is poised to encourage hiring from local communities and among populations that have typically been underemployed and underserved.

Labor and Development Partnerships

The Goods Movement Training Campus is a partnership among the Port of Los Angeles, Port of Long Beach, International Longshore and Warehouse Union, Pacific Maritime Association, and the California Workforce Development Board. Although the campus will initially focus on workforce needs related to terminal operations, the intent is to support the green transition across the logistics chain, including the harbor-craft sector.

Replicability to Other Communities

Training programs developed for this project are applicable to any harbor-craft operator that uses similar engine technologies. The project team will work with the engine manufacturers and vessel engineers to document training protocols so they can be shared with other communities.

Performance and Evaluation Metrics

At minimum, the project team will track the following metrics:

- Number of jobs created as a result of the Tier 4+ ferry and the two hybrid-electric excursion vessels
- Dollar amount and percent of total project budget associated with each of the vessel components
- Job classifications
- Job training credentials earned
- Total project hours
- Average hourly wage
- Number of workers completing job training

-
- Description of workplace benefits for engineers and Safety and Compliance managers (such as health insurance, and paid time off)

Data Collection and Reporting Methodologies

The project team will collect the data using the following methods:

- California Climate Investments Job Co-benefit Modeling Tool (<https://ww2.arb.ca.gov/resources/documents/cci-methodologies>)
- Employment records for CCE and Harbor Breeze by classification and hours worked
- Training logs
- Certificates of courses completed
- Review of job benefits from company materials
- Surveys, post-class evaluation forms, and/or informal feedback to assess the quality and value of job trainings

Additional reporting methodologies will be developed in collaboration with CARB, the harbor craft operators, and other stakeholders.

Criterion 14: Optional Extra Credit Scoring Criteria

The LA MER project achieves the following optional extra credit criteria:

CEQA

The project has been issued a categorical exemption under CEQA. Please see Attachment 8.

Subagreements

POLA will need to execute subagreements with each project partner after the grant has been awarded in order to ensure that each subagreement contains the grant terms and conditions dictated by the master grant contract between POLA and CARB. This process ensures that all project participants are held to the same stringent requirements.

That said, POLA has other contracts in place with the project partners. These existing contracts will accelerate subagreement approvals, as POLA already knows these partners can meet its insurance and vendor requirements. Contracts include:

- Contract with Tetra Tech/CE-CERT to provide technical assistance and emissions testing for technology projects
- Contract with Harbor Breeze to provide educational Port harbor tours
- Lease agreement with CCE for dock space in Los Angeles

Workforce Plan Benefits

The workforce plan will benefit an area that has higher unemployment rates than approximately half of all census tracts in California. Within a 2-mile radius of the domicile locations for this project, data show 63 census tracts with an overall average unemployment rate of 6.91%, compared to 5.2% and 5.7% for the cities of Long Beach and Los Angeles respectively.

Work Plan

The following tasks are required to complete the projects. Due dates are provided in terms of months since the Notice to Proceed (NTP), which is the date by which POLA has signed the grant agreement with CARB and subgrantees have signed subgrant agreements with POLA, as required. The due dates listed below assume December 31, 2023, as the NTP date.

Task 1.0 Project Administration. The purpose of this task is to ensure that all project components are completed on time, within budget, and in compliance with CARB and/or CEC requirements. POLA will hold monthly project status meetings with the operators and regular meetings with CARB/CEC, including Critical Project Review (CPR) meetings, to ensure timely project execution. This task includes the following subtasks:

- 1.1 Project Kick-Off Meeting, once after the grant contract has been signed
- 1.2 Quarterly Reports, every three months from start of project
- 1.3 CPR Meetings, as needed, but at minimum, there will be one meeting prior to finalizing the engine/ emission-reduction technology design for the CCE ferry (June 2024) and one meeting prior to ordering the Harbor Breeze vessels (February 2024)

All quarterly reports will comply with the Americans with Disabilities Act (ADA), ensuring they meet CARB's requirements.

Deliverable: Quarterly reports, CPR summaries

Duration: 39 months (NTP to March 15, 2027)

Completion Date: Quarterly reports are at least every three months from start of project

Milestone: Yes, Milestone #1

Task 2.0 CCE Low-Emission High-Capacity Ferry. The purpose of this task is to design, construct, launch, and demonstrate a 525-passenger ferry equipped with Tier 4 propulsion engines and a DPF. As discussed earlier, the vessel design will accommodate space and design elements to ensure DPF integration. The DPF will be included if there is a commercialized product that has been CARB-verified and approved by the US Coast Guard for use in a passenger vessel. If the Coast Guard has not approved a DPF for use in this ferry, CCE will only install the Tier 4 engines. There are six subtasks.

Subtask 2.1. Boat Yard Procurement. The purpose of this task is to identify a boat yard to build the vessel and to develop initial designs. During this subtask, CCE will sign a contract with a boat yard and place the downpayment on construction.

Deliverable: Quarterly report with signed boat yard contract

Duration: Less than 15 days

Completion Date: Complete upon NTP (December 31, 2023)

Milestone: Yes, Milestone #2

Subtask 2.2. Equipment Component Orders. The purpose of this subtask is to complete design of the ferry and order all long lead-time components, such as the certified Tier 4 engines and verified DPF. Prior to

finalizing design, CCE will validate whether a CARB-verified and USCG-approved DPF is available for installation, referencing the Technology Evaluation (see Task 4.0).

Deliverable: Quarterly report with receipts and paid invoices

Duration: 30 days

Completion Date: One month from NTP (February 1, 2024)

Milestone: Yes. Milestone #3

Subtask 2.3. Vessel Construction. The purpose of this subtask is to build the new ferry. This subtask also includes traveling to the boat yard every month for the duration of construction to observe progress, address issues, and ensure on-time completion of construction. This subtask includes the following components:

2.3.1. Hull construction, which includes hull framing and Construction (duration: 8 months)

2.3.2 Superstructure, which includes constructing the deck and cabin and attaching the deck to the hull (duration: 4 months)

2.3.3 Metal work, which includes welding and fittings (duration: 3 months)

Deliverable: Quarterly report with invoices, photographs, and travel receipts

Duration: 15 months

Completion Date: 16 months from NTP (April 1, 2025)

Milestone: Yes. Milestones #5, #6, and #7

Subtask 2.4 Vessel Launch and Acceptance. The purpose of this subtask is to secure USCG certification, launch the ferry, conduct sea trials, and transport the ferry to Los Angeles. This subtask also includes traveling to the boat yard to observe testing, address issues, and ensure on-time launch and delivery. This subtask includes the following components:

2.4.1 Vessel launch (duration: 5 months)

2.4.2 Vessel acceptance and delivery (duration: 3 months)

Deliverable: Quarterly report with USCG certification, invoices, photographs, and travel receipts

Duration: 8 months

Completion Date: 24 months from NTP (December 31, 2025)

Milestone: Yes. Milestones #8 and #9.

Subtask 2.5 Vessel Demonstration. The purpose of this subtask is to demonstrate the new CCE ferry for one year in full revenue service operation.

Deliverable: Quarterly report with performance data

Duration: 12 months

Completion Date: 36 months from NTP (December 31, 2026)

Milestone: No

Subtask 2.6 Data Collection and Emissions Testing. The purpose of this subtask is to conduct emissions testing on a baseline vessel and the new vessel, to collect the data required in Attachment F and/or any other data requested by CARB, and to produce a demonstration report. CE-CERT will conduct emissions testing on one representative passenger ferry and the new Tier 4 vessel. Exact emissions testing methods will be determined as part of a CARB-approved test plan and may include a gas analyzer, portable emissions measurement system (PEMs), and a partial dilution system with a micro soot sensor. CE-CERT will adhere to a test plan that will be developed with and approved by CARB.

Deliverable: Emissions testing report

Duration: 14 months

Completion Date: 38 months from NTP (February 1, 2027)

Milestone: Yes, Milestone #10

Task 3.0 Harbor Breeze Zero-Emission Advanced Technology Vessels. Under this task, Harbor Breeze will design, construct, launch, and demonstrate two zero-emission capable excursion boats. Harbor Breeze will conduct the same activities below for each of the boats. There are six subtasks.

Subtask 3.1 Boat Yard Procurement. The purpose of this task is to identify a boat yard to build the vessels and to develop initial designs. Both vessels will use the same design. During this subtask, Harbor Breeze will sign a contract with a boat yard and place the downpayment on construction.

Deliverable: Quarterly report with signed boat yard contract

Duration: Less than 15 days

Completion Date: Complete upon NTP (December 31, 2023)

Milestone: Yes, Milestone #11

Subtask 3.2 Equipment Component Orders. The purpose of this subtask is to complete design of the boats and order all long lead-time components, including the propulsion engines.

Deliverable: Quarterly report with receipts and paid invoices

Duration: 30 days

Completion Date: One month from NTP (February 1, 2024)

Milestone: Yes, Milestone #12

Subtask 3.3 Vessel Construction. The purpose of this subtask is to build the new vessels. This subtask includes the following components:

3.3.1. Hull construction, which includes hull framing and construction (duration: 4 months)

3.3.2. Metal work, which includes completing welding and rolling over the hull (duration: 3 months)

3.3.3. Superstructure, which includes completing the deck and attaching the cabin to the hull (duration: 2 months)

3.3.4. Outfitting and finishes, which includes interior finishings, such as seats and galley components (duration: 2 months)

Deliverable: Quarterly report with invoices and photographs
Duration: 11 months
Completion Date: 12 months from NTP (January 1, 2025)
Milestone: Yes, Milestones #14, #15, #15, and #17

Subtask 3.4 Vessel Launch and Acceptance. The purpose of this subtask is to secure USCG certification, launch the boats, and conduct sea trials. This subtask includes the following components:

- 3.4.1 Vessel launch (duration: 6 months)
- 3.4.2 Vessel acceptance (duration : 4 months)

Deliverable: Quarterly report with USCG certification, invoices, and photographs
Duration: 10 months
Completion Date: 22 months from NTP (November 1, 2025)
Milestone: Yes, Milestones #18 and #19

Subtask 3.5 Vessel Demonstration. The purpose of this subtask is to demonstrate the new excursion boats for one year in full revenue service operation.

Deliverable: Quarterly report with performance data
Duration: 12 months
Completion Date: 34 months from NTP (November 1, 2026)
Milestone: No

Subtask 3.6 Data Collection and Emissions Testing. The purpose of this subtask is to conduct emissions testing on a baseline vessel and the new vessel, to collect the data required in Attachment F and/or any other data requested by CARB, and to produce a demonstration report. CE-CERT will conduct emissions testing on one representative excursion boat and one new ZEAT vessel. Exact emissions testing methods will be determined as part of a CARB-approved test plan and may include a gas analyzer, portable emissions measurement system (PEMs), and a partial dilution system with a micro soot sensor. CE-CERT will adhere to a test plan that will be developed with and approved by CARB. Because the new ZEATs will have an identical design, it is only necessary to conduct baseline testing on one comparable boat.

Deliverable: Emissions testing report
Duration: 14 months
Completion Date: 36 months from NTP (December 31, 2026)
Milestone: Yes, Milestone #20

Task 4.0 Next Generation Harbor Craft Technology Evaluation. The purpose of this task to develop a technology evaluation of emission-reduction technologies for ferries, pilot boats, and tugboats. Although technology/feasibility assessments have been conducted in the past, including by CARB, this evaluation will focus on the specific duty cycles found in San Pedro Bay for the three vessel types, and it will incorporate the most updated findings from engine manufacturers and technology developers.

POLA and POLB will identify a qualified consultant to conduct the study. This task consists of five subtasks, many of which will run concurrently:

- Subtask 4.1 Commercial Market Status Summary.** The purpose of this subtask is to summarize the current state of commercially available harbor craft technologies applicable to ferries, tugboats, and pilot boats serving San Pedro Bay.
Deliverable: Commercial Market Status Summary
Duration: 5 months
Completion Date: 5 months from NTP (May 1, 2024)
Milestone: No
- Subtask 4.2 DPF Marinization Review/Report.** The purpose of this subtask is to assess the status of DPFs for harbor craft. The selected consultant, in consultation with the project partners, work with the partners, engine manufacturers, and the US Coast Guard to conduct this assessment. If DPFs are not certified for harbor-craft use at the time of the review, the consultant will identify what must be done to marinize DPFs for safe and effective use in harbor craft. The timeline is expected to identify whether it will be feasible for CCE to install a DPF on the Tier 4 ferry.
Deliverable: DPF Marinization Review/Report
Duration: 6 months
Completion Date: 6 months from NTP (June 1, 2024)
Milestone: No
- Subtask 4.3 Engine Manufacturer Request for Information (RFI).** The purpose of this subtask is to issue an RFI to marine engine manufacturers to understand the status and future prospects for next-generation emission-reduction technologies and low- and no-carbon marine fuels, such as green methanol and green ammonia.
Deliverable: Engine Manufacturer RFI
Duration: 4 months
Completion Date: 12 months from NTP (December 31, 2024)
Milestone: No
- Subtask 4.4. Zero-Emission Harbor Craft Infrastructure Assessment.** The purpose of this subtask is for the project team to assess the needs for charging or fueling infrastructure to support zero-emission tugboats, ferries, and pilot boats. It involves understanding energy needs and load capacity and identifying possible locations within the Port complex to install infrastructure. This task will be informed by tasks 4.1 and 4.3.
Deliverable: Infrastructure Assessment
Duration: 10 months
Completion Date: 22 months from NTP (November 1, 2025)
Milestone: No
- Subtask 4.5. Roundtable Workshop and Community Outreach.** The purpose of this subtask is for the project team to share the technology evaluation results at a roundtable workshop for discussion. Invitees will include

POLB, permitting and regulatory partners, engine manufacturers, and harbor craft operators. Separately, POLA will present its findings to the Clean Air Action Plan Implementation Stakeholder Advisory Group comprised of community members, environmental justice organizations, and industry representatives.

Deliverable: Roundtable Workshop

Duration: 2 months

Completion Date: 24 months from NTP (January 1, 2026)

Milestone: No

Subtask 4.6 Final Technology Evaluation Report. The purpose of this subtask is to compile the findings and analysis into a cohesive and readable final report. In addition to the technical findings, the report will include information on future workforce needs for safe, clean harbor craft. The report will be shared publicly and posted on POLA's Web site.

Deliverable: Final Technology Evaluation Report

Duration: 4 months

Completion Date: 28 months from NTP (May 1, 2026)

Milestone: Yes, Milestone #21

Task 5.0: Workforce Development Data Collection. The purpose of this task is to collect data on workforce outputs and outcomes resulting from this project.

Deliverable: Quarterly report with workforce development summary report

Duration: 38 months

Completion Date: 38 months from NTP (February 1, 2027)

Milestone: No

Task 6.0 Technology Showcase. The purpose of this task is to showcase the new technologies deployed and demonstrated by sharing the results and lessons learned from the project to other owners and operators, end-user fleets and equipment operators. Activities include public harbor tours on the new ZEAT vessels and presentations at community and industry events.

Deliverable: Included in Final Report, Task 7.0

Duration: 39 months

Completion Date: 39 months from NTP (March 15, 2027)

Milestone: No

Task 7.0: Final Report. The purpose of this task is to summarize the results of this project, including the data collected from tasks 2.6, 3.6, and 5.0, into one readable report. The report will include, but is not limited to, a summary of the progress reports, any deliverables that were committed to in the project, the results from any emission testing performed, and any other information required by CARB. The report will comply with the ADA, ensuring it meets CARB's requirements. This task includes two subtasks:

7.1 Draft Report, which will be provided no later than January 2, 2027

7.2 Final Report, which will be provided no later than March 15, 2027

Deliverable: Draft Report and Final Report

Duration: 4 months

Completion Date: 39 months from NTP (March 15, 2027)

ATTACHMENT 3: EMISSION REDUCTIONS AND COST-EFFECTIVENESS CALCULATIONS

Below is a detailed greenhouse gas (GHG), criteria pollutant and toxic air contaminant emission reduction and cost-effectiveness evaluation for the Port of Los Angeles Marine Emissions Reduction (LA MER) project, based on CARB's Appendix D guidance document entitled: "Quantification Methodology for the CARB LCT Demos and Pilots" for the Advanced Technology Demonstration and Pilot Projects Solicitation (July 14, 2023). Equation Numbers used below are based on original assigned identification by CARB.

For this project, there are three project components, as detailed below:

- I. Passenger Ferry with Tier 4 Engines and Diesel Particulate Filter (DPF): Catalina Channel Express (CCE) shall design, construct, launch, and demonstrate a high-capacity passenger ferry with Tier 4 propulsion engines and a diesel particulate filter (DPF), assuming a DPF has been verified for this application by the California Air Resources Board (CARB) and approved by the USCG at the time of engine installation. The new ferry will operate on renewable diesel (RND) and take the place of three smaller ferries with Tier 2 and Tier 3 engines, enhancing the efficiency of regional ferry service between the San Pedro Bay Ports and Catalina Island residents and visitors.
- II. Zero-Emission Capable Excursion Boats: Harbor Breeze shall design, construct, launch, and demonstrate two zero-emission capable hybrid excursion boats. The vessels are designed to meet the definition of Zero-Emission Advanced Technology (ZEAT) vessel under the CARB Harbor Craft Regulation. Each boat will have renewable-diesel-powered Tier 4 propulsion engines for safety, resiliency, and added range, but will be able to operate a minimum 30% of the time in zero-emission mode (though 40% is expected) with trips operating in low-load duty cycles achieving 100% in zero-emission mode, depending on route length. Although not part of this project, Harbor Breeze also will install shore power at a public wharf to charge the zero-emission capable excursion boats overnight and provide opportunity charging to maximize zero-emission operation of the vessels and auxiliary engines while at berth.
- III. Next Generation Harbor Craft Technology Evaluation. In partnership with the Port of Long Beach, POLA will develop a report to evaluate the commercial status of emission-reduction technologies, to assess the feasibility of marinizing DPFs, to request information from engine manufacturers on future low-carbon fuels and technologies, to identify infrastructure gaps for zero-emission harbor craft, and to understand workforce development needs specific to tugs, ferries, and pilot boats operating in San Pedro Bay. No GHG or air pollutant emission reductions will result directly from this project component, though of course, we anticipate this study will significantly contribute to the implementation of ever-cleaner harbor craft technologies.

Detailed calculations following CARB’s step-by-step methodology from Appendix D are provided below this summary of POLA’s estimated LA MER project benefits. Following the detailed emissions and cost-effectiveness assessment, screenshots from CARB’s Quantification Tool are provided. The “Other” tab was utilized due to the unique nature of the LA MER project components.

The below table provides the annual reductions for each demonstration vessel individually and across the total LA MER Project, reflecting the benefits during the one-year demonstration. The Harbor Breeze estimated reductions are based on a conservative assumption of 40% zero-emission operation based on the vendor’s energy requirements analysis for the primary excursion duty cycles. This analysis indicates that zero-emission operation is feasible as much as 80% of the time, depending on how much of the operation is in the whale watching duty cycle (which requires some diesel engine operation 1/3 of the time), but such a high benefit will be investigated during the demonstration.

| Project Results (Tons per Year) | | | | | |
|--|--|---|---|--|------------------------------|
| Project Component | Annual NO_x Emission Reductions (short tons/yr) | Annual ROG Emission Reductions (short tons/yr) | Annual PM/DPM/PM10 Emission Reductions (short tons/yr) | Annual PM_{2.5} Emission Reductions (short tons/yr) | MT CO₂e/yr |
| Component #1 CCE Tier 4+DPF Ferry (3-for-1 Replacement) | 60.213 | 5.512 | 2.365 | 2.2608 | 1355 |
| Component #2 HB Excursion ZEAT Vessel #1 (40% Hybrid) | 1.268 | 0.146 | 0.028 | 0.027 | 74 |
| Component #2 HB Excursion ZEAT Vessel #2 (40% Hybrid) | 1.268 | 0.146 | 0.028 | 0.027 | 74 |
| Total Project | 62.75 | 5.804 | 2.421 | 2.315 | 1,503 |

As required by the CARB Solicitation, below are the projected emission reductions during the one-year demonstration, a two-year period and a ten-year useful life after project completion.

| Total Project Results for Different Periods (All Vessels) | | | | | |
|--|---|------------------------------------|--|---|---------------------------|
| Project Period | NO_x Reductions (short tons) | ROG Reductions (short tons) | PM/DPM/PM10 Reductions (short tons) | PM_{2.5} Reductions (short tons) | MT CO₂e |
| One Year (Demo Period) | 62.749 | 5.804 | 2.421 | 2.3148 | 1,503 |
| Two Years | 125.498 | 11.608 | 4.842 | 4.6296 | 3,006 |
| Ten Years | 627.49 | 58.04 | 24.21 | 23.148 | 15,030 |

Similarly, the cost-effectiveness for each individual vessel, as well as the overall project is summarized below.

| Cost-Effectiveness Results (Each Project and Combined Total) | | | | |
|---|--|---|--|---|
| Project Component | Air Pollutant Cost-Effectiveness (2-year) | Air Pollutant Cost-Effectiveness (10-year) | GHG Cost-Effectiveness (2-year) | GHG Cost-Effectiveness (10-year) |
| CCE Tier 4+DPF Ferry (3-for-1 Replacement) | \$112,301 | \$23,433 | \$9,365 | \$1,954 |
| Component #2 HB Excursion ZEAT Vessel #1 (40% Hybrid ⁶) | \$3,916,582 | \$817,240 | \$52,330 | \$10,919 |
| Component #2 HB Excursion ZEAT Vessel #2 (40% Hybrid) | \$3,916,582 | \$817,240 | \$52,330 | \$10,919 |
| Combined Project (3 Vessels) | \$241,137 | \$50,316 | \$18,761 | \$3,915 |

Note that overall, this project far exceeds the Carl Moyer Program Advanced Technology CE limit of \$522,000 per weighted ton of emissions reductions achieved.

⁶ This is a conservative assumption since the energy requirements analysis for the primary duty cycles indicate that zero-emission operation is feasible as much as 80% of the time, depending on how much of the operation is in the whale watching duty cycle (which requires some diesel engine operation 1/3 of the time).

Component I. Catalina Channel Express Tier 4+DPF Ferry Replacement Project

Project Equipment Description:

- Three existing passenger ferries (equipped with 12 Tier 2/3 main and auxiliary engines) will be removed from California service and replaced with a high-capacity ferry equipped with four main engines (Tier 4+verified DPF) and two auxiliary engines (Tier 4+DPF if available, else Tier 3+DPF). Project metrics for each vessel are summarized in Table 3-1 below.
- Incremental Equipment Cost (IC) at demonstration: \$25,024,760
- IC @ two years after demonstration (January 2029): \$26,000,000

Table 3-1: Catalina Channel Express Baseline and Reduced Vessel Input Factors

| Vessel Name | Avalon Express (Baseline 1) | Super Express (Baseline 2) | Catrina Express (Baseline 3) | Tier 4+DPF Ferry (Name TBD #1) |
|--------------------------------|--------------------------------|--|---------------------------------|--|
| Vessel Type | Ferry (Monohull) | Ferry (Monohull) | Ferry (Catamaran) | Ferry (Monohull) |
| Passenger Capacity (typical) | 149 | 149 | 250 | 525 |
| Main Engine Load Factor | 0.42 | 0.42 | 0.42 | 0.42 |
| Aux Engine Load Factor | 0.43 | 0.43 | 0.43 | 0.43 |
| Wet Exhaust? | Yes | Yes | No | No |
| No. of Main Engines (ME) | 2 | 2 | 2 | 4 |
| ME Model Year | 2009 | 2009 | 2012 | 2024 |
| ME Horsepower | 2250 | 2250 | 2250 | 2550 |
| ME Certification Tier | 2 | 2 | 3 | 4+DPF |
| ME NO _x g/bhp-hr* | 5.24 | 5.24 | 5.24 | 1.34 |
| ME ROG g/bhp-hr | 0.49 | 0.49 | 0.49 | 0.14 |
| ME PM g/bhp-hr | 0.160 | 0.160 | 0.160 | 0.0045 (85% reduction from 0.03 g/bhp-hr) |
| No. of Auxiliary Engines (AE) | 2 | 2 | 2 | 2 |
| AE Model Year | 2016 | 2017 | 2011 | 2024 |
| AE Horsepower | 32 | 32 | 102 | 268 |
| AE Certification Tier | 3 | 3 | 2 | 3+DPF |
| AE NO _x g/bhp-hr | 5.04 | 5.04 | 5.04 | 0.49 |
| AE ROG g/bhp-hr | 1.54 | 1.54 | 0.85 | 0.07 |
| AE PM g/bhp-hr | 0.176 | 0.176 | 0.176 | 0.0102 (85% reduction from 0.068 g/bhp-hr) |
| Main Engine Hours/Year | 2,750 | 2,750 | 2,750 | 2,750 |
| Main Engine Gallons/Year | 165,000 | 165,000 | 165,000 | 176,138 |
| Main Engine Gallons/Hour | 60 | 60 | 60 | 64 |
| Aux Engine Hours/Year | 1,750 | 1,750 | 1,750 | 1,750 |
| Aux Engine Gallons/Year | 3,675 | 4,025 | 8,225 | 21,000 |
| Aux Engine Gallons/Hour | 2 | 2 | 5 | 12 |
| ME Total Gallons/Year | 330,000 | 330,000 | 330,000 | 704,552 |
| AE Total Gallons/Year | 7,350 | 8,050 | 16,450 | 42,000 |
| Vessel Gallons/Year | 337,350 | 338,050 | 346,450 | 746,552 |
| Sum of Baseline Vessels Gal/Yr | 1,021,850 | *All emission/load factors per Carl Moyer Program Guidelines, Appendix D, April 27, 2017 | | |
| Reduced Vessel Gal/Yr | 746,552 | | | |
| Fuel Savings Gal/Yr | 275,298 | | | |

STEP 1: Calculate the Carbon Content of Renewable Diesel (RND) fuel used by the baseline and replacement vessels via unit analysis using the following Fuel Specific Factors from CARB's Quantification Tool:

Carbon Intensity (CI) for Renewable Diesel Fuel:

$$CI_{RND} = \frac{37.97 \text{ gCO}_2\text{e}}{\text{MJ}}$$

Energy Density (ED) for Renewable Diesel Fuel:

$$ED_{RND} = \frac{129.65 \text{ MJ}}{\text{gal RND}}$$

Carbon Content (CC) for Renewable Diesel Fuel:

$$CC_{RND} = \frac{37.97 \text{ g CO}_2\text{e}}{\text{MJ}} * \frac{129.65 \text{ MJ}}{\text{gal RND}} = \frac{4,922.81 \text{ gCO}_2\text{e}}{\text{gal RND}}$$

STEP 2: Using the Carbon Content in Step 1 and Equation 23, calculate the baseline and replacement annual GHG emissions. Note that Table 3-1 includes the annual renewable diesel fuel consumption for each of the 12 baseline engines from the three vessels being removed from California service as well as each of the 6 replacement engines that will be equipped on the new, replacement vessel. The calculation of the overall baseline and replacement annual RND usage negates the needs to individually apply Equation 24 to each of the 18 project engines.

$$\begin{aligned} AEG_{baseline} &= \frac{1,021,850 \text{ gal RND}}{\text{year}} * \frac{4,922.81 \text{ gCO}_2\text{e}}{\text{gal RND}} * \frac{1 \text{ MT CO}_2\text{e}}{1,000,000 \text{ g}} \\ &= 5,030.37 \frac{\text{MTCO}_2\text{e}}{\text{year}} \end{aligned}$$

$$\begin{aligned} AEG_{replacement} &= \frac{746,522 \text{ gal RND}}{\text{year}} * \frac{4,922.81 \text{ gCO}_2\text{e}}{\text{gal RND}} * \frac{1 \text{ MTCO}_2\text{e}}{1,000,000 \text{ g}} \\ &= 3,674.98 \frac{\text{MTCO}_2\text{e}}{\text{year}} \end{aligned}$$

STEP 3: Compute the GHG emission reductions from the CCE project component:

$$\begin{aligned} CCE \text{ Project } ER_{annual} &= AEG_{baseline} - AEG_{reduced} \\ &= \frac{5,030.37 \text{ MTCO}_2\text{e}}{\text{year}} - \frac{3,674.98 \text{ MTCO}_2\text{e}}{\text{year}} = \frac{1,355.39 \text{ MTCO}_2\text{e}}{\text{year}} \end{aligned}$$

STEP 4: Determine the GHG emission reductions from the CCE project component over various quantification periods (QP) as prescribed by the CARB Solicitation guidance.

$$\text{Equation 23: } ER_{GHG} = QP * AER_{GHG}$$

| QP (years) | AER _{GHG} | ER _{GHG} (MTCO _{2e}) |
|------------|--------------------|---|
| 1 | 1,353.96 | 1,355.39 |
| 2 | 1,353.96 | 2,710.78 |
| 10 | 1,353.96 | 13,553.9 |

STEP 5: Determine the incremental cost of the proposed technology and the baseline and advanced technology equipment costs for two scenarios: (1) two-year project term based on costs at the time of demonstration, and (2) ten-year project term, with costs projected two years after the completion of the demonstration project.

Incremental Cost = Cost of New Tech – Cost of Baseline Tech

Incremental Cost_{2 years} = \$25,024,760 – \$0 = \$25,024,760

Incremental Cost_{10 years} = \$26,000,000 – \$0 = \$26,000,000

For this project, POLA understands that, in reality, the incremental cost of this project is \$0, since current regulations require a new ferry be purchased with this same technology (Tier 4+DPF), even though it is not currently available. Technical feasibility exemptions would be requested until such time as the new technology is commercially available, thus delaying the development and demonstration of this clean vessel technology. However, a cost-effectiveness (CE) assessment with no costs would not make sense, and thus the following CE estimates are based on the actual cost of the replacement vessel (both now and 2029 - two years past the project completion) as well as the grant request, in order to assist CARB staff in evaluating the effectiveness of the agency funds.

The projected 2029 cost applies a nominal 5% escalation based on input from POLA's demonstration partners that vessel purchase costs have increased significantly over the past several years with each purchase. Further, CCE notes that they have never experienced vessel construction costs to decrease due to ongoing evolution of customization and operational parameters.

Note: POLA interpreted the description of the header in the Quantification Tool to mean that we should enter the technology cost, which we assumed does not include other grant costs such as emissions testing, administration, and demonstration costs. The Tool rolls up the results as if the total project costs are entered, so please refer to Attachment 4 for the actual overall project costs, beyond the cost to design and commission the vessels. In order to ensure the Tool grant request roll-up matches the LA MER overall grant request, POLA added a 4th row for Data Collection to account for the cost share request towards this effort (\$250,000). Full project match is not reflected in this Tool.

STEP 6: Determine the GHG cost effectiveness from the CCE project component over various quantification periods (QP) as prescribed by the CARB Solicitation guidance. Per Table D-24 of the 2017 Carl Moyer Program Guidelines (April 27, 2017), the capital recovery factor (CRF) at a 1% discount rate for various project periods is:

| CRF @ 1% Discount Rate | |
|------------------------|-------|
| 1-yr CRF | 1.01 |
| 2-yr CRF | 0.508 |
| 10-yr CRF | 0.106 |

Apply Equation 2 to calculate the CE of the project for the 1, 2 and 10 year project period. The 1-year period reflects the 12-month demonstration term and correlates to the annual results obtained from the CARB Quantification Tool – Other Tab, and the 2 and 10 year project periods are prescribed by CARB for this assessment (bold, matches Quantification Tool – Other results).

$$GHG\ CE = \frac{CRF * IC}{GHG\ ER_{annual}}$$

| Catalina Channel Express | | \$25,024,760 | \$26,000,000 | \$14,924,128 |
|--------------------------|-------|-----------------------------|-----------------------------|-----------------------------|
| CRF @ 1% Discount Rate | | (2024 cost) | (2029 cost) | (Grant Request) |
| | | CE (\$/MTCO ₂ e) | CE (\$/MTCO ₂ e) | CE (\$/MTCO ₂ e) |
| 1-yr CRF | 1.01 | \$18,648 | \$19,395 | \$11,107 |
| 2-yr CRF | 0.508 | \$9,379 | \$9,745 | \$5,586 |
| 10-yr CRF | 0.106 | \$1,957 | \$2,033 | \$1,166 |

STEP 7: Determine the annual criteria and toxic air pollutant emission reductions (ER) for this equipment. The Equipment will be used 100% of the time in California. Baseline and Replacement engine Emission Factors, Load Factors and CRF are from the 2017 CMP Guidelines (April 27, 2017) and summarized above in Table 3-1. Table 3-1 also includes engine horsepower, wet exhaust factor and the per-engine annual operation. Table 3-2 (further below) provides the baseline and replacement project emissions reductions on an engine-by-engine basis. Annual emissions are calculated using the CMP emission reduction and cost-effectiveness methodology, which is reflected in Equation 32. Key emission reduction results are summary below:

$$\text{Equation 32: } \mathbf{Annual\ AEP} = \frac{EF\ g}{bhp-hr} * LF * HP * \frac{hours}{year} * 100\% * \frac{1\ ton}{907,200\ g}$$

Table 3-2: Catalina Channel Express Baseline and Reduced Emissions (tpy)

| Vessel | Engine | Per Engine Baseline NOx Emissions (tons/year) | Per Engine Baseline ROG Emissions (tons/year) | Per Engine Baseline PM Emissions (tons/year) | Per Engine Baseline PM2.5 Emissions (tons/year) |
|---------------------------------------|---------|---|---|--|---|
| Avalon Express | Main #1 | 12.0083 | 1.1229 | 0.3667 | 0.3505 |
| | Main #2 | 12.0083 | 1.1229 | 0.3667 | 0.3505 |
| | Aux #1 | 0.1070 | 0.0327 | 0.0037 | 0.0036 |
| | Aux #2 | 0.1070 | 0.0327 | 0.0037 | 0.0036 |
| Super Express | Main #1 | 12.0083 | 1.1229 | 0.3667 | 0.3505 |
| | Main #2 | 12.0083 | 1.1229 | 0.3667 | 0.3505 |
| | Aux #1 | 0.1070 | 0.0327 | 0.0037 | 0.0036 |
| | Aux #2 | 0.1070 | 0.0327 | 0.0037 | 0.0036 |
| Catalina Express | Main #1 | 15.0104 | 1.4036 | 0.4583 | 0.4382 |
| | Main #2 | 15.0104 | 1.4036 | 0.4583 | 0.4382 |
| | Aux #1 | 0.4264 | 0.0719 | 0.0149 | 0.0142 |
| | Aux #2 | 0.4264 | 0.0719 | 0.0149 | 0.0142 |
| | | 79.335 | 7.574 | 2.428 | 2.321 |
| Vessel | Engine | Per Engine Reduced NOx Emissions (tons/year) | Per Engine Reduced ROG Emissions (tons/year) | Per Engine Reduced PM Emissions (tons/year) | Per Engine Reduced PM2.5 Emissions (tons/year) |
| New Vessel (TBD #1) | Main #1 | 4.3503 | 0.4610 | 0.0146 | 0.0140 |
| | Main #2 | 4.3503 | 0.4610 | 0.0146 | 0.0140 |
| | Main #3 | 4.3503 | 0.4610 | 0.0146 | 0.0140 |
| | Main #4 | 4.3503 | 0.4610 | 0.0146 | 0.0140 |
| | Aux #1 | 0.8603 | 0.1089 | 0.0023 | 0.0022 |
| | Aux #2 | 0.8603 | 0.1089 | 0.0023 | 0.0022 |
| | | 19.122 | 2.062 | 0.063 | 0.060 |
| Emission Reductions / YR (AER) | | 60.213 | 5.512 | 2.365 | 2.261 |

Note: Per Section E.2 (page 25) of the Quantification Methodology, PM = PM10 = Diesel PM, and PM2.5 is 95.6% of PM.

STEP 8: Determine the weighted annual emission reductions (WER) that are associated with the CCE 3-for-1 vessel replacement project using the results from Step 5 above and Equation 1:

$$\begin{aligned}
 WER &= \text{Annual } ER_{NO_x} + \text{Annual } ER_{ROG} + 20 * (\text{Annual } ER_{PM}) \\
 &= \frac{60.213 \text{ ton } NO_x}{\text{year}} + \frac{5.512 \text{ ton } ROG}{\text{year}} + (20 * \frac{2.365 \text{ ton } PM_{10}}{\text{year}}) = \frac{113.025 \text{ ton}}{\text{year}}
 \end{aligned}$$

STEP 9: Determine the criteria pollutant cost effectiveness for the CCE project component using Formula 8 and the results from Steps 6 and 7:

$$\text{Cost Effectiveness } \left(\frac{\$}{\text{ton}} \right) = \frac{\text{CRF} * \text{Incremental Cost}}{\text{WER}}$$

Determine the GHG cost effectiveness (CE) from the CCE project component over various quantification periods (QP) as prescribed by the CARB Solicitation guidance. Apply Equation 2 to calculate the CE of the project for the 1, 2 and 10 year project period. The 1-year period reflects the 12-month demonstration term, and the 2 and 10 year project periods are prescribed by CARB for this assessment (bold, matches Quantification Tool – Other results).

$$CE = \frac{CRF * IC}{WER_{\text{annual}}}$$

| Catalina Channel Express | | \$25,024,760 | \$26,000,000 | \$14,924,128 |
|---------------------------------|-------|------------------|------------------|-----------------|
| CRF @ 1% Discount Rate | | (2024 cost) | (2029 cost) | (Grant Request) |
| | | CE (\$/ton) | CE (\$/ton) | CE (\$/ton) |
| 1-yr CRF | 1.01 | \$223,276 | \$232,338 | \$133,189 |
| 2-yr CRF | 0.508 | \$112,476 | \$116,859 | \$66,990 |
| 10-yr CRF | 0.106 | \$23,469 | \$24,384 | \$13,978 |

PLEASE SEE THE END OF ATTACHMENT 3 FOR THE RESULTS FROM THE CARB QUANTIFICATION TOOL UTILIZING THE “OTHER” TAB FOR EACH PROJECT VESSEL.

II. Harbor Breeze Zero-Emission Advanced Technology Marine Vessels

Project Equipment Description:

- Design, construct, launch, and demonstrate two zero-emission capable hybrid excursion boats. The vessels are designed to meet the definition of Zero-Emission Advanced Technology (ZEAT) vessel under the CARB Harbor Craft Regulation. Each boat will have renewable-diesel-powered Tier 4 propulsion engines for safety, resiliency, and added range, but will meet the required minimum 30% zero-emission operation.
- Harbor Breeze operates a variety of excursions including the following:
 - School Trip Tours
 - Port Harbor Tours
 - Private Tours
 - Whale Watching
 - Burial-at-Sea
 - Occasional Catalina Transport
- The hybrid propulsion design team determined that for the low-load trips, there will be sufficient on-board energy storage (308 kWh⁷) and opportunity charging in between tours to operate in zero-emissions mode for the typical shorter trips (indicated in bold). The whale watching and Catalina Island trips require the larger main engines and gensets to manage propulsion, but it is estimated that the whale watching tours will operate in zero-emission mode 2/3 of the time.
- For this assessment, POLA characterized the baseline vessel as the proposed project vessel with 0% hybrid operation.
- In order to ensure a conservative emissions and CE assessment for these vessels, POLA assumed a 40% zero-emission capability with this ZEAT design. The purpose of this demonstration is to determine if we can achieve far better zero-emission operation during the course of the demonstration year. If 80% can be reach, then the below benefits are much greater than documented.
- IC at demonstration: \$15,250,000
- IC @ two years after demonstration (January 2029): \$16,000,000

⁷ Battery management designed not to draw down more than 80%.

Table 3-3: Harbor Breeze ZEAT Vessel Input Factors

| Vessel Name | ZEAT #1 | ZEAT #2 |
|---------------------------------|-----------|-----------|
| Vessel Type | Excursion | Excursion |
| Passenger Capacity (typical) | 350 | 350 |
| Main Engine Load Factor | 0.42 | 0.42 |
| Aux Engine Load Factor | 0.43 | 0.43 |
| Wet Exhaust? | Yes | Yes |
| No. of Main Engines (ME) | 2 | 2 |
| ME Model Year | 2024 | 2024 |
| ME Horsepower | 1182 | 1182 |
| ME Certification Tier | 4 | 4 |
| ME NO _x g/bhp-hr* | 1.34 | 1.34 |
| ME ROG g/bhp-hr | 0.14 | 0.14 |
| ME PM g/bhp-hr | 0.03 | 0.03 |
| No. of Auxiliary Engines (AE) | 2 | 2 |
| AE Model Year | 2024 | 2024 |
| AE Horsepower | 173 | 173 |
| AE Certification Tier | 3 | 3 |
| AE NO _x g/bhp-hr | 3.60 | 3.60 |
| AE ROG g/bhp-hr | 0.58 | 0.58 |
| AE PM g/bhp-hr | 0.077 | 0.077 |
| Main Engine Hours/Year | 2,250 | 2,250 |
| Main Engine Gallons/Year | 78,750 | 78,750 |
| Main Engine Gallons/Hour | 35 | 35 |
| Aux Engine Hours/Year | 1,125 | 1,125 |
| Aux Engine Gallons/Year | 5,625 | 5,625 |
| Aux Engine Gallons/Hour | 5 | 5 |
| ME Total Gallons/Year | 157,500 | 157,500 |
| AE Total Gallons/Year | 11,250 | 11,250 |
| Vessel Gallons/Year | 168,750 | 168,750 |
| Sum of Baseline Vessels Gal/Yr | 337,500 | |
| Reduced Vessel Gal/Yr (@40% ZE) | 202,500 | |
| Fuel Savings Gal/Yr | 135,000 | |

STEP 1: Calculate the Carbon Content of Renewable Diesel (RND) fuel used by the baseline vessel⁸ using the following Fuel Specific Factors from CARB's Quantification Tool:

Energy Density (ED) for Renewable Diesel Fuel:

$$ED_{RND} = \frac{129.65MJ}{gal\ RND} \quad ED_{elec} = \frac{129.65MJ}{kWh}$$

Carbon Content (CC) for Renewable Diesel Fuel:

$$CC_{RND} = \frac{4,922.81\ gCO_2e}{gal\ RND} \quad CC_{elect} = \frac{276.23\ gCO_2e}{kWh}$$

Energy Economy Ratio (EER) for Electricity (note that POLA assumed the OGV ration was the closest, if a larger ratio is appropriate, then GHG benefits will increase:

$$EER_{elecOGV} = 2.6$$

STEP 2: Using the Carbon Content in Step 1 and Equation 23, calculate the baseline and replacement annual GHG emissions. Note that Table 3-3 includes the annual renewable diesel fuel consumption for all of the 4 baseline engines in each of the project vessels. For the baseline fuel consumption, the estimated annual fuel usage for both vessels is used. For the replacement fuel consumption, a 40% The calculation of the overall baseline and replacement annual RND usage negates the needs to individually apply Equation 24 to each of the 8 project engines.

$$\begin{aligned} AEG_{baseline} &= \frac{337,500\ gal\ RND}{year} * \frac{4,922.81\ gCO_2e}{gal\ RND} * \frac{1\ MT\ CO_2e}{1,000,000\ g} \\ &= 1,661.45\ \frac{MTCO_2e}{year} \end{aligned}$$

To estimate the Replacement GHG emissions that result with the application of the 40% hybrid factor, the contribution of the RND consumption is needed, but also we need to estimate the contribution to GHG emissions from the electricity used when offsetting 40% of the diesel fuel consumption.

First, calculation the GHG emissions of the replacement vessel when 60% of the baseline RND is consumed:

⁸ The two Harbor Breeze project vessels are identical, so this analysis will discuss a single vessel that has similar design and operation assignments. The final results will apply to both vessels.

$$AEG_{\text{replacement RND}} = (60\%) * \frac{337,500 \text{ gal RND}}{\text{year}} * \frac{4,922.81 \text{ gCO}_2\text{e}}{\text{gal RND}} * \frac{1 \text{ MT CO}_2\text{e}}{1,000,000 \text{ g}}$$

$$= 996.87 \frac{\text{MTCO}_2\text{e}}{\text{year}}$$

Next convert the 135,000 gallons of RND that is not being burned in the vessel to the equivalent energy in KWh per year:

$$\text{Replacement Fuel Usage} \left(\frac{\text{kWh}}{\text{yr}} \right) = \left(\frac{135,000 \text{ gal RND}}{\text{year}} \right) * \left(\frac{129.65 \text{ MJ}}{1 \text{ gal RND}} \right) * \left(\frac{1 \text{ kWh}}{3.6 \text{ MJ}} \right) * \left(\frac{1}{2.6} \right)$$

$$= 1,869,952 \left(\frac{\text{kWh}}{\text{yr}} \right)$$

$$AEG_{\text{replacementELEC}} = \frac{1,869,952 \text{ kWh}}{\text{year}} * \frac{276.23 \text{ gCO}_2\text{e}}{\text{kWh}} * \frac{1 \text{ MTCO}_2\text{e}}{1,000,000 \text{ g}}$$

$$= 516.5 \frac{\text{MTCO}_2\text{e}}{\text{year}}$$

STEP 3: Compute the GHG emission reductions from both Harbor Breeze vessels:

$$HB \text{ Project } ER_{\text{annual}} = AEG_{\text{baseline}} - AEG_{\text{reduced}}$$

$$= \frac{1,661.45 \text{ MTCO}_2\text{e}}{\text{year}} - \frac{996.87 \text{ MTCO}_2\text{e}}{\text{year}} - \frac{516.5 \text{ MTCO}_2\text{e}}{\text{year}} = \frac{148 \text{ MTCO}_2\text{e}}{\text{year}}$$

STEP 4: Determine the GHG emission reductions from the Harbor Breeze project component (both vessels) over various quantification periods (QP) as prescribed by the CARB Solicitation guidance.

Equation 23: $ER_{\text{GHG}} = QP * AER_{\text{GHG}}$

| QP (years) | AER _{GHG} | ER _{GHG} (MTCO ₂ e) |
|------------|--------------------|---|
| 1 | 148 | 148.04 |
| 2 | 148 | 296.08 |
| 10 | 148 | 1,480.16 |

STEP 5: Determine the incremental cost of the proposed technology and the baseline and advanced technology equipment costs for two scenarios: (1) two-year project term based

on costs at the time of demonstration, and (2) ten-year project term, with costs projected two years after the completion of the demonstration project.

$$\text{Incremental Cost} = \text{Cost of New Tech} - \text{Cost of Baseline Tech}$$

$$\text{Incremental Cost}_{2 \text{ years}} = \$15,250,000 - \$0 = \$15,250,000$$

$$\text{Incremental Cost}_{10 \text{ years}} = \$16,000,000 - \$0 = \$16,000,000$$

For this project, POLA understands that, in reality, the incremental cost of this project is \$0, since the purchase of the vessel with the hybrid technology is assumed, and for analysis, we are presuming 0% hybrid system utilization. However, a cost-effectiveness (CE) assessment with no costs would not make sense, and thus the following CE estimates are based on the actual cost of the vessel (both now and 2029 -- two years past the project completion) as well as the grant request, in order to assist CARB staff in evaluating the effectiveness of the agency funds.

The projected 2029 cost applies a nominal 5% escalation based on input from POLA's demonstration partners that vessel purchase costs have increased significantly over the past several years with each purchase.

Note: POLA interpreted the description of the header in the Quantification Tool to mean that we should enter the technology cost, which we assumed does not include other grant costs such as emissions testing, administration, and demonstration costs. The Tool rolls up the results as if the total project costs are entered, so please refer to Attachment 4 for the actual overall project costs, beyond the cost to design and commission the vessels.

STEP 6: Determine the GHG cost effectiveness from the CCE project component over various quantification periods (QP) as prescribed by the CARB Solicitation guidance. Per Table D-24 of the 2017 Carl Moyer Program Guidelines (April 27, 2017), the capital recovery factor (CRF) at a 1% discount rate for various project periods is:

| CRF @ 1% Discount Rate | |
|------------------------|-------|
| 1-yr CRF | 1.01 |
| 2-yr CRF | 0.508 |
| 10-yr CRF | 0.106 |

Apply Equation 2 to calculate the CE of the project for the 1, 2 and 10 year project period. The 1-year period reflects the 12-month demonstration term and correlates to the annual results obtained from the CARB Quantification Tool – Other Tab, and the 2 and 10 year project periods are prescribed by CARB for this assessment (bold, matches Quantification Tool – Other results).

$$GHG\ CE = \frac{CRF * IC}{GHG\ ER_{annual}}$$

| CRF @ 1% Discount Rate | | \$15,250,000 (2024 cost) | \$16,000,000 (2029 cost) | \$7,903,125 (Grant Request) |
|------------------------|-------|-----------------------------|-----------------------------|--------------------------------|
| | | CE (\$/MTCO ₂ e) | CE (\$/MTCO ₂ e) | CE (\$/MTCO ₂ e) |
| 1-yr CRF | 1.01 | \$104,041 | \$109,158 | \$53,918 |
| 2-yr CRF | 0.508 | \$52,330 | \$54,903 | \$27,119 |
| 10-yr CRF | 0.106 | \$10,919 | \$11,456 | \$5,659 |

NOTE: The above analysis combine both vessels, since costs and emissions are identical. The summary tables at the beginning of this discussion, and the vessels as reflected in the CARB quantification tool are on an individual basis.

STEP 7: Determine the annual criteria and toxic air pollutant emission reductions (ER) for this equipment. The Equipment will be used 100% of the time in California. Baseline engine Emission Factors, Load Factors and CRF are from the 2017 CMP Guidelines (April 27, 2017) and summarized above in Table 3-3. Table 3-3 also includes engine horsepower, wet exhaust factor and the per-engine annual operation. Table 3-4 (further below) provides the baseline and replacement project emissions reductions on an engine-by-engine basis. Annual emissions are calculated using the CMP emission reduction and cost-effectiveness methodology, which is reflected in Equation 32. Key emission reduction results are summary below:

$$\text{Equation 32: } \textit{Annual AEP} = \frac{EF \text{ g}}{bhp-hr} * LF * HP * \frac{\text{hours}}{\text{year}} * 100\% * \frac{1 \text{ ton}}{907,200 \text{ g}}$$

Table 3-4: Harbor Breeze Baseline and Reduced Emissions (tpy)

| Baseline Vessels (0% Hybrid) | Engine | Per Engine Baseline NOx Emissions (tons/year) | Per Engine Baseline ROG Emissions (tons/year) | Per Engine Baseline PM Emissions (tons/year) | Per Engine Baseline PM2.5 Emissions (tons/year) |
|---|---------|--|--|---|--|
| ZEAT #1 | Main #1 | 1.3199 | 0.1399 | 0.0296 | 0.0282 |
| | Main #2 | 1.3199 | 0.1399 | 0.0296 | 0.0282 |
| | Aux #1 | 0.2657 | 0.0428 | 0.0057 | 0.0054 |
| | Aux #2 | 0.2657 | 0.0428 | 0.0057 | 0.0054 |
| TOTAL: | | 3.1712 | 0.3653 | 0.0705 | 0.0674 |
| ZEAT #2 | Main #1 | 1.3199 | 0.1399 | 0.0296 | 0.0282 |
| | Main #2 | 1.3199 | 0.1399 | 0.0296 | 0.0282 |
| | Aux #1 | 0.2657 | 0.0428 | 0.0057 | 0.0054 |
| | Aux #2 | 0.2657 | 0.0428 | 0.0057 | 0.0054 |
| TOTAL: | | 3.1712 | 0.3653 | 0.0705 | 0.0674 |
| BOTH BOATS: | | 6.3423 | 0.7307 | 0.1409 | 0.1347 |
| REDUCED Vessels (40% Hybrid) | Engine | Per Engine Reduced NOx Emissions (tons/year) | Per Engine Reduced ROG Emissions (tons/year) | Per Engine Reduced PM Emissions (tons/year) | Per Engine Reduced PM2.5 Emissions (tons/year) |
| ZEAT #1 | Main #1 | 0.7919 | 0.0839 | 0.0177 | 0.0169 |
| | Main #2 | 0.7919 | 0.0839 | 0.0177 | 0.0169 |
| | Aux #1 | 0.1594 | 0.0257 | 0.0034 | 0.0033 |
| | Aux #2 | 0.1594 | 0.0257 | 0.0034 | 0.0033 |
| TOTAL: | | 1.9027 | 0.2192 | 0.0423 | 0.0404 |
| ZEAT #2 | Main #1 | 0.7919 | 0.0839 | 0.0177 | 0.0169 |
| | Main #2 | 0.7919 | 0.0839 | 0.0177 | 0.0169 |
| | Aux #1 | 0.1594 | 0.0257 | 0.0034 | 0.0033 |
| | Aux #2 | 0.1594 | 0.0257 | 0.0034 | 0.0033 |
| TOTAL: | | 1.9027 | 0.2192 | 0.0423 | 0.0404 |
| BOTH BOATS: | | 3.8054 | 0.4384 | 0.0846 | 0.0808 |
| Emission Reductions Per Year (tons): | | 1.2685 | 0.1461 | 0.0282 | 0.0269 |

Note: Per Section E.2 (page 25) of the Quantification Methodology, PM = PM10 = Diesel PM, and PM2.5 is 95.6% of PM.

STEP 8: Determine the weighted annual emission reductions (WER) that are associated with the Harbor Breeze ZEAT project using the results from Step 5 above and Equation 1. The discussion below is on a per-vessel basis:

$$WER = Annual ER_{NO_x} + Annual ER_{ROG} + 20 * (Annual ER_{PM})$$

$$= \frac{1.2685 \text{ ton } NO_x}{\text{year}} + \frac{0.1461 \text{ ton } ROG}{\text{year}} + (20 * \frac{0.0285 \text{ ton } PM_{10}}{\text{year}}) = \frac{1.978 \text{ ton}}{\text{year}}$$

STEP 9: Determine the criteria pollutant cost effectiveness for the CCE project component using Formula 8 and the results from Steps 6 and 7:

$$\text{Cost Effectiveness } \left(\frac{\$}{\text{ton}} \right) = \frac{\text{CRF} * \text{Incremental Cost}}{\text{WER}}$$

Determine the GHG cost effectiveness from the Harbor Breeze ZEAT vessel over various quantification periods (QP) as prescribed by the CARB Solicitation guidance. Apply Equation 2 to calculate the CE of the project for the 1, 2 and 10 year project period. The 1-year period reflects the 12-month demonstration term, and the 2 and 10 year project periods are prescribed by CARB for this assessment (bold, matches Quantification Tool – Other results).

$$CE = \frac{CRF * IC}{WER_{\text{annual}}}$$

| CRF @ 1% Discount Rate | | \$15,250,000 (2024 cost) | \$16,000,000 (2029 cost) | \$7,903,125 (Grant Request) |
|------------------------|-------|-----------------------------|-----------------------------|--------------------------------|
| | | CE (\$/ton) | CE (\$/ton) | CE (\$/ton) |
| 1-yr CRF | 1.01 | \$7,786,906 | \$13,276,036 | \$7,610,584 |
| 2-yr CRF | 0.508 | \$3,916,582 | \$6,677,452 | \$3,827,898 |
| 10-yr CRF | 0.106 | \$817,240 | \$1,393,327 | \$798,735 |

PLEASE SEE BELOW FOR THE RESULTS FROM THE CARB QUANTIFICATION TOOL UTILIZING THE "OTHER" TAB. A ROW IS USED FOR EACH VESSEL, AND A PLACEHOLDER COST WAS INPUT FOR THE DATA COLLECTION GRANT REQUEST IN THE AMOUNT OF \$250,000 TO COST SHARE THIS EFFORT. ALL OTHER COSTS ARE ASSOCIATED WITH THE COST TO COMMISSIONED A NEW VESSEL (I.E., NO DEMO COSTS OR OTHER MATCH INCLUDED IN THIS TOOL).

| | |
|---|--|
| Project Name: | Port of Los Angeles Marine Emission Reduction Project (LA MER) |
| Business/Air District/Organization/Individual Name | City of Los Angeles Harbor Department (Port of Los Angeles) |
| Contact Name: | Jacob Goldberg |
| Contact Phone Number: | (310) 732-2675 |
| Contact Email: | JGoldberg@portla.org |
| Date Calculator Completed: | 10/23/2023 |
| Total Project Cost (\$): | \$ 62,440,932 |
| Total LCT Demos & Pilots GGRF Funds Requested (\$): | \$ 30,980,378 |
| Total GGRF Funds Under Contract (\$): | \$ 30,980,378 |

| | |
|--|---------------|
| LCT Demos & Pilots GGRF Funds Requested for: | |
| On-Road Heavy-Duty Vehicles (\$): | |
| Off-Road Vehicles and Equipment (\$): | |
| Locomotives (\$): | |
| Commercial Harbor Craft (\$): | |
| Ocean-Going Vessel Projects (\$): | |
| Landscaping Equipment (\$): | |
| Aviation (\$): | |
| Other (\$): | \$ 30,980,378 |



California Air Resources Board
Benefits Calculator Tool for
Advanced Technology Demonstration and Pilot Projects
California Climate Investments

| | |
|--------------|--|
| Project Name | Port of Los Angeles Marine Emission Reduction Project (LA MER) |
|--------------|--|

| Co-benefits and Key Variables Summary | |
|--|-------------------------------|
| | LCT Demos & Pilots GGRF Funds |
| NO _x emission reductions (lbs) | 126,554 |
| ROG emission reductions (lbs) | 11,653 |
| Diesel PM emission reductions (lbs) | 4,869 |
| PM _{2.5} emission reductions (lbs) | 4,656 |
| Fossil Fuel Based Transportation Fuel Use Reductions (gal) | 545,298 |
| Energy and Fuel Cost Savings (\$) | 4,175,015 |
| Total | |
| NO _x emission reductions (lbs) | 126,554 |
| ROG emission reductions (lbs) | 11,653 |
| Diesel PM emission reductions (lbs) | 4,870 |
| PM _{2.5} emission reductions (lbs) | 4,656 |
| Fossil Fuel Based Transportation Fuel Use Reductions (gal) | 545,298 |
| Energy and Fuel Cost Savings (\$) | 4,175,015 |

| Project Information | | Baseline Vehicle/Equipment Information | | | | |
|---|----------------------|--|---------------------------------------|--------------------|--|--------------------------------|
| Project Description | Project Life (years) | Baseline Vehicle/Equipment Type | Number of Baseline Vehicles/Equipment | Baseline Fuel Type | Baseline Annual Fuel Consumption and Units (unit/yr) | Baseline Annual Usage (hrs/yr) |
| CCE 3-10r-1 Tier 4+DPF Ferry Rep (2 yr) | 1 | Tier 2 & 3 Passenger Ferry | 1 | Renewable Diesel | 1,021,850 gal/yr | 27,000 |
| HB ZEAT Excursion Vessels (40% ZE) | 1 | Same Vessel without any ZE | 1 | Renewable Diesel | 337,500 | 13,500 |
| HB ZEAT Excursion Vessels (40% ZE) | 1 | Same Vessel without any ZE | 1 | Renewable Diesel | 337,500 | 13,500 |
| Data Collection Grant Request | | | | | | |

| Replacement Vehicle/Equipment Information | | | | |
|---|--|-----------------------|---|-----------------------------------|
| Replacement Vehicle/Equipment Type | Number of Replacement Vehicles/Equipment | Replacement Fuel Type | Replacmenet Annual Fuel Consumption and Units (unit/yr) | Replacement Annual Usage (hrs/yr) |
| Tier 4+DPF Passenger Ferry | 1 | Renewable Diesel | 746,552 gal/yr | 14,500 |
| Tier 4 Hybrid | 1 | Renewable Diesel | 202,500 gal/yr | 8,100 |
| Tier 4 Hybrid | 1 | Renewable Diesel | 202,500 gal/yr | 8,100 |
| | | | | |

| Baseline Scenario Annual Emissions (for all vehicles/equipment) | | | | | |
|---|---|---------------------------------------|---|--|---|
| Baseline Annual GHG (MTCO ₂ e/year) | Baseline Annual NO _x (short tons/year) | Baseline Annual ROG (short tons/year) | Baseline Annual Diesel PM (short tons/year) | Baseline Annual PM ₁₀ (short tons/year) | Baseline Annual PM _{2.5} (short tons/year) |
| 5,030.37 | 79.335 | 7.574 | 2.428 | 2.428 | 2.321 |
| 1,661.45 | 3.171 | 0.365 | 0.071 | 0.071 | 0.067 |
| 1,661.45 | 3.171 | 0.365 | 0.071 | 0.071 | 0.067 |

| Replacement Scenario Annual Emissions (for all vehicles/equipment) | | | | | |
|--|--|--|--|---|--|
| Replacement Annual GHG (MTCO ₂ e/year) | Replacement Annual NO _x (short tons/year) | Replacement Annual ROG (short tons/year) | Replacement Annual Diesel PM (short tons/year) | Replacement Annual PM ₁₀ (short tons/year) | Replacement Annual PM _{2.5} (short tons/year) |
| 3,674.98 | 19.122 | 2.062 | 0.063 | 0.063 | 0.060 |
| 1,513.41 | 1.903 | 0.219 | 0.042 | 0.042 | 0.040 |
| 1,513.41 | 1.903 | 0.219 | 0.042 | 0.042 | 0.040 |

| Fuel Savings | | Energy Generation | Funding Amount | | | | |
|--|---|--|--|---|---|--|--|
| Annual Fossil Fuel Savings, if applicable (gal/yr) | Annual Fuel Cost Savings, if applicable (\$/yr) | Renewable Energy Generated, if applicable (kWh/yr) | Cost of Baseline Technology (dollars, per equipment) | Cost of New/Replacement Technology (dollars, per equipment) | LCT Demos & Pilots Funds Requested (dollars, total for all equipment) | Other GGRF Funds, if applicable (dollars, total for all equipment) | Other GGRF Program Name, if applicable |
| 275,298 | \$1,492,115 | | \$0 | \$26,024,760 | \$14,924,128 | | |
| 135,000 | \$731,700 | | \$0 | \$15,250,000 | \$7,903,125 | | |
| 135,000 | \$731,700 | | \$0 | \$15,250,000 | \$7,903,125 | | |
| | | | | | \$250,000 | | |

| Project Total Results | | | | | | |
|--|--|---|--|---|---|--|
| Annual NO _x Emission Reductions (short tons/yr) | Annual ROG Emission Reductions (short tons/yr) | Annual PM Emission Reductions (short tons/yr) | Annual PM _{2.5} Emission Reductions (short tons/yr) | Annual Weighted Surplus Emission Reductions (short tons/yr) | Air Pollutant Cost-Effectiveness (2-year) | Air Pollutant Cost-Effectiveness (10-year) |
| 60.213000 | 5.512000 | 2.365000 | 2.260800 | 113.025000 | 112475.806945 | 23469.361292 |
| 1.268000 | 0.146000 | 0.028200 | 0.027000 | 1.978000 | 3916582.406471 | 817239.635996 |
| 1.268000 | 0.146000 | 0.028200 | 0.027000 | 1.978000 | 3916582.406471 | 817239.635996 |

| Project Total Results | | | | | | |
|--|---|---------------------------------|----------------------------------|--|---|-------------------------------------|
| Air Pollutant Cost-Effectiveness (10-year) | Annual GHG Emission Reductions (MTCO ₂ e/yr) | GHG Cost-Effectiveness (2-year) | GHG Cost-Effectiveness (10-year) | Annual Diesel PM Emission Reductions (short tons/yr) | Annual Energy and Fuel Cost Savings (\$/yr) | Annual Fossil Fuel Savings (gal/yr) |
| 23469.361292 | 1355.390000 | 9379.276872 | 1957.093205 | 2.365000 | 1492115.16000000 | 275298.00000000 |
| 817239.635996 | 148.040000 | 52330.451229 | 10919.346123 | 0.028200 | 731700.00000000 | 135000.00000000 |
| 817239.635996 | 148.040000 | 52330.451229 | 10919.346123 | 0.028200 | 731700.00000000 | 135000.00000000 |

| CCIRTS Results | | | | | | | |
|-------------------------------|---|----------------------------|----------------------------------|-------------------------|---|-----------------------------------|--|
| Quantification Period (years) | GHG Emission Reductions (MTCO ₂ e) | Diesel PM Reductions (lbs) | NO _x Reductions (lbs) | PM 2.5 Reductions (lbs) | Reactive Organic Gases Reductions (lbs) | Energy and Fuel Cost Savings (\$) | Fossil Fuel Based Transportation Fuel Use Reductions (gallons) |
| 1 | 1,355 | 4,730 | 120,426 | 4,522 | 11,024 | \$1,492,115 | 275,298 |
| 1 | 148 | 56 | 2,536 | 54 | 292 | \$731,700 | 135,000 |
| 1 | 148 | 56 | 2,536 | 54 | 292 | \$731,700 | 135,000 |
| 0 | 0 | 0 | 0 | 0 | 0 | \$0 | 0 |

ATTACHMENT 4: PROPOSED BUDGET, PROJECT MILESTONES AND DISBURSEMENT SCHEDULE

Proposed Budget

The total project cost for LA MER is \$62,590,932. Of this amount, \$30,980,378 is requested from CARB and \$31,610,554 will be provided as match funding from the partners for a cost-share percentage of 51%, which exceeds the minimum requirement. All match is cash, exceeding the 10% minimum requirement. POLA is not requesting administrative fees for this project. All grant funds will be used to support direct project costs associated with building the new vessels and collecting data, including emissions testing.

All project partners have been involved in the development of the proposed budget. There are no project assets that have been or will be funded in whole or part by other public incentive programs and that are still under contractual obligations. The budget reserves \$10,000 in grant funds for the Final Report task, per the program requirements.

Table 4-1 displays the detailed budget by task and source of funding. Note: Crew costs for the demonstrations are provided on an annual basis due to the need to protect confidential wage information. Both operators are able to provide detailed hourly wage rates upon request. There are no labor rate adjustments over the course of the project term.

Table 4-1: LA MER Detailed Budget

| TASK 1- PROJECT ADMINISTRATION | Hourly Rate | Grant | | Match Funding | | Total |
|--|-------------|---------------------|---------------------|---------------|--|---------------------|
| | | CARB | Cash | In-Kind | | |
| Direct Labor Plus Expenses | | | | | | |
| Position/Classification | | | | | | |
| Direct Costs (Non-Labor) | | \$0 | \$0 | \$0 | | \$0 |
| Travel Costs | | \$0 | \$0 | \$0 | | \$0 |
| Equipment and Supplies | | \$0 | \$0 | \$0 | | \$0 |
| Other Direct Costs | | \$0 | \$0 | \$0 | | \$0 |
| Task 1 Subtotal | | \$0 | \$0 | \$0 | | \$0 |
| Task 2 - CATALINA CHANNEL EXPRESS FERRY | | | | | | |
| Project Costs | | | | | | |
| Task 2.1 - Boat Yard Procurement | | \$1,484,153 | \$989,435 | \$0 | | \$2,473,588 |
| Task 2.2 - Equipment Component Orders | | \$2,226,229 | \$1,484,153 | \$0 | | \$3,710,382 |
| Task 2.3 - Vessel Construction | | \$9,646,993 | \$6,431,329 | \$0 | | \$16,078,322 |
| Task 2.4 - Vessel Launch and Acceptance | | \$1,542,313 | \$1,176,275 | \$0 | | \$2,718,588 |
| Task 2.5 - Vessel Demonstration | | \$0 | \$0 | \$0 | | \$0 |
| Task 2.6 - Data Collection and Baseline Testing | | \$125,000 | \$125,000 | \$0 | | \$250,000 |
| Direct Labor | | | | | | |
| Annual Crew Costs (Task 2.5) | Annual | | \$1,923,156 | | | \$1,923,156 |
| Labor Subtotal | | | \$1,923,156 | | | \$1,923,156 |
| Direct Costs (non-labor) | | | | | | |
| Travel Costs (Task 2.3) | | \$19,440 | \$19,440 | \$0 | | \$38,880 |
| Insurance - 1 year (Task 2.5) | | | \$200,000 | | | \$200,000 |
| Renewable diesel (R-99) - 1 year (Task 2.5) | | | \$3,146,766 | | | \$3,146,766 |
| Direct Costs Subtotal | | | \$3,366,206 | | | \$3,366,206 |
| Task 2 Subtotal | | \$15,044,128 | \$15,495,554 | \$0 | | \$30,539,682 |
| Task 3 - HARBOR BREEZE ZEAT VESSELS | | | | | | |
| Project Costs | | | | | | |
| Task 3.1 - Boat Yard Procurement | | \$1,594,531 | \$1,455,469 | \$0 | | \$3,050,000 |
| Task 3.2 - Equipment Component Orders | | \$1,594,531 | \$1,455,469 | \$0 | | \$3,050,000 |
| Task 3.3 - Vessel Construction | | \$9,428,125 | \$8,871,875 | \$0 | | \$18,300,000 |
| Task 3.4 - Vessel Launch and Acceptance | | \$3,184,063 | \$2,910,938 | \$0 | | \$6,095,000 |
| Task 3.5 - Vessel Demonstration | | \$0 | \$0 | \$0 | | \$0 |
| Task 3.6 - Data Collection and Baseline Testing | | \$125,000 | \$125,000 | \$0 | | \$250,000 |
| Direct Labor | | | | | | |
| Annual Crew Costs (Task 3.5) | Annual | | \$406,250 | | | \$406,250 |
| Labor Subtotal | | | \$406,250 | | | \$406,250 |
| Direct Costs (non-labor) | | | | | | |
| Insurance - 1 year (Task 3.5) | | | \$150,000 | | | \$150,000 |
| Direct Costs Subtotal | | | \$150,000 | | | \$150,000 |
| Task 3 Subtotal | | \$15,926,250 | \$15,375,000 | \$0 | | \$31,301,250 |
| Task 4 - TECHNOLOGY EVALUATION | | | | | | |
| Project Costs | | | | | | |
| Task 4.1 - Commercial Market Summary | | \$0 | \$50,000 | \$0 | | \$50,000 |
| Task 4.2 - DPF Marinization Review/Report | | \$0 | \$25,000 | \$0 | | \$25,000 |
| Task 4.3 - Engine Manufacturer RFI | | \$0 | \$15,000 | \$0 | | \$15,000 |
| Task 4.4 - ZE Harbor Craft Infrastructure Needs Assessment | | \$0 | \$100,000 | \$0 | | \$100,000 |
| Task 4.5 - Roundtable Workshop | | \$0 | \$10,000 | \$0 | | \$10,000 |
| Task 4.6 - Final Evaluation Report | | \$0 | \$300,000 | \$0 | | \$300,000 |
| Task 4 Subtotal | | \$0 | \$500,000 | \$0 | | \$500,000 |
| Task 5 - WORKFORCE DATA COLLECTION | | | | | | |
| Project Costs | | | | | | |
| Task 5.0 - Workforce Data Collection | | \$0 | \$25,000 | \$0 | | \$25,000 |
| Task 5 Subtotal | | \$0 | \$25,000 | \$0 | | \$25,000 |
| Task 6 - TECHNOLOGY SHOWCASE | | | | | | |
| Project Costs | | | | | | |
| Task 6.0 - Technology Showcase Harbor Tours | | \$0 | \$180,000 | \$0 | | \$180,000 |
| Task 6 Subtotal | | \$0 | \$180,000 | \$0 | | \$180,000 |
| Task 7 - FINAL REPORT | | | | | | |
| Project Costs | | | | | | |
| Task 7.0 - Final Report Accepted by CARB | | \$10,000 | \$35,000 | \$0 | | \$45,000 |
| Task 7 Subtotal | | \$10,000 | \$35,000 | \$0 | | \$45,000 |
| Total All Tasks | | \$30,980,378 | \$31,610,554 | \$0 | | \$62,590,932 |
| | | \$ | % of Total | | | |
| Total Grant Request to CARB | | \$30,980,378 | 49% | | | |
| Administration Portion of Request | | \$0 | 0.0% | | | |
| Cash Match | | \$31,610,554 | 51% | | | |
| In-Kind Match | | 0 | 0% | | | |

Project Milestones and Disbursement Schedule

The project is comprised of 22 milestones representing major decision points and/or activities for which grant disbursements are requested. Not all tasks are milestones. Information about each milestone's planned completion date, general duration, and associated deliverable can be found in the Work Plan.

POLA is proposing at least two Critical Project Review (CPR) meetings. One meeting will be held prior to CCE installing the engines in the new ferry to validate whether a CARB-verified, USCG-approved DPF is available (June 2024). POLA and CCE will share the results of the DPF Marinization Review with CARB to discuss the options. POLA proposes to hold a second CPR meeting just before Harbor Breeze starts construction on the vessel to ensure there are no issues with the proposed hybrid-electric design and/or infrastructure (February 2024). Other CPR meetings can be scheduled as needed.

Table 4-2 shows the project milestones, disbursement amounts, and whether match funding is associated with the milestone. Note that the match funds listed at the bottom of the table do not reflect the full match amount for the project because the table does not include non-milestone tasks contributing match funds.

Table 4-2: Proposed Project Milestone and Disbursement Schedule

| Milestone No. | Task Description | Project Funding | | Match Funds | |
|--|---|-----------------|----------------------|--------------|---------|
| | | Project Funds | Administrative Funds | Cash | In-Kind |
| 1 | Conduct Kick-Off Meeting. Task 1.0 | \$0 | \$0 | \$0 | \$0 |
| 2 | CCE - Boat yard procurement. Task 2.1 | \$1,484,153 | \$0 | \$989,435 | \$0 |
| 3 | CCE - Equipment component orders. Task 2.2 | \$2,231,089 | \$0 | \$1,489,013 | \$0 |
| 4 | Critical Project Review Meeting. Task 1.3 | \$0 | \$0 | \$0 | \$0 |
| 5 | CCE - Hull construction. Task 2.3.1 | \$4,452,458 | \$0 | \$2,968,306 | \$0 |
| 6 | CCE - Superstructure. Task 2.3.2 | \$2,973,166 | \$0 | \$1,983,730 | \$0 |
| 7 | CCE - Metal work. Task 2.3.3 | \$2,231,089 | \$0 | \$1,489,013 | \$0 |
| 8 | CCE - Vessel launch. Task 2.4.1 | \$1,113,115 | \$0 | \$742,076 | \$0 |
| 9 | CCE - Vessel acceptance and delivery. Task 2.4.2 | \$434,059 | \$0 | \$439,059 | \$0 |
| 10 | CCE - Data collection and baseline testing. Task 2.6 | \$125,000 | \$0 | \$125,000 | \$0 |
| 11 | HB - Boat yard procurement. Task 3.1 | \$1,594,531 | \$0 | \$1,525,000 | \$0 |
| 12 | HB - Equipment component orders. Task 3.2 | \$1,594,531 | \$0 | \$1,525,000 | \$0 |
| 13 | Critical Project Review Meeting. Task 1.3 | \$0 | \$0 | \$0 | \$0 |
| 14 | HB - Hull construction. Task 3.3.1 | \$2,357,031 | \$0 | \$2,287,500 | \$0 |
| 15 | HB - Metal work. Task 3.3.2 | \$2,357,031 | \$0 | \$2,287,500 | \$0 |
| 16 | HB - Superstructure. Task 3.3.3 | \$2,357,031 | \$0 | \$2,287,500 | \$0 |
| 17 | HB - Outfitting and finishes. Task 3.3.4 | \$2,357,031 | \$0 | \$2,287,500 | \$0 |
| 18 | HB - Vessel launch. Task 3.4.1 | \$1,594,531 | \$0 | \$1,525,000 | \$0 |
| 19 | HB - Vessel acceptance and delivery. Task 3.4.2 | \$1,589,531 | \$0 | \$1,525,000 | \$0 |
| 20 | HB - Data collection and baseline testing. Task 3.6 | \$125,000 | \$0 | \$125,000 | \$0 |
| 21 | Next Generation Harbor Craft Technology Evaluation Final Report. Task 4.6 | \$0 | \$0 | \$500,000 | \$0 |
| 22 | Final Report. Task 7. | \$10,000 | \$0 | \$35,000 | \$0 |
| Subtotal of Project Funds and Administrative Funds | | \$30,980,379 | \$0 | \$26,135,632 | \$0 |
| Grant Total Funding Amount | | \$30,980,379 | | \$26,135,632 | |

Cost Estimates

Cost estimates for the major project components are provided on the following pages.

Catalina Channel Express

Duclos Corporation

April 14, 2023

**GLADDING-HEARN
SHIPBUILDING**

Page 1 of 3

Brett Crowther
Incat Crowther
PO Box 179, Terrey Hills
Sydney, NSW 2084
Australia
brett@incatcrowther.com

Subject: Proposal for IC21001, Catalina Express

Reference: February 6, 2023 RFP

Dear Brett:

Enclosed is our offer in response to the February 6th Catalina Express request for request for proposal.

As you will see the base boat offer assumes that the main engine and gear package is Owner furnished. Caterpillar is not able to provide us DPF solution at this time so we have included pricing for their standard Tier 4 package without the DPF.

Gladding-Hearn is well positioned and capable of taking on this project. Since forming our relationship with Incat in 1985, we have delivered 43 high speed catamaran ferries, ranging in size from 22 to 47 meters, as indicated on the attached Catamaran Delivery List. In addition, we provide regular service for the fleet of high-speed ferries operating in the New England area, which gives us important insight into the design of robust, simple and reliable mechanical and electrical systems. We would be happy to provide contacts for any customer on the attached list.

Price Offer

| BASE BOAT | DIRECT COST(US\$) | <u>INSTALLED OR COMPLETED COST(US\$)</u> |
|---|--------------------------|---|
| 48.8m vessel as described by IC21001-011-00-01 General Arrangement and accompanying Specification, FOB Somerset, MA, with <u>Owner Furnished</u> quad MTU Engine, ZF Gear, SCR and DPF exhaust treatment package, two Volvo Penta 216kW generators with exhaust aftertreatment per March 21, 2021 Pacific Power Group scope of supply. This price <u>includes</u> the following allowances. | NA | \$23,995,000 |

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Mail: P.O. Box 300, Somerset, MA 02726 • Shipping: 80 Francis Street, Somerset, MA 02725 • USA (GMT-5) • Tel: 508-676-8595

DESIGNERS • BUILDERS

| ALLOWANCES IN BASE BOAT | DIRECT COST(US\$) | INSTALLED OR COMPLETED COST(US\$) |
|---|-------------------|-----------------------------------|
| 4 x Hamilton HM721 waterjet system, with three station AVX control system, Net GH cost FOB Somerset, MA | \$1,210,000 | NA |
| 4 x Driveline Services shaft lines, including steel tube cardan shafts, bearings, spool adapters, bulkhead seals, couplings and hardware, Net GH Cost FOB Somerset MA | \$200,000 | NA |
| Navigation and Communications electronics package including technical assistance/commissioning Net GH cost FOB Somerset, MA | \$140,000 | NA |
| Beurteaux seating and table allowance, Net GH Cost FOB Somerset | \$225,000 | NA |
| Floor covering allowance, Material and installation, Net GH cost FOB Somerset, MA | \$70/sq-m | NA |
| Public Address and sound system allowance, Material and technical assistance/commissioning, Net GH cost, FOB Somerset, MA | \$50,000 | NA |
| Video systems allowance including monitors, DVD, CCTV system Cameras, DVR, Technical assistance/Commissioning, Net GH Cost, FOB Somerset, MA | \$20,000 | NA |
| Naiad Dynamics Ride control system with T-foils and Interceptors, HPU's, commissioning, GH Net FOB Somerset | \$772,000 | NA |
| Life Raft Systems Australia EMS System with two 4m slides, two 150 person IBA, two 128 person IBA, launching racks, Technical support and commissioning, GH Net FOB Somerset MA, assumes exchange rate of AU\$1.48 to USD | \$152,000 | NA |
| Estimated cost to Install the four Owner furnished DPF systems. This cost includes the labor to install four DPF units, transformers, and engineering. The cost to purchase/fabricate mounts, flexes, gaskets, hardware, cabling, and the cost difference between a 150kw and 200kW generators and associated switchgear. | NA | \$233,000 |

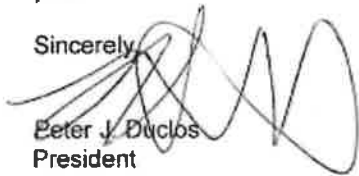
GH

| OPTIONAL ITEMS | DIRECT COST(US\$) | INSTALLED OR COMPLETED COST(US\$) |
|---|-------------------|-----------------------------------|
| Additional cost for Bulder to supply and install 4 x Caterpillar 3512E 2375Bhp, EPA Tier 4 engines with ZF8055 NR2H gears. 2 x Cat C7.1 150kW generators EPA Tier 3, (Does not include DPF Systems) | \$4,841,700 | |
| Cost reduction to install 4 x Kongsberg S63-3/CA waterjets with controls. Includes additional labor and materials for engineering, gear mounted hydraulic pump PTO's, piping and additional cabling. Assumes US\$1.113 to EU\$ | NA | (\$42,000) |
| Additional cost for carbon fiber composite tube cardan shafts to save about 1400 pounds. | NA | \$113,400 |

This offer assumes standard Gladding-Hearn contractual terms and conditions described in the enclosed Draft Construction Agreement and is subject to the laws and regulations of the Commonwealth of Massachusetts and the United States of America in effect at the time of this offer. Price is based on our current material prices and contractual commitments and is valid for 120 days. Delivery would be approximately 24-26 months from signing the Construction Agreement. Orders are taken on a first come, first serve basis. We endeavor to be fair to all of our customers, therefore no commitment is binding until a Construction Agreement is signed and a deposit is received.

Thank you for the opportunity to provide this proposal and we look forward to hearing from you.

Sincerely,



Peter J. Duclos
 President
 Director of Business Development

Enclosures:

Standard Draft Gladding-Hearn Construction Agreement
 Incat Catamaran Delivery List
 Description of Gladding-Hearn

CC: Grant Pecoraro – grant@incatcrowther.com

Harbor Breeze Cruises

----- Forwarded message -----

From: John McDonald <JMcDonald@allamericanmarine.com>

Date: Thu, Sep 28, 2023 at 3:29 PM

Subject: RE: Vessel Building Agreement- DRAFT 9-28-2023

To: Ron Wille <rwille@allamericanmarine.com>, dan.harbor.breeze@gmail.com <dan.harbor.breeze@gmail.com>

Hi Ron and Dan,

See below for the table with estimated milestone completion dates added.

| Task | Description | Grant | Cost-Share (breakdown tbd) | Total | Estimated Completion Date |
|------|---|----------------|----------------------------------|----------------|---------------------------------|
| 1 | Down-payment/Initial Design and materials | \$762,500.00 | \$762,500.00 | \$1,525,000.00 | October 2023 |
| 2 | Propulsion equipment orders | \$762,500.00 | \$762,500.00 | \$1,525,000.00 | November 2023 |
| 3 | Commence Hull Frame | \$1,143,750.00 | \$1,143,750.00 | \$2,287,500.00 | March 2024 |
| 4 | Weldout complete- hull rollover | \$1,143,750.00 | \$1,143,750.00 | \$2,287,500.00 | June 2024 |

2

| | | | | | |
|-------|--|----------------|----------------|-----------------|-----------------|
| 5 | Completion of Deck and attaching cabin to hull | \$1,143,750.00 | \$1,143,750.00 | \$2,287,500.00 | August 2024 |
| 6 | Outfitting and interior finishes | \$1,143,750.00 | \$1,143,750.00 | \$2,287,500.00 | October 2024 |
| 7 | Launch | \$762,500.00 | \$762,500.00 | \$1,525,000.00 | April 2025 |
| 8 | Completion of satisfactory sea trials and inspection | \$762,500.00 | \$762,500.00 | \$1,525,000.00 | June 2025 |
| TOTAL | | \$7,625,000.00 | \$7,625,000.00 | \$15,250,000.00 | |

John McDonald, CPA | Finance Manager

ALL AMERICAN MARINE

1010 Hilton Ave.

Bellingham, WA 98225

Email: jmcdonald@allamericanmarine.com

Office: 360.647.7602

Direct: 360.746.6932

ALLAMERICANMARINE.com

Port of Los Angeles – Data Collection



249 E. Ocean Blvd. Suite 325
Long Beach, CA 90802
Telephone: (562) 257-1596

October 20, 2023

Mr. Jacob Goldberg
Environmental Planning Division
Port of Los Angeles
425 S. Palos Verdes Street
San Pedro, CA 90731

RE: Tetra Tech New Agreement, Grant Data Request – Catalina Express and Harbor Breeze Cruise Testing

Dear Jacob:

Tetra Tech team is pleased to assist the Port of Los Angeles (POLA) in data collection and analysis of the Catalina Express ferry testing and Harbor Breeze Cruises vessel testing for the California Air Resources Board (CARB) grant under SB 179. At the direction of the Port, Tetra Tech and our subcontractor (UCR) will support the Port in the following areas:

Data Collection and Analysis

Data collection and analysis will be a required element of all funded projects under SB 179 and will be accomplished by a member of the proposed project team with experience in collecting and analyzing data from large and complex projects. Tetra Tech team will collect and analyze data from emissions testing of:

- The Catalina Express vessels (new vessel with Tier 4 engines (4 main engines and 2 auxiliary engines) with DPF, assuming DPR is certified as safe and effective on the appropriate engine class in time for deployment)
- Harbor Breeze Cruise vessels (new hybrid-assist excursion tour vessel)

to verify the emission benefits from the demonstration of technologies funded under this Solicitation is required. All types of data to be collected will be determined at CARB's sole discretion, as outlined in Appendix F, or as modified by CARB at its sole discretion. The final emission testing procedure will be presented to CARB before work begins and will be subject to CARB approval. The project will be divided into three tasks/activities: 1) Measuring emission benefits of new technology; 2) Measuring the activity of the vessel and 3) Monitoring and reporting. All work is assumed to be carried out in San Pedro Bay.

Budget

The Tetra Tech team proposes to perform scope on a not-to-exceed time and materials basis. The estimated cost for the above services will be dependent upon the options chosen from the table below. The total estimated for UCR will include 85% OBE for UCR.

| Testing Options | Testing Type | Cost |
|---|--|-----------|
| Catalina Express Testing (Option 1) | Testing on 2 vessels measuring NOx, PM, CO, CO ₂ , SO ₂ , and O ₂ | \$310,000 |
| Catalina Express Testing (Option 2) | Testing on 2 vessels measuring all species listed in Appendix F | \$350,000 |
| Harbor Breeze Cruise Testing (Option 1) | Testing on 1 new vessel with 3-month monitoring (without CEMS and SCR converter efficiency) | \$150,000 |
| Harbor Breeze Cruise Testing (Option 2) | Baseline testing on 1 vessel without 3-months monitoring (without CEMS and SCR converter efficiency) | \$125,000 |

Key Personnel

Dr. J Wayne Miller is the PI for this project. He was one of the advisors for Dr. Eckel and has been measuring the emissions from ocean going vessels, commercial harbor craft, locomotives and cargo handling equipment for over 20 years. Dr. Miller teaches classes on emissions controls so is well aware of the expected reductions with the latest technology. According to google scholar, Dr. Miller has over 6,500 citations to his publications.

Dr. Tom Eckel will be the field manager. He recently obtained his PhD at the University of California – Riverside, mainly based on his work of measuring emissions in the field from ocean going vessels that started in 2019. Since then, he has managed and overseen the measurement of main engines on four vessels and the accompanying auxiliary engines. Since COVID, Dr. Eckel has single handily taken over the testing of the OGV and CIIC vessels that are part of the POLB ZANZEFF project.

Dr. Tom Durbin will be included as advisor for this project. His research is in the area of vehicle emissions with an emphasis on studying particulate emissions. This research includes programs to quantify particulate emissions from in-use gasoline and diesel vehicles, smoking vehicles, as well as alternative fuel vehicles. Dr. Durbin is also currently involved in research to evaluate the effectiveness of OBDII systems in monitoring emissions-related malfunctions and in diesel fuels research with biodiesel.

If you have any questions regarding this proposal, please feel free to contact me at (626) 470-2496.

Sincerely,



Erica Alvarado, D.Env., M.P.H.
Associate Director

ATTACHMENT 5: PRIORITY POPULATION ELIGIBILITY DETERMINATION

The Harbor Department (POLA) affirms that the LA MER project meets the criteria of benefiting priority populations. This affirmation is supported by the below discussion and site locations that are mapped using the two tools prescribed by the Solicitation to identify priority population locations:

California Climate Investments (CCI) Priority Populations Map:

<https://webmaps.arb.ca.gov/PriorityPopulations/>

CalEnviroScreen 4.0 (CES4):

<https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40>

The specific domicile (i.e., dock) locations for this project are signified by stars in Figure 5-1, including:

- Catalina Express
 - Berth 95, San Pedro, 90731
 - 320 Golden Shore, Long Beach, 90802
 - Avalon Bay, Avalon, 90704
- Harbor Breeze
 - 1150 Nagoya Way, Berth 79, San Pedro, 90731
 - 100 Aquarium Way (Dock #2), Long Beach, 90802

The project meets the priority population criteria as follows:

Projects that provide incentives for advanced technology equipment or vehicles that are registered in a census tract that contains a priority population, have a domicile address in a census tract that contains a priority population, or are operated more than 50 percent of the time in a census tract or tracts that contains a priority population.

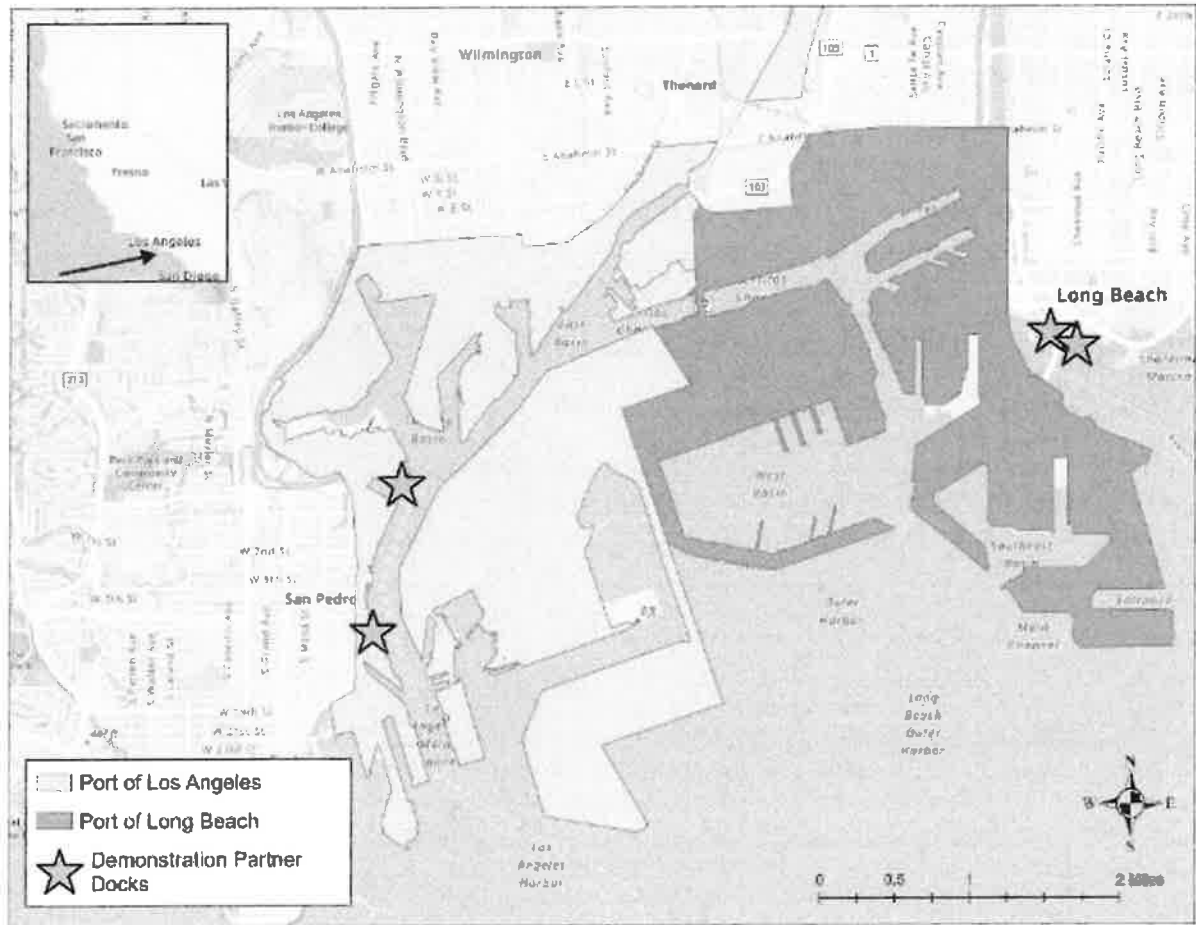
YES! This project will be domiciled 100 percent of the time within census tracts that contain priority populations, and 100 percent of population-adjacent operational time is within census tracts that contain a priority population. This distribution is further exemplified in Figures 5-2 and 5-3, which show that 90% or more of census tracts within 2 miles of the domicile address are disadvantaged, low income, or both, as identified by the CCI and CES4 tools.

Projects that provide incentives for advanced technology equipment or vehicles that provide meaningful criteria air pollutant or toxic air contaminant emission reductions in a census tract or tracts that contains a priority population.

YES! The project will provide real, surplus and quantifiable criteria air pollutant, toxic air contaminant and greenhouse gas emission reductions in census tracts that contain priority populations. These priority population emissions benefits are quantified and discussed under Criterion 5 and Attachment 3.

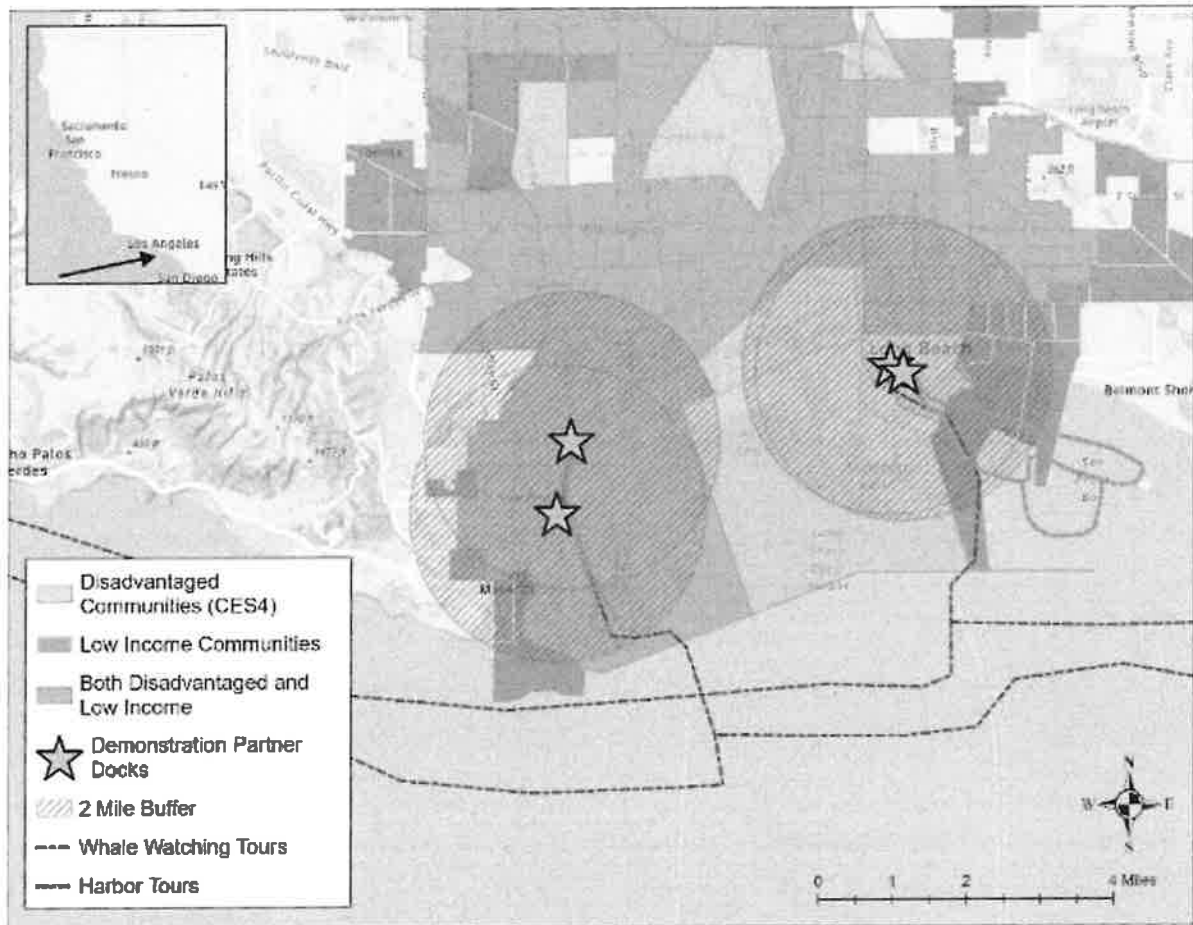
Overall, the Project is located in an urban area (Los Angeles and Long Beach) at the San Pedro Bay Ports coastal port complex, consisting of the Port of Los Angeles and the Port of Long Beach, as shown in Figure 5-1. In addition to the local Port area, CCE's demonstration vessel will transport passengers across to Avalon Bay in Catalina Island, approximately 25 miles from the Port. The Port area and Avalon Bay are in census tracts with priority populations, as shown in the following figures.

Figure 5-1: LA MER Geographic Location Sites within San Pedro Bay



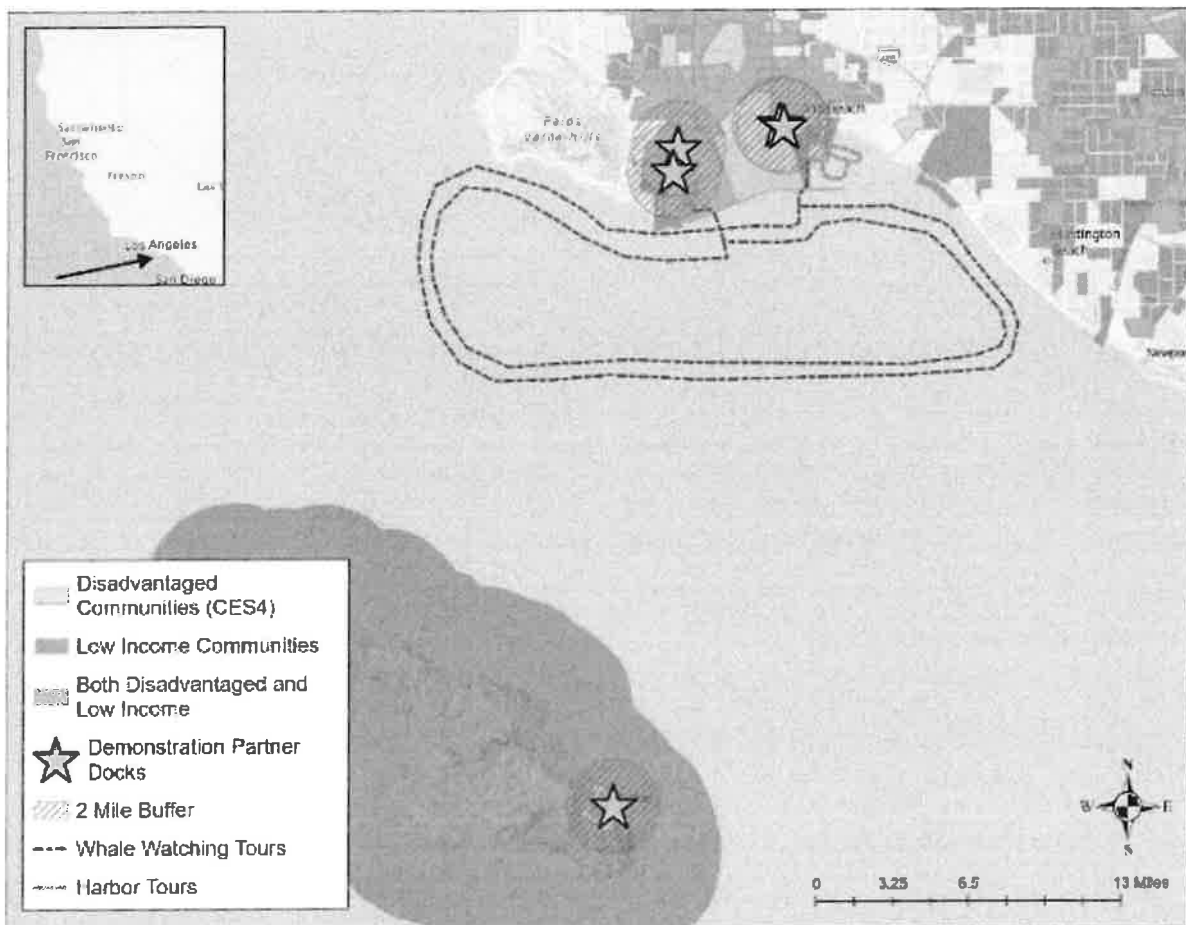
To demonstrate the proposed project benefits, the domicile addresses for the project were evaluated using the above-referenced mapping tools. Figure 5-2 presents the mapping results from the CCI Priority Population Map.

Figure 5-2: CCI Map Results for LA MER Port-side Domicile Addresses



Source: [California Climate Investments \(CCI\) Priority Populations Map](#), California Climate Investments (June, 2023); Disadvantaged Communities designations per Senate Bill (SB) 535 (De León, Chapter 830, Statutes of 2012); Low-income definitions per Assembly Bill (AB) 1550 (Gomez, Chapter 369, Statutes of 2016)

Figure 5-3: CCI Map Results for Harbor Craft Domicile Addresses



Source: [California Climate Investments \(CCI\) Priority Populations Map](#), California Climate Investments (June, 2023); Disadvantaged Communities designations per Senate Bill (SB) 535 (De León, Chapter 830, Statutes of 2012); Low-income definitions per Assembly Bill (AB) 1550 (Gomez, Chapter 369, Statutes of 2016)

Table 5-1 summarizes the Census Tracts and Priority Populations identified by the CCI tool for each of the project locations. In addition, since the vessels transit the San Pedro Bay, those census tracts are also included.

Table 5-1: Priority Population Status for the Proposed Project

| Vessel Berth Location | Census Tract | Priority Population Identified (CCI Tool) | Reason the Criteria is Satisfied |
|--|-------------------------|---|---|
| Berth 95, San Pedro, 90731 | 6037980031 & 6037296210 | Disadvantaged Community: CES 4 & Low-income Community | Located and operates within identified Census Tract |
| 320 Golden Shore, Long Beach, 90802 100 Aquarium Way, Long Beach, 90802 | 6037576001 & 6037980033 | Disadvantaged Community: CES 4 | |
| Avalon Bay, Avalon, 90704 | 6037599000 & 6037599100 | Low-income Community | |
| 1150 Nagoya Way, Berth 79, San Pedro, 90731 | 6037980031 & 6037297110 | Disadvantaged Community: CES 4 & Low-income Community | |

The LA MER project benefits include significant emission reductions, in addition to the demonstration of advanced clean marine vessel technology, which will lay the foundation for replicating the project across the Port of Los Angeles and the Port of Long Beach, as well as other ports across California and the Nation. Specifically, the following results are projected to benefit the priority populations summarized in Table 5-1:

- 1,503 MT/year gCO₂e
- 62.75 tons per year (tpy) NO_x
- 5.8 tpy ROG
- 2.42 tpy PM
- 2.38 tpy PM_{2.5}
- Accelerated validation and introduction of clean harbor craft technology that can be implemented throughout California and the nation.
- Workforce programs aimed at recruiting and training members of the local community, which are classified as disadvantaged and have above-average unemployment rates.

Figure 5-4 depicts the project locations within the SPBPs, which are surrounded by a majority of top ranked communities for adverse environmental impacts.

Figure 7: CalEnviroScreen 4.0 Map Results for LA MER Port-side Domicile Addresses



Source: [CalEnviroScreen 4.0 Map \(CES4\)](#), Office of Environmental Health Hazard Assessment (OEHHA) (October, 2021); An area with a high score is one that experiences a much higher pollution burden than areas with low scores. Indicators used for calculating CES4 scores include geographic, socioeconomic, public health, and environmental hazard criteria, as required by SB 353.

The Project is surrounded by Historically Disadvantaged Community census tracts, falling primarily within Los Angeles County (County FIPS 06037, where FIPS is the Federal Information Processing Standard, a unique federal identifier for a geographic area). These disadvantaged census tracts meet California State SB 535 Disadvantaged Community Zone requirements, as shown in the CCI maps in Figures 2 and 3. These areas represent the 25% highest scoring census tracts in the State for elevated pollution levels and low socioeconomic indicators.

In August 2018, the U.S. EPA designated the South Coast Air Basin, in which the SPBPs reside, as “extreme” nonattainment for the 2015 8-hour ozone standard.⁹ Further, the community surrounding the Project Location is classified as an “Assembly Bill (AB) 617 Community” by the California Air Resources Board, which means it is particularly impacted by poor air quality and generally meets

⁹South Coast AQMD 2022 Air Quality Management Plan, Page ES-1: <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/final-2022-aqmp/final-2022-aqmp.pdf?sfvrsn=16> Accessed July 9, 2023.

the definition of a disadvantaged community.¹⁰ The Wilmington-Carson-West Long Beach AB 617 community has higher rates of asthma, low birth weight, and cardiovascular disease than California's state average. The community also has higher rates of linguistic isolation, poverty, unemployment, and housing burden, and lower educational attainment, according to the "Wilmington-Carson-West Long Beach Community Emission Reduction Plan", 2019.

The project area similarly presents an opportunity for workforce training and job creation, particularly due to the relatively higher levels of unemployment. The State of California's Employment Development Department demonstrates this fact in the Local Area Unemployment Statistics (LAUS) table. The most recent finalized LAUS report puts unemployment levels for the cities of Long Beach and Los Angeles at 5.2% and 5.7% respectively as of July 2023. The CalEnviroScreen 4.0 (CES4) data [last updated October 2021, downloaded October 2023] further highlights the presence of these priority populations. Within a 2-mile radius of the domicile locations for this project, CES4 data shows 63 census tracts with an overall average unemployment rate of 6.91%. Moreover, 34 of these census tracts fall above the 50th percentile for unemployment rates, meaning these tracts have higher unemployment rates than approximately half of all census tracts in California.

¹⁰ <http://www.aqmd.gov/nav/about/initiatives/environmental-justice/ab617-134/wilm>

ATTACHMENT 6: PROCEDURES FOR HANDLING CONFIDENTIAL INFORMATION

This application does not contain confidential information nor will any materials developed under the LA MER Project.

ATTACHMENT 7: LETTERS OF COMMITMENT



425 S. Polos Verdes Street Post Office Box 151 San Pedro, CA 90733-0151 TEL/TDD 310 SEA-PORT www.portoflosangeles.org

Karen Bass
Board of Harbor
Commissioners
Eugene D. Seroko

Mayor, City of Los Angeles

Lucille Roybal-Alford
President
Executive Director

Diane L. Middleton
Vice President

Michael Muñoz
Commissioner

Edward R. Renwick
Commissioner

L Lee Williams
Commissioner

October 25, 2023

Earl Landberg
California Air Resources Board
Mobile Source Control Division
1001 I Street
Sacramento, California 95814

Dear Mr. Landberg:

SUBJECT: HARBOR DEPARTMENT APPLICATION FOR CALIFORNIA AIR RESOURCES BOARD GRANT – PORT OF LOS ANGELES MARINE EMISSIONS REDUCTION PROJECT

The City of Los Angeles Harbor Department (Harbor Department) is pleased to submit our response to the California Air Resources Board's (CARB) Advanced Technology Demonstration and Pilot Projects Solicitation. For the proposed "Port of Los Angeles Marine Emissions Reduction Project" (Project), the Harbor Department, in partnership with Catalina Channel Express and Harbor Breeze, two harbor craft operators, is requesting funding support in the amount of \$30,980,378 for this project. The CARB funding request is matched with \$31,610,554 from the project team as documented in each partner's Letter of Commitment (match percentage of 51%).

The Project will help achieve the Harbor Department's longstanding commitment to reduce emissions from harbor craft, which impact our local communities. The Project includes the following key components:

- Design, build, commission and operate one 525-passenger ferry equipped with Tier 4 engines and a diesel particulate filter. This ferry will replace three existing ferries currently in operation; these ferries will be removed from service in California.
- Design, build, commission and operate two zero-emission capable excursion vessels equipped with Tier 4 engines and an on-board battery storage system to enable all-electric zero-emission range for 30% of travel time, and possibly as much as 75% of travel time, depending on the route.
- Develop a report to evaluate the commercial status of emission-reduction technologies, to assess the feasibility of marinizing diesel particulate filters, to request information from engine manufacturers on future low-carbon fuels and technologies, to identify infrastructure gaps for zero-emission harbor craft, and to understand workforce development needs specific to tugs, ferries, and pilot boats operating in San Pedro Bay.
- Conduct workforce training, equity-focused community engagement, and efforts to showcase these new technologies to accelerate broader adoption.

AN EQUAL EMPLOYMENT OPPORTUNITY - AFFIRMATIVE ACTION EMPLOYER



The Harbor Department commits to provide in-kind staff resources to manage and implement this Project, in addition to \$650,000 in direct cash match subject to approval by the Board of Harbor Commissioners following the notice of approval, as shown in the table below.

| Task | Grant Request | Match Funding | | | | Total | % Total Project Cost |
|---|---------------------|---------------------|---------------------|------------------|------------------|---------------------|----------------------|
| | | CCE | Harbor Breeze | POLA | POLB | | |
| Task 1 - Project Administration | \$0 | | | | | \$0 | 0% |
| Task 2 - Catalina Channel Express Ferry | \$15,044,128 | \$15,370,554 | | \$125,000 | | \$30,539,682 | 49% |
| Task 3 - Harbor Breeze ZEAT Vessels | \$15,826,250 | | \$15,250,000 | \$125,000 | | \$31,201,250 | 50% |
| Task 4 - Technology Evaluation | \$0 | | | \$250,000 | \$250,000 | \$500,000 | 1% |
| Task 5 - Workforce Data Collection | \$0 | | | \$25,000 | | \$25,000 | 0.0% |
| Task 6 - Technology Showcase | \$0 | | | \$90,000 | \$90,000 | \$180,000 | 0.3% |
| Task 7 - Final Report | \$10,000 | | | \$35,000 | | \$45,000 | 0.1% |
| Total | \$30,980,378 | \$15,370,554 | \$15,250,000 | \$650,000 | \$340,000 | \$62,590,932 | 100% |
| % Total Project Cost | 49% | 25% | 24% | 1% | 0.5% | 100% | |

We are excited to partner with harbor craft operators for this important Project. Please feel free to contact Lisa Wunder, Acting Director of Environmental Management, with any questions at (310) 732-7688 or via email at lwunder@portla.org.

Sincerely,

Marka Bhavins For

EUGENE D. SEROKA
Executive Director

MD:LW:JG:mrx
APP NO.: 230622-534

Catalina Channel Express



October 24, 2023

Mr. Earl Landberg
California Air Resources Board
Mobile Source Control Division
1001 I Street
Sacramento, California 95814

**SUBJECT: SUPPORT FOR PORT OF LOS ANGELES MARINE EMISSIONS
REDUCTION PROJECT (LA MER)**

Dear Mr. Landberg,

Catalina Channel Express (CCE) is pleased to partner with the Port of Los Angeles (Port) on the Port of Los Angeles Marine Emissions Reduction Project (LA MER) in response to the California Air Resources Board (CARB)'s Advanced Technology Demonstration and Pilot Projects Solicitation. The LA MER project includes the following key components:

- Design, build, commission and operate one 525-passenger ferry equipped with Tier 4 engines and a diesel particulate filter. This ferry will replace three existing ferries currently in operation; these ferries will be removed from service in California.
- Design, build, commission and operate two zero-emission capable excursion vessels equipped with Tier 4 engines and an on-board battery storage system to enable all-electric zero-emission range for 30% of travel time, and possibly as much as 75% of travel time, depending on the route.
- Develop the Next Generation Harbor Craft Technology Evaluation to evaluate the commercial status of emission-reduction technologies, to assess the feasibility of marinizing DPFs, to request information from engine manufacturers on future low-carbon fuels and technologies, to identify infrastructure gaps for zero-emission harbor craft, and to understand workforce development needs specific to tugs, ferries, and pilot boats operating in San Pedro Bay.
- Conduct workforce training, equity-focused community engagement, and efforts to showcase these new technologies in order to accelerate broader adoption.

CCE will be the end user of the Tier 4+ ferry. We commit to managing the design, construction, deployment, and demonstration of this ferry and of partnering with the Port to develop the Next Generation Harbor Craft Technology Evaluation. CCE also commits to conducting workforce training to prepare our existing crew for the operation, maintenance, and repair of these new cutting-edge engine technologies.

Catalina Express • 385 E Swinford St, 2nd Floor • San Pedro, CA 90731 • 310-519-7971
www.CatalinaExpress.com • Reservations: 800-995-4385

CCE will provide \$15,370,554 in cash match funding, which is 25% of the total project cost, as shown in the table below. CCE also commits to completing the project by March 15, 2027, as scoped, even if actual costs exceed the anticipated CARB grant amount. CCE has the funding set aside for this project in its capital budget.

| Task | Grant Request | Match Funding | | | | Total | % Total Project Cost |
|---|---------------------|---------------------|---------------------|------------------|------------------|---------------------|----------------------|
| | | CCE | Harbor Breeze | POLA | POLB | | |
| Task 1 - Project Administration | \$0 | | | | | \$0 | 0% |
| Task 2 - Catalina Channel Express Ferry | \$15,044,128 | \$15,370,554 | | \$125,000 | | \$30,539,682 | 49% |
| Task 3 - Harbor Breeze ZEAT Vessels | \$15,926,250 | | \$15,250,000 | \$125,000 | | \$31,301,250 | 50% |
| Task 4 - Technology Evaluation | \$0 | | | \$250,000 | \$250,000 | \$500,000 | 1% |
| Task 5 - Workforce Data Collection | \$0 | | | \$25,000 | | \$25,000 | 0.0% |
| Task 6 - Technology Showcase | \$0 | | | \$90,000 | \$90,000 | \$180,000 | 0.3% |
| Task 7 - Final Report | \$10,000 | | | \$35,000 | | \$45,000 | 0.1% |
| Total | \$30,980,378 | \$15,370,554 | \$15,250,000 | \$650,000 | \$340,000 | \$62,590,932 | 100% |
| % Total Project Cost | 49% | 25% | 24% | 1% | 0.5% | 100% | |

The LA MER project is an exciting effort to reduce air pollution in San Pedro Bay while advancing cutting-edge harbor craft technologies, and CCE is pleased to partner with the Port. Please feel free to contact Greg Bombard with any questions at (310) 629-0127 or gbombard@catalinaexpress.com.

Sincerely,



Greg Bombard
President
Catalina Channel Express

Harbor Breeze Cruises

Harbor Breeze Corporation

October 24, 2023

Mr. Earl Landberg
California Air Resources Board
Mobile Source Control Division
1001 I Street
Sacramento, California 95814

**SUBJECT: SUPPORT FOR PORT OF LOS ANGELES MARINE EMISSIONS
REDUCTION PROJECT (LA MER)**

Dear Mr. Landberg,

Harbor Breeze Cruises is pleased to partner with the Port of Los Angeles (Port) on the Port of Los Angeles Marine Emissions Reduction Project (LA MER) in response to the California Air Resources Board (CARB)'s Advanced Technology Demonstration and Pilot Projects Solicitation. The LA MER project includes the following key components:

- Design, build, commission and operate one 525-passenger ferry equipped with Tier 4 engines and a diesel particulate filter. This ferry will replace three existing ferries currently in operation; these ferries will be removed from service in California.
- Design, build, commission and operate two zero-emission capable excursion vessels equipped with Tier 4 engines and an on-board battery storage system to enable all-electric zero-emission range for 30% of travel time, and possibly as much as 75% of travel time, depending on the route.
- Develop the Next Generation Harbor Craft Technology Evaluation to evaluate the commercial status of emission-reduction technologies, to assess the feasibility of marinizing DPFs, to request information from engine manufacturers on future low-carbon fuels and technologies, to identify infrastructure gaps for zero-emission harbor craft, and to understand workforce development needs specific to tugs, ferries, and pilot boats operating in San Pedro Bay.
- Conduct workforce training, equity-focused community engagement, and efforts to showcase these new technologies in order to accelerate broader adoption.

Harbor Breeze will be the end user of the two zero-emission-capable excursion boats. We commit to managing the design, construction, deployment, and demonstration of the vessels and of partnering with the Port to develop the Next Generation Harbor Craft Technology Evaluation. Harbor Breeze also commits to conducting workforce training to prepare our existing crew for the operation, maintenance, and repair of these new cutting-edge engine technologies.

Corporate Office: 400 Oceangate #1110, Long Beach, CA 90802
Tel. # (562) 983-6880; Fax # (562) 983-6883

Harbor Breeze Corporation

Harbor Breeze will provide \$15,250,000 in cash match funding, which is 24% of the total project cost, as shown in the table below. Harbor Breeze also commits to completing the project by March 15, 2027, as scoped, even if actual costs exceed the anticipated CARB grant amount. Harbor Breeze has the funding set aside for this project in its capital budget.

| Task | Grant Request | Match Funding | | | | Total | % Total Project Cost |
|---|---------------------|---------------------|---------------------|------------------|------------------|---------------------|----------------------|
| | | CCE | Harbor Breeze | POLA | POLB | | |
| Task 1 - Project Administration | \$0 | | | | | \$0 | 0% |
| Task 2 - Catalina Channel Express Ferry | \$15,044,128 | \$15,370,554 | | \$125,000 | | \$30,539,682 | 49% |
| Task 3 - Harbor Breeze ZEAT Vessels | \$15,926,250 | | \$15,250,000 | \$125,000 | | \$31,301,250 | 50% |
| Task 4 - Technology Evaluation | \$0 | | | \$250,000 | \$250,000 | \$500,000 | 1% |
| Task 5 - Workforce Data Collection | \$0 | | | \$25,000 | | \$25,000 | 0.0% |
| Task 6 - Technology Showcase | \$0 | | | \$90,000 | \$90,000 | \$180,000 | 0.3% |
| Task 7 - Final Report | \$10,000 | | | \$35,000 | | \$45,000 | 0.1% |
| Total | \$30,980,378 | \$16,370,654 | \$15,250,000 | \$650,000 | \$340,000 | \$62,590,932 | 100% |
| % Total Project Cost | 49% | 25% | 24% | 1% | 0.5% | 100% | |

The LA MER project is an exciting effort to reduce air pollution in San Pedro Bay while advancing cutting-edge harbor craft technologies, and Harbor Breeze is pleased to partner with the Port. Please feel free to contact Dan Salas with any questions at 310-466-4930 or dan.harbor.breeze@gmail.com.

Sincerely,



Dan Salas
CEO
Harbor Breeze Cruises

Port of Long Beach



October 24, 2023

Mr. Earl Landberg
California Air Resources Board
Mobile Source Control Division
1001 I Street
Sacramento, California 95814

SUBJECT: SUPPORT FOR PORT OF LOS ANGELES MARINE EMISSIONS REDUCTION PROJECT (LA MER)

Dear Mr. Landberg,

The Port of Long Beach (Port, or POLB) is pleased to support the Port of Los Angeles's (POLA) response to the California Air Resources Board (CARB) Advanced Technology Demonstration and Pilot Projects Solicitation. The "Port of Los Angeles Marine Emissions Reduction Project" (LA MER) includes the following key components:

- Design, build, commission and operate one 525-passenger ferry equipped with Tier 4 engines and a diesel particulate filter. This ferry will replace three existing ferries currently in operation; these ferries will be removed from service in California.
- Design, build, commission and operate two zero-emission capable excursion vessels equipped with Tier 4 engines and an on-board battery storage system to enable all-electric zero-emission range for 30% of travel time, and possibly as much as 75% of travel time, depending on the route.
- Develop a report to evaluate the commercial status of emission-reduction technologies, to assess the feasibility of marinizing DPFs, to request information from engine manufacturers on future low-carbon fuels and technologies, to identify infrastructure gaps for zero-emission harbor craft, and to understand workforce development needs specific to tugs, ferries, and pilot boats operating in San Pedro Bay.
- Conduct workforce training, equity-focused community engagement, and efforts to showcase these new technologies in order to accelerate broader adoption.

The Port of Long Beach will support the project in the following ways:



- Contribute expertise and financial support to develop the Next Generation Harbor Craft Technology Evaluation. Subject to approval by the Port's Board of Harbor Commissioners, the Port commits to providing \$250,000 toward this effort in the form of payments to a consultant.
- Showcase the new technologies by providing roughly 50 public harbor tours aboard the new zero-emission capable Harbor Breeze excursion boats. The Port commits to providing \$90,000 toward this effort in the form of boat rental fees.

The total match committed by the Port is \$340,000, which is 0.5% of the total project budget, as shown in the table below.

| Task | Grant Request | Match Funding | | | | Total | % Total Project Cost |
|---|---------------------|---------------------|---------------------|------------------|------------------|---------------------|----------------------|
| | | CCE | Harbor Breeze | POLA | POLB | | |
| Task 1 - Project Administration | \$0 | | | | | \$0 | 0% |
| Task 2 - Catalina Channel Express Ferry | \$15,044,128 | \$15,370,554 | | \$125,500 | | \$30,539,682 | 49% |
| Task 3 - Harbor Breeze ZEAT Vessels | \$15,926,250 | | \$15,250,000 | \$125,500 | | \$31,301,250 | 50% |
| Task 4 - Technology Evaluation | \$0 | | | \$250,000 | \$250,000 | \$500,000 | 1% |
| Task 5 - Workforce Data Collection | \$0 | | | \$25,000 | | \$25,000 | 0.0% |
| Task 6 - Technology Showcase | \$0 | | | \$90,000 | \$90,000 | \$180,000 | 0.3% |
| Task 7 - Final Report | \$10,000 | | | \$35,000 | | \$45,000 | 0.1% |
| Total | \$30,980,378 | \$15,370,554 | \$15,250,000 | \$650,000 | \$340,000 | \$62,590,932 | 100% |
| % Total Project Cost | 49% | 26% | 24% | 1% | 0.5% | 100% | |

The LA MER project is an exciting effort to reduce air pollution in San Pedro Bay while advancing cutting-edge harbor craft technologies. POLB is proud to be a supporting entity on this project. Please feel free to contact Leela Rao with any questions at leela.rao@polb.com.

Sincerely,

for
Matthew Arms
 Director of Environmental Planning
 Port of Long Beach

ATTACHMENT 8: CALIFORNIA ENVIRONMENTAL QUALITY ACT WORKSHEET

1. Please provide a detailed summary below of the proposed project and project location (use additional sheets if necessary):

Detailed Project Summary

The Port of Los Angeles (POLA), in partnership with the Port of Long Beach (POLB) and two harbor craft operators, is proposing the Los Angeles Marine Emission Reduction project (LA MER) to immediately reduce emissions for disadvantaged communities while advancing the understanding of cutting-edge harbor-craft technologies for the future.

This multi-faceted project will demonstrate two distinct emission-reduction technologies in different vessel types and duty cycles. The technologies include commercialized low-emission combustion engines using renewable diesel, and plug-in hybrid-electric near-zero-emission technology. The technologies have been chosen to match the duty cycles of the operators – cleanest available combustion and aftertreatment devices for ferries that must cross miles of choppy ocean waters, and near-zero-emissions battery-assisted technology for excursion boats that run shorter routes within a protected harbor. LA MER will demonstrate the ability to maximize emission reductions while balancing operational suitability.

As part of this project, POLA also will work with POLB, harbor craft operators, regulators, engine manufacturers, technology developers, and the US Coast Guard (USCG) to evaluate next-generation harbor-craft technologies that could be feasible for the tugboats, ferries, and pilot vessels operating in San Pedro Bay.

Specific components include:

- Passenger Ferry with Tier 4 Engines and Diesel Particulate Filter (DPF). Design, construct, launch, and demonstrate a high-capacity passenger ferry with Tier 4 propulsion engines and a DPF, if a DPF has been verified by the California Air Resources Board (CARB) and approved by the USCG at the time of engine installation. Catalina Channel Express (CCE), the project partner, is designing the ferry with removeable side panels to permit installation of a CARB-verified, USCG-approved DPF in the future, if one cannot be installed during the time period for this grant. The new ferry will run on renewable diesel and take the place of three smaller ferries with Tier 2XX engines, which enhances the efficiency of regional ferry service and thus increases the emissions benefits.
- Zero-Emission Capable Excursion Boats. Design, construct, launch, and demonstrate two zero-emission capable hybrid excursion boats in partnership with Harbor Breeze. The vessels are expected to meet the definition of Zero-Emission Advanced Technology (ZEAT) vessel under the CARB Harbor Craft Regulation. The vessels will provide harbor tours of the Ports, dinner cruises, and whale watching expeditions roughly six times per day. Each boat will have renewable-diesel-powered Tier 4 propulsion engines for safety, resiliency, and added range, but will be able to operate at least 30% of the time in zero-emission mode (40% is expected) with some trips operating as much as 75% of the time in zero-emission mode depending on route length. Although not part of this project or grant request, Harbor Breeze also will install shore power at a public wharf to serve the zero-emission capable excursion boats.

- Next Generation Harbor Craft Technology Evaluation. Develop a report to evaluate the commercial status of emission-reduction technologies, to assess the feasibility of marinizing DPFs, to request information from engine manufacturers on future low-carbon fuels and technologies, and to identify workforce development needs specific to tugs, ferries, and pilot boats operating in San Pedro Bay.

Project benefits will accrue to the disadvantaged, high-priority populations in which the vessels will be domiciled and spend nearly all of their time.

Project Locations

Below are the project locations where the project vessels will be docked. The vessels operate throughout the San Pedro Bay and to/from Catalina Island.

- Catalina Channel Express
 - Berth 95, San Pedro, 90731
 - Avalon Bay, Avalon, 90704
- Harbor Breeze
 - 320 Golden Shore, Long Beach, 90802

2. What are the physical aspects of the project? (Check all that apply and provide brief description of work, including any size or dimensions of the project).

Additionally, please provide site layout figure(s) showing locations of new or modified infrastructure, trenching, grading, paving, etc. Such figure(s) need not be engineering-grade but should show the locations of the anticipated project components at the site. (Attach additional sheets as necessary.)

| Type of Project | Yes | No | Description of Project Aspect |
|--|-------------------------------------|-------------------------------------|-------------------------------|
| Ground disturbance (including grading, paving, trenching, etc.) Provide length and depth, and describe whether the area(s) to be disturbed are previously disturbed. | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| New or replaced pipelines | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Construction of underground facilities (including tanks) | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Modification or conversion of a facility, or construction of new or modified structures | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| New or modified operation of a facility or equipment | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Off-road demonstration | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| EV infrastructure (how many, what kind, approximate dimensions) | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Alternative gas station (how many, what kind, approximate dimensions) | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |

| | | | |
|---|--------------------------|-------------------------------------|--|
| Electrical infrastructure | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Solar component (extent of and general location at project site) | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Paper study (including analyses on economics, feedstock availability, workforce availability, etc.) | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Laboratory research | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Temporary or mobile structures (skid-mounted) | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Design/Planning | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Other (describe and add pages as necessary) | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |

3. Where is the project located or where will it be located? (Attach additional sheets as necessary.)

| Address | County | Type of Work to Be Completed at Site |
|---|-------------|--------------------------------------|
| Berth 95, San Pedro, 90731 Avalon Bay, Avalon, 90704 | Los Angeles | Ferry operation |
| 320 Golden Shore, Long Beach, 90802 | Los Angeles | Excursion Vessel Operation |

4. Will the project potentially have environmental impacts that trigger CEQA review? (Check a box and explain the answer for each question. Additionally, please provide a complete description of any direct physical changes and reasonably foreseeable indirect changes to the environment that may result from the project. Please provide as much detail as possible. You may provide additional information on supplemental pages as necessary.)

| Question | Yes | No | Don't Know | Explanation |
|--|--------------------------|-------------------------------------|--------------------------|--|
| Is the project site environmentally sensitive? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| Is the project site on agricultural land? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | The Project site does not contain any Farmland and is not located within any agricultural land use |

| | | | | |
|--|--------------------------|-------------------------------------|--------------------------|---|
| Is the land on which the project will be built previously disturbed? If so, please provide detail on how the land was previously disturbed (i.e., whether it is paved and/or graded). | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | This project is to retrofit existing harbor craft and no ground disturbance is required. |
| Is this project part of a larger project? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| Is there public controversy about the proposed project or larger project? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| Will historic resources or historic buildings be impacted by the project? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | The proposed project will not be modifying any buildings. |
| Is the project located on a site the Dep't. of Toxic Substances Control and the Secretary of Environmental Protection have identified as being affected by hazardous wastes or cleanup problems? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | The proposed project will not be making any modifications to landside operations or structures. |
| Will the project generate noise or odors in excess of permitted levels? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | The proposed project is not expected to increase noise or odors compared to existing operations. |
| Will the project increase traffic at the site and by what amount? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Proposed project would not modify existing operations or traffic. |
| Is the project expected to result in environmental impacts to any other resource area (e.g., air quality, aesthetics, water quality)? (Add pages as necessary.) | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | The proposed project is not expected to increase any environmental impacts compared to existing operations. |

5. Will the project require discretionary permits or determinations, as listed below?

| Type of Permit | No | Modified | New | Approving Agency | Reason for Permit, Summary of Process, and Anticipated Date of Issuance |
|--------------------|-------------------------------------|--------------------------|--------------------------|------------------|---|
| Air Quality Permit | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |

| | | | | | |
|---|-------------------------------------|--------------------------|--------------------------|--|--|
| Water Quality Permit | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |
| Conditional Use Permit or Variance | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |
| Building Expansion Permit | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |
| Hazardous Waste Permit | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |
| Rezoning | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |
| Authority to Construct | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |
| California Coastal Commission | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |
| California Land Commission | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |
| Bay Conservation and Development Commission | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |
| Other Permits (List types) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | |

6. Of the agencies listed in #4, have you identified and contacted the public agency who will be the lead CEQA agency on the project?

Yes. Provide the name of and contact information for the lead agency.

Port of Los Angeles
 425 S. Palos Verdes St.
 San Pedro, CA 90731

No. Explain why no contact has been made and/or a proposed process for making contact with the lead agency.

7. If you identified an agency with discretionary approval authority over the project (see Item 4 above), has the public agency prepared environmental documents (e.g., Notice of Exemption, Initial Study/Negative Declaration/Mitigated Negative Declaration, Environmental Impact Report, Notice of Determination) under CEQA for the proposed project?

Yes. If yes, please complete the following and attach the CEQA document to this worksheet. (For "Not a project," the title of the document may be an e-mail, resolution, or letter.)

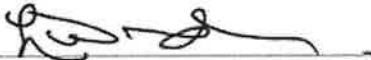
| Type of Environmental Review | Title of Environmental Document | State Clearinghouse Number | Completion Date | Planned Completion Date (must be before approval of award) |
|---|---------------------------------|----------------------------|-----------------|--|
| "Not a project" Email Letter Resolution Other: | | N/A | | N/A |
| Exempt (Resolution of public agency or Agenda Item approving Exemption) | | N/A | | N/A |
| Exempt (Notice of Exemption) | Los Angeles Marine Emission | N/A | 10/20/2023 | |
| Initial Study | | | | |
| Negative Declaration | | | | |
| Mitigated Negative Declaration | | | | |
| Notice of Preparation | | | | |
| Environmental Impact Report | | | | |
| Master Environmental Impact Report | | | | |
| Notice of Determination | | | | |
| NEPA Document (Environmental Assessment, Finding of No Significant Impact, and/or Environmental Impact Statement) | | | | |

No. Explain why no document has been prepared. Propose a process for obtaining lead agency approval and estimated date for that approval (must occur before the CARB will approve the grant).

Certification: The undersigned declares that he or she is an official/agent of the responding Applicant and is empowered to represent, bind, and execute contracts and other agreements on behalf of the Applicant. The undersigned hereby represents, warrants, certifies and declares under penalty of perjury, under the laws of the State of California, that all statements and responses in this application package are true and correct, with full knowledge that all statements and responses are subject to investigation and that any incomplete, unclear, false or dishonest statements or responses may be grounds for rejection of the application, disqualification from this Solicitation process, termination of any or

Name: Lisa Wunder.

Title: Acting Director, Environmental Management

Signature: 

Phone Number: 310-732-7688

Email: LWunder@portla.org

Date: [DATE]

| To | | From |
|----|------------------------------------|------|
| | BOARD OF HARBOR COMMISSIONERS | |
| | EXECUTIVE DIRECTOR | |
| | DED & CHIEF OF STAFF | |
| | DED & CHIEF FINANCIAL OFFICER | |
| | CHIEF OF PUBLIC SAFETY & EMERG MGT | |
| | DED - MKTG & CUSTOMER RELATIONS | |
| | DED - DEVELOPMENT | |
| | SR DIRECTOR, COMMUNICATIONS | |
| | SR DIRECTOR, GOVERNMENT AFFAIRS | |
| | ACCOUNTING | |
| X | CARGO/ INDUSTRIAL REAL ESTATE | |
| | CARGO MARKETING | |
| | CITY ATTORNEY | |
| | COMMISSION OFFICE | |
| | COMMUNITY RELATIONS | |
| | CONSTRUCTION | |
| | CONSTRUCTION & MAINTENANCE | |
| | CONTRACTS & PURCHASING | |
| | DEBT & TREASURY MANAGEMENT | |
| | EMERGENCY MANAGEMENT | |

CITY OF LOS ANGELES
HARBOR DEPARTMENT

OFFICE MEMORANDUM

October 20, 2023

| To | | From |
|----|------------------------------|------|
| X | ENGINEERING | |
| | ENVIRONMENTAL MANAGEMENT | X |
| | FINANCIAL MANAGEMENT | |
| | GOODS MOVEMENT | |
| | GRAPHICS | |
| | HUMAN RESOURCES | |
| | INFORMATION TECHNOLOGY | |
| | LEGISLATIVE AFFAIRS | |
| | MANAGEMENT AUDIT | |
| | MEDIA RELATIONS | |
| X | PLANNING & STRATEGY | |
| | PORT PILOTS | |
| | PORT POLICE | |
| | RISK MANAGEMENT | |
| | TRADE DEVELOPMENT | |
| X | WATERFRONT/ COMM REAL ESTATE | |
| | WHARFINGERS | |
| CC | Daniel Samaro - Engineering | |
| CC | Christina Sar - Engineering | |

SUBJECT: ENVIRONMENTAL ASSESSMENT

The environmental assessment for the following:

LAHD - Los Angeles Marine Emission Reduction Project

as requested by Environmental Management Division on October 17, 2023, has been completed. We have determined that the proposed action is exempt from the requirements of the California Environmental Quality Act (CEQA) in accordance with Section 15306, of the State CEQA Guidelines. A Notice of Exemption was prepared and may be filed with the County Clerk's offices upon issuance of a Coastal Development Permit, Harbor Engineer Permit or any lease/ entitlement.

If this project does not involve Board action, please notify this office upon issuance of any permit or entitlement so that we may file the Notice of Exemption.



LISA WUNDER
Acting Director of Environmental Management

LW:NE
APP No.: 231020-540

Notice Of Exemption

To: **Office of Planning and Research**
PO Box 3044, 1400 Tenth Street, Room 22
Sacramento, CA 95812-3044

From: Los Angeles Harbor Department
425 S. Palos Verdes St.
San Pedro, CA 90731

County Clerk
County of Los Angeles

Project Title: LAHD - Los Angeles Marine Emission Reduction Project

Project Location - Specific: Various Locations

Project Location - City: Los Angeles

Project Location - County: Los Angeles

Description of Project:

This multi-faceted project will demonstrate two distinct emission-reduction technologies in different vessel types and duty cycles. The technologies include commercialized low-emission combustion engines using renewable diesel, and plug-in hybrid-electric near-zero-emission technology. Specifically, this demonstration will include a passenger ferry with Tier 4 Engines and a Diesel Particulate Filter as well as two Zero-Emission Capable Excursion Boats. Project locations include Berth 95 in San Pedro, Avalon Bay in Avalon, and 320 Golden Shore in Long Beach.

Name of Public Agency Approving Project: Los Angeles Harbor Department

Name of Person or Agency Carrying Out Project: LA Harbor Department

Exempt Status (check one)

- Ministerial (Sec. 21080(b) (1); 15268);
- Declared Emergency (Sec. 21080(b) (3); 15269(a));
- Emergency Project (Sec. 21080(b) (4); 15269(b) (c))
- Categorical Exemption. State type and section number: Section 15306
- Statutory Exemptions. State code number:

Reasons why project is exempt:

Basic data collection and research activities which do not result in serious or major disturbances to an environmental resource.

Lead Agency

Contact Person: Nicole Enciso

Area Code/ Telephone/ Extension: 310 732-3675

If filed by applicant:

1. Attach certified document of exemption finding.
2. Has a Notice of Exemption been filed by the public agency approving the project? Yes No



Signature: Lisa Wunder

Date: 10/20/2023

Title: Acting Director of Environmental

Signed by Lead Agency

Signed by Applicant

Management Date received for filing at OPR: _____

ATTACHMENT 9: APPLICANT RESOURCES

The City of Los Angeles Harbor Department (Harbor Department or POLA) has extensive experience developing, implementing, and administering technology demonstrations and projects that require detailed and active project management and coordination with technology providers, equipment and vehicle manufacturers, equipment operators, as well as other project stakeholders. The following projects demonstrate the Harbor Department's proven ability to efficiently and effectively implement the proposed LA MER project.

The Ports of Los Angeles and Long Beach's landmark joint Clean Air Action Plan (CAAP) guides the Harbor Department in its commitment to reduce the health risks and air emissions associated with port-related operations, while allowing port development and growth to continue. A key element of the CAAP is its Technology Advancement Program (TAP), which works to accelerate the verification and commercial availability of emission reduction technologies to move towards an emissions free port. Active since 2007, the TAP has considered numerous technology proposals covering a broad range of different port sources, ultimately approving 30 projects for TAP funding. Below is a selected list of key TAP projects that were successfully completed:

- Capacity Plug-In Hybrid Electric Terminal Tractor (2010)
- Characterization of Drayage Truck Duty-Cycles (2011)
- Development of a Drayage Truck Chassis Dynamometer Test Cycle (2011)
- Centerline Logistics (formerly Harley Marine) Electric Drive Tugboat Design (2020)
- Hybrid Yard Tractor Development & Demonstration (2010)
- Hybrid Yard Tractor Development & Demonstration – Beta Test (2011)
- Johnson Matthey Locomotive DPF Demonstration (2014)
- Long Beach Container Terminal Eco-Crane™ (2011)
- San Pedro Bay Ports Drayage Truck Demonstration of a Near-Zero Ultra-Low NOx Natural Gas Engine Operating on Renewable Natural Gas (2018)
- SCAQMD HDV In-Use Emissions Testing Program (2013)
- TransPower Electric Drayage Infrastructure and Improvement (EDII) Project (2016)
- TransPower Electric Drayage Pre-Commercial Truck Demonstration (2016)
- US Hybrid On-Board Charger for Zero Emission Cargo Transport Demonstration (2016)
- VYCON REGEN® System for Rubber-Tired Gantry Cranes Testing & Verification (2007)

In addition to the TAP, the Harbor Department has a number of other important projects that demonstrate POLA's ability to manage and complete a number of important technology development and demonstration projects:

- Electric Yard Tractor Demonstration Project – In 2013, the Harbor Department was awarded \$1 million from CARB's AB 118 Air Quality Improvement Program to integrate TransPower's electric drive technology into two off-road yard tractors. The project was completed in May 2015.
- Cargo Handling Equipment Retrofit – The Harbor Department was awarded \$469,000 from the 2013 Defense Evaluation and Research Agency program to retrofit 14 pieces of cargo handling equipment with diesel particulate filters. Projects are on schedule and reporting is up to date.
- Shore Power Program – In 2012, the Harbor Department was awarded \$23.5 million by CARB to co-fund shore power installation. All 10 berths were completed by November 2014.

-
- Early Shore Power – USEPA awarded \$1.2 million in June 2010 to supply electricity generated from a Flex-Grid System to container vessels while at berth. The final report was accepted by USEPA.
 - Eco-Crane – U.S. Environmental Protection Agency (USEPA) awarded a \$731,298 Emerging Technologies grant to the Harbor Department to demonstrate the Eco-Crane, a diesel-electric hybrid rubber tire gantry crane.

The Harbor Department has over 25 active cooperative agreements with the Transportation Security Authority and Federal Emergency Management Agency (FEMA) valued at approximately \$75 million, as well as several other federal and state grants. All government grants active at this time total over \$400 million. The Harbor Department is consistent in its routine reporting and has successfully completed cooperative agreements with approved final reports submitted on time. In addition, the Harbor Department has a long history of implementing successful government grant partnerships. These include:

- The Air Quality Mitigation Incentive Program (AQMIP), The Air Quality Mitigation Incentive Program (AQMIP), a \$29 million program that provided grant funding to port operators to reduce emissions that are surplus to existing regulations or other mandates. A wide range of projects were implemented under the AQMIP, including marine vessel and cargo handling equipment repowers, truck and non-road equipment replacements, diesel emission reduction retrofits, and a number of innovative research and development projects.
- The Vessel Main Engine Fuel Incentive Program, which provided monetary incentive for the use of low-sulfur marine fuel in vessel main engines prior to state regulation.
- In July 2012, the Harbor Department launched the Environmental Ship Index Program (ESI) to provide incentives to ships that obtain certain clean ship scores using an international rating system developed through the International Association of Ports and Harbors and World Ports Climate Initiative.
- The Harbor Department successfully manages the Vessel Speed Reduction (VSR) Program, an incentive program for vessels to reduce speeds in the designated VSR zone. In 2016, the compliance rate was 92% at 20 nm and 80% at 40 nm.
- The Harbor Department, as part of CAAP, oversees the Clean Truck Program, which calls for drayage truck owners to replace about 16,000 polluting trucks working at the ports, with the assistance of a port-sponsored grant or loan subsidy. The Harbor Department has contributed close to \$70 million in funding to the Clean Truck Program, including grants.

These programs represent a voluntary, collaborative effort between Harbor Department and equipment owners and technology providers that spans decades. In addition, these projects demonstrate the Harbor Department's ability to successfully implement cooperative agreements, manage resources, meet reporting requirements, evaluate projects/initiatives, and document progress. This extensive history implementing grant projects from both sides (grantor and grantee) uniquely positions the Harbor Department for this proposed project in that it has both managed and implemented technology development and demonstration programs.

Staff Information

The POLA LA MER Project will be led by senior Harbor Department staff that have administered and managed tens of millions of dollars of grant funded projects.

| | |
|---|-----------------------------|
| Name: Tim DeMoss | |
| Phone: (310) 221-4782 | Email: TDeMoss@portla.org |
| Title: City of Los Angeles Harbor Department Environmental Affairs Officer, Air Quality | |
| Expected duties: Project Director – Provides overall leadership and executive oversight for the project. | |
| | |
| Name: Jacob Goldberg | |
| Phone: (310) 732-2675 | Email: jgoldberg@portla.org |
| Title: Marine Environmental Supervisor | |
| Expected duties: Project Lead – Lead staff, manages project coordination and oversees Project Manager and partners. | |
| | |
| Name: Brittney Ford | |
| Phone: (310) 732-3261 | Email: BFord@portla.org |
| Title: Environmental Planning Assistant | |
| Expected duties: Project Manager – Oversees grant administration and day-to-day project management needs. | |
| | |

Demonstration Partner Contact Information

Below is a summary of POLA's demonstration partner staff contact information and expected duties for the proposed LA MER demonstration project.

Catalina Express

Catalina Express' Operations and Engineering departments are responsible for ensuring the safe transportation of our passengers. They partner together to ensure the vessels are kept in a safe and passenger pleasing manner. All maintenance is done in house with larger projects usually handled under warranty by the manufacturers of the equipment. 92% of our Vessel Engineering department have a tenure of over 5 years with the Company vessels and 62% have been with us over 10 years. 83% of our Captains have a tenure of over 5 years with the company and 49% have been with us for over 10 years.

Catalina Express has provided continuous ferry service to Catalina Island since 1981, operating 365 days a year. Catalina Express employs over 275 people year-round (325 seasonally) who handle everything from passenger ticketing to marketing, Human Resources to Information Technology and Insurance, Accounting to Customer Service. We are the sole source of ferry transportation to the Island from Los Angeles County.

| Catalina Express – Advanced Technology Demonstration Partner | |
|---|---|
| Name: Greg Bombard | |
| Phone: 310-629-0127 | Email: GBombard@catalinaexpress.com |
| Title: President/CEO | |
| Expected duties: Responsible for overall direction and project accountability. | |
| Catalina Express – Advanced Technology Demonstration Partner | |
| Name: Erik Bombard | |
| Phone: 310-519-7971 | Email: EBombard@catalinaexpress.com |
| Title: Vice President of Operations | |
| Expected duties: Responsible for quality assurance and assists with overall direction of project. | |
| Catalina Express – Advanced Technology Demonstration Partner | |
| Name: Anthony J. Ross | |
| Phone: 310-519-7971 | Email: TonyRoss@catalinaexpress.com |
| Title: Vice President, Vessel Engineering | |
| Expected duties: Directs the maintenance of all vessels to maintain them to highest possible standards. | |
| Catalina Express – Advanced Technology Demonstration Partner | |
| Name: Koral Shishido | |
| Phone: 310-519-7971 | Email: KShishido@catalinaexpress.com |
| Title: Vice President, Finance | |
| Expected duties: Monitors and controls all financial aspects of the operations of the vessels. | |
| Catalina Express – Advanced Technology Demonstration Partner | |
| Name: Craig Tallman | |
| Phone: 310-519-7971 | Email: CTallman@catalinaexpress.com |
| Title: Operations Manager | |
| Expected duties: Responsible for oversight of vessel crew members, scheduling and training. | |
| Catalina Express – Advanced Technology Demonstration Partner | |

| | |
|--|---|
| Name: Chuck Madic | |
| Phone: 310-519-7971 | Email: CMadic@catalinaexpress.com |
| Title: Engineering Manager | |
| Expected duties: Assists with the maintenance of all vessels to maintain them to highest possible standards. | |
| Catalina Express – Advanced Technology Demonstration Partner | |
| Name: Matt Vaughn | |
| Phone: 310-519-7971 | Email: MVaughn@catalinaexpress.com |
| Title: Training, Safety and Compliance Manager | |
| Expected duties: oversight of vessel crew member training, company safety and security regulations | |

Harbor Breeze

Harbor Breeze Cruises has been providing public whale watching, harbor tours and charter cruises daily for the past 30 years in the Los Angeles and Orange County areas. Our experienced Captains provide a comprehensive narration about the characteristics of each cruise. Today Harbor Breeze Cruises offers more whale watching tours than any other company in the area.

Harbor Breeze employees over 40 people year-round (80 seasonally), with captains being with the company for over 10 years.

Safety of our passengers is of utmost importance. Operations, Engineering and the Captains work together to make sure all of our vessels and public space are kept safe and that all passengers have a positive experience. Most maintenance is done in-house with larger projects being handled by BAE Systems, Quinn Caterpillar, AAA Marine and Boatswain's Locker.

| | |
|--|---|
| Harbor Breeze – Advanced Technology Demonstration Partner | |
| Name: Ralph Dan Salas | |
| Phone: 310-466-4930 | Email: dan.harbor.breeze@gmail.com |
| Title: President/CEO | |
| Expected duties: Provide overall leadership and executive oversight for the project. | |
| Harbor Breeze – Advanced Technology Demonstration Partner | |
| Name: Maria Mendoza | |
| Phone: 562-983-6880 | Email: maria@longbeachcruises.com |
| Title: General Manager | |
| Expected duties: CO-Project Manager/Grant Administrator – Manages the project and oversees grant administrative duties and will work with the Operations Manager regarding staffing each vessel. | |
| Harbor Breeze – Advanced Technology Demonstration Partner | |
| Name: Mike Hadley | |
| Phone: 562-983-6880 | Email: |
| Title: Training & Safety Captain | |
| Expected duties: Will oversee all safety and operational training for all vessels. Including keeping up to date with new/changing requirements regarding safety and operational procedures. | |
| Harbor Breeze – Advanced Technology Demonstration Partner | |
| Name: Scott Louie | |

| | |
|--|---|
| Phone: 562-983-6880 | Email: scott@longbeachcruises.com |
| Title: Operations Manager | |
| Expected duties: Working with the General Manager, will oversee staffing for each vessel. | |
| Harbor Breeze – Advanced Technology Demonstration Partner | |
| Name: Ignacio Lopez | |
| Phone: 562-983-6880 | Email: |
| Title: Chief Port Engineer | |
| Expected duties: Will be responsible for all repairs and maintenance of all vessels. | |
| Harbor Breeze – Advanced Technology Demonstration Partner | |
| Name: Jeff Forney | |
| Phone: 562-983-6880 | Email: jeff@harborbreezecruiseslosangeles.com |
| Title: COO | |
| Expected duties: CO-Project Manager/Grant Administrator – Manages the project and oversees grant administrative duties. | |
| Harbor Breeze – Advanced Technology Demonstration Partner | |
| Name: Chris Batts | |
| Phone: 562-983-6880 | Email: |
| Title: Lead Captain | |
| Expected duties: Assist the Training and Safety Captain in making sure all employees are trained and up to date on all operational procedures. | |

Data Collection and Analysis Qualifications

Tetra Tech and University of California Riverside (UCR) College of Engineering Center for Environmental Research & Technology (CE-CERT) will provide field data collection and analysis support for this project. This team will also conduct emissions testing in accordance with CARB-approved test plans, which will be developed in concert with CARB post-award. CE-CERT provides unbiased, expert research and guidance—backed by real-world data and analysis as well as proven systems, tools, and processes—needed to accelerate widespread deployment of energy efficient, emission-reducing technologies for commercial vessels. The CE-CERT team has been successfully conducting field evaluations, emissions testing, and data analytics for new propulsion systems in marine vessels to characterize emissions, performance and inform design for more than two decades. CE-CERT data analysis examines operation, maintenance, performance, economic, and emissions characteristics of both advanced-technology and baseline fleets. Recent field evaluations have focused on ocean going vessels, harbor craft, and locomotives. These projects include the emissions testing on over 40 ocean going vessels, and several projects working directly with CARB grant awards.

More information can be found on CE-CERT's website, <https://www.cert.ucr.edu/>

Below are key Tetra Tech and CE-CERT staff assigned to this project.

| Tetra Tech – Data Collection and Analysis Subcontractor | |
|--|---|
| Name: Dr. Erica Alvarado | |
| Phone: 626-470-2496 | Email: Erica.Alvarado@tetrattech.com |
| Title: Air Quality Manager | |
| Expected duties: Project Manager for Tetra Tech team, primary liaison to POLA staff. | |
| CE-CERT – Data Collection and Analysis Subcontractor | |
| Name: Dr. Wayne Miller | |
| Phone: 951-827-8511 | Email: wayne.miller@ucr.edu |
| Title: Associate Director, CE-CERT | |
| Expected duties: Data Collection and Analysis oversight | |
| CE-CERT – Data Collection and Analysis Subcontractor | |
| Name: Dr. Tom Eckel | |
| Phone: 310-227-4700 | Email: tecke002@ucr.edu |
| Title: | |
| Expected duties: UCR lead, data collection and analysis. | |

Resumes

Resumes for key project team members listed below are attached.

Port of Los Angeles

- Jacob Goldberg, Marine Environmental Supervisor
- Tim DeMoss, Environmental Affairs Officer
- Brittney Ford, Environmental Specialist

Harbor Breeze (Demonstration Partner)

- Dan Salas, President
- Chris Batts, Senior Captain
- Ignacio Lopez, Chief Port Engineer
- Michael Hadley, Port Captain
- Maria Mendoza, General Manager
- Scott Louie, Operations Manager
- Jeff Forney, Consultant

Catalina Express (Demonstration Partner)

- Greg Bombard, President/CEO
- Erik Bombard, Vice President of Operations
- Anthony J. Ross, Vice President, Vessel Engineering
- Koral Shishido, Vice President, Finance
- Craig Tallman, Manager, Operations Manager
- Chuck Madic, Engineering Manager
- Matt Vaughan, Training, Safety and Compliance Manager

Tetra Tech/CE-CERT (Data Collection and Analysis Subcontractor)

- Dr. Erica Alvarado, Air Quality Manager, Tetra Tech
- Dr. Wayne Miller, Associate Director, CE-CERT
- Dr. Tom Eckel, Student Researcher

GOLDBERG, JACOB

1118 S Holt Ave | Los Angeles, CA 90035 | (310) 490-2237 | jgoldberg@portla.org

WORK EXPERIENCE

Marine Environmental Supervisor

Oct. 2023 to Present

Part of Los Angeles, Environmental Management Division

Manage team tasked with identifying, researching, and assisting with applications for grants, assisted with application and administration of grants from various sources

Recent Grant Applications

- o Port of Los Angeles PIDP 2023 - Grant request of \$64 Million, deployment of various zero emission cargo handling equipment and supporting infrastructure at terminals in the Port of Los Angeles
- o San Pedro Bay Ports Truck Trip Transition Program – Grant request of \$60 Million, to develop and implement a per-transaction incentive for the use of zero emission trucks at the Ports

Technology Advancement Program Manager – Manage joint Port of Los Angeles and Long Beach Technology Advancement Program

- o Review project submissions
- o Direct team managing ongoing demonstration projects

Direct team in support of the continued implementation of the Joint Ports Clean Air Action Plan Update (2017)

Interface with industry and community stakeholders and regulatory agencies on new incentive programs and rulemaking efforts

Oct. 2015 to Sep. 2023

Environmental Specialist

Technology Advancement Program Manager – Manage joint Port of Los Angeles and Long Beach Technology Advancement Program projects

Identifying, researching, and assisting with applications for grants, assisted with application and administration of grants from various sources, including the California Energy Commission and California Air Resources Board

Project Manager – Port of Los Angeles Shore to Shore Hydrogen Fuel Cell Drayage Demonstration Project - \$82 Million Project, demonstrating 10 hydrogen fuel cell Class B trucks and associated fueling infrastructure

Project Manager – Port of Los Angeles Advanced Infrastructure Demonstration Project - \$12 Million Project demonstrating inductive charging stations for battery-electric heavy-duty equipment

Interfaced with industry and community stakeholders and regulatory agencies on new incentive programs and rulemaking efforts

Student Professional Worker

Jun. 2014 to Oct. 2015

Part of Los Angeles, Environmental Division

-
- Responsible for managing the “Marina Engine Exchange” program.
 - Responsible for compiling and processing the Port’s annual Greenhouse Gas Inventory.
 - Data-entry and analysis work

EDUCATION

Masters of Science, Environmental Science
August, 2019
Loyola Marymount University

Bachelor of Science, Marine Biology
January, 2015
California State University, Long Beach

TIM De MOSS

425 S. Palos Verdes Street, San Pedro CA 90275
Phone: (310) 221-4782 E-mail: tdemoss@portla.org

EDUCATION

LOYOLA MARYMOUNT UNIVERSITY, LOS ANGELES, CA August 2000

- Master of Science in Civil Engineering with emphasis on Environmental Science
Course work: Air Pollution Analysis, Environmental Engineering and Science Laboratory, Aquatic Chemistry, Principals of Water Quality Management

LOYOLA MARYMOUNT UNIVERSITY, LOS ANGELES, CA May 1991

- Bachelor of Science in Civil Engineering
Course work: Analytical Methods in Civil Engineering, Introduction to Environmental Engineering, Water Resources Planning and Design, Water and Wastewater Treatment

WORK EXPERIENCE

ENVIRONMENTAL AFFAIRS OFFICER

Port of Los Angeles, Environmental Management Division July 2019 – Present

Duties Summary:

- Develops and shapes Port policy regarding major air quality programs, including but not limited to the following:
 - Port's Clean Truck Fund Rate, Container Terminal Electrification Plans, Green Shipping Corridor
 - Government Agency Regulations: California Air Resources Board's Advanced Clean Fleet Rule and Ocean Going Vessel At Berth Rule
 - Government Agency Programs: California Air Resources Board's Sustainable Freight Strategy Program and Reduction of Greenhouse Gases Cap and Trade Program, and the South Coast Air Quality Management District Air Quality Management Plan
- Manages and supervises the Air Quality staff in applying for large grant funding opportunities offered by local, state, and federal regulatory agencies. Since 2016, we have been successful in receiving over \$100 million to demonstrate near-zero and zero emission technologies in and around the Port complex. The Port is seeking hundreds of millions of dollars in grant funding from the Department of Energy's Hydrogen Hub opportunity and the Department of Transportation's Port Infrastructure Development Program.

MARINE ENVIRONMENTAL SUPERVISOR

Port of Los Angeles, Environmental Management Division June 2014 – July 2019

Duties Summary:

- Supervises the Air Quality Section with the major focus of reducing air pollutant emissions and greenhouse gases from the 5 major sources (Ocean Going Vessels, Heavy Duty Vehicles, Cargo Handling Equipment, Locomotives and Harbor Craft) that move freight in and out of the Port of Los Angeles.
- Project Manager for the preparation of the 2017 Clean Air Action Plan Update
- Project Manager for the preparation of the Port of Los Angeles 2015 Zero Emission White Paper
- Supervises the Air Quality staff in applying for large grant funding opportunities offered by local, state, and federal regulatory agencies. Since 2016, we have been successful in receiving over \$50 million to demonstrate near-zero and zero emission technologies in and around the Port complex.
- Manages and supervises the Air Quality staff in implementing near-zero and zero emission projects to reduce air pollutants and greenhouse gases produced by the equipment that moves freight in the Port and throughout the Southern California region.

TIM De MOSS

425 S. Palos Verdes Street, San Pedro CA 90275
Phone: (310) 221-4782 E-mail: tdemoss@portla.org

WORK EXPERIENCE (Continued)

ENVIRONMENTAL SPECIALIST III

Port of Los Angeles (POLA), Environmental Management Division

May 2007 - June 2014

- Clean Truck Program Manager since October of 2010. Duties involved managing the implementation, monitoring and enforcement of the program.
- Managed POLA's private consultants in order to complete various air quality projects.
- Maintained a professional link of communication with members of the ARB, SCAQMD, private consultants, business contractors, environmental advocacy groups, and Port of Long Beach staff.
- Prepared various Division Memos, Board Reports, and Letters.

ENVIRONMENTAL SPECIALIST II

Los Angeles World Airports (LAWA), Environmental Management Division

January 2005 - May 2007

- Project Manager for Air Quality projects. Duties involved researching air quality and environmental compliance regulations, coordinating regulatory compliance projects for all 4 LAWA Airports, and representing LAWA on annual and periodic SCAQMD audits of LAWA's RECLAIM and Title V facilities.

SANITARY ENGINEERING ASSOCIATE II

City of Los Angeles, Bureau of Sanitation, Various Divisions

June 1991 - January 2005

- Project Manager for Recycling and Waste Reduction projects, Hazardous Waste Management projects, Wastewater Permitting projects, and Wastewater Capital Improvement projects. Duties involved training Bureau staff, auditing facilities throughout the United States, and preparing various Division Memos, Board Reports, and Letters.

Brittney Renaye Ford

19414 Caney Ave Carson, CA 90476 • (951) 753-1226 • brittneyrenayeford@gmail.com

OBJECTIVE

Develop solutions for implementing equipment and infrastructure by using policy analysis techniques. I am well-versed in bringing an idea into reality by communicating and delegating using an agile project management waterfall approach.

EDUCATION

| | |
|--|---------------|
| CAL STATE UNIVERSITY, DOMINGUEZ HILLS | Carson, CA |
| Master of Public Administration and Management | Fall 2020 |
| Certificate in Grant Writing | Summer 2017 |
| Certificate in Real Estate Finance and Investment | Present |
| Certificate in Agile Project Management | Present |
| Bachelor of Arts, Communication Media Studies | Fall 2015 |
| Minor in Business Marketing | |
| RIVERSIDE COMMUNITY COLLEGE | Riverside, CA |
| Associate of Arts Degree & Associates of Science Degree | Spring 2011 |

EXPERIENCE

PORT OF LOS ANGELES

ENVIRONMENTAL PLANNING AND AIR QUALITY GRANTS PROGRAM MANAGEMENT AND ADMINISTRATION

SAN PEDRO, CA
Feb. 2023- Present

- Support the development and implementation of strategies, goals, and objectives for the Environmental Planning and Air Quality Grants Program.
- Evaluate and prioritize grant applications based on pertinent zero emission equipment related funds.
- Coordinate and manage the grant application process, including completing applications, conducting subrecipient assessment, and selecting collaborating entities.
- Monitor and track awarded grants to ensure compliance with program guidelines and regulations.
- Provide technical assistance and support to grant recipients, including answering questions and providing guidance on project implementation.
- Prepare and administer grant agreements, including setting up payment schedules and monitoring grant funds utilization.
- Collaborate with other departments and agencies to coordinate grant projects and ensure alignment with overall environmental planning and air quality initiatives.
- Maintain program documentation and records, including grant applications, agreements, and progress reports.
- Prepare and present program updates and reports to management and stakeholders.
- Stay abreast of current environmental planning and air quality regulations, policies, and best practices to inform program development and decision-making.

FREELANCE GRANT WRITER

Carson, CA

PROGRAM MANAGEMENT

July 2020- Feb. 2023

- Conducted deep organizational analysis that emboldened nonprofit organizations to further their mission with confident outcome forecasts.
- Informed executives about compliance measures, administrative ethics, and regulations related to managing progress reports.
- Identified core organizational values that aligned with foregrounding grantmaking agencies' mission statements and policies.
- Analyzed available datasets and translated information into compelling grant narratives.

CSUDH ASSOCIATED STUDENTS, INC.

Carson, CA

Student Representative for the College of Arts and Humanities

August 2014 – July 2015

- Advocated for undergraduate students enrolled in Arts and Humanities programs.
- Lobbied State legislators to increase funding for the Cal State System of universities.
- Participated in the hiring process of the new Dean of the College of Arts and Humanities.
- Analyzed curriculum standards during participation in four student committees, which included assessing accreditation and learning outcomes.

CALIFORNIA STATE UNIVERSITY, DOMINGUEZ HILLS

STUDENT ASSISTANT – COM 381 SCREENWRITING COURSE

Key liaison between esteemed screenwriting professor and 20 students. Duties included assisting in final grading procedures.

Dan Salas

President/CEO
Harbor Breeze Cruises

Harbor Breeze Cruises was founded by Dan Salas in 1990. Danny's love of the ocean began at a young age. He began working at the San Pedro docks at the early age of 12. His fondness for the sea grew stronger as he grew older and he pursued a career as a tug boat captain. After 10 years of working as a tugboat captain Danny was ready to set out on his own. He bought his first boat in 1994 and shortly thereafter gave his first tour. Danny has worked on perfecting his harbor cruise business. He's hired experienced captains and staff to help his business excel. Today Harbor Breeze Cruises offers more whale watching tours than any other company in the area.

Christian Lorraine Batts

3800 Hathaway Ave., #804
Long Beach, CA 90815
(562)618-9515

EMPLOYMENT HISTORY

01/2010 - Present

Harbor Breeze Corp., Senior Captain

Duties while vessel operator include navigation, daily maintenance, ensure safety of passengers, and safety of nine vessels. Vessel voyages include harbor tours, whale watch trips, ferries to Catalina Island, and private event charters. Manages United States Coast Guard inspections, vessel repowers, and oversees shipyard work for vessels.

01/2010 - Present

M/V Gail Force, Captain

Duties while vessel operator include navigation, daily maintenance, ensure safety of passengers, and safety of a 50' twin screw vessel. Vessel voyages include sportfishing trips to Catalina Island and whale watch trips.

10/2009 - 01/2010

M/V Pacific Adventure, Captain

Duties while vessel operator included navigation, daily maintenance, ensuring safety of passengers, and safety of a 65' twin screw vessel. Vessel voyages included sportfishing trips to Catalina Island and sea life cruises up to 10 miles offshore.

01/2009 - 01/2010

Matt Walsh Inc., Captain, Deckhand.

Duties while vessel operator included navigation, daily maintenance, ensuring safety of passengers, and safety of one 60' single screw vessel. Duties while deckhand included ensuring passenger safety, constant compartment checks, and operating heavy machinery. Vessel voyages include ½ day sportfishing trips up to 10 miles offshore and night fishing trips.

TRAINING

USCG Licensed Master 06/09 (currently third issue)

Red Cross First Aid/ CPR and AED 06/09

Southern California Maritime Institute Training 03/09

Harbor Occupational Center 09/07 (Diesel Tech.)

IGNACIO LOPEZ

41 West Adams St., Long Beach, CA 90802

562.844.3815

lopeznacho4141@gmail.com

EMPLOYMENT

May 2005 – Present, **Harbor Breeze Corporation**, Long Beach, California, *Chief Port Engineer*

Responsible for coordinating and overseeing the maintenance, repair, and safe operations of all the engineering needs for vessels and equipment. Ensures all vessels and equipment are up to standards with United States Coast Guard and government agency regulations.

MICHAEL HADLEY

2799 S. Gaffey St., San Pedro, California 90731

Mobile: 310.940.1079

Email: bluesurfdive@yahoo.com

EMPLOYMENT

April 2017 – Present, **Harbor Breeze Corporation**, Long Beach, California, *Port Captain*

Duties while vessel operator include navigation, daily maintenance, ensure safety of passengers, and safety of nine vessels. Vessel voyages include harbor tours, whale watch trips, ferries to Catalina Island, and private event charters. Manages United States Coast Guard inspections, vessel repowers, and oversees shipyard work for vessels. Manages boat crew. Performs crew training.

Maria Mendoza
11605 209th St.
Lakewood, CA 90715
(562) 673-4046
E-mail: Maria@longbeachcruises.com

Summary: To obtain a challenging full-time position with room for advancement, where I can express my organization skills and creative talents along with my experiences while learning new skills.

Employer: Harbor Breeze Corp.
Date: May 2009 to present
Job Title: General Manager L.A./L.B. 2023- Present
-Overseeing day to day operations for L.A. & L.B.
-Customer Service
-Handling ticketing/Group Sales
-Support CEO for projects
-Overseeing master calendar for all bookings
-Dealing with 40+ employees
-Handling all employee/Customer issues and complains
-Overseeing performance for all employees for office, Ticket-booth, Galley, boats, docks

Job Title: Office Manager 2017- March 2023
L.A. Waterfront Cruises LLC, Harbor Breeze Corp. San Pedro Location
-Managing office
-Overseeing day to day operations
-Customer service
-Scheduling office, ticket booth, and dock staff
-Ticketing Sales
-Training new employees for ticket booth/office

Job Title: Executive Assistant
Harbor Breeze Corp. 2013-2017
Duties: -Frontline staff to answer phone calls for all company enquiries. Private events, Memorials at sea, School trips, Catalina Charters.
- Communicate with a weekly report items you are working on and what items have been completed from the previous week.

Job Title: Ticketbooth Representative
Harbor Breeze Corp. 2009-2013
Duties: - Operate ticketing software program and other computer systems to sell tickets - Collect payment for tickets - Provide telephone and in-person customer service courteously with information - Work closely with accounting on reconciliation of financial transactions -Sell snacks -Make public announcements about daily boat tours -Get the people in line and the line organized for the whale watch and harbor tours - Keep log of the number of people that get on the boats -Solicit passer buyers to purchase cruise tickets -Clean the booth -Update owner with what goes around in the booth and at the dock - Assisting with cleaning the boats

References: Available upon request

SCOTT A. LOUIE

19011 Canyon Royal Dr., Tomball, Texas 77377

Mobile: 323.314.0743

Email: scottlouie241@yahoo.com

EDUCATION

California State University Los Angeles, Los Angeles, California
Bachelor of Science in Computer Information Systems, 2006

EMPLOYMENT

January 2023 – Present, **Harbor Breeze Corporation**, Long Beach, California (Remote), *Operations Manager*

Manage eight websites. Manage multiple online ticketing systems. Manage online marketing. Assist staff with questions and customer concerns. Book private charters for organizations including Port of Los Angeles, Port of Long Beach, Boy Scouts of America, Los Angeles County of Education, and Aquarium of the Pacific.

December 2007 – May 2022, **Harbor Breeze Corporation**, Long Beach, California, *Port Operations Manager*

Managed and scheduled 40+ employees for two business locations. Managed eight cruise vessels. Managed boat tour schedules. Ensured docks were open for boats to load and offload passengers. Managed eight websites. Managed multiple online ticketing systems. Managed online and print advertising. Installed computer hardware and software. Trained new employees. Responded to customer inquiries and resolved disputes. Attended business meetings and functions. Booked private charters for organizations including Port of Los Angeles, Port of Long Beach, Boy Scouts of America, Los Angeles County of Education, and Aquarium of the Pacific.

September 2006 – October 2007, **Harbor Breeze Corporation**, Long Beach, California, *Office Manager*

Managed and scheduled 20+ employees. Managed eight websites. Managed online ticketing system. Installed computer hardware and software. Responded to customer inquiries and resolved disputes. Booked groups and private charters.

May 2005 – May 2022, **Harbor Breeze Corporation**, Long Beach, California, *First Mate*

Performed duties as First Mate, such as maintaining cleanliness and safety of cruise boats and yachts; tied up and launched boats; served food and beverages to customers.

JEFF FORNEY
Jeff4knee@gmail.com / 310.375.4533

LONG BEACH CONVENTION & VISITORS BUREAU, Long Beach, CA
Vice President of Marketing, Membership & Special Projects, 2013 – Present

- Manage Marketing, Client Relations, Community Relations (Membership) and Visitor Services Departments.
- Oversee the operation and staffing of three visitor centers.
- Developed LongBeachlive!, the interactive hybrid option for meeting planners, turning the convention center into an interactive, broadcast studio.
- Produce the Annual Tree Lighting Event for the City of Long Beach.
- Produce the July 4th Fireworks Show for the City of Long Beach.
- Manage CVB involvement in \$10 million capital improvement plans at the convention center for new 45,000 square foot state of the art ballroom space.
- Hermes Platinum Award Winner for direct mail campaign and arena architect video.
- Hermes Gold Award Winner for promotional video, client testimonial video and special insert piece.

Vice President of Marketing, 2008 – 2013

- Liaison with city management and elected officials on district and city wide projects.
- Community liaison with business and neighborhood associations.
- Responsible for market research and analysis of competitive landscape.
- Managed development of custom CRM software and new website.
- Managed Long Beach Convention & Entertainment Center website.
- Managed all creative for TedxSoCal.
- Director of production for TedxSoCal.
- Founding member of the Millers Children's Hospital Tour of Long Beach (Bike tour of the city).

Director of Marketing, 2006 - 2008

- Responsible for brand development.
- Responsible for all media buys, both digital and print.
- Responsible for the Annual Official City Guide, circulation of over 200,000 per year.
- Manage outside agencies including creative and public relations services.
- Manage implementation of company-wide marketing programs to ensure on-target strategy and timely execution of all campaign initiatives.
- Managed seven staff, which includes: Public Relations, Social Media, Tour & Travel, Website and Graphic Design.
- Created social engagement strategies to ensure highest ROI and widest social reach is obtained.
- Managed all creative and day of operations for the city during the final stage of the 2007 Amgen Tour of California.

Director of Membership, 2003 – 2006

- Committee member for the creation of the Long Beach Tourism Business Improvement Area (LBTBIA)
- Managed and executed all Membership sales and retention equaling 20% of the Bureau's annual budget.
- Developed executed and managed Internet package promotional sales designed to provide Members with additional visibility on the LBCVB web site, resulting in a revenue increase of over 50%.
- Developed and executed a business plan to market LBCVB Membership and its benefits to those people or companies that derive revenue from the Hospitality and Tourism industry.
- Developed programs that coordinated and integrated LBCVB Membership sales with LBCVB marketing opportunities, including but not limited to, The Official Guide, Meeting Planner Guide and other potential programs.
- Developed, executed and managed promotional sales and benefits programs designed to promote and expand the Membership, including but not limited to, Membership meetings, orientations, workshops, individual member meetings, new benefits and greater value programs, Networking breakfasts, mixers and tradeshows.
- Committee member for the 2004 Olympic Swim Trials.

Membership Services Manager, 2001 – 2003

- Strategic retention of existing members through oral, written, and personal communication, including in person sales calls, resulting in a retention rate of over 90%.
- Managed all Membership billing/invoicing.
- Managed all Membership-related web and publication content.
- Represented the company at a variety of community events.
- Team Lead in the development of visitlongbeach.com an award-winning web site.

TEAM PLAY EVENTS, Agoura Hills, CA

Sales Representative, 2000-2001

- Special event sales for Corporate and Academic institutions.
- Responsible for development of promotional material and events.
- Administered contractual agreements and promotional materials to all clients.
- Procured event services including equipment rental, transportation, entertainment, housing and security.
- Responsible for site preparation, menu selection, and layout.
- In charge of hiring and supervising event staff.

AQUARIUM OF THE PACIFIC, Long Beach, CA

Group Sales Representative, 1998-2000

- Increased department sales from \$1 million to \$2.2 million.
- Managed year-round consignment program for over 200 corporate clients.
- Responsible for special event sales.
- Handled convention market sales.
- Administered contractual agreements, tickets and promotional materials to all clients.
- Planned foreign and domestic sales programs, which include tour operator packaging and hotel programs.
- Responsible for the development and implementation of age-related packages.

MAIN STREET TOURS, Torrance, CA

Tour Coordinator, 1996-1998

- Responsible for advertising sales in the Group Tour Planning Guide.
- Responsible for all communication with vendors including negotiating annual pricing agreements.
- Development, sales and marketing of 1200 day tours per year.
- Worked with travel writers and local papers to promote special programs.

EDUCATION AND TRAINING

1993 CALIFORNIA STATE UNIVERSITY DOMINGUEZ HILLS, Carson, CA

- B.A., Recreation Administration and Communications/Public Relations.

DALE CARNEGIE TRAINING

- Sales Advantage Course Graduate.

THE KEN BLANCHARD COMPANIES TRAINING

- Situational Leadership II Course Completion.

Greg Bombard, President/CEO

Greg Bombard is Co-founder and President of Catalina Channel Express, a passenger ferry company serving one of Southern California's most popular vacation destinations, Catalina Island. In 1981, Catalina Express began as a commuter service between Catalina Island and San Pedro, CA with a single 55-passenger monohull vessel. Today, Catalina Express carries over one million passengers annually and has grown to four ports with two in Long Beach at the Queen Mary and Downtown Catalina Landing and another port in Dana Point. The company's fleet of vessels has also expanded to 8 modern, high-speed vessels, four of which are catamarans, with the largest carrying up to 500 passengers. Greg's dedication to passenger safety, comfort and good old personalized service has resulted in Catalina Express celebrating over 41 years of service.

Greg has a 100 Ton Master's License and has been captaining vessels for over 50 years. Greg is affiliated with several associations serving on the board of the US Passenger Vessel Association, Marine Exchange of Southern California and Interferry, the international association of fast ferries, serving as President in 2006. Greg is also a current member of the Long Beach Convention and Visitors Bureau Board and in the past has been a member of the Boys and Girls Club of Long Beach Board, Los Angeles County Fish & Game Commission and he received the City National Bank Entrepreneur of the Year Award in 2007. Greg also received a public service commendation from the US Coast Guard for his work with the Passenger Vessel Association/Coast Guard partnership action team.

Erik Bombard, Vice President of Operations

Erik Bombard has been employed by Catalina Express since 2002 and has worked in every department throughout the company since then. Mr. Bombard currently holds a United States Coast Guard 100-ton Master's License which he received in 2007, Radar Endorsement, and an FCC Radio license. Mr. Bombard's current position is Vice President of Operations which oversees the vessel, ticketing, and call center operations, as well as customer service. Mr. Bombard has been the Facility Security Officer for Catalina Express since 2015.

Mr. Bombard has represented Catalina Express in a number of industry activities including:

Vessel Member / Interferry since 2015

Vessel Member / Passenger Vessel Association since 2012

PVA / Safety and Security Committee---- 2015 - current

PVA / Board of Directors---- 2021 - current

Harbor Safety Committee Los Angeles-Long Beach ---- 2019 -current

Marine Exchange of Southern California/VTS Board of Directors--- 2020 -current

Anthony J. Ross, Vice President, Vessel Engineering

Tony started his career with Catalina Express in 1984 as a boat operator with a 100 Gross Ton Master License from the USCG. In 1987, he received the certificate for Unlimited Radar Observer and in 1988 he upgraded his license to a 500 Gross Ton Master. As a captain, Tony worked in the CCE Engineering Department part time during the off-season. In 1994 he began full time in the Engineering Department and the following year he was appointed to the position of Manager. He worked as Manager for fifteen years until July 2010 when he was promoted to the position of Director, Vessel Engineering and then to Vice President, Vessel Engineering in 2013. Tony has attended several training courses offered by Detroit Diesel, MTU and Caterpillar and has overseen the repowering of the Catalina Express fleet. From 2014-Present. Tony has also served on the Board of Governors for the Society of Port Engineers for Los Angeles & Long Beach

In his 38 years with Catalina Express, Tony has had the pleasure of working with some of the most state of the art ferry vessels, along with gaining the knowledge and skills to understand all aspects of maintaining multimillion dollars vessels.

Koral Shishido, Vice President, Finance

PROFESSIONAL EXPERIENCE

Catalina Channel Express, Inc., *Vice President of Finance* January 2017 – Present

Manage all accounting and IT functions within the company. Includes general accounting, accounts receivable, accounts payable, cash control, and budgeting. Coordination of annual review of financial statements by outside auditors.

Brigante, Cameron, Watters & Strong, LLP, *Accounting and Audit Manager* February 2006 – 2016

- Financial audits, reviews and compilations – contributions include:
 - Planning, fieldwork and financial reporting for engagements (type of clients include aerospace manufacturing and construction industry)
 - Perform financial statement analysis and prepare supporting schedules ensuring proper documentation of information for peer review
 - Develop and maintain various clients' relationship
 - Responsible for billing and management of realization on various clients
 - Train and develop staff on various accounting software and processes, as well as provide mentorship
- Consulting and bookkeeping services (type of clients include trusts and government entity)
- Key results:
 - Assisted a consulting client with streamlining accounting processes and procedures to ensure no deficiencies identified upon completion of external audit. Within 1 year, client was able to rectify prior year significant audit deficiencies with no adjustments for subsequent years.
 - Championed implementation of new audit software. Results were reduced project hours in the engagement administration.
 - Collaborated with other audit managers to build crossover with tax managers for enhanced client service experience.
 - Part of peer review team that coordinates annual internal peer review and tri-annual external peer review. Last peer review year of 2015 was a clean opinion.
 - Collaborated with management team in electronicizing engagement letters through design. Results were reduction of savings of printing and postage.
 - Selected to participate in Boomer P3 manager training.
 - Completed Dale Carnegie sales advantage training.

EDUCATION

University of Hawai'i at Manoa August 2001 – August 2002
Masters of Accounting

University of Hawai'i at Manoa August 1997 – August 2001
Bachelors of Business Administration

Major: Accounting and Finance

MEMBERSHIPS

- Member of the AICPA and California Society of CPAs
- Current, valid and in good standing California CPA license and Hawaii CPA license

Craig Tallman, Manager, Operations Manager

Craig Tallman began his career at Catalina Express in January 1988. He holds a 500-ton Masters License and after crewing on company vessels was promoted to Captain in spring of 1988.

CCE developed a Chief Operator program and Mr. Tallman was appointed Chief Operator of the M/V Two Harbors Express. Chief Operator responsibilities included maintaining the vessel, communication with maintenance and training new crew and prospective captains. As the company continued to grow, the fleet expanded to eight vessels, including four Catamarans. Mr. Tallman was promoted to Chief Operator of the M/V Cat Express and then moved up to Chief Operator of the largest vessel in the fleet, the M/V Catalina Jet.

In spring of 2010, Mr. Tallman accepted the position of Port Captain/Manager, Vessel Operations for CCE. Mr. Tallman was in charge of managing all vessel crew and the scheduling of vessels. He was promoted in 2018 and is currently Director of Vessel Operations, holding the responsibility of Managing Captains, Crew Supervisors, scheduling vessel routes and logistics of day-to-day operations with all departments.

Chuck Madic, Engineering Manager

Chuck Madic served in the United States Army, advancing to NCO. He was honorably discharged after 4 years. He earned an AA Degree in Diesel Technology, HVAC, Welding and Management. From there, Chuck sought employment in the marine industry, where he has remained for 35 years. He was employed at an engine distributorship and a dealership as a Mechanic, Technician, and Manager. Soon after, Chuck began his 25+ year career at Catalina Express as an Engineer and was promoted to the Engineering Manager of their fleet of high-speed vessels as well as the AquaLinks and AquaBuses.

Matt Vaughn, Training, Safety and Compliance Manager

Matt Vaughn was hired by Catalina Express in 2019 after serving in the United States Coast Guard for over 23 years. Mr. Vaughn held commands in the ports of Boston, MA., Corpus Christi, TX., and Los Angeles, CA., the nation's most economically vital port complex, and numerous other leadership and operational positions. As a highly skilled operator who conducted law enforcement and search and rescue operations, he eventually earned his Merchant Mariner Credential as a 100-ton Captain. Mr. Vaughn is our resident First Aid and CPR Instructor through the American Red Cross, where he ensures our regulatory compliance while expanding individual response capabilities in the event of emergencies both on land and at sea. Mr. Vaughn has represented Catalina Express in a number of Industry activities over the years including:

- Harbor Safety Committee Los Angeles-Long Beach---3 three-year terms/current
- Area Maritime Security Council
- Vessel Member/Passenger Vessel Association since 2019
- Small Passenger Vessel Industry Day

Mr. Vaughn's responsibilities include oversight of vessel crew member initial training, company safety and security regulations, and is also a primary liaison for communications and activities associated with the U.S. Coast Guard.



Erica Alvarado, D. Env. Air Quality Manager

Dr. Alvarado is an Air Quality Manager in the Air Quality and Transportation Group at Tetra Tech. She has assisted in the CAAP Feasibility Assessments for Cargo Handling Equipment and Drayage Trucks in 2019 and the 2021 updated version, providing information on the program procedure and detailed progress reports. She is currently assisting in the administration of the demonstration of near-zero and zero-emissions equipment under the ZANZEFF grant and the Off-Road Advanced Technology Demonstration Projects (C-PORT grant) for Port of Long Beach. She is currently conducting project implementation and data analysis for the Pacoima Spreading Grounds air monitoring program and did so previously for the Devil's Gate Reservoir Restoration project air monitoring program. Dr. Alvarado has worked on the air quality and source apportionment study at the Los Angeles World Airports with the objective of examining ambient air concentrations in the communities surrounding Los Angeles International Airport. She also has worked with the City of Santa Monica Municipal Airport in the review of air quality studies to determine whether posting of Proposition 65 signage is appropriate. She is a California Air Resource Board Accredited Greenhouse Gas Lead Verifier with sector specialties in Oil & Gas, Transactions, and Process Emission. She has conducted as well as provided technical assistance for greenhouse gas verification for various sites, including multiple oil and gas facilities, electricity retail providers, and a paper processing entity for the past eight verification years.

EXPERIENCE

As-Needed Air Quality Services, POLA (2011 to Present). Provide air quality services for the Port including support for the CAAP Feasibility Assessments for Cargo Handling Equipment and Drayage Trucks in 2017 and the 2021 updated version, advanced engine and alternative fuel technology evaluation/demonstration, emission testing for ocean going vessels, CTP Truck Rate Study, and technical document preparation. Review prepared reports for submittal to the Port.

Data Collection, and Analysis, CARB START Phase 1 Project, Project Manager (2019-Present) – Support the POLB Environmental Planning Division in demonstrating the performance, effectiveness, and emissions benefits of near-zero and zero-emissions equipment under CARB's Zero and Near-Zero Emissions Freight Facility Project Grant (also known as ZANZEFF). Under this grant, multiple types of port-related mobile sources (trucks, cargo-handling equipment, ships, harbor craft, trains) and technologies (near-zero emissions, battery-electric, fuel cell) will be demonstrated. Tetra Tech will develop a Data Collection and Analysis Plan to be approved by the Port and CARB as well as an Emission Test Plan including baseline testing on two non-Tier 3 vessels and emissions testing on the main engines, auxiliary engines, and boilers on the two new Tier 3 vessels.

Greenhouse Gas Verification (2011-present) - CARB certified Greenhouse Gas Verifier. Evaluate Greenhouse Gas reporting using the Mandatory Reporting Requirements for cement processing facilities, petroleum refineries, oil and gas production facilities, electricity retail providers, electricity purchasers, turbine manufacturers, natural gas suppliers, recycled oil producers, electric car manufacturers, and paper processing entities by drafting required reports analyzing emissions sources, performing calculations, conducting site visits, and carrying out full verifications. Evaluate entities compliance with reporting regulations and requirements to

Education:

D. Env. Environmental Science and Engineering (2018)

M.P.H., Environmental Health Sciences (2009)

B.A., Biology with Marine Science Concentration (2005)

Office Location:
Long Beach, CA

Years of Experience:

Tetra Tech 11

Total: 15

Key Areas of Expertise

Environmental Regulations for air quality

Air Quality Regulatory Compliance

Greenhouse Gas Emissions

Advanced and Alternative Fuel and Vehicle Technologies

Data analysis

REGISTRATION / TRAINING

GHG Lead Verifier, California Air Resources Board (EO H- 21-006) with Specialty Sector Accreditation in Oil & Gas, Transactions, and Process Emissions

LCFS Lead Verifier, California Air Resources Board (EO H3-20-085) with Fuel Pathways, Alternative Transactions, and Petroleum Based Fuel Reports

LCFS Lead Verifier, Oregon Department of Environmental Quality (CFPV-031) for Fuel Pathway Applications and Annual Fuel Pathway Reports for CFP Quarterly Reports

GHGRP Lead Verifier, Oregon Department of Environmental Quality (GHGRP-008) for Air Contamination Stationary Source Emissions Data Reports (Electricity Supplier)



Erica Alvarado, D. Env.
Air Quality Manager

determine all criteria have been met for reporting. Draft verification statements for submittal to CARB to certify all requirements have been met.

Low Carbon Fuel Standard Monitoring Plans (2020 – Present) – CARB certified Low Carbon Fuel Standard (LCFS) Verifier, Evaluate LCFS regulatory requirements and prepare documentation adhering to all requirements. Provide consulting services to collect appropriate information, identify additional data to collect, and improve upon reporting of LCFS data to CARB. Evaluate compliance with reporting regulations and requirements to determine all criteria have been met for program applications and reporting.

Data Collection, and Analysis, POLB Off-Road Advanced Technology Demonstration Projects, (2018-2021) – Support the POLB Environmental Planning Division in demonstrating the performance, effectiveness, and emissions benefits of Advanced equipment under CARB Off-Road Advanced Technology Demonstration Projects (also known as C-PORT Grant). The Tetra Tech team provides support for baseline emissions testing, data logging and portable activity measurement of off-road equipment. In conjunction with these advanced technology equipment, one diesel top handler at LBCT, one diesel top handler at SSA Marine, and one diesel yard truck at LBCT will also be monitored. HEM data logger will be utilized for the activity monitoring program.

New York City Department of Transportation (NYCDOT) Hunts Point Clean Trucks Program (HPCTP), New York City, New York (2011-Present) - Calculated emission reduction totals using MOVES program and cost effectiveness calculations for projected truck replacements for the Hunts Point Clean Truck Program. Created tracking processes for participants of the HPCTP to ensure compliance with program requirements. Provided technical and administrator support for application development, database development, application and document review, vendor agreements, dealership agreements, and truck qualification guidelines.

City of Santa Monica Municipal Airport Document Review (2015) - Provided services to the City of Santa Monica Municipal Airport to assist in determination of posting of Proposition 65 signage at the two (2) observations decks located on site. Assisted in providing a thorough review of three (3) previous air quality studies provided to aid in the determination of posting such signage. Calculated potential health risk assessment of exposure at the airport to substances listed under Proposition 65. Prepared a final report including findings and recommendations.

Los Angeles World Airport Air Quality and Source Apportionment Study (2011-2013) - Provided support on data gathering and analysis for the air quality study. Edited Scope of Work, Quality Assurance Project Plan and Modeling and Analysis Protocol documents for the Los Angeles World Airport air quality study. Drafted reports on preliminary results of monitoring seasons.

THOMAS W. ECKEL

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(310)-227-4700, tecke002@ucr.edu
[linkedin.com/in/tom-eckel-892068159/](https://www.linkedin.com/in/tom-eckel-892068159/)

EDUCATION

University of California, Riverside

Doctor of Philosophy, Chemical and Environmental Engineering 2019 – 2023

- Dissertation: Investigations of Emissions on the Deep Sea and in Port for Dated and Modern Ocean-Going Vessels

B.S. Chemical Engineering, Nanotechnology 2014 – 2019

EMPLOYMENT

PhD Student Researcher July 2019 – Sept. 2023

Atmospheric Processes Lab, CE-CERT, Riverside CA

- Designed reaction chambers to study effects of Secondary Atmospheric Chemistry, serving as global standard for chambers of its type
- Designed sample systems for stack sampling on large Ocean-Going Vessels with Cat. 3 engines in compliance with ISO and CFR requirements
- Conducted field studies on ocean going vessels and consumer vehicles in use
- Conducted complex emissions and fuel analysis in compliance with the EPA and Code of Federal Regulations guidelines using Federal Reference and Federal Equivalent Methods for Toxics and Inorganic, Gas Phase and Aerosol
- Supervised teams of up to 5 Graduate Students and 3 Undergraduate Students in Research Activities
- Worked with California Air Resources Board, South Coast Air Quality Management District, and US-EPA conducting field studies and compiling reports for compliance and research
- Managed a multi-million dollar lab: Lab Safety Officer, responsible for maintaining budget, responsible for instrument purchases
- Grant and contract proposal and report writing
- Completed contracts with corporate entities performing product evaluation and QA/QC

Undergrad Research Team Leader May 2017 – June 2019

Titania Coatings, CE-CERT APL, Riverside, CA

- Designed reaction chamber and experiment to determine analytical figures about compounds studied
- Collected samples, performed routine measurements, adjusted experiments for different variables
- Trained two other students on data collection and analysis
- Primary author of two research proposals and a research budget

Real Estate Agent June 2014 – May 2015

Cal Mutual Real Estate, Long Beach, CA

- Mediated between buyers, sellers, and lessors in the home buying process
- Negotiated between interested parties in large sales
- Integrated changes into active real estate contracts

Team Leader*April 2008 – Jan. 2014**U.S. Army Infantry, 4th Batt. 6th Inf. Reg. 4BCT 1AD, Ft. Bliss, TX*

- Supervised and trained teams of up to 6 men for combat operations in Iraq
- Led teams of soldiers in and out of combat theater
- Combat deployments to Iraq (Operation Iraqi Freedom 09-10, Operation New Dawn 2011)

HONORS AND AWARDS

- CE-CERT Atmospheric Processes Award *2023*
- Science to Policy Fellow *2023*
- Tau Beta Pi Engineering Honors Society *2017 – 2019*
- Delta Epsilon Sigma Honors Society *2015 – 2019*
- Army Good Conduct Medal *2014*
- Army Achievement Medal *2012*
- Army Certificate of Achievement *2011*
- Army Commendation Medal *2010*
- Meritorious Unit Commendation *2010*

PUBLICATIONS IN PREPARATION

1. “Next-Generation UCR 120- m³Fixed-Volume Chamber – Experimental Characterization of Particle Wall-loss Using Monodisperse Seed Injections,” (in preparation, expected to be published in 2023), Le et al. (2nd author)
2. “A Novel Design for the UCR 120- m³ Fixed-Volume Chamber,” (in preparation, expected to be published in 2024), Eckel et al.
3. “Comparing SOA from E-10 and E-15 Blended Fuels ULEV and SULEV Vehicles,” (in preparation, expected to be published in 2024), Eckel et al.
4. “Comparing POA from E-10 and E-15 Blended Fuels ULEV and SULEV Vehicles,” (in preparation, expected to be published in 2023), Tang et al. (2nd author)
5. “Tier III NO_x Standards for Ocean Going Vessels: Reducing At-Sea Emissions While Failing to Protect Port Air Quality,” (in preparation, expected to be published in 2023), Eckel et al.
6. “Full Spectrum Emissions Profiles for New Build Tier 3 Commercial Marine Vessels,” (in preparation, expected to be published in 2024), Eckel et al.
7. “Comparing Tier 3 and Tier 2 Commercial Marine Vessel Emissions Profiles: Benefits of a New Technology Class,” (in preparation, expected to be published in 2024), Eckel et al.
8. “Analysis of the Current Regulatory Compliance Models Utilized by CARB, EPA, and MARPOL to Determine Overall Emission Factors for Marine Emissions,” (in preparation, expected to be published in 2024), Eckel et. al.
9. “Applying Real-Time On-Board Emissions Measurements and GIS Data to Evaluate the Applicability of AIS-based Emissions Inventory Estimates of Ocean-Going Vessels,” (in preparation, expected to be published in 2023), Drover et. al. (2nd Author)
10. “Evaluating “In-Use” Emissions from a Dual Boiler, Steam Turbine Driven Ocean-Going Vessel,” (in preparation, expected to be published in 2023), Eckel et. al.

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11. “Holistic emissions profile of a Category 3 Container Ship While At-Sea” (in preparation, expected to be published in 2024), Eckel et. al.

CONFERENCE PRESENTATIONS

- **Eckel, T.; Drover, R.; Miller, W.; Cocker, D.** Emissions from an Ocean-Going Vessel with an LNG-Ready, Dual-Fuel Engine Meeting Tier III NO_x Standards. Presentation delivered at American Association for Aerosol Research 41st annual conference, Raleigh, NC, October 2022.

PROFESSIONAL SERVICE

American Institute of Chemical Engineers (UC Riverside) *May 2017 – June 2019*
External Outreach Manager

- Organized industry tours for the chemical engineering student body at UCR
- Corresponded with alumni and various representatives in industry.

Student Veteran Organization (Marymount California University) *January 2015 – May 2016*
President

- Assisted student veterans with personal needs transitioning to academic civilian life.
- Conducted events to bridge gaps between the general student body and the student veteran population.

PROFESSIONAL MEMBERSHIPS

American Institute of Chemical Engineers
American Association for Aerosol Research

J. Wayne Miller, Ph.D.

Adjunct Professor Chemical and Environmental Engineering
Associate Director of CE-CERT

Education:

| | | |
|------------------------------------|----------------------|-------|
| Worcester Polytechnic Institute | Chemical Engineering | B.S. |
| California Institute of Technology | Chemical Engineering | Ph.D. |

Additional training at Harvard Business School and Wharton School

Professional Summary:

Dr. Miller joined UCR in December 2000 after a distinguished industrial career of more than 30 years of experience in technology planning, new product commercialization, business development and multi-national relationships. He was one of six oil members on the landmark Auto/Oil Research Program and the DOE's National Petroleum Council review of the U.S. refining industry. Dr. Miller led the largest proprietary research program of gasoline properties and tailpipe emissions, resulting in a patent on reformulated gasoline. For the past sixteen years at UCR, his research has concentrated on studying the emission from mobile and stationary sources with an emphasis on sources related to goods movement. His research is funded by: California Air Resources Board, California Energy Commission, U.S. EPA, Health Effects Institute, Department of Defense, Coordinating Research Council, U.S. Maritime Administration, Ports of Los Angeles and Long Beach, Airline Transport Association, Cummins Inc., SoCal Gas and many private companies. Dr. Miller as PI/co-PI has received over \$10 million for research since 2001.

- 2001-present. Adjunct Professor CEE Department & Associate Director of CE-CERT, UCR
- 1995-2001. Vice President for Technology and Product Development, Sunoco Inc.
- 1975-1995. Unocal Corp. Manager, Fuels Technology (1990-94); Manager, Fuels and Lubricants Research (1985-90); Team Leader, Obed Coal Company (1984-85); Supervisor, Exploratory Process Research (1981-85); Senior Research Engineer (1975-81)

Relevant Technical Experience

Since 2004, Dr. Wayne Miller has carried out over 40 emission measurement projects with operating vessels, ranging from small harbor craft to ocean going vessels with 10,000 containers.

Ocean Going Vessels: main engines

Feb 04 Container Ship I
Oct 06 Container Ship IV
Feb 07 Oil tanker
July 07 Container Ship I
Sept 07 Container Ship IV
Sept 08 Container Ship IV
Jun 09 Container Ship IV
Aug 09 Container Ship IV
Apr 10 Container Ship V
Sept 10 Container Ship VI (Tier I)

Ocean Going Vessels: auxiliary engines

Feb 04 Container Ship I
May 05 Container Ship II
July 05 Container Ship II
Oct 05 Container Ship II
Dec 05 Container Ship II
Dec 05 Container Ship III
Mar 06 Container Ship II

Oct 06 Container Ship IV

Nov 06 RORO

Feb 07 Oil tanker

Apr 10 Container Ship V

Ocean Going Vessels: auxiliary boiler

Feb 07 Oil tanker

Sept 07 Container ship IV

Harbor Craft: main & auxiliary engines

Mar 06 Ferry: exhaust control

Jun 06 Shuttle: Biodiesel

Aug 06 Activity studies

Sept 06 Dredger: engine control

Oct 06 Dredger: exhaust control

Oct 08 Workboat: T2 & biodiesel

Feb 09 Ferry: T2 & biodiesel

Sept 09 AZ Shuttle: T2 & biodiesel

Oct 10 First hybrid tug

Sept 11 Great Lakes vessel + algal fuel

Dec 11 Retrofit tug

Marine Test Experience of UC, Riverside to 2012.

Southeast Missouri Regional Planning Commission. "Development of Emission Factors for Repowered Towboat for MARAD Project", 10/1/12-9/30/15, \$117,612.

Bristol Harbor Group, Inc., "Measurement of Criteria Pollutant Emissions from USACE Vessels using Advanced Fuels", 10/1/2012 - 3/10/2014, \$106,884.

Synergistic Activities

WPI Goddard Award for Outstanding Professional Achievement (2012); **UCR Non-Faculty Research and Teaching Award** (2008), **EPA Climate Change Award** (2007), **Judge for the Secretary of Defense Environmental Awards** (2003-2012), **U.S. Air Force's Arnold Engineering Development Center Annual Technical Achievement Award** (2006), **Advisory Board Member** South Coast Air Quality Management District (2001-2013)

Publications and Presentations

Over 100 presentations/publications in North America, Europe and Japan; patented nine inventions.

Jayaram V, Khan, MY, Welch WA, Johnson, K., Miller, J.W., Cocker III, D. C. A generalized approach for verifying the emissions benefit of off-road hybrid mobile sources *Emiss. Control Sci. Technol.* DOI 10.1007/s40825-015-0032-9, Dec 2015

M. Yusuf Khan, Michael Giordano, James Gutierrez, William A. Welch, A. Asa-Awuku, J. Wayne Miller, and David R. Cocker, III, Benefits of Two Mitigation Strategies for Container Vessels: Cleaner Engines and Cleaner Fuels *Environ Sci. Technol.*, **2012**, *46* (9), pp 5049–5056

Khan, M. Y., Agrawal, H., Ranganthan, S., Welch, W. A., Miller, J. W., Cocker, D. R., Greenhouse Gas and Criteria Emission Benefits through Reduction of Vessel Speed at Sea *Environ. Sci. Technol.*, **2012**, *46* (22), pp 12600–12607.

Jayaram V, Nigam A, Welch WA, Miller, J. Wayne, Cocker, David R., III, Effectiveness of Emission Control Technologies for Auxiliary Engines on Ocean-Going Vessels *Journal of Air and Waste Management*, Vol. 61, 14-21- Jan 2011

Jayaram V, Nigam A, Welch WA, Miller, J. Wayne, Cocker, David R., III, Real-time gaseous, PM and ultrafine particle emissions from a modern marine engine operating on biodiesel. *Environmental Science & Technology* 45 (6) pp 2286-2292- 2011

Hosseini S, Li Q, Cocker D, Weise, D., Miller, A., Shrivastava, M., Miller, J. W., Mahalingam, S., Princevac, M., Jung, H., Particle size distributions from laboratory-scale biomass fires using fast response instruments, *Atmospheric Chemistry and Physics*, Vol 10, (16) pp 8065-8076, 2010

ATTACHMENT 10: REFERENCES

Provided below are Professional References for the POLA project team. POLA understands that CARB, including its authorized representatives, has full consent and permission to contact and interview each of the above references.

Reference #1: California Air Resources Board

Business Name of Reference: California Air Resources Board

Business Address of Reference: 1001 I Street, Sacramento, CA 95814

Type and Date of Relationship (e.g., contract, partnership): Grant Agreement

Describe how these Business Relationships are similar to Applicant's proposed relationship with CARB under the Grant Agreement: Under Grant Agreement # G17-ZNZE-10, POLA demonstrated its ability to implement CARB advanced technology and demonstration project grant agreements, including the newly requested ADA formatting that improves equitable access to the important project results. These large-scale advanced technology development and demonstration projects show the Port is fully aware of the detailed and active project management that is required for successful implementation of large demonstration projects and already has the team in place to successfully implement the LA MER Project. The LA MER project has the full commitment of the Port's Executive Director and the Director of Environmental Management, ensuring that committed Port resources will be available throughout implementation of the project at the levels necessary for success.

As background, the "Shore to Store" (S2S) project was designed to develop and demonstrate the technical feasibility of zero-emission advanced technologies and supporting infrastructure in goods movement operation. The POLA partnered with CARB, Equilon Enterprises LLC (d/b/a Shell Oil Products US) (Shell), Toyota Motor North America, Kenworth and others to introduce hydrogen (H2) fuel into the Southern California drayage truck market by demonstrating ten near-commercial heavy-duty H2 fuel cell electric trucks in operation at and between freight facilities throughout the region. Foundational infrastructure was designed and commissioned by Shell to fuel the demonstration truck fleet. Successful implementation of this project demonstrated not only the technical feasibility of Class 8 fuel cell electric vehicle trucks in rigorous goods movement operation and expanded the use of zero-emission equipment at warehouse facilities, but also POLA's ability to manage and complete large-scale, complex demonstration projects. The contracting, monitoring and reporting requirements for the S2S project are nearly identical to those which are required for the proposed LA MER Project and POLA is well-versed in CARB's expectations for a successful contractual relationship.

Describe the Reasons for why this was a Successful Relationship: This project resulted in direct localized emission reductions in designated disadvantaged communities, initiated a leap to zero-emission technology for a new class of on-road goods movement vehicles,

expanded the use of zero-emission technology in off-road warehouse equipment, and provided multiple sources of hydrogen throughout the region. This success is a result of experienced team members and an open and productive grant relationship between POLA and CARB. Further, POLA ensured full staffing to support the project so that monitoring and reporting requirements were met on time and within budget. The project partners continue to operate the stations, and have developed a commercial version of the demonstrated truck for sale as a direct result of this project.

Name of Reference(s): Ryan Murano, Air Pollution Specialist

Phone Number: (279) 842-9016

Email Address: ryan.murano@arb.ca.gov

Reference #2: California Energy Commission

Business Name of Reference: California Energy Commission (CEC)

Business Address of Reference: 715 P Street Sacramento, CA 95814

Type and Date of Relationship (e.g., contract, partnership): Grant Agreement

Describe how these Business Relationships are similar to Applicant's proposed relationship with CARB under the Grant Agreement: While CEC agreement terms and conditions are not identical to CARB terms, they are substantively similar, if not more stringent in some areas. As such, the experience gained with past CEC grant agreements directly contributes to POLA's ability to meet CARB requirements for this proposed project. Under Grant Agreement # ARV-17-049 (Zero Emission Freight Vehicle Advanced Infrastructure Demonstration), POLA is demonstrating its ability to implement complex state agency grant agreements, and maintain clear and thorough communication with the granting agency as the project progresses. Weekly meetings and monthly reports are conducted during the project to ensure timely communication of issues and help facilitate resolution. Successful implementation of large-scale advanced technology demonstration projects proves that the Port is fully capable of implementing the detailed and active project management required for successful large-scale demonstration project outcomes and already has the team in place for success. Challenges are brought forward immediately upon recognition, and POLA leads the team in coordinating responses to specific issues, as approved by the grantor.

Describe the Reasons for why this was a Successful Relationship: This project is ongoing and POLA successfully completed its first Critical Project Review on April 5, 2021. A second review is scheduled for February 1, 2024. The project is proceeding according to plan, with some significant delays and challenges, and project partners are working cooperatively toward successful project completion.

Name of Reference(s): Marc Perry, Commission Agreement Manager

Phone Number: (916) 931-9424

Email Address: marc.perry@energy.ca.gov

Reference #3: California Energy Commission

Business Name of Reference: California Energy Commission

Business Address of Reference: 715 P Street Sacramento, CA 95814

Type and Date of Relationship (e.g., contract, partnership): Grant Agreement

Describe how these Business Relationships are similar to Applicant's proposed relationship with CARB under the Grant Agreement: As noted in reference #2, CEC agreement terms and conditions are not identical to CARB terms, but they are substantively similar, if not more stringent in some areas. As such, the experience gained with past CEC grant agreements directly contributes to POLA's ability to meet CARB requirements for this proposed project. Under Grant Agreement # ARV-16-026 (The Port of Los Angeles Everport Advanced Cargo Handling Demonstration Project)), POLA demonstrated its ability to implement complex state agency grant agreements under challenging conditions. Weekly, monthly and quarterly meetings and reports were conducted during the project to ensure timely communication of issues and help facilitate resolution. It is notable that this project was primarily conducted during the COVID-19 global pandemic and the team experienced significant interruptions and delays that challenged the project, but meaningful results and lessons learned were achieved by the project. Successful completion of large-scale advanced technology demonstration projects proves that the Port is fully capable of implementing the detailed and active project management required for successful implementation of large demonstration projects and already has the team in place for success.

Describe the Reasons for why this was a Successful Relationship: This project resulted in the demonstration of zero-emission cargo handling equipment and charging technology that remain in limited operation today. This success is a result of experienced team members and an open and productive grant relationship between POLA and CEC. Further, POLA ensured full staffing to support the project so that monitoring and reporting requirements were met on time and within budget.

Name of Reference(s): Alex Wan, Commission Agreement Manager

Phone Number: (916) 805-7477

Email Address: alexander.wan@energy.ca.gov

Reference #4: California Energy Commission

Business Name of Reference: California Energy Commission (CEC)

Business Address of Reference: 715 P Street Sacramento, CA 95814

Type and Date of Relationship (e.g., contract, partnership): Grant Agreement

Describe how these Business Relationships are similar to Applicant's proposed relationship with CARB under the Grant Agreement: As noted in reference #2, CEC agreement terms and conditions are not identical to CARB terms, but they are substantively similar, if not more stringent in some areas. As such, the experience gained with past CEC grant agreements directly contributes to POLA's ability to meet CARB requirements for this proposed project. Under Grant Agreement # ARV-15-069 (Port of Los Angeles Advanced Yard Tractor Deployment and ECO-FRATIS Drayage Truck Efficiency Project), POLA demonstrated its ability to implement complex state agency grant agreements under challenging conditions. This grant included two disparate efforts, including advanced heavy-duty cargo handling equipment technologies and the demonstration of intelligent transportation systems and technologies to reduce freight-induced environmental impacts while improving mobility and congestion in and around the Port of Los Angeles. Weekly, monthly and quarterly meetings and reports were conducted during the project to ensure timely communication of issues and help facilitate resolution. Successful completion of large-scale advanced technology demonstration projects proves that the Port is fully capable of implementing the detailed and active project management required for successful implementation of large demonstration projects and already has the team in place for success.

Describe the Reasons for why this was a Successful Relationship: This project resulted in the demonstration of low-NOx (LNG) and zero-emission cargo handling equipment and intelligent transportation systems and technology. This success is a result of experienced team members and an open and productive grant relationship between POLA and CEC. Further, POLA ensured full staffing to support the project so that monitoring and reporting requirements were met on time and within budget.

Name of Reference(s): Marc Perry, Commission Agreement Manager

Phone Number: (916) 931-9424

Email Address: marc.perry@energy.ca.gov

Reference #5: US Environmental Protection Agency

Business Name of Reference: U.S. Environmental Protection Agency

Business Address of Reference: 1200 Pennsylvania Ave. N.W. Washington, DC 20004

Type and Date of Relationship (e.g., contract, partnership): Cooperative Agreement

Describe how these Business Relationships are similar to Applicant's proposed relationship with CARB under the Grant Agreement: The Port of Los Angeles has a long-standing collaboration with the Environmental Protection Agency. Under grant 98T27801, the port administers pass through funds to subrecipients of the Diesel Emission Reduction Act (DERA) program. POLA staff maintains regular contact with the EPA on behalf of subrecipients that implement and operate programs for emission reduction engine technology. Through this effort the port effectuates the administrative organization necessary to regularly report business conditions with an agile posterity despite operations as a bureaucratic corporation. The relationship that CARB maintain with POLA will be the same for reporting purposes. Whereas the CARB requirements are less taxing the EPA relationship differs in the degree of project management reporting and administrative partnership.

Describe the Reasons for why this was a Successful Relationship: The Port of Los Angeles and port tenants have engaged in continued cooperation with the EPA by virtue of a cooperative agreement since 2009. Regular communication using official formatting and informal site visits facilitated fruitful project development during this time. Building trust with the agency has resulted in continued support for ongoing zero-emission projects. Success of advocacy for assistance to fund project developments on behalf of port tenants has made an impact on a national scale. Together we have set the path of innovation on a positive forward trajectory thus improving environmental conditions through funding arrangements for various zero emission port equipment engines.

Name of Reference(s): Asia Yeary, Grants Project Officer

Phone Number: (808)342-5675

Email Address: Yeary.Asia@epa.gov


ATTACHMENT 11: CONFLICT OF INTEREST DECLARATION

Applicant represents, warrants and agrees that all conflicts of interest, if any, have been fully disclosed to CARB in the submitted application.

The undersigned declares that he or she is an official/agent of the responding Applicant and is empowered to represent, bind, and execute contracts and other agreements on behalf of the Applicant. The undersigned declares under penalty of perjury, under the laws of the State of California, that all statements and responses in this Declaration are true and correct, with full knowledge that all statements and responses are subject to investigation and that any incomplete, unclear, false or dishonest statements or responses may be grounds for rejection of the application, disqualification from this Solicitation process, termination of any or all executed Grant Agreements and/or other legal consequences.

The undersigned declares that he or she is an official/agent of the responding Applicant and is empowered to represent, bind, and execute contracts and other agreements on behalf of the Applicant. The undersigned hereby represents, warrants, certifies and declares under penalty of perjury, under the laws of the State of California, that all statements and responses in this application package are true and correct, with full knowledge that all statements and responses are subject to investigation and that any incomplete, unclear, false or dishonest statements or responses may be grounds for rejection of the application, disqualification from this Solicitation process, termination of any or all executed Grant Agreements and/or other legal consequences.

Company Name: City of Los Angeles Harbor Department

Signature of Designated Authorized Representative: 

Name and Title of Authorized Representative: Lisa Wunder, Acting Director of Environmental Management

Date of Signature: 10/23/23

CONFLICT OF INTEREST DECLARATION

Applicant represents, warrants and agrees that all conflicts of interest, if any, have been fully disclosed to CARB in the submitted application.

The undersigned declares that he or she is an official/agent of the responding Applicant and is empowered to represent, bind, and execute contracts and other agreements on behalf of the Applicant. The undersigned declares under penalty of perjury, under the laws of the State of California, that all statements and responses in this Declaration are true and correct, with full knowledge that all statements and responses are subject to investigation and that any incomplete, unclear, false or dishonest statements or responses may be grounds for rejection of the application, disqualification from this Solicitation process, termination of any or all executed Grant Agreements and/or other legal consequences.

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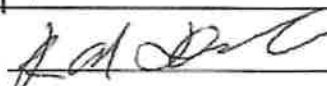
Company Name: Catalina Channel Express, Inc
Signature of Designated Authorized Representative: 
Name and Title of Authorized Representative: Greg Bombard, President
Date of Signature: October 9, 2023

CONFLICT OF INTEREST DECLARATION

Applicant represents, warrants and agrees that all conflicts of interest, if any, have been fully disclosed to CARB in the submitted application.

The undersigned declares that he or she is an official/agent of the responding Applicant and is empowered to represent, bind, and execute contracts and other agreements on behalf of the Applicant. The undersigned declares under penalty of perjury, under the laws of the State of California, that all statements and responses in this Declaration are true and correct, with full knowledge that all statements and responses are subject to investigation and that any incomplete, unclear, false or dishonest statements or responses may be grounds for rejection of the application, disqualification from this Solicitation process, termination of any or all executed Grant Agreements and/or other legal consequences.

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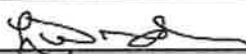
Company Name: Harbor Breeze Corp.
Signature of Designated Authorized Representative: 
Name and Title of Authorized Representative: _____
Date of Signature: 10/11/2023

ATTACHMENT 12: STD. 204 PAYEE DATA RECORD

STATE OF CALIFORNIA - DEPARTMENT OF FINANCE

PAYEE DATA RECORD

(Required when receiving payment from the State of California in lieu of IRS W-9 or W-7)
 STD 204 (Rev. 03/2021)

| Section 1 - Payee Information | | | |
|---|--------------|--|--------------------------------------|
| NAME (This is required. Do not leave this line blank. Must match the payee's federal tax return) | | | |
| City of Los Angeles Harbor Department | | | |
| BUSINESS NAME, DBA NAME or DISREGARDED SINGLE MEMBER LLC NAME (if different from above) | | | |
| MAILING ADDRESS (number, street, apt. or suite no.) (See instructions on Page 2) | | | |
| 425 S Palos Verdes St | | | |
| CITY, STATE, ZIP CODE | | E-MAIL ADDRESS | |
| San Pedro, CA, 90731 | | jgoldberg@portia.org | |
| Section 2 - Entity Type | | | |
| Check one (1) box only that matches the entity type of the Payee listed in Section 1 above. (See instructions on page 2) | | | |
| <input type="checkbox"/> SOLE PROPRIETOR / INDIVIDUAL <input type="checkbox"/> SINGLE MEMBER LLC <i>Disregarded Entity owned by an individual</i> <input type="checkbox"/> PARTNERSHIP <input type="checkbox"/> ESTATE OR TRUST | | CORPORATION (see instructions on page 2) <input type="checkbox"/> MEDICAL (e.g., dentistry, chiropractic, etc.) <input type="checkbox"/> LEGAL (e.g., attorney services) <input type="checkbox"/> EXEMPT (e.g., nonprofit) <input checked="" type="checkbox"/> ALL OTHERS | |
| Section 3 - Tax Identification Number | | | |
| Enter your Tax Identification Number (TIN) in the appropriate box. The TIN must match the name given in Section 1 of this form. Do not provide more than one (1) TIN. The TIN is a 9-digit number. Note: Payment will not be processed without a TIN. | | Social Security Number (SSN) or Individual Tax Identification Number (ITIN) _____ | |
| <ul style="list-style-type: none"> • For Individuals, enter SSN. • If you are a Resident Alien, and you do not have and are not eligible to get an SSN, enter your ITIN. • Grantor Trusts (such as a Revocable Living Trust while the grantors are alive) may not have a separate FEIN. Those trusts must enter the individual grantor's SSN. • For Sole Proprietor or Single Member LLC (disregarded entity), in which the sole member is an individual, enter SSN (ITIN if applicable) or FEIN (FTB prefers SSN). • For Single Member LLC (disregarded entity), in which the sole member is a business entity, enter the owner entity's FEIN. Do not use the disregarded entity's FEIN. • For all other entities including LLC that is taxed as a corporation or partnership, estates/trusts (with FEINs), enter the entity's FEIN. | | OR Federal Employer Identification Number (FEIN) 9 5 . 6 0 0 0 7 3 5 | |
| Section 4 - Payee Residency Status (See instructions) | | | |
| <input checked="" type="checkbox"/> CALIFORNIA RESIDENT - Qualified to do business in California or maintains a permanent place of business in California. | | | |
| <input type="checkbox"/> CALIFORNIA NONRESIDENT - Payments to nonresidents for services may be subject to state income tax withholding. | | | |
| <input type="checkbox"/> No services performed in California <input type="checkbox"/> Copy of Franchise Tax Board waiver of state withholding is attached. | | | |
| Section 5 - Certification | | | |
| <i>I hereby certify under penalty of perjury that the information provided on this document is true and correct. Should my residency status change, I will promptly notify the state agency below.</i> | | | |
| NAME OF AUTHORIZED PAYEE REPRESENTATIVE | | TITLE | E-MAIL ADDRESS |
| Lisa Wunder | | Acting Director, Environment | lwunder@portia.org |
| SIGNATURE | DATE | TELEPHONE (include area code) | |
|  | 10/25/2023 | 310-732-7668 | |
| Section 6 - Paying State Agency | | | |
| Please return completed form to: | | | |
| STATE AGENCY/DEPARTMENT OFFICE | | UNIT/SECTION | |
| | | | |
| MAILING ADDRESS | | FAX | TELEPHONE (include area code) |
| | | | |
| CITY | STATE | ZIP CODE | E-MAIL ADDRESS |
| | | | |

ATTACHMENT 13: COMPLIANCE WITH THE LAW

ATTACHMENT 13 - COMPLIANCE WITH THE LAW

Applicant represents, warrants, and agrees that all claims of noncompliance, if any, have been disclosed to CARB in its Application.

The undersigned declares that he or she is an official/agent of the responding Applicant and is empowered to represent, bind, and execute contracts and other agreements on behalf of the Applicant. The undersigned hereby represents, warrants, certifies and declares under penalty of perjury, under the laws of the State of California, that all statements and responses in this application package are true and correct, with full knowledge that all statements and responses are subject to investigation and that any incomplete, unclear, false or dishonest statements or responses may be grounds for rejection of the application, disqualification from this Solicitation process, termination of any or all executed Grant Agreements and/or other legal consequences.

Organization Name: City of Los Angeles Harbor Department

Signature of Designated Authorized Representative: _____



Name and Title of Authorized Representative: Lisa Wunder, Acting Director of Environmental Management

Date of Signature: 10/23/23

COMPLIANCE WITH THE LAW

Applicant represents, warrants, and agrees that all claims of noncompliance, if any, have been disclosed to CARB in its Application.

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Organization Name: Catalina Channel Express, Inc

Signature of Designated Authorized Representative: 

Name and Title of Authorized Representative: Greg Bombard, President

Date of Signature: October 9, 2023

COMPLIANCE WITH THE LAW

Applicant represents, warrants, and agrees that all claims of noncompliance, if any, have been disclosed to CARB in its Application.

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Organization Name: Harbor Breeze Corp.
Signature of Designated Authorized Representative: Rah D/Sa CEO
Name and Title of Authorized Representative: _____
Date of Signature: 10/11/2023

ATTACHMENT 14: INSURANCE ENDORSEMENT



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
10/26/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

| | | | |
|--|--|--|------------------------|
| PRODUCER Seattle-Alliant Insurance Services, Inc. 401 Union St, 31st Floor Seattle WA 98101 | | CONTACT NAME: Renee Judge PHONE (A/C No. Ext.): 206 204-9100 FAX (A/C No.): 206 204-9205 E-MAIL Address: rjudge@alliant.com | |
| INSURED Port of Los Angeles City of Los Angeles Harbor Department Risk Management Division 425 S. Palms Verdes Street San Pedro CA 90731 | | INSURER(S) AFFORDING COVERAGE | |
| | | INSURER A: Endurance Risk Solutions Assur | NAIC # 43630 |
| | | INSURER B: Self Insured | |
| | | INSURER C: Stratford Insurance Company | 40436 |
| | | INSURER D: Liberty Mutual Insurance Compa | 1112 |
| | | INSURER E: Navigators Insurance Company | 42307 |
| | | INSURER F: | |

COVERAGES **CERTIFICATE NUMBER: 2047993708** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

| INSR LTR | TYPE OF INSURANCE | ADOL SUBR (INSR / SUBR) | POLICY NUMBER | POLICY EFF (MM/DD/YYYY) | POLICY EXP (MM/DD/YYYY) | LIMITS |
|----------|--|-------------------------|--|-------------------------------------|-------------------------------------|---|
| D | <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO. JUDGE <input type="checkbox"/> LOC <input checked="" type="checkbox"/> OTHER: Fel Part | Y Y | SFAA1003810 | 10/1/2023 | 10/1/2024 | EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (As occurrence) \$ MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 3,000,000 PRODUCTS - COMPROP AGG \$ 1,000,000 DCL - Indemnity \$ 500,000 |
| B | <input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY | Y Y | N/A | 10/1/2023 | 10/1/2024 | COMBINED SINGLE LIMIT (Per accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$ |
| F C A | <input type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED. RETENTION \$ | | SE23UA955585 VMX8002815 CMX10009870407 | 10/1/2023 10/1/2023 10/1/2023 | 10/1/2024 10/1/2024 10/1/2024 | EACH OCCURRENCE \$ 9,000,000 AGGREGATE \$ 9,000,000 \$ |
| E | WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY EMPLOYER TO BE PART OF THIS POLICY? OFFICER/EMBER EXCLUDED? (Mandatory in NH) <input type="checkbox"/> N/A If yes, describe under DESCRIPTION OF OPERATIONS below | Y N | N/A | 10/1/2023 | 10/1/2024 | <input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000 |
| B | Marine Employers' Liab. (MEL) | | N/A | 10/1/2023 | 10/1/2024 | Limit \$1,000,000 |

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
CGL is written on an MGL policy form
RE: Grant Number #G21-ATDP-xx, Sample Grant Agreement with the State of CA acting by and through the California Air Resources Board for the Advanced Technology Demonstration and Pilot Projects. The State of California, the California Air Resources Board, and each of its and their officers, agents, and employees are included as Additional Insured. Coverage is primary and non-contributory. Waiver of subrogation applies

| | |
|---|--|
| CERTIFICATE HOLDER | CANCELLATION |
| The State of CA Acting by and through The California Air Resources Board Mobile Source Control Division 1001 I Street Sacramento CA 95814 | SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. |
| | AUTHORIZED REPRESENTATIVE <i>Brian A. White</i> |

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ACORD 25 (2016/03)

The ACORD name and logo are registered marks of ACORD



Primary Port Liability Policy

The Company's obligation to pay damages on behalf of the Insured applies only to the amount of damages in excess of the deductible amounts as applicable to such coverages. The Limits of Insurance applicable to each occurrence for such coverages shall be reduced by the amount of such deductible. The "aggregate limits" for such coverages shall not be reduced by the application of such deductible amount.

Our duty to defend any one claim ends when we have used up the applicable Limits of Insurance in the payment of judgments or settlements under the INSURING AGREEMENT, coverages A-J or when the Additional Expenses Occurrence Limit has been exhausted, whichever shall first occur.

POLICY PERIOD-TERRITORY

This Policy applies to "Personal Injury", "Property Damage" or "Advertising Liability" anywhere in the world during the Policy Period.

PERSONS OR ENTITIES INSURED

- (A) The Named Insured and/or subsidiary, associated affiliate companies or owned and controlled companies, as now or hereafter constituted and, their duly elected and appointed officials, commissioners, officers, employees and volunteers while working for and on behalf of the Port if the Named Insured is designated in Item 1 of the Declarations.
- (B) Any officers, commissioners, stockholders, partners, or employees of the Named Insured, while acting in his capacity as such, and any organization or proprietor with respect to real estate management for the Named Insured;
- (C) Any person, organization, trustee or estate to whom the Named Insured is obligated by virtue of a written contract or agreement to provide insurance such as is afforded by the Policy, but only to the extent of such obligation and in respect of operations by or on behalf of the Named Insured or of facilities of the Named Insured or of facilities used by the Named Insured;
- (D) With respect to the operation of mobile equipment, whether licensed or unlicensed, an employee of the Named Insured while operating any such equipment in the course of his employment and/or any other person while operating any such equipment with the permission of the Named Insured;
- (E) Any Additional Insureds, solely, however, with respect to their interest in premises and/or operations, and/or activities of the Insured and Insureds hereunder, but this provision shall not operate to increase the limit of liability of this Policy.

This policy shall apply separately to each Named Insured hereunder in the same manner as if separate policies had been issued to each, but this shall not operate to increase Underwriter's limit of liability for each occurrence as stated herein.

EXCLUSIONS

This Policy does not apply:



American Ports Insurance Program
Risk Purchasing Group
Policy No. SFAA1008010

| | |
|------------------------|--|
| Effective Date: | October 1, 2023 |
| Policy Number: | SFAA1008010 |
| Issued To: | AMERICAN PORTS INSURANCE PROGRAM RISK PURCHASING GROUP |

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**PRIMARY COVERAGE FOR PERSONS OR ORGANIZATIONS
NAMED AS ADDITIONAL INSUREDS**

This endorsement modifies insurance provided under the following

SPECIAL LIABILITY POLICY FOR PORTS

The following paragraph is added to Persons or Entities Insured to comply with insurance requirements of written contracts relative to the performance of your operations for the additional insureds:

This insurance is primary over any similar insurance available to any individual or entity named as an additional insured where required by written contract or agreement. However, this insurance is primary over the other similar insurance only if the additional insured is designated as an insured in the Declarations of the other similar insurance. We will not require contribution of limits from the other similar insurance if the insurance afforded by this endorsement is primary.

This insurance is excess over any other valid and collectible insurance, whether primary, excess, contingent or on any other basis, if it is not primary as defined in the paragraph above.

All other terms and conditions of the policy are the same.



Primary Port Liability Policy

- (2) If such settlement demand is not acceptable to the Insured and the Company tenders to the Insured an amount equal to the difference between the Insured's retention less incurred defense costs and said settlement demand, or the applicable amount specified in the limits of liability section of the declarations, whichever is less, then the Company's agreement to indemnify or to pay on behalf of the Insured for the ultimate net loss hereunder shall be discharged and terminated and the Company shall have no further obligations with respect thereto.

4. Appeals.

In the event the Insured elects not to appeal a Judgment in excess of the Insured's Retained Limit, the Company may elect to do so at its own expense, but in no event shall the liability of the Company for Ultimate Net Loss exceed the applicable amount specified in the Limit of Liability section of the Declarations plus all defense costs necessary and incident to such appeal.

5. Action Against the Company.

No action shall lie against the Company with respect to any Occurrence unless, as a condition precedent thereto, the Insured shall have fully complied with all the terms of this Policy, nor until the amount of the Insured's obligation to pay an amount of Ultimate Net Loss in excess of the Deductible shall have been finally determined either by judgment against the Insured after actual trial or by written agreement of the Insured, the claimant and the Company. Any person or organization or the legal representative thereof who has secured such judgment or written agreement shall thereafter be entitled to recover under this Policy to the extent of insurance afforded by this Policy. Nothing contained in this Policy shall give any person or organization any right to join the Company as co-defendant in any action against the Insured to determine the Insured's liability.

6. Bankruptcy and Insolvency.

Bankruptcy or insolvency of the Insured shall not relieve the Company of any of its obligations hereunder.

7. Other Insurance.

If collectible Insurance with any other insurer is available to the Insured covering a loss also covered hereunder, whether on a primary, excess or contingent basis, the insurance hereunder shall be in excess of, and shall not contribute with such other insurance, provided that this clause does not apply with respect to excess insurance purchased specifically to be in excess of this Policy, or to other insurance which is intended to provide the remainder of the Limit of Liability stated in the Declarations of this Policy when the insurance afforded under this Policy provides less than 100 percent of the limit set forth on the Declarations, or where the Insured has agreed to provide another Additional Insured status.

8. Subrogation.

The Company shall be subrogated to the extent of any payment hereunder to all the Insured's rights of recovery, therefore; and the Insured shall do nothing after loss to prejudice such rights and shall do everything necessary to secure such rights. Any amount so recovered shall be apportioned as follows:

10 12

American Ports Insurance Program
Risk Purchasing Group
Policy No. SFAA1008010



Primary Port Liability Policy

Any interest, including the insured's having paid an amount in excess of the Deductible plus the Limit of Liability hereunder, shall be reimbursed first to the extent of actual payment. The Company shall be reimbursed next to the extent of its actual payment hereunder. If any balance then remains unpaid, it shall be applied to reimburse the insured. The expenses of all such recovery proceedings shall be apportioned in the ratio of the respective recoveries. If there is no recovery in proceedings conducted solely by the Insured, it shall bear the expenses thereof.

The Named Insured may elect to waive its right of subrogation at any time. To the extent the Named Insured elects to waive such rights, the Company shall have no right of subrogation.

9. Sovereign Liability.

With respect to such insurance as is afforded by this Policy, it is agreed that:

- (A) The Company will not use, either in the adjustment of claims or in the defense of suits against the Insured, the "Sovereign Immunity" of the Insured from tort liability except upon written request of the Named Insured.
- (B) The Insured agrees that the waiver of the defense of "Sovereign Immunity" shall not subject the Company to liability for any proportion of a claim verdict or judgment in excess of the limits of liability stated in this Policy.

10. Changes.

Notice to any agent or knowledge possessed by any agent or by any other person shall not effect a waiver or change in any part of this Policy or stop the Company from asserting any right under the terms of this Policy, nor shall the terms of this Policy be waived or changed, except by endorsement issued to form a part of this Policy.

11. Assignment

Assignment of interest under this Policy shall not bind the Company until its consent is endorsed hereon; however, if an Insured shall die, such insurance as is afforded by this Policy shall apply (A) to the Insured's legal representative, as the Insured, but only while acting within the scope of his/her duties as such and (B) with respect to the property of the insured to the person having temporary custody thereof as Insured. But only until the appointment and qualification of the legal representative.

12. Cancellation.

This policy may be canceled by the Named Insured by surrender thereof to the Company or any of its authorized agents or by mailing to the Company written notice stating when thereafter the cancellation shall be effective. The Policy may be canceled by the Company by mailing to the Named Insured at the address shown in this Policy written notice stating when not less than ninety (90) days, thereafter such cancellation shall be effective. Provided that the Insured fails to discharge when due any of its obligations in connection with the payment of premium for the Policy or any installment thereof, whether payable directly to the Company or its agent or indirectly under a premium finance plan or extension of credit, this Policy may be canceled by the Company by mailing to the Named Insured at the address shown in the Policy written notice stating when not less than ten (10) days thereafter such cancellation shall be effective.

11 12

American Ports Insurance Program
Risk Purchasing Group
Policy No. SFAA10Q8010



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
10/26/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

| | | |
|---|--|-----------------------|
| PRODUCER Seattle-Alliant Insurance Services, Inc. 401 Union St. 31st Floor Seattle WA 98101 | CONTACT NAME: Renee Judge | |
| | PHONE (A/C No. Ext): 206 204-9100 | FAX (A/C No.): |
| E-MAIL ADDRESS: rjudge@alliant.com | | |
| INSURER(S) AFFORDING COVERAGE | | NAIC # |
| INSURER A: Lloyd's Syndicate 623 (Beazley) | | 0 |
| INSURER B: | | |
| INSURER C: | | |
| INSURER D: | | |
| INSURER E: | | |
| INSURER F: | | |

INSURED
Los Angeles Harbor Department
425 S. Palms Verdes Street
San Pedro CA 90731

LOGANGE-14

COVERAGES **CERTIFICATE NUMBER:** 2054386923 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

| INSR LTR | TYPE OF INSURANCE | ADDL SUBR (INSR / WVD) | POLICY NUMBER | POLICY EFF (MM/DD/YYYY) | POLICY EXP (MM/DD/YYYY) | LIMITS |
|----------|---|---|---------------|-------------------------|-------------------------|---|
| | COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER <input type="checkbox"/> POLICY <input type="checkbox"/> PROJ. <input type="checkbox"/> LCC <input type="checkbox"/> OTHER: | | | | | EACH OCCURRENCE \$ DAMAGE TO RENTED PREMISES (Per occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COMP/OP AGG \$ OTHER \$ |
| | AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY | | | | | TOWNSHIP RISKY TRIP (Per occurrence) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ OTHER \$ |
| | <input type="checkbox"/> UMBRELLA LIAB <input type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DEF <input type="checkbox"/> RETENTION \$ | | | | | EACH OCCURRENCE \$ AGGREGATE \$ OTHER \$ |
| | WORKERS COMPENSATION AND EMPLOYERS' LIABILITY APPROVED FOR PARTIAL/WHOLE/OTHER OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe and DESCRIPTION OF OPERATIONS below | <input type="checkbox"/> Y/N <input type="checkbox"/> N/A | | | | <input type="checkbox"/> PER STATUTE <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$ |
| A | Cyber Liability | Y Y | APIP2324 | 7/1/2023 | 7/1/2024 | See Below* See Below* |

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
 *Cyber Liability.

*Additional Insurers:
 Liberty Surplus Insurance Corporation
 Associated Industries Insurance Company, Inc.

*APIP Cyber Coverages & limits:
 A: \$45,000,000 Annual Policy and Program Aggregate Limit of Liability (subject to policy exclusions) for all Insureds/Members combined (Aggregate for all See Attached...

| | |
|--|---|
| CERTIFICATE HOLDER The State of CA Acting by and through The California Air Resources Board Mobile Source Control Division 1001 I Street Sacramento CA 95814 | CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE <i>Brian A. White</i> |
|--|---|

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AGENCY CUSTOMER ID: LOSANGE-14

LOC #: _____



ADDITIONAL REMARKS SCHEDULE

Page 1 of 1

| | | | |
|---|-----------|--|--|
| AGENCY Seattle-Akiant Insurance Services, Inc. | | NAMED INSURED Los Angeles Harbor Department 425 S. Palms Verdes Street San Pedro CA 90731 | |
| POLICY NUMBER | | | |
| CARRIER | NAIC CODE | EFFECTIVE DATE: | |

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM.

FORM NUMBER: 25 **FORM TITLE:** CERTIFICATE OF LIABILITY INSURANCE

coverages combined, including Claims Expenses), subject to the following limits and sub-limits as noted.
All: \$2,000,000 Insured/Member Annual Aggregate Limit of Liability (subject to policy exclusions) for each Insured/Member, within the Annual Policy and Program Aggregate Limit of Liability and JPA/Pool Annual Aggregate Limit of Liability (Aggregate for all coverages combined, including Claim Expenses) subject to the following limits and sub-limits as noted.

BREACH RESPONSE:

A. \$500,000 Aggregate Limit of Liability for each Insured/Member for Breach Response Costs (Limit is increased to \$1,000,000 if Baazley Nominated Services Providers are used).

FIRST PARTY LOSS:

- 1. \$750,000 Aggregate Limit of Liability for each Insured
- A. \$750,000 Aggregate Limit of Liability for each Insured/Member for Business Interruption Loss Resulting from Security Breach
- B. \$500,000 Aggregate Limit of Liability for each Insured/Member for Business Interruption Loss Resulting from System Failure
- C. \$750,000 Aggregate Limit of Liability for each Insured/Member for Dependent Business Loss Resulting from Security Breach
- D. \$100,000 Aggregate Limit of Liability for each Insured/Member for Dependent Business Loss Resulting from System Failure
- E. \$750,000 Aggregate Limit of Liability for each Insured/Member for Cyber Extortion Loss
- F. \$750,000 Aggregate Limit of Liability for each Insured/Member for Data Recovery Costs

LIABILITY:

- A. \$2,000,000 Aggregate Limit of Liability for each Insured/Member for all Damages and Claims Expenses - Data & Network Liability
- B. \$2,000,000 Aggregate Limit of Liability for each Insured/Member for Regulatory Defense & Penalties
- C. \$2,000,000 Aggregate Limit of Liability for each Insured/Member for Payment Card Liabilities & Costs
- D. \$2,000,000 Aggregate Limit of Liability for each Insured/Member for all Damages and Claims Expenses for Media Liability

eCRIME:

- A. \$75,000 Aggregate Limit of Liability for each Insured/Member for Fraudulent Instruction
- B. \$75,000 Aggregate Limit of Liability for each Insured/Member for Funds Transfer Fraud
- C. \$75,000 Aggregate Limit of Liability for each Insured/Member for Telephone Fraud

CRIMINAL REWARD:

- A. \$25,000 Aggregate Limit of Liability for each Insured/Member for Criminal Reward

COVERAGE ENDORSEMENT(S):

- A. \$100,000 Aggregate Limit of Liability for each Insured/Member for Reputation Loss
- B. \$50,000 Aggregate Limit of Liability for each Insured/Member for Claims Preparation Costs for Reputation Loss Claims Only
- C. \$100,000 Aggregate Limit of Liability for each Insured/Member for Computer Hardware Replacement Costs
- D. \$100,000 Aggregate Limit of Liability for each Insured/Member for Invoice Manipulation
- E. \$25,000 Aggregate Limit of Liability for each Insured/Member for Cryptosacking

RETENTION:

- A. TBD CSU Auxiliary Organizations only
- B. \$50,000 Per Claim for each Member/Insured with Total Insured Value (TIV) up to \$250,000,000 at the time of policy inception
8 Hour waiting period for Dependent/Business Interruption Loss
- C. \$100,000 Per Claim for each Member/Insured with Total Insured Value (TIV) greater than \$250,000,000 and up to \$750,000,000 at the time of policy inception
8 Hour waiting period for Dependent/Business Interruption Loss
- D. \$250,000 Per Claim for each Member/Insured with Total Insured Value (TIV) greater than \$750,000,000 at the time of policy inception
8 Hour waiting period for Dependent/Business Interruption Loss

RE: Grant Number #G21-ATDP-xx, Sample Grant Agreement with the State of CA Acting by and through the California Air Resources Board for the Advanced Technology Demonstration and Pilot Projects. The State of California, the California Air Resources Board, and each of its and their officers, agents, and employees are included as Additional Insured. Waiver of subrogation applies.



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
10/26/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

| | |
|---|---|
| PRODUCER Seattle-Alliant Insurance Services, Inc. 401 Union St, 31st Floor Seattle WA 98101 | CONTACT NAME: Renee Judge PHONE: (A/C No, Ext): 206 204-9100 FAX: (A/C, No): E-MAIL Address: rjudge@alliant.com |
| | INSURER(S) AFFORDING COVERAGE NAIC # INSURER A: National Union Fire Insurance 19445 INSURER B: INSURER C: INSURER D: INSURER E: INSURER F: |

| | |
|--|-------------------|
| INSURED Port of Los Angeles City of Los Angeles Harbor Department Risk Management Division 425 S. Potos Verdes Street San Pedro CA 90731 | LOSANGE 14 |
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COVERAGES **CERTIFICATE NUMBER: 983929576** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

| INSR LTR | TYPE OF INSURANCE | ADDITIONAL INSURER | POLICY NUMBER | POLICY EFF. DATE (MM/DD/YYYY) | POLICY EXP. DATE (MM/DD/YYYY) | LIMITS |
|----------|--|--|---------------|-------------------------------|-------------------------------|--|
| | COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS MADE <input type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER: | | | | | EACH OCCURRENCE \$ DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COMP/OP AGG \$ \$ |
| | AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY | | | | | COMBINED SINGLE LIMIT (Per accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$ |
| | UMBRELLA LIAB <input type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS MADE DEF RETENTIONS \$ | | | | | EACH OCCURRENCE \$ AGGREGATE \$ \$ |
| | WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PERSONS OR PARTS THEREOF (EMPLOYEE MEMBER EXCLUDED) (Mandatory in NY) If yes, describe below: | <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A | | | | <input type="checkbox"/> PER STATUTE <input type="checkbox"/> OTHER EL EACH ACCIDENT \$ EL DISEASE - EA EMPLOYEE \$ EL DISEASE - POLICY LIMIT \$ |
| A | Crime* | | 13000202 | 7/1/2023 | 7/1/2024 | Limit \$1,000,000 Deductible \$2,500 |

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
 *Crime Coverage includes:
 Employee Theft Including Faithful Performance of Duty
 Forgery or Alteration
 Inside Premises Theft of Money and Securities
 Inside Premises Robbery and Safe Burglary other property
 Outside the Premises
 Computer Fraud
 Funds Transfer Fraud
 See Attached...

| | |
|--|---|
| CERTIFICATE HOLDER The State of CA Acting by and through The California Air Resources Board Mobile Source Control Division 1001 I Street Sacramento CA 95814 | CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE <i>Brian A. White</i> |
|--|---|

AGENCY CUSTOMER ID: LOSANGE-14

LOC #: _____



ADDITIONAL REMARKS SCHEDULE

Page 1 of 1

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|--|-----------|---|--|
| AGENCY Seattle-Alliant Insurance Services, Inc. | | NAMED INSURED Port of Los Angeles City of Los Angeles Harbor Department Risk Management Division 425 S. Palos Verdes Street San Pedro CA 90731 | |
| POLICY NUMBER | | EFFECTIVE DATE: | |
| CARRIER | NAIC CODE | | |

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM.

FORM NUMBER: 25 **FORM TITLE:** CERTIFICATE OF LIABILITY INSURANCE

Money Orders and Counterfeit Paper Currency

Third Party Coverage - \$250,000 Included in Crime Limit

Joint Loss Payee Endorsement Included

RE: Grant Number #G21-ATDP-xx. Sample Grant Agreement with the State of CA acting by and through the California Air Resources Board for the Advanced Technology Demonstration and Pilot Projects. The State of California, California Air Resources Board are included as Loss Payee.

ACORD 101 (2008/01)

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ATTACHMENT 15: ATTESTATION OF READINESS

Applicant accepts the terms and conditions of the attached Grant Agreement (Appendix B) in the same form, and is ready, willing, and able to comply with all such terms and conditions.

The undersigned declares that he or she is an official/agent of responding entity (the applicant) and is empowered to represent, bind, and execute contracts and other agreements on behalf of said entity.

The undersigned declares that he or she is an official/agent of the responding Applicant and is empowered to represent, bind, and execute contracts and other agreements on behalf of the Applicant. The undersigned hereby represents, warrants, certifies and declares under penalty of perjury, under the laws of the State of California, that all statements and responses in this application package are true and correct, with full knowledge that all statements and responses are subject to investigation and that any incomplete, unclear, false or dishonest statements or responses may be grounds for rejection of the application, disqualification from this Solicitation process, termination of any or all executed Grant Agreements and/or other legal consequences.

Company Name: City of Los Angeles Harbor Department

Signature of Designated Authorized Representative: 

Name and Title of Authorized Representative: Lisa Wunder, Acting Director of Environmental Management

Date of Signature: 10/23/2023

ATTESTATION OF READINESS

Applicant accepts the terms and conditions of the attached Grant Agreement (Appendix B) in the same form, and is ready, willing, and able to comply with all such terms and conditions.

The undersigned declares that he or she is an official/agent of responding entity (the applicant) and is empowered to represent, bind, and execute contracts and other agreements on behalf of said entity.

The undersigned declares that he or she is an official/agent of the responding Applicant and is empowered to represent, bind, and execute contracts and other agreements on behalf of the Applicant. The undersigned hereby represents, warrants, certifies and declares under penalty of perjury, under the laws of the State of California, that all statements and responses in this application package are true and correct, with full knowledge that all statements and responses are subject to investigation and that any incomplete, unclear, false or dishonest statements or responses may be grounds for rejection of the application, disqualification from this Solicitation process, termination of any or all executed Grant Agreements and/or other legal consequences.

Company Name: Catalina Channel Express, Inc

Signature of Designated Authorized Representative:  _____

Name and Title of Authorized Representative: Greg Bombard, President

Date of Signature: October 9, 2023

ATTESTATION OF READINESS

Applicant accepts the terms and conditions of the attached Grant Agreement (Appendix B) in the same form, and is ready, willing, and able to comply with all such terms and conditions.

The undersigned declares that he or she is an official/agent of responding entity (the applicant) and is empowered to represent, bind, and execute contracts and other agreements on behalf of said entity.

The undersigned declares that he or she is an official/agent of the responding Applicant and is empowered to represent, bind, and execute contracts and other agreements on behalf of the Applicant. The undersigned hereby represents, warrants, certifies and declares under penalty of perjury, under the laws of the State of California, that all statements and responses in this application package are true and correct, with full knowledge that all statements and responses are subject to investigation and that any incomplete, unclear, false or dishonest statements or responses may be grounds for rejection of the application, disqualification from this Solicitation process, termination of any or all executed Grant Agreements and/or other legal consequences.

Company Name: Harbor Breeze Corp.
Signature of Designated Authorized Representative: Ralph Sales
Name and Title of Authorized Representative: Ralph Sales CEO
Date of Signature: 10/11/2023

ATTACHMENT 16: ATTESTATION OF DRAYAGE AND SHORT-HAUL LABOR COMPLIANCE

PLEASE SEE BELOW FOR A SCREENSHOT THAT POLA SUBMITTED THIS AS REQUIRED, THOUGH NO DRAY OR SHORT-HAUL WORK IS PROPOSED AS PART OF THIS PROJECT.

[Home \(/s/\)](#)

[Attestation List \(/s/attestationslist\)](#)

[Submit Your Attestation \(/s/submit-your-attestation\)](#)

Thank you for submitting your attestation, your attestation is currently being reviewed by CARB. Please allow up to 2 weeks before it is posted on the Attestation List page.

Finish

[CARB labor violation complaint page \(https://air.arb.ca.gov/Forms/Complaints/LaborViolation\)](https://air.arb.ca.gov/Forms/Complaints/LaborViolation) | [Privacy Policy \(/privacy-policy\)](#)

If you have knowledge that a company is not compliant with applicable laws, has an outstanding labor law violation, or is otherwise not compliant with this attestation, you may file a complaint with the California Air Resources Board.

ATTACHMENT 17: NON-COLLUSION DECLARATION

NON-COLLUSION DECLARATION

I, Lisa Wunder, Acting Director of Environmental Management, on behalf of the City of Los Angeles Harbor Department, affirmatively state the following to be true and correct: the application is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; the application is genuine and not collusive or a sham; the submittal of the application has not directly or indirectly been induced by or solicited from any other applicant to put in a false or sham proposal; the applicant has not directly or indirectly colluded, conspired, connived, or agreed with any other applicant or anyone else to put in a sham application; the applicant has not in any manner directly or indirectly, sought by agreement, communication, or conference with anyone to fix the proposed fees or terms of the application or of any other application, or to fix any overhead, profit, or cost elements of the proposed fees or fee structure, or of that of any other applicant, or to secure any advantage against CARB or other applicants; all statements contained in the application are true and correct.

The undersigned declares that he or she is an official/agent of the responding Applicant and is empowered to represent, bind, and execute contracts and other agreements on behalf of the Applicant. The undersigned hereby represents, warrants, certifies and declares under penalty of perjury, under the laws of the State of California, that all statements and responses in this application package are true and correct, with full knowledge that all statements and responses are subject to investigation and that any incomplete, unclear, false or dishonest statements or responses may be grounds for rejection of the application, disqualification from this Solicitation process, termination of any or all executed Grant Agreements and/or other legal consequences.

Organization Name: City of Los Angeles Harbor Department

Signature of Designated Authorized Representative: 

Name and Title of Authorized Representative: Lisa Wunder, Acting Director of Environmental Management

Date of Signature: 10/23/23

NON-COLLUSION DECLARATION

I, Greg Bombard, President, on behalf of Catalina Channel Express, Inc, affirmatively state the following to be true and correct: the application is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; the application is genuine and not collusive or a sham; the submittal of the application has not directly or indirectly been induced by or solicited from any other applicant to put in a false or sham proposal; the applicant has not directly or indirectly colluded, conspired, connived, or agreed with any other applicant or anyone else to put in a sham application; the applicant has not in any manner directly or indirectly, sought by agreement, communication, or conference with anyone to fix the proposed fees or terms of the application or of any other application, or to fix any overhead, profit, or cost elements of the proposed fees or fee structure, or of that of any other applicant, or to secure any advantage against CARB or other applicants; all statements contained in the application are true and correct.

The undersigned declares that he or she is an official/agent of the responding Applicant and is empowered to represent, bind, and execute contracts and other agreements on behalf of the Applicant. The undersigned hereby represents, warrants, certifies and declares under penalty of perjury, under the laws of the State of California, that all statements and responses in this application package are true and correct, with full knowledge that all statements and responses are subject to investigation and that any incomplete, unclear, false or dishonest statements or responses may be grounds for rejection of the application, disqualification from this Solicitation process, termination of any or all executed Grant Agreements and/or other legal consequences.

Organization Name: Catalina Channel Express, Inc
Signature of Designated Authorized Representative: 
Name and Title of Authorized Representative: Greg Bombard, President
Date of Signature: October 9, 2023

NON-COLLUSION DECLARATION

I, Ralph Salas, Owner, on behalf of Harbor Breeze Yacht Charters and Cruises, affirmatively state the following to be true and correct: the application is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; the application is genuine and not collusive or a sham; the submittal of the application has not directly or indirectly been induced by or solicited from any other applicant to put in a false or sham proposal; the applicant has not directly or indirectly colluded, conspired, connived, or agreed with any other applicant or anyone else to put in a sham application; the applicant has not in any manner directly or indirectly, sought by agreement, communication, or conference with anyone to fix the proposed fees or terms of the application or of any other application, or to fix any overhead, profit, or cost elements of the proposed fees or fee structure, or of that of any other applicant, or to secure any advantage against CARB or other applicants; all statements contained in the application are true and correct.

The undersigned declares that he or she is an official/agent of the responding Applicant and is empowered to represent, bind, and execute contracts and other agreements on behalf of the Applicant. The undersigned hereby represents, warrants, certifies and declares under penalty of perjury, under the laws of the State of California, that all statements and responses in this application package are true and correct, with full knowledge that all statements and responses are subject to investigation and that any incomplete, unclear, false or dishonest statements or responses may be grounds for rejection of the application, disqualification from this Solicitation process, termination of any or all executed Grant Agreements and/or other legal consequences.

Organization Name: Harbor Breeze Corp.
Signature of Designated Authorized Representative: [Handwritten Signature]
Name and Title of Authorized Representative: Ralph Salas CEO
Date of Signature: 10/11/2023

Exhibit B

GRANT AGREEMENT COVER SHEET

| | | | |
|--|--|---|--|
| | | GRANT NUMBER G22-ATDP-03 | |
| NAME OF GRANT PROGRAM Advanced Technology Demonstration and Pilot Projects: Los Angeles Marine Emission Reduction Project | | | |
| GRANTEE NAME City of Los Angeles Harbor Department | | | |
| TAXPAYER'S FEDERAL EMPLOYER IDENTIFICATION NUMBER 95-6000735 | | TOTAL GRANT AMOUNT NOT TO EXCEED \$30,980,376.00 | |
| START DATE: February 1, 2025 | | END DATE: May 31, 2027 | |

This legally binding Grant Agreement, including this cover sheet and Exhibits attached hereto and incorporated by reference herein, is made and executed between the State of California, California Air Resources Board (CARB) and the City of Los Angeles Harbor Department (the "Grantee").

- Exhibit A – Grant Provisions
- Exhibit B – Statement of Work
- Exhibit B, Attachment I – Budget Summary
- Exhibit B, Attachment II – Project Tasks and Disbursements
- Exhibit B, Attachment III – Scope of Work and Project Schedule
- Exhibit B, Attachment IV – Key Project Personnel
- Exhibit C – FY2021-22 and FY2022-23 Grant Solicitation Package
- Exhibit D – Grantee Application Package

In accordance with Assembly Bill (AB) 107, Section 15.14, twenty-five percent (25%) of the Fiscal Year 2024-25 GGRF funds allocated under this Grant, in the amount of \$731,869.25, shall be withheld. Upon determination of the final amount of the fourth quarter Cap-and-Trade Auction and approval from the Department of Finance (DOF), the remaining funds may be encumbered and available for use. A formal Amendment may not be required to encumber and liquidate the remaining funds.

This Agreement is of no force or effect until signed by both parties. Grantee shall not commence performance until it receives written approval from CARB.

The undersigned certify under penalty of perjury that they are duly authorized to bind the parties to this Grant Agreement.

| | | | |
|--|------|---|------|
| STATE AGENCY NAME California Air Resources Board | | GRANTEE'S NAME (PRINT OR TYPE) City of Los Angeles Harbor Department | |
| SIGNATURE OF ARB'S AUTHORIZED SIGNATORY: | | SIGNATURE OF GRANTEE (AS AUTHORIZED IN RESOLUTION, LETTER OF COMMITMENT, OR LETTER OF DESIGNATION) | |
| TITLE Branch Chief, Acquisitions | DATE | TITLE | DATE |
| STATE AGENCY ADDRESS 1001 I Street, Sacramento, CA 95814 | | GRANTEE'S ADDRESS (INCLUDE STREET, CITY, STATE AND ZIP CODE) 425 S Palos Verdes St. San Pedro, CA 90731 | |

CERTIFICATION OF FUNDING

| | | | |
|---|--|--|---|
| AMOUNT ENCUMBERED BY THIS AGREEMENT \$30,980,376.00 | PROGRAM 3510000L32 3500000D15 | PROJECT N/A 3900EMOP | ACTIVITY N/A 3228EMOP24 |
| PRIOR AMOUNT ENCUMBERED FOR THIS AGREEMENT \$0.00 | FUND TITLE General Fund Greenhouse Gas Reduction Fund | | FUND NO. 0001 3228 |
| TOTAL AMOUNT ENCUMBERED TO DATE \$30,980,376.00 | (OPTIONAL USE) FY 2024 GGRF \$2,195,607.75 upon execution and \$731,869.25 after 4th quarter Cap-and-Trade Auction | CHAPTER 249 994 | STATUTE 2022 AB179 2024 AB157 |
| APPR REF 101 102 | ACCOUNT/ALT ACCOUNT 5432000 5432000 | REPORTING STRUCTURE 39006100 39006100 | SERVICE LOCATION 50042 50072 |
| | | FISCAL YEAR (ENY) 2022 (\$28,052,899.00) 2024 (\$2,927,477.00) | |

I hereby certify that the California Air Resources Board Legal Office has reviewed this Grant Agreement.

| | |
|--|------|
| SIGNATURE OF CALIFORNIA AIR RESOURCES BOARD LEGAL OFFICE: N/A | DATE |
|--|------|

Grant Agreement

City of Los Angeles Harbor Department
Advanced Technology Demonstration and Pilot Projects: Los Angeles Marine
Emission Reduction Project

Mobile Source Control Division
California Air Resources Board

Grant Number: G22-ATDP-03



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GRANT PROVISIONS (Exhibit A)

1. AGREEMENT

This Grant Agreement ("Grant," "Grant Agreement," or "Exhibit A") is entered into by and between the State of California acting by and through the California Air Resources Board (hereinafter referred to as "CARB," the "Grantor," the "State," or the "Board") and the City of Los Angeles Harbor Department, a city-governmental body with its principal place of business located at 425 South Palos Verdes Street, San Pedro, California, 90731 (hereinafter referred to as the "Grantee"). The Grantor and the Grantee are each a "Party" and together the "Parties" to this Grant Agreement.

The Parties agree to comply with the requirements and conditions contained herein, as well as all commitments identified in the Statement of Work ("Exhibit B"), Fiscal Year (FY) 2021-22 and FY 2022-23 Grant Solicitation for the Advanced Technology Demonstration and Pilot Projects ("Grant Solicitation"), and Grantee Application Package.

CARB will be using a Third-Party Administrator to help facilitate administrative activities and to support the Grantee in the development of reports, submission of data, and preparation of meetings. The Grantee will work with CARB's Third-Party Administrator, as directed by CARB, while implementing this Grant Agreement.

2. GRANT ACKNOWLEDGEMENT

Where applicable, the Grantee agrees to acknowledge the California Climate Investments (CCI) program and CARB as a funding source and adhere to the CCI Funding Guidelines as outlined in the California Climate Investments Messaging and Communications Guide.¹ Below are specific requirements for acknowledgement.

Grantee agrees to include the CCI funding boilerplate and logo (see Figure 1) on all outreach and public facing materials whenever projects funded, in whole or in part by this Grant Agreement, are publicized in any news media, websites, brochures, publications, audiovisuals, or other types of promotional material.

The acknowledgement must read as follows: "LA MER is part of California Climate Investments, a statewide initiative that puts billions of Cap-and-Trade dollars to work reducing greenhouse gas emissions, strengthening the economy, and improving public health and the environment - particularly in disadvantaged communities." And whenever applicable, the Spanish translation acknowledgement: "LA MER forma parte de las Inversiones del Clima de California, un iniciativa estatal que destine miles

¹ CCI Communications Guide <http://www.caclimateinvestments.ca.gov/logo-graphics-request>

de millones de dólares de Cap-and-Trade para la reducción de gases de efecto invernadero, fortalecimiento de la economía y mejoramiento de la salud pública y el medio ambiente - especialmente en comunidades en desventaja.”

The CCI logo and name serves to bring under a single brand the many investments whose funding comes from the Greenhouse Gas Reduction Fund (GGRF). The logo represents a consolidated and coordinated initiative by the State to address climate change by reducing greenhouse gases, while also investing in disadvantaged communities and achieving many other co-benefits.



Figure 1: CCI logo

3. GRANT AND AMENDMENTS SUMMARY

3.1 Project title (the "Project"):

Advanced Technology Demonstration and Pilot Projects: Los Angeles Marine Emission Reduction Project

3.2 Project description:

Port of Los Angeles (POLA), with the Port of Long Beach (POLB), Catalina Channel Express (CCE), and Harbor Breeze Corp. (Harbor Breeze) - is undertaking the Los Angeles Marine Emission Reduction project (LA MER) to immediately reduce emissions for disadvantaged communities while advancing the understanding of cutting-edge harbor-craft technologies for the future. The total project cost is \$62,451,868.00. Of this amount, POLA requested \$30,980,376.00 in grant funds with \$31,471,492.00 to be provided as match.

This multi-faceted project will demonstrate two (2) different emission-reduction technologies in different vessel types across many duty cycles. Additionally, POLA will work with POLB, harbor craft operators, regulators, engine manufacturers, technology developers, and the US Coast Guard (USCG) to evaluate next-generation technologies that could be feasible for the tugboats, ferries, and pilot vessels operating in San Pedro Bay. Project components include:

Passenger Ferry with Tier 4 Engines and Diesel Particulate Filter (DPF). Design, construct, launch, and demonstrate a high-capacity passenger ferry with Tier 4

propulsion engines and a diesel particulate filter (DPF), assuming a DPF has been verified by the California Air Resources Board and approved by USCG at time of engine installation. The new ferry, operated by CCE, will operate on renewable diesel and replace three smaller ferries with Tier 2 and Tier 3 engines, which enhances the efficiency of regional ferry service and thus increases the emissions benefits.

Zero-Emission Capable Excursion Boats. Design, construct, launch, and demonstrate two zero-emission capable hybrid excursion boats in partnership with Harbor Breeze. The vessels are expected to exceed the definition of Zero-Emission Advanced Technology (ZEAT) vessel under the Harbor Craft Regulation. Each boat will have renewable-diesel powered Tier 4 propulsion engines for safety, resiliency, and added range, but will be able to operate a minimum of thirty percent (30%) of the time in zero-emission mode with some trips operating as much as one hundred percent (100%) of the time in zero-emission mode depending on duty cycle and route length. Although not part of this project, Harbor Breeze also will install shore power at a public wharf to serve the zero-emission capable excursion boats.

Next Generation Harbor Craft Technology Evaluation. Develop a report to evaluate the commercial status of emission-reduction technologies, to assess the feasibility of marinizing DPFs, to request information from engine manufacturers on future low-carbon fuels and technologies, to identify infrastructure gaps for zero-emission harbor craft, and to understand workforce development needs specific to tugs, ferries, and pilot boats operating in San Pedro Bay.

Project benefits will accrue to the disadvantaged, high-priority populations in which the vessels will be domiciled and spend nearly all of their time. Emission benefits include 1,503 metric tons reduction of carbon-dioxide equivalent emissions and 113 weighted tons reduction of criteria and toxic emissions per year.

LA MER also includes a robust workforce plan, training harbor-craft workers in new engine technologies and advanced battery-electric solutions while supporting recruitment programs that draw from the local, underserved community. The LA MER project balances the need to immediately reduce air-quality and health-risk impacts on nearby disadvantaged communities with the long-term goal of carbon-neutral, zero-emission harbor vessels.

3.3 Funding Amount ("Grant Funds" or "Grant Fund"):

\$30,980,376.00 (See Grant Coversheet and Exhibit B, Budget Summary)

3.4 Match Amount:

\$31,471,492.00 (See Grant Coversheet and Exhibit B, Budget Summary)

4. GRANT PARTIES AND CONTACT INFORMATION

- 4.1 The CARB Project Liaison is AJ Edwards PE PhD. Correspondence regarding this Project shall be directed to, and Project reports shall be submitted by email to:

AJ Edwards PE PhD
Mobile Source Control Division
4001 Iowa Avenue, Riverside, California 92507
Phone: 916-712-3891
Email: adam.edwards@arb.ca.gov

- 4.2 The Grantee Liaison is Jacob Goldberg. Correspondence regarding this Project shall be directed to:

Grantee Liaison: Jacob Goldberg
Title: City of LA Harbor Department Environmental Affairs Officer, Air Quality
Address: 425 South Palos Verdes Street, San Pedro, California, 90731
Phone: 310-490-2237
Email: jgoldberg@portla.org

- 4.3 If the CARB Project Liaison identified above changes, CARB will notify the Grantee Liaison of said change and provide the new contact information. If the Grantee Liaison identified above changes, the Grantee will notify the CARB Project Liaison of said change and provide the new contact information.

5. TIME PERIOD

- 5.1 CARB retains full discretion to consider all available information relating to the California Environmental Quality Act compliance before determining whether to proceed forward with this Grant Agreement. No work may be done by the Grantee, nor will any funding be disbursed by CARB until CARB has affirmatively notified the Grantee in writing that this provision has been satisfied. If CARB decides not to proceed forward with this Grant Agreement under this provision, the Grant Agreement will be terminated immediately by CARB upon written notice to the Grantee.

- 5.2 The "Term" (Begin and End Date) of this Grant Agreement is set out in the Grant Cover Sheet to which this Exhibit A is attached. Performance of work or other expenses billable to CARB under this Grant may ONLY commence after full execution of this Grant by both Parties, in accordance with the Grant Cover Sheet for Grant Number G22-ATDP-03. Performance on this Grant ends when

the Grantee has submitted and CARB has approved the final report or when the Grant is terminated or expires, whichever occurs first.

- 5.3 Grantee must implement the Project and complete the following:
- a. Upon completion of the Project, the Grantee shall submit a draft Final Report (see Section 9) to CARB Project Liaison no later than March 31, 2027.
 - b. Final request for payment and Final Report shall be received by CARB no later than April 30, 2027.

6. DUTIES AND REQUIREMENTS

This section defines the respective duties and requirements of the Grantee and CARB in implementing the Project and Program under this Grant Agreement. More detailed duties and responsibilities are set out in other Sections of this Grant Agreement.

6.1 The Grantee's Tasks

Grantee is responsible for the following:

Grantee's key Project personnel will administer the various tasks of the Project including: participation in meetings with CARB staff and the Third-Party Administrator; development and implementation of Project plans; record-keeping procedures; reporting procedures; and financial tracking and disbursements. Grantee's responsibilities include all Project development, press events, project administration, and Project reporting. A comprehensive description of tasks and responsibilities is included in Exhibit B (Statement of Work) which contains the budget and task details, Project schedule, and list of key personnel.

- a. Initial Project Kick-Off Meeting: The Grantee's key Project personnel, in collaboration with CARB's Project Liaison and Third-Party Administrator, will plan, conduct, and attend an initial meeting with CARB staff following execution of the grant. The purpose of the initial meeting will be to discuss the overall plan, details for performing the tasks, the Project schedule, and any issues that may need to be addressed. Topics for discussion may include, but are not limited to, the following:
 - i. Project tasks, timelines, and milestones
 - ii. Project design, outreach, workforce development
 - iii. Content and format of disbursement requests, status reports, draft, and final reports

- iv. Press and public information request procedures
 - v. Schedule for ongoing coordination meetings
 - vi. Other items as necessary
- b. Ongoing Project Coordination Meetings: The purpose will be to discuss the status of the Project and these meetings should be held at least quarterly. In addition, at least one Critical Project Review meeting at a major milestone is required. Additional meetings may be conducted by phone if deemed appropriate by the CARB Project Liaison. A final meeting or conference call with the CARB Project Liaison will be held at the conclusion of the Project. Project Coordination and review meetings are the responsibility of the Grantee with support from the Third-Party Administrator and should contain:
- i. Agenda for the meeting with conference call information
 - ii. Discussion of Project activities, deliverables, schedule, and milestones
 - iii. Discussion of any difficulties encountered since the last update
 - iv. Concerns or questions requiring resolution from CARB
 - v. Notification of any pending disbursement requests
 - vi. Scheduling the next Project coordination meeting
- c. Critical Project Review Meetings: CARB will require that the Grantee develop and hold Critical Project Review meetings at least once during the Project at critical junctures in the Project to assess the ability of the Project to compete its stated objectives. The determination of CARB at these meetings are final and could result in the termination of the Project or reduction of the dollar amount of this Grant Agreement for nonperformance. In the event of such termination or reduction of the Grant Fund amount, Section 7.4 Suspension of Payment and Grant Termination of this Grant Agreement shall apply.
- d. Public Outreach and Workforce Development: Prepare outreach and educational materials, in consultation with CARB, the Third-Party Administrator, and community-based organizations to:
- i. Conduct statewide public outreach necessary to educate local community members about the benefits of the local projects and about technical training opportunities that may result from such projects.

- ii. Conduct statewide public outreach necessary for the Project to be successful.
 - iii. Conduct statewide public outreach to vehicle dealers and fleets and work with community-based organizations (CBOs) necessary for the Project to be successful.
 - iv. Advise CARB on potential additional opportunities for outreach and technical assistance.
- e. Respond to CARB and public requests in a timely manner.
 - f. Document and track expenditures, as defined in Section 7 of this Grant Agreement,
 - g. Reporting and assessment procedures, as defined in Section 9 of this Grant Agreement.
 - h. Record-keeping and policy procedures, as defined in Section 11 of this Grant Agreement.
 - i. Submit data collected as required in Appendix F, Data Collection Requirements of the Grant Solicitation and the Project application, or as requested by CARB in a template that will be provided by CARB in the manner and time as defined by CARB. Data may be required to be submitted to CARB's Third-Party Administrator through an upload portal.
 - j. Ensure that Project end-users are working with data collection provider.
 - k. Ensure all outreach, workforce development, press, and other public materials have been approved by CARB and adhere to the CCI guidelines, see Section 2; and Americans with Disabilities Act (ADA) web accessibility requirements, see Section 13.
 - l. All vehicles and equipment in the Project that will be operated on California roadways or waterways must be compliant with all applicable State requirements, including, but not limited to applicable CARB engine or vehicle approval or certification, Department of Motor Vehicles (DMV) licensing, and California Highway Patrol safety certification. New vehicles must also have a manufacturer's certification showing that the vehicle model complies with all applicable federal safety standards for new motor vehicles and new motor vehicle equipment issued by the Nation Highway Traffic Safety Administration.
 - m. Ensure that any funded vehicle, piece of equipment, or vessel has the CARB and CCI logo affixed prominently and in consultation with CARB.

6.2 CARB's Role

CARB is responsible for the following list of items. Within CARB's sole and absolute discretion, CARB may designate a third-party administrator to manage, oversee, or administer projects and programs, which may include any or all of CARB's responsibilities under this Grant Agreement. Upon such designation, Grantee shall respond to, report to, and comply with requests from CARB's third-party administrator when requested.

- a. Participating in regular meetings with the Grantee to discuss program refinements and guide program implementation.
- b. Reviewing and approving all Grant Disbursement Request Forms and distributing grant funds to the Grantee.
- c. Reviewing and approving Project outreach and education elements provided by Grantee, such as outreach and education materials, webpage, initial participant survey, quarterly reports, and final report.
- d. Reviewing and approving data collection plan.
- e. Providing program oversight and accountability (in conjunction with the Grantee).
- f. Ensure compliance with applicable requirements of statutes, applicable State law, the FY 2021-22 Funding Plan, the FY 2022-23 Funding Plan, the Grant Solicitation, and this Grant Agreement with the Grantee. The Funding Plans for Clean Transportation Incentives are available at:
<https://www2.arb.ca.gov/our-work/programs/low-carbon-transportation-investments-and-air-quality-improvement-program/low-1>.
- g. Reviewing, evaluating, and auditing the Grantee's administration, management, collaboration, partnership, and/or oversight of or with any "Recipient" or "Recipients" of Grant Funds (i.e., subgrantees, contractors, subcontractors, vendors, suppliers, consultants, sub- or co-applicants, Project team members, and community partners), including but not limited to written agreements and disbursement requests.

7. FISCAL ADMINISTRATION

7.1 Budget

- a. The maximum amount of this Grant is \$30,980,376.00 (the Grant Funds), as set out in Exhibit B, Attachment I (Budget Summary) and in the Cover Sheet to which Exhibit A is attached. Under no circumstance will CARB reimburse the Grantee for more than this amount. A written Grant Agreement

amendment is required whenever there is a change to the amount of this grant. The budget summary for the Project is shown in Exhibit B, Attachment I.

- b. The Project will include a cash match and an in-kind match from private, eligible State, and local funding to leverage this Grant, for a total Project budget of \$62,451,868.00.
- c. The Application package is incorporated by reference as part of the Grant Agreement. Costs associated with Project implementation, detailed in the Application must consider the time frame of the Project and may cover an increase in costs that take into account inflation or planned cost of living increases. The application submitted includes the actual costs for the Project and will not be amended due to faulty estimations, increases in costs due to inflation, or other reasons that have not been covered in the budget.
- d. Line-item shifts in the Budget Summary (Exhibit B, Attachment I) of up to ten percent (10%) of the Grant Fund total may be made over the life of the Grant, with prior written approval from CARB. Line-item shifts greater than ten percent require a formal amendment to the Grant. Line-item shifts may be proposed by either the State or the Grantee and must not increase the total Grant Fund amount. All line-item shifts must be approved in writing by CARB within ten (10) business days of approval for inclusion in the Grant folder. If the Grant is formally amended, all line-item shifts must be included in the amendment.
- e. Where the total disbursed amount of the Project implementation (Administrative costs) is less than the allowable amount, CARB, in its sole discretion, may re-allocate the remaining amount to other Project uses within the Scope of Work and Project Schedule reflected in Exhibit B, Attachment III, which may only be accomplished through a written amendment to the Grant Agreement.
- f. In the event of Grant expiration or termination, or as allowed (or required) under any other provision of this Grant Agreement, CARB shall require full recovery of the unspent funds by transfer from the Grantee's accounts. The Grantee must provide fund transfer information within forty-five (45) calendar days upon receipt of notification from CARB, or sooner where required or allowed by any other provision of this Grant.
- g. In addition to any other rights that the Grantor has or may have under this Grant Agreement or applicable law, the Grantee agrees to revert all unused Grant Funds (including all earned interest) to CARB if the Grant Funds have not been fully liquidated within the timeline specified in the Grant

Agreement or if CARB determines that Grantee has not performed in accordance with any of the Grant terms or conditions. Such reversion shall happen no later than forty-five (45) calendar days from the Grant Agreement liquidation date, notice of nonperformance date, Grant termination date, or Grant expiration date, whichever occurs sooner.

7.2 Eligible Costs

Allowable expenditures associated with the Grant include actual direct costs incurred and may include actual indirect costs incurred, examples of which are described below:

a. Project Implementation Costs

- i. Preparation of materials for Project planning, community outreach, workforce development, and education activities, including travel, printing, mailing, and other expenses directly attributable to planning, outreach, workforce development, and education for the Project tasks.
- ii. Record-keeping procedures, reporting procedures, financial tracking, and disbursements.
- iii. Vehicle, vessel, driver, passenger, equipment, required logos, and facilities insurance costs.
- iv. External consultant costs.

b. Project Technology Costs

- i. Vehicle, vessel, or eligible equipment costs.
- ii. Charging equipment purchase and installation costs, including design and planning costs.
- iii. Equipment maintenance costs.
- iv. Related equipment costs.
- v. Infrastructure improvement costs, including design and planning costs.
- vi. Data collection services, software, and device costs.
- vii. Training, workforce development, and education costs, including materials for outreach.

c. Explanation of When a Cost Identified above is Considered a Direct or Indirect Cost:

- i. Direct costs are actual costs incurred that are directly tied to (have a measurable direct benefit to) the implementation of the Project as identified in the scope of work (statement of work) attached to the Grant Agreement, including, but not limited to, personnel costs (i.e., hourly wage), subcontracts, equipment costs, and travel expenses.
- ii. Indirect costs are actual costs incurred for services or activities that cannot be easily identified to a specific cost objective identified in the scope of work (statement of work) attached to the Grant Agreement but do support a common or joint purpose. For purposes of this Grant Agreement, allowable indirect costs are a pro-rata share of general management (overhead) costs for operations that support the work performed under the Grant Agreement, such as accounting, budgeting, payroll preparation, personnel services, utility costs, rent, mail services, and centralized data processing not already identified or reimbursed as a direct cost. Indirect costs shall NOT exceed eight percent of the total Grant Funds awarded under this Grant Agreement. Indirect costs are only payable on a reimbursement basis.
- iii. Allowable direct and indirect costs are paid on a reimbursement basis only. Costs identified as direct costs cannot also be indirect costs.
- iv. Profits, profit sharing, shareholder interest, lobbying, fundraising, involvement in political activities or campaigns, and payment of taxes or liens (real and personal) are NOT allowable direct or indirect costs.

7.3 Grant Disbursements

The Grantee shall not submit disbursement requests from June 1 through June 30 of each year. This will accommodate the Financial Information System for California (FI\$Cal²) going offline for end-of-year closing.

With each disbursement request, the Grantee must provide documentation as required in this section:

- a. Grant Funds payments will be made when CARB has received and has determined (within its sole judgment) the Grantee has submitted a complete and accurate Grant Disbursement Request Form which identifies discrete payable tasks stipulated in Exhibit B, Attachment II, and Attachment III; satisfies the requirements specified herein, including Section 6, Section 7, Section 8, and Section 9 of this Grant Agreement; and is also accompanied by a Status Report that includes relevant

² FI\$Cal - State of California. One state. One system. | The FI\$Cal system is how the State of California manages its finances combining the State's accounting, budgeting, cash management, and procurement operations into a single financial-management system.

documentation of accomplishments, and associated deliverables. CARB will have sole discretion to accelerate the timeline for allowable disbursements of administration and Project funds identified in Exhibit B, Attachment II (with the exception of the final Project administration disbursement), necessary to ensure the goals of the Projects are met.

- b. A payment will not be made if the CARB Project Liaison determines a task has not been accomplished or documented; a deliverable has not been provided; claimed expenses are not documented, not reasonable, or not valid per the budget; or that the Grantee has not met other terms of the Grant.
- c. The Chief of the Mobile Source Control Division or designee of CARB may review the CARB Project Liaison's approval or disapproval of a Grant Disbursement Request. No reimbursement will be made for expenses that, in the judgement of the Division Chief of the Mobile Source Division, are not reasonable or do not comply with the Grant Agreement.
- d. The Grantee shall submit completed and signed Grant Disbursement Requests to CARB Accounting Section via email to grants@arb.ca.gov with a carbon copy to the CARB Project Liaison. Requests for payment must be made with the Grant Disbursement Request Form and contain all documentation requested or required with the form.
 - i. Prior to submitting to the Accounts Payable Unit, the Grantee will submit disbursement requests to the CARB-designated Third-Party Administrator (Program administrator) and CARB Project Liaison to allow for a pre-review of the request. The Grantee agrees to modify, adjust, or provide supporting documentation justifying disbursement requests, as identified by the Program administrator, or CARB Staff as needed. The Grantee must submit this electronically, based on CARB's current electronic submission guidance at the time of the request.
- e. CARB will withhold payment of up to ten percent (10%) of the Grant Funds until completion of the Final Report and Intellectual Property and other property have been relinquished to CARB in accordance with Sections 9, 12, and 13 of this Grant. Grantee shall submit by email an appropriately formatted Final Report to the CARB Project Liaison. It is the Grantee's responsibility to submit a Grant Disbursement Request for this final disbursement of Grant Funds.
- f. CARB shall disburse Grant Funds in accordance with the California Prompt Payment Act, Government Code, Section 927, et seq.
- g. The Grantee will pay out CARB Grant Funds to other sub-grantees and

Recipients ONLY on a reimbursement basis. There is no advance pay for Grantee's employees, agents, affiliates, officers, directors, subsidiaries, sub-grantees, or other Recipients.

- h. The Grantee shall not submit disbursement requests from June 1 through June 30 of each year. This will accommodate FISCAL going offline for end-of-year closing.

7.4 Suspension of Payments and Grant Termination

- a. CARB reserves the right to issue a Grant suspension order in the event that a dispute should arise. The Grant suspension order will be in effect until the dispute has been resolved or the Grant has been terminated. If the Grantee chooses to continue work on the Project after receiving a Grant suspension order, the Grantee will not be reimbursed for any expenditure incurred during the suspension. If CARB rescinds the suspension order and does not terminate the Grant, CARB, without any obligation to do so, may elect to reimburse the Grantee for any expenses incurred during the suspension that are reimbursable in accordance with the terms of this Grant Agreement.
- b. CARB reserves the right to terminate this Grant without cause, upon thirty (30) calendar days' written notice to the Grantee.
- c. Termination for Cause by Grantor. This Grant Agreement may be terminated by CARB without advance notice at any time if CARB has determined, in its sole discretion, that the Grantee or any of Grantee's employees, agents, officers, representatives, affiliates, or any of the Recipients have breached any of the terms, conditions, responsibilities, or obligations of this Grant Agreement or if CARB has determined, in its sole discretion, that any of Grantee's employees, representatives, agents, officers, affiliates, or any of the Recipients have violated or are in violation of any of their respective obligations or responsibilities under this Grant Agreement or any other agreement where CARB is an intended third-party beneficiary.
- d. In case of early termination for whatever reason, the Grantee will submit a Grant Disbursement Request, a Status Report covering activities up to, and including the termination date and following the requirements specified herein and in Section 9 of these provisions. Upon receipt of the Grant Disbursement Request Form, Status Report, and upon the transfer of all intellectual property and other property to CARB, a final payment, the amount of which shall be solely determined by CARB within its absolute discretion, will be made to the Grantee. This payment shall be for all CARB-approved, actually incurred costs that in the opinion of CARB are justified.

However, the total amount paid, if any, shall not exceed the total Grant Fund amount.

- e. Non-performance (Breach) Provisions. The Grantee agrees that the following is a non-exhaustive list of the circumstances that constitute non-performance (breach) under this Grant. These circumstances will be solely determined by CARB and include, but are not limited to:
 - i. Failure to comply with any of the provisions of the Grant, including Exhibits.
 - ii. Failure to obligate or expend Grant Funds within established timelines, or failure to show timely interim progress to meet these timelines.
 - iii. Insufficient performance or widespread deficiencies with Grant Fund or Project oversight, enforcement, recordkeeping, contracting, inspections, or any other duties.
 - iv. Misuse of Grant Funds.
 - v. Funding of ineligible activities or other items.
 - vi. Exceeding the allowable Grant Fund allotment on an itemized or other basis.
 - vii. Insufficient, incomplete, or faulty documentation.
 - viii. Failure to provide required documentation or reports requested by CARB, or other State agencies, in a timely manner.
 - ix. Poor performance as determined by a review or fiscal audit.
- f. Additional Remedies. In addition to any other requirements and remedies set out elsewhere in this Grant Agreement, upon request by CARB, the Grantee will also perform as follows:
 - i. Within fourteen (14) calendar days of any request, timely develop and implement a corrective action plan.
 - ii. Immediately cease all work and spending, and notify all employees, representatives, agents, officers, affiliates, and Recipients to immediately cease all work and spending.
 - iii. Upon termination of this Grant Agreement or upon issuance of the termination notice (whichever occurs sooner), the Grantee shall immediately turn over all remaining Grant Funds in its possession or

control and all records, personally identifiable information ("PII"), intellectual property, documents, information and data relating to performance, accounting, administration, contracting, and management of the Grant Funds, the Project, and the Program, as well as any other materials requested by CARB or as otherwise required by any of the provisions of this Grant. CARB, at its sole discretion, may elect to have any or all of the funding, documentation, intellectual property, and other property transferred to another CARB-selected third-party administrator or designee.

- iv. Unless otherwise directed in writing by CARB, upon termination of this Grant Agreement or upon issuance of the termination notice (whichever occurs sooner), Grantee shall immediately cease all work and cease all expenditure of Grant Funds.
- v. Unless otherwise directed in writing by CARB, upon termination of this Grant Agreement or upon issuance of the termination notice (whichever occurs sooner), Grantee shall submit a Grant Disbursement Request and a Status Report covering activities up to and including the termination date. The Status Report shall be subject to review and approval by CARB before any final payments are disbursed. Upon receipt of the Grant Disbursement Request, and Status Report, and once all intellectual property and requested data, information and property have been transferred and assigned to CARB, CARB, at its sole discretion, may make a final payment to the Grantee. This payment shall be for all CARB-approved, actually incurred costs that in the opinion of CARB are justified. However, the total amount paid shall not exceed the total authorized amount for the Administrative Fee and, where payments are being requested on behalf of a Recipient, then no payment shall exceed the total authorized amount for the Grant Funds.

7.5 Contingency Provision

In the event this Grant is terminated for any reason, the CARB Executive Officer or designee reserves the right in his or her sole discretion to award a grant to the next highest scored applicant and if an agreement cannot be reached, to the next applicant(s) until an agreement is reached. CARB may also elect to award a grant in a manner consistent with direction provided in the FY 2021-22 Funding Plan and/or FY 2022-23 Funding Plan, which may include but is not limited to allocating the funds to other projects.

7.6 Documentation of Costs

- a. Personnel documentation must make use of timesheets or other labor tracking software.

- b. Fees for external consultants must be documented with copies of the consultant contract and invoices. All external consultant fees must be pre-approved by CARB. Fees included in the budget as a part of the Grantee Application Package (Exhibit D) are considered pre-approved by CARB.
- c. Printing, mailing, records retention, and travel expenses must be documented with receipts and/or invoices.
- d. Any reimbursement for necessary supporting Project costs requires receipts and/or invoices.
- e. Any reimbursement for necessary travel and per diem shall be at rates not to exceed those amounts paid to the State's represented employees. No travel outside the State of California or out of country shall be reimbursed unless prior written authorization is obtained from CARB. The California Department of Human Resources (CalHR) travel and per diem reimbursement amounts may be found online at <https://www.calhr.ca.gov/employees/pages/travel-reimbursements.aspx>. Reimbursement will be at the State travel and per diem amounts that are current as of the date costs are incurred by the Grantee.
- f. The above documentation, records, and referenced materials must be made available for review during monitoring visits and audits by CARB, or its designee. These records must be retained for a minimum of five (5) years after submittal of the final Grant disbursement request to CARB.
- g. The above documentation must be provided to CARB in Status Reports and a Final Report.

7.7 Earned Interest

"Earned interest" means any interest generated from State funds provided to the Grantee and held in an interest-bearing account.

- a. Interest earned by the Grantee on this Project must be expended on eligible program costs (See Section 7 of this Grant Agreement) or returned to CARB. The Grantee is responsible for reporting to CARB on all interest earned and reinvested into this Project or returned.
- b. All earned interest income must be reinvested into the program or returned to CARB. Interest earned that is reinvested in the program is not included as part of the Total Grant Amount from CARB. Grantee is responsible for reporting to CARB all Project expenditures funded with interest earned or returned.
- c. The Grantee must maintain accounting records (e.g., general ledger) that

track interest earned and expended on this Project as follows:

- i. The calculation of interest must be based on an average daily balance or some other reasonable and demonstrable method of allocating the proceeds from the interest-generating account back into the program.
 - ii. The methodology for tracking earned interest must ensure that it is separately identifiable from interest earned on Advanced Technology Demonstration and Pilot project funds.
 - iii. The methodology for calculating earned interest must be consistent with how it is calculated for the Grantee's other fiscal programs.
 - iv. Earned interest must be fully expended by March 15, 2027, or returned to CARB.
- d. Documentation of interest earned on this Project must be retained for a minimum of five (5) years after it is generated. Documentation of interest expended on this Project must be retained for a minimum of five (5) years after the funds have been reinvested into the Project.
 - e. The above documentation must be provided to CARB in Status Reports and a Final Report.

8. PROJECT MONITORING

- 8.1 Any changes in the scope or schedule for the Project shall require prior written approval by the CARB Project Liaison and may require a written Grant Agreement amendment.
- 8.2 The Grantee shall notify the CARB Project Liaison in writing, immediately if any circumstances arise (technical, economic, or otherwise), which might place completion of the program in jeopardy. The Grantee shall also make such notification if there is a change in key Project personnel (see Exhibit B, Attachment IV).
- 8.3 In addition to Status Reports (see Section 9 of this Grant Agreement), the Grantee shall provide information requested by the CARB Project Liaison that is needed to assess progress in completing tasks and meeting the objectives of the program.
- 8.4 Any change in budget allocations, re-definition of deliverables, or extension of the program schedule must be requested in writing to the CARB Project Liaison and approved by CARB, in its sole discretion, and may require a Grant Agreement amendment.

- 8.5 Where solely determined by CARB as necessary, site visits shall be established by the CARB Project Liaison during the Term of this Grant.

9. REPORTING AND DOCUMENTING EXPENDITURE OF GRANT FUNDS

The Grantee must provide CARB with documentation accounting for the proper expenditure of all Grant Funds. The documentation must be provided in Status Reports submitted at a minimum every three months to CARB and a Final Report submitted prior to the Grantee receiving their last disbursement of Grant Funds.

9.1 Supporting Documentation

- a. The Grantee must submit to CARB and maintain substantiating documentation of expenses incurred for technology and implementation costs under this Grant Agreement. CARB reserves the right to require Grantee to submit itemized invoices (invoices must include enough details to ensure that only eligible costs are paid for), and any other appropriate documentation required by CARB. The following documentation must be provided to CARB, as necessary, along with a Grant disbursement request form to support Grant disbursement requests:
 - i. Copy of the final itemized vehicle or vessel sales receipt/contract showing delivery confirmation, including documentation of the vehicle identification number (VIN) tag, vessel identification number (VIN), make, model, engine model year (if applicable), vehicle model year, and gross vehicle weight rating (if applicable).
 - ii. Copy of itemized equipment and labor expenses.
 - iii. Proof of temporary or permanent California vehicle registration for the vehicles.
 - iv. Other substantiating documentation such as digital photos of the vehicles or vessels such as VIN tags, odometers, vehicle or vessel certifications such as California Highway Patrol or United States Coast Guard, proof of insurance, and types of coverage.

9.2 Status Reports

The Grantee shall submit Status Reports at least quarterly but may submit them on a monthly basis if necessary to justify more frequent disbursements with prior approval from CARB. These reports must be approved by CARB and must contain the following information, at a minimum, in either Microsoft Word or PDF, and may include Microsoft Excel electronic files:

- a. Project Status Report number, title of Project, name of Grantee, date of submission, and Project Grant number.
- b. Summary of work completed since the last progress report, noting progress toward completion of tasks and milestones identified in the work plan.
- c. Statement of work expected to be completed by the next progress report.
- d. Notification of problems encountered and an assessment of their effects on the Project's outcome.
- e. Data collected from vehicles, vessels, equipment, and facilities.
- f. Schedule of community outreach, workforce development and education conducted, materials used, number of people contacted, and number of participants, where applicable.
- g. Accounting records, including expenditure and income information, and supporting documentation.
- h. Itemized invoices (invoices must include enough details to ensure that only eligible costs are paid for), and any other appropriate documentation.
- i. Discussion of the Project's adherence to the Project timeline.
- j. Other data and analysis as mutually agreed upon between Grantee and CARB.

9.3 Final Report

When the Project is complete, the Grantee shall submit a draft Final Report. The draft Final Report must be submitted to CARB in an appropriate format agreed upon between the CARB Project Liaison and the Grantee. The Grantee will provide a draft Final Report within 90 calendar days of Project completion or by March 31, 2027, whichever comes first. The finalized Final Report must be submitted thirty (30) calendar days later or by April 30, 2027, whichever comes first. Final reports will contain the following information (at a minimum):

- a. Expenditures in detail to date and for the period between the last quarterly report and the Final Report.
- b. Overview of the Project from inception through Project end, including Project background, partnerships, and funding sources.
- c. Table and narrative of Project Milestones.
- d. VIN or other documentation for all vessels, vehicles, equipment purchased.

- e. Overview and outreach, workforce development and educational efforts.
- f. Estimated GHG and co-pollutant emissions reductions achieved.
- g. Other co-benefits to the identified low-income and/or disadvantaged community(ies) as mutually agreed upon between Grantee and CARB.
- h. Accounting records, including expenditure and income information, and supporting documentation.
- i. Best practices and implementation challenges including suggestions for future Project considerations.
- j. Recommendations for potential Program improvements.
- k. Other data and analysis as mutually agreed upon between Grantee and CARB.

9.4 Other Reporting

The Grantee must provide data in support of other CARB needs such as requests from legislators, governor's office, data reporting needed by GGRF reporting requirements, and other data needs such as regulatory development. Other reporting requirements include:

- a. Detailed jobs creation data (a.k.a. jobs reporting) will be required to be submitted. The required data may include the top three funded Project activities by cost, percent of total Project budget associated with each of the top three Project activities, job classifications or trades, job training credentials earned, number of jobs provided, total Project work hours, average hourly wage, total number of workers that completed job training, description of job quality (e.g., benefits provided such as health care and paid time off), and targeted hiring strategy used. The Grantee shall track and report information on employment outcomes from funded projects that provide jobs or job training, including:
 - i. Job classifications or trades
 - ii. Job training credentials
 - iii. Number of jobs provided (in full and for priority populations)
 - iv. Total Project work hours (in full and for priority populations)
 - v. Average hourly wage (in full and for priority populations)
 - vi. Total number of workers that completed job training (in full and for

- priority populations)
 - vii. Description of job quality (e.g., benefits provided such as health care and paid time off)
 - viii. Targeted hiring strategy
 - ix. Census tracts of education and training(s), outreach, and partner organizations
 - x. Location of trainees/participants (priority population)
 - xi. Race/ethnicity of trainees/participants
 - xii. Number of trainees/participants completing training program (including number of certifications received)
 - xiii. Employment status, job titles, occupations, and salary wages of trainees/participants
 - xiv. Level of trainee involvement in training and curriculum design
- b. Program benefits reporting shall include, but is not limited to:
- i. Geographic distribution of workforce training, curriculum, and program offerings
 - ii. Increased connections to ZEV technology employers and industries
 - iii. Number of job placements, including full- and part-time jobs, and paid internships or apprenticeships
 - iv. Number of new full- and part-time jobs created and retained
 - v. Development of new partnerships with local and regional workforce entities, and economic/business development entities
 - vi. Connections between training and education programs and small, women, minority, disadvantaged, and certified business employment or support in priority communities
 - vii. Replication of concepts and program outcomes in other priority communities
 - viii. Community education events by type of event and attendance
 - ix. Direct address of community-specific workforce training and

development needs

- c. Program participant reporting shall include, but is not limited to:
 - i. Participant's level of satisfaction in their preparation for ZEV industry jobs and careers provided by the ZEV education and training program curriculum.
 - ii. Participant's current employment status (part- or full-time employment, or unemployed)
 - iii. Participant's level of satisfaction with services provided, including increased access to potential economic opportunities. (For example: improved outcomes over program expenses or investments, willingness to recommend the program to others)
 - iv. Participant's level of satisfaction with accessibility and ease of training program
 - v. Participant's level of satisfaction with program workforce, career development, and job placement support and opportunities
 - vi. Portal or other resources for existing trainees to provide their experiences and feedback loops to ensure changes to programs are made over time to best meet needs and boost new student recruitment.

10. OVERSIGHT AND ACCOUNTABILITY

- 10.1 The Grantee shall comply with all oversight responsibilities.
- 10.2 CARB or its designee may recoup the Grant Funds which were received based upon misinformation or fraud, or as otherwise allowed under any other term or condition of this Grant Agreement or State law. CARB also reserves the right to prohibit any entity from participating in future Advanced Technology Demonstration and Pilot solicitations.
- 10.3 If the Grantee detects any actual or potentially fraudulent activity by anyone or entity associated with the Project, it shall notify CARB as soon as possible and work with CARB to determine an appropriate course of action.

11. PROJECT RECORDS

As further described below, program records include but are not limited to Grantee financial and participant records. All Project records must be retained for a period of five (5) years after final payment under this Grant. All Project records are subject to audit pursuant to Section 13.7 of this Grant Agreement. Upon completion of the fifth

year of record retention, the Grantee shall submit all program records to CARB. Hardcopy or electronic records are suitable. Acceptable forms of electronic media include hard drives, CDs, and DVDs. Other forms of electronic media may be allowed based on prior written concurrence from CARB.

11.1 Grantee Record

The Grantee shall retain a file for the projects carried out under this Grant Agreement containing, but not limited to:

- a. Original executed copy of the Grant Agreement and Grant Agreement Amendments (if applicable)
- b. Policies and Procedures Manuals
- c. Copies of Grant Disbursement Request Forms and attachments
- d. Copies of Status Reports
- e. Documentation of earned interest generation and expenditure (see Section 7 for more information)
- f. Invoices from Project participants for reimbursable items
- g. All other information that documents all aspects of the Project

11.2 Financial Records

Without limitation of the requirement to maintain program accounts in accordance with generally accepted accounting principles, the Grantee must:

- a. Establish an official file for the projects, which shall adequately document all significant actions relative to the Project.
- b. Establish separate accounts which will adequately and accurately depict all amounts received and expended on the projects.
- c. Establish separate accounts which will adequately and accurately depict all income received which is attributable to the projects including in-kind donations, if any.
- d. Establish an accounting system which will adequately depict the final total costs of the projects, including indirect costs.

11.3 Project Participant Records

Grantee is required to establish and maintain participant records, which must

include, at a minimum:

- a. Project participant applications (denied, approved, and removed)
- b. Initial participant surveys and survey updates
- c. Unique identifier that links each Project to its corresponding Project and associated cost
- d. Documentation on any deviations from the normal processing of projects (examples include enforcement action, CARB case-by-case approvals)

12. OWNERSHIP

All information or data received or generated by the Grantee under this Grant Agreement shall become the property of CARB. No information or data received or generated under this Grant Agreement shall be released without CARB approval.

13. GENERAL PROVISIONS

13.1 Additional Required Terms (Pass-Through Obligations) for Third-Party Agreements: All grants, subawards, subgrants, contracts, vouchers, agreements, and subcontracts entered into by and between Grantee and any Recipient or Recipients (as defined in Section 6 of this Grant Agreement) using or applying Grant Funds (in whole or in part) shall contain the following language (or similar language with the same meaning and intent):

- a. Conflict of Interest. By entering into this grant, award, voucher, contract, subcontract, or agreement, said party is or may be a direct or indirect recipient ("Recipient") of funds received from or provided by the California Air Resources Board ("CARB"), and as such certifies, represents, and warrants that he, she, it is in compliance with all applicable State and federal conflict of interest laws on the date said grant, award, contract, subcontract, agreement, or voucher (as applicable) is signed and shall remain in compliance with all such laws for a period of five (5) consecutive years following receipt of any and all funding amounts on a rolling continuous basis. Recipient further certifies, represents, and warrants that he, she, it has no interest, and shall not acquire any interest, direct or indirect, which will conflict with Recipient's ability to impartially perform under, or complete the tasks described in any and all agreements, grants, awards, contracts, subcontracts, vouchers, or programs. The Recipient acknowledges, understands, and accepts that Recipient must disclose any direct or indirect financial interest or situation which may pose an actual, apparent, or potential conflict of interest. The Recipient acknowledges, understands, and accepts that the nature and extent of any actual,

apparent, or potential conflict of interest may be a basis for disqualification from receiving any funds. The Recipient certifies, represents, and warrants that Recipient will immediately advise the Grantee in writing of any potential new conflicts of interest as they arise.

- b. Cooperation with Audits. Recipient warrants, represents, and agrees to cooperate fully, without delay, in all audits, inquiries, and investigations initiated by or on behalf of the Grantee and/or the State of California concerning or relating to compliance with local, State, or federal air quality laws, or this agreement, including but not limited to timely submission of any and all records requested and full cooperation with any on-site inspections.
- c. Payment (Recapture) on Demand. Recipient represents, warrants, and agrees that upon notification by the Grantee or its authorized representative of an overpayment, a wrongful payment, or a violation of or failure to comply with any of the grant or subgrant agreement, contract, voucher, or program requirements or obligations, Recipient will, without challenge or delay, remit to the Grantee or its authorized representative the requested amount within sixty (60) calendar days from the date of issuance of said notice.
- d. Separate Accounts. If Recipient has received any funds as a grant or subgrant pursuant to a grant or subgrant agreement, then Recipient shall not commingle said funds with any other accounts, revenues, grants, donations, or resources except where expressly authorized in the fully executed written agreement between Recipient and the Grantee. Recipient will maintain all such grant or subgrant funds in a separate bank account designated specifically for the purposes of carrying out the intent and purpose for which said funds were provided. The bank account must be held in the name of the Recipient (the official legal entity's name, and not a dba), and under no other name, person, or entity. Funds received are NOT the assets of the Recipient. Grant and subgrant funds shall not be used as collateral for or an obligation to any debt, loan, or other commitments of Recipient, its officers, agents, assigns, contractors, subcontractors, subgrantees, or affiliates. Recipient shall ensure that the Grantee is designated in writing as a third-party beneficiary of and to all such bank accounts in which said funds are maintained or held.
- e. Third-Party Beneficiary. The Recipient acknowledges, accepts, and agrees that the State of California, acting by and through the California Air Resources Board (CARB), is an intended third-party beneficiary to any and all Recipient agreements, vouchers, contracts, subcontracts, awards, and grants with the Grantee where any CARB-provided funds are used or applied to pay or reimburse Recipient.

- f. Authorized Signature. The Recipient agrees and acknowledges that it has signed or has authorized the signing of the grant, award, contract, subcontract, and/or agreement with the Grantee, and by doing so hereby declares under penalty of perjury, under the laws of the State of California, that all statements and responses made in said grant, award, contract, subcontract, and/or agreement are true and correct, with full knowledge that all statements and responses are subject to investigation and that any incomplete, unclear, false, or dishonest response may be grounds for disqualification from receiving any existing or further funding or participating in any programs or projects using the CARB-provided or Grantee-provided funds, or from doing business with the State of California or the Grantee. The Recipient acknowledges, understands, and accepts that by providing or making any false statements or providing false information, the Recipient may be in violation of the California False Claims Act (Government Code Section 12650 et seq.). Recipient certifies, represents, and warrants that the individual signing on its, his, or her behalf herein below is an authorized representative of Recipient with full power and legal authority to sign below and by said signature Recipient is bound to and will comply with all terms, conditions, and obligations set forth in this agreement, grant, voucher, application, and/or contract, as applicable.
- g. Compliance with Air Quality Laws. Recipient understands, acknowledges, and agrees that compliance with all applicable federal, State, and local air quality rules, regulations, and statutes is a precondition to the receipt or use of any State funds provided by or through the California Air Resources Board (CARB), and is a continuing obligation for the consecutive five (5) years following receipt of any State funds on a rolling continuous basis. Recipient understands, acknowledges, and agrees that a failure to comply in whole or in part with any local, State, or federal air quality rules, regulations or statutes, or a failure to comply, in whole or in part, with any of the requirements or obligations under the project or program, agreement, contract, subcontract, award, voucher, or grant (as applicable) is, in each instance, a material breach of the conditions under which State funds were provided or made available, and such breach will result in undue hardship and damages to the Grantee and the State of California some or all of which may be impossible to easily calculate.
- h. Liquidated Damages. If the Grantee or the State of California determines, within its or their sole and absolute discretion, that Recipient is in breach or has breached any obligation to remain in compliance with any applicable federal, State, or local air quality rules, regulations, and statutes, then Recipient, immediately upon demand, will pay the Grantee (or to CARB, as requested), as recaptured funds or liquidated damages, the full amount of all Grant Funds received to date. The Recipient agrees that quantifying the

losses arising from any breach is inherently difficult insofar as breach may cause the State of California or the Grantee irreparable, serious, or substantial harm or damage, including to taxpayers or to the environment. Recipient further stipulates that the agreed upon amount of recaptured funds or liquidated damages is not a penalty, but rather a reasonable measure of damages based upon experience and given the nature of the losses that may result from said breach. The Recipient agrees that the recaptured funds or liquidated damages have been computed, estimated, and agreed upon by all Parties and represents an attempt to make a reasonable forecast of probable actual loss because of the difficulty of estimating with exactness the damages which will result. This obligation shall apply even if there is concurrent noncompliance or violation of air quality rules, regulations, or laws caused by a third party. The remedies set out in this paragraph are contractual in nature.

- i. Nothing stated herein above in any way limits, prevents, or precludes the State of California or the Grantee from taking any enforcement action, exercising any police power, or prosecuting any violation of law against Recipient, its employees, officers, agents, assigns, representatives, contractors, subcontractors, affiliates, grantees, sub awardees, subgrantees, or any third parties.
- j. Survival. Recipient acknowledges, agrees, and accepts that those terms, conditions, provisions, and exhibits which by their nature should survive termination, cancellation, or expiration of the grant, award, contract, voucher, subcontract, or agreement, shall so survive, including but not limited to those sections and provisions pertaining to indemnity, recordkeeping, audit, third-party beneficiary status, return or recapture of funds, data security, insurance, confidentiality, and the general provisions.
- k. All Recipient agreements must also contain, at a minimum, all of the following:
 - i. A clear and accurate description of the material, products, or services to be procured as well as a detailed budget and timeline.
 - ii. A detailed budget and timeline.
 - iii. Provisions that allow for administrative, contractual, or legal remedies in instances where a Recipient violates or breaches any term or condition of any contract or agreement and provide for such sanctions and penalties as may be appropriate.
 - iv. Provisions for termination by the Grantee, including termination procedures and the basis for settlement.

- v. A statement that further assignments will not be made to any third or subsequent tier subcontractor without additional advance written consent of CARB and Grantee.
 - vi. Language conforming to all of the General Provisions of this Grant Agreement.
- 13.2 Alternative Enforcement: The remedies set out in this Grant Agreement are not exclusive. Nothing stated in this Grant Agreement in any way limits, prevents or precludes the State of California from taking any enforcement action, exercising any police power, or prosecuting any violation of law.
- 13.3 Amendment: No amendment or variation of the terms of this Grant Agreement shall be valid unless made in writing, signed by authorized representatives of both Parties, and approved as required. No oral understanding or agreement not incorporated in the Grant Agreement is binding on any of the Parties.
- 13.4 Americans with Disabilities Act (ADA) Language: Grantee must ensure that all products and services submitted to CARB, uploaded, or otherwise provided to or funded by CARB, or offered to or made available to the public by the Grantee and/or by any of its Recipients, including but not limited to data, software, plans, drawings, specifications, reports, operating manuals, notes, and other written or graphic work prepared in the course of performance of this Grant, as specified in any attached Exhibits (collectively, the "Work"), comply with Web Content Accessibility Guidelines 2.0, levels A and AA, and otherwise meet the accessibility requirements set forth in California Government Code Sections 7405 and 11135, Section 202 of the federal Americans with Disabilities Act (42 U.S.C. § 12132), and Section 508 of the federal Rehabilitation Act (29 U.S.C. § 794d) and the regulations promulgated thereunder (36 C.F.R. Part 1194) (collectively, the "Accessibility Requirements"). For any Work provided to CARB in PDF format, Grantee, along with its Recipients, shall also provide an electronic version in the original electronic format (for example, Microsoft Word or Adobe InDesign).
- A. CARB may request documentation from the Grantee of compliance with the requirements described above and may perform testing to verify compliance. Grantee agrees to respond to and resolve any complaint brought to its attention regarding accessibility of deliverables provided under this Grant. Grantee must bring into compliance, at no cost to CARB, any Work by Grantee, or its Recipients, not meeting the Accessibility Requirements. If Grantee fails to bring the Work into compliance with the Accessibility Requirements within five (5) business days of issuance of written notice from CARB, or within the time frame specified by CARB in its written notice, then Grantee will be responsible for all costs incurred by CARB in bringing the Work into compliance with the Accessibility

Requirements. Grantee agrees to respond to and resolve any complaint brought to its attention regarding accessibility of deliverables provided under this Grant Agreement for a period of one year following delivery of the final deliverable under this Grant Agreement.

Deviations from the Accessibility Requirements are permitted only by written consent by CARB.

- 13.5 Assignment: This Grant is not assignable by the Grantee, either in whole or in part, without the prior written consent of an authorized representative of Grantor in the form of a formal fully executed written amendment.
- 13.6 Assurances: CARB reserves the right, but not the obligation, to seek further written assurances from the Grantee and any of Grantee's employees, agents, officers, Recipients, or affiliates, that the work performed under this Grant Agreement will be performed consistent with the terms and conditions of this Grant Agreement.
- 13.7 Audit: Grantee agrees that CARB, the California Department of General Services, the California Department of Finance, the California State Auditor, or any of their respective designated representatives shall have the right to review and to copy any records and supporting documentation pertaining to the performance of this Grant and all Grant Funds received. Grantee agrees to maintain such records for a possible audit for a minimum of five (5) years from the date of termination, cancellation, or expiration of this Grant Agreement or for 5 years after a funded incentive activity has concluded, whichever is later, unless a longer period of records retention is determined necessary by CARB or any State designated representative. Grantee agrees to allow such California designated representatives (including auditors) access to such records during normal business hours and to allow interviews of any employees, representatives, agents, officers, and Recipients who might reasonably have information related to such records. Furthermore, Grantee agrees to include in all agreements, contracts, subcontracts, and subgrants, language identical to or similar to this paragraph to ensure Grantor has the ability and right to audit records and conduct interviews of any and all Recipients in relation to performance and use of Grant Funds under this Grant Agreement.
- 13.8 Authority: Each person executing this Grant Agreement on behalf of a Party represents that he or she is duly authorized to execute and deliver this Grant Agreement on the Party's behalf.
- 13.9 Availability of Funds: Grantee acknowledges, agrees, and understands that Grantor's obligations under this Grant Agreement are contingent upon the availability of funds. In the event funds are not available, the State shall have no

liability and no obligation to pay any funds whatsoever to the Grantee or to furnish any other considerations under this Grant Agreement or for any other reason.

- 13.10 CARB as Third-Party Beneficiary: Grantee represents, warrants, and agrees that CARB is and shall remain a third-party beneficiary to all Recipient agreements, and Grantee shall ensure said Recipient agreements expressly state that CARB is a third-party beneficiary.
- 13.11 Compliance with Laws, Regulations, etc.: The Grantee agrees that it will, at all times, comply with and require its Recipients to comply with all applicable federal and State laws, rules, guidelines, regulations, and requirements during the Grant Term. A failure of the Grantee to comply fully at all times with this section is a breach of this Agreement and is cause for immediate termination of the Agreement without advance notice.
- 13.12 Confidentiality and Data Security: Except as required by applicable law, or as otherwise expressly authorized by this Grant Agreement, Grantee shall not disclose to any third party any record which CARB has designated as confidential. It is expressly understood and agreed that the information the Grantee collects on behalf of the Grantor or from a third party in performing its obligations under this Grant Agreement may be deemed confidential by the Grantor. Therefore:
 - a. If the Grantee believes disclosure of a confidential record or information may be required under the California Public Records Act, the Grantee shall first give CARB at least fourteen (14) calendar days advance written notice prior to any planned disclosure so that CARB can seek, solely at CARB's discretion, an order preventing disclosure from a court of competent jurisdiction. The Grantee agrees that it shall immediately notify and work cooperatively with CARB to respond timely and correctly to any and all public records requests. The Grantee agrees that it will not challenge or authorize or endorse any challenge to any action or request by CARB to obtain a protective order or court order to prevent the release of any information.
 - b. The Grantee certifies that it has appropriate systems and controls in place to ensure that Grant funds will not be used in the performance of this Grant Agreement for the acquisition, operation, or maintenance of computer software in violation of copyright or other intellectual property laws.
 - c. Information or data, including but not limited to personally identifiable information (PII) and all application records and supporting documentation that personally identifies or describes an individual or individuals is confidential in accordance with California Civil Code sections 1798, et seq.

and other relevant State or federal statutes and regulations. The Grantee shall safeguard all such information, records, applications, and data which comes into its possession under this Grant Agreement in perpetuity, and shall not release or publish any such information, records, data, or application records without first obtaining in each instance the advance written approval of an authorized representative of CARB.

- d. The Grantee must observe complete confidentiality with respect to such information or data collected pursuant to this Grant, including without limitation, agreeing not to disclose or otherwise permit access to such information or data by any person or entity in any manner whatsoever unless such disclosure is required by law or legal process.
- e. The Grantee must acknowledge the confidential nature of such information and ensure by agreement or otherwise that the Grantee, its employees, Recipients, affiliates, officers, agents, and assigns are prohibited from copying or revealing, for any purpose whatsoever, the contents of such information or any part thereof, or from taking any action otherwise prohibited under any provision or section of this Grant Agreement.
- f. The Grantee must ensure that the Grantee's employees and Recipients are informed of the confidential nature of any shared information or data and ensure by written agreement that such individuals and entities are prohibited from (i) copying, revealing, or utilizing such information or data (or any parts thereof) for any purpose other than fulfillment of this Grant, and (ii) from taking any action otherwise prohibited under any provision or section of this Grant Agreement.
- g. The Grantee shall limit access to information and data gathered pursuant to this Grant only to necessary employees to perform their job duties in fulfillment of the Grant Agreement provisions.
- h. The Grantee must not use such information or any part thereof in the performance of services to others or for the benefit of others in any form whatsoever whether gratuitously or for valuable consideration.
- i. The Grantee must notify the Grantor promptly and in writing of the circumstances surrounding any possession, use, or knowledge of such information or any part thereof, by any person other than those authorized by this document.
- j. The Grantee must adhere to all CARB confidentiality, disclosure, and privacy policies.
- k. The Grantee must treat all information, deliverables, and work products

developed or collected pursuant to this Grant as confidential. All information, deliverables, and work products cannot be disclosed in any form to any third party (including any Recipients) without first obtaining the written consent of an authorized representative of CARB or except as otherwise authorized by this Grant Agreement.

- l. The Grantee must not use, without CARB written approval, any CARB materials, data, information, PII or documentation for any purpose other than for the sole purpose of performing Grantee's duties and obligations under this Grant Agreement.
- m. At the conclusion of the engagement or upon termination of this Grant Agreement, the Grantee shall surrender all information in any form developed or collected pursuant to this Grant.
- n. If the Grantee suspects loss or theft, the Grantee must report any lost or stolen information, data, or equipment developed or collected pursuant to this Grant to CARB immediately and to State or federal officials where required by applicable laws.
- o. The Grantee must provide CARB all pass phrases/passwords used for private keys to encrypt data used, produced, or acquired in the course of performing duties under this Grant Agreement.
- p. The Grantee must sign all non-disclosure and confidentiality agreements as provided by CARB and shall require employees, contractors, and subcontractors to do the same when requested by CARB.
- q. The Grantee agrees to notify CARB immediately of any security incident involving the information system, servers, data, or any other information developed or collected pursuant to this Grant. The Grantee agrees that CARB has the right to participate in the investigation of a security incident involving its data or conduct its own independent investigation, and that the Grantee shall cooperate fully in such investigations.
- r. The Grantee agrees that it shall be responsible for all costs incurred by CARB due to a security incident resulting from the acts or omissions of Grantee or any of its employees, agents, officers, or Recipients, including any acts or omissions resulting in an unauthorized disclosure, release, access, review, or destruction of data or information; or loss, theft or misuse of information or data developed or gathered pursuant to this Grant. If the Grantee experiences a loss or breach of data, the Grantee shall immediately report the loss or breach to CARB and, where required by applicable law, to State or federal officials. If applicable law requires, or if CARB determines, that notice to the individuals whose data has been lost or

breached is needed, then the Grantee shall provide all such notification and will bear any, and all costs associated with the notice, or any mitigation selected by CARB. These costs include, but are not limited to, staff time, material costs, postage, media announcements, credit monitoring for impacted individuals, and other identifiable costs associated with the breach or loss of data.

- s. The Grantee shall ensure that confidential, sensitive and/or PII information shall be encrypted in accordance with California State Administrative Manual 5350.1 and California Statewide Information Management Manual 5305-A.
- t. Grantee assumes all responsibility and liability for the security and confidentiality of the PII and confidential information under its control.
- u. Rights to data: Grantee acknowledges, accepts, and agrees that as between Grantee and Grantor, all rights, including all intellectual property rights, in and to PII, data, information, documentation and materials shall remain the exclusive property of the Grantor, and Grantee has a limited, non-exclusive license to access, and use said information as provided to Grantee solely for performing its obligations under the Grant Agreement. Nothing herein shall be construed to confer any license or right to said PII, data, documentation, materials, or information, including user tracking and exception data, by implication, estoppel, or otherwise, under copyright or other intellectual property rights, to any third party. Unauthorized use of said information by Grantee or third parties is prohibited. For the purposes of this requirement, the phrase "unauthorized use" means the data mining or processing of data, stored, or transmitted by any Grantee or third-party service, for unrelated or commercial purposes, advertising, or advertising-related purposes, or for any other purpose other than security or service delivery analysis that is not explicitly authorized by Grantor.
- v. Grantee certifies, represents, and warrants that:
 - i. Its data and information security standards, tools, technologies, and procedures are sufficient to protect such information and data;
 - ii. Grantee is in compliance and shall remain in compliance at all times during the Grant Term with the following requirements and obligations:
 1. The California Information Practices Act (Civil Code Sections 1798 et seq.);
 2. Current NIST special publications 800-171 Protecting Controlled Unclassified Information in Nonfederal Information Systems and

Organizations. Third party audit results and Grantee's plan to correct any negative findings shall be made available to the Grantor upon request;

3. Undergo an annual Statement on Standards for Attestation Engagements (SSAE) No. 16 Service Organization Control (SOC) 2 Type II audit. Third party audit results and Grantee's plan to correct any negative findings and implementation progress reports shall be made available to the Grantor upon request; and

4. Privacy provisions of the Federal Privacy Act of 1974;

iii. Compliance with industry standards and guidelines applicable to the work performed under the Grant Agreement. Relevant security provisions may include but are not limited to: Health Insurance Portability and Accountability Act of 1996, IRS 1075, Health Information Technology for Economic and Clinical (HITECH) Act, Criminal Justice Information Services (CJIS) Security Policy, Social Security Administration (SSA) Electronic Information Exchange Security Requirements, and the Payment Card Industry (PCI) Data Security Standard (DSS) as well as their associated Cloud Computing Guidelines.

13.13 Conflict of Interest: Government Code Section 87104 prohibits public officials of CARB, which includes any member, officer, employee, or consultant of a CARB advisory body, from making a formal or informal appearance before, or oral or written communication to CARB for the purpose of influencing a decision by CARB on a grant or other entitlement for use, such as a contract, loan, license, or permit. Prohibited communications include grant applications, letters, emails, phone calls, meetings, or any other form of oral or written communication within or outside of a public committee meeting with CARB, or CARB staff, for the purpose of influencing a CARB decision on an application for funding submitted to CARB. A knowing or willful violation of this section may result in a member being guilty of a misdemeanor and fined up to the greater of \$10,000 or three times the amount of an amount unlawfully received. If a court determines a violation occurred and that the official action might not otherwise have been taken or approved if not for the prohibited communication, the Grant may be voided. (See Gov. Code §§ 91000, 91003.)

a. For this reason, CARB officials, including but not limited to advisory body members, also may not be a signatory, or administrator on a grant application, or on any resulting grant agreement. Such individuals should not be listed on the grant application except as necessary to show their role in the organization.

b. Note that an advisory body member's organization may continue to be

eligible for a grant. However, the grant must not follow any communications for purposes of influence by the advisory body member on CARB's decision on that grant agreement. Additionally, that organization would need to identify a different member of the organization to sign or be the administrator for any applications and awarded grants.

- c. Please also note that applications from organizations affiliated with CARB Board members may require additional review and Board approval. Although CARB will make every effort to obtain required review and approval in a timely manner, this may delay grant execution and/or distribution of funds.
- d. The Grantee certifies that it is, and shall remain, in compliance with all applicable State and federal conflict of interest laws during the entire Term of this Grant Agreement. The Grantee will have no interest, and shall not acquire any interest, direct or indirect, which will conflict with its ability to impartially perform under, or complete the tasks described in, this Grant. The Grantee must disclose any direct or indirect financial interest or situation which may pose an actual, apparent, or potential conflict of interest with its duties throughout the Grant Term. CARB may consider the nature and extent of any actual, apparent, or potential conflict of interest in the Grantee's ability to perform the Grant. The Grantee must immediately advise CARB in writing of any potential new conflicts of interest throughout the Grant Term.

13.14 Construction: This Grant Agreement shall not be construed more strongly against either Party regardless of who is more responsible for its preparation.

13.15 Cumulative Remedies: The rights and remedies of the Parties to this Grant Agreement, whether pursuant to this Grant Agreement or in accordance with law, shall be construed as cumulative, and the exercise of any single right or remedy shall constitute neither a bar to the exercise of nor the waiver of any other available right or remedy.

13.16 Disputes: The Grantee shall continue with the responsibilities under this Grant Agreement during any dispute. Grantee staff or management will work in good faith with CARB staff and management to resolve any disagreements or conflicts arising from implementation of this Grant Agreement. However, any disagreements that cannot be resolved at the management level within 30 calendar days of when the issue is first raised with CARB staff shall be subject to resolution by the CARB Executive Officer, or his designated representative. Nothing contained in this paragraph is intended to limit any of the rights or remedies that the Parties may have under law.

13.17 Vehicle Charging Infrastructure and Equipment: Prior to executing contracts,

Grantee must ensure the following requirements are included in all Recipient agreements and contracts and all or other agreements pursuant to this Grant:

- a. Prior to authorizing work, a Recipient that was awarded funds to install electrical charging equipment for use by on-road transportation vehicles, must require both:
 - i. An Assembly Bill (AB) 841 Certification that certifies the Project will comply with all AB 841 (2020) requirements or describes why the AB 841 requirements do not apply to the Project. The certification shall be signed by the sub awardee's or subgrantee's authorized representative.
 - ii. Electric Vehicle Infrastructure Training Program (EVITP) Certification Numbers of each EVITP certified electrician that will install electric vehicle charging infrastructure or equipment.
- b. Evidence such as Certification Numbers are not required to be obtained by Grantee if AB 841 requirements do not apply to a Project.
- c. Prior to remitting payment to a Recipient, Grantee is responsible for collecting all AB 841 Certifications to ensure the Project did comply with all AB 841 (2020) requirements and shall retain Certification Numbers in accordance with the Grantee's records retention schedule.
- d. The requirements of this section do not apply to any of the following:
 - i. Electric vehicle charging infrastructure installed by employees of an electrical corporation or local publicly owned electric utility.
 - ii. Electric vehicle charging infrastructure funded by moneys derived from credits generated from the Low Carbon Fuel Standard (California Code of Regulations, tit. 17, § 95480 et seq.).
 - iii. Single-family home residential electric vehicle chargers that can use an existing 208/240-volt outlet.

13.18 Electric Vehicle Charger Uptime: Grantee shall ensure that all agreements with any and all Recipients, consultants, affiliates, or representatives, who receive or use any Grant Funds to support the installation of electric vehicle chargers or charging stations on or after January 1, 2024, comply at all times with the applicable requirements of AB 2061 (2022; Pub. Resources Code, §25231.5), and any and all related uptime recordkeeping and reporting standards, as a condition of Grant Fund receipt or use and as a condition of participation in the Program. The requirements in this section do not apply to chargers or charging stations installed at residential real property containing four or fewer dwelling units. This section shall remain in effect until January 1, 2035.

- 13.19 Entitlements and Regulatory Compliance: The Grantee agrees to comply with all applicable laws, ordinances, regulations, and standards in its performance under this Grant Agreement, including obtaining, where needed or required by law, any permits, or approvals necessary to undertake the activities funded by the Grant Funds, and complying with all environmental review requirements associated with such activities.
- 13.20 Environmental Justice: In the performance of this Grant Agreement, the Grantee shall conduct its programs, policies, and activities that substantially affect human health or the environment in a manner that ensures the fair treatment of people of all races, cultures, and income levels, including minority populations and low-income population of the State of California. Equal access includes, but is not limited to, ensuring language barriers are fully addressed to the satisfaction of CARB and as otherwise required by local, State, and federal laws.
- 13.21 Fiscal management systems and accounting standards: The Grantee agrees that, at a minimum, its fiscal control and accounting procedures will be sufficient to permit tracing of Grant Funds to a level of expenditure adequate to establish that such Grant Funds have not been used in violation of California law or this Grant Agreement. Unless otherwise prohibited by State or local law, the Grantee further agrees that it will maintain separate Project accounts in accordance with generally accepted accounting principles.
- a. Grantee shall not commingle Grant Funds with any other accounts, revenues, grants, donations, or funds. The Grantee shall maintain all Grant Funds in a separate bank account designated specifically for the purposes of carrying out the obligations of this Grant Agreement. The bank account must be held in the name of the Grantee (the official non-profit corporate name, and not a dba), and no other person or entity. Grant Funds are not the assets of the Grantee and shall not be used, obligated, or relied upon for any purposes other than those purposes and uses set out in this Grant Agreement. Grant Funds shall not be used as collateral for an obligation to any debt, loan, or other commitments of Grantee, its officers, agents, assigns, Recipients, or affiliates. Grantee shall ensure that the Grantor is designated in writing as a third-party beneficiary of all bank accounts in which Grant Funds are maintained.
- 13.22 Force Majeure: Neither CARB nor the Grantee must be liable for or deemed to be in default for any delay or failure in performance under this Grant Agreement or interruption of services resulting, directly or indirectly, from acts of God, enemy or hostile governmental action, civil commotion, strikes, government orders, national or State declared pandemics, lockouts, labor disputes, fire, flood, earthquakes, or other physical natural disaster. If either Party intends to invoke this clause to excuse or delay performance, the Party

invoking the clause must provide written notice to the other Party immediately but no later than within fifteen (15) calendar days of when the force majeure event occurs and include reasons that the force majeure event is preventing or delaying that Party in performing its obligations under this contract. CARB may terminate this Grant Agreement immediately in writing without penalty in the event Grantee invokes this clause, in which case Grantee shall immediately return all remaining Grant Funds to CARB, cease all expenditure of Grant Funds, and turn over all documents, records, deliverables intellectual property and other information in relation to this Grant.

- a. If the Grant Agreement is not terminated by CARB pursuant to this clause, upon completion of the event of force majeure, the Grantee must recommence the performance of its obligations under this Grant Agreement. The Grantee must also provide a revised schedule to minimize the effects of the delay caused by the event of force majeure. An event of force majeure does not relieve a Party from liability for an obligation which arose before the occurrence of that event nor is any Party relieved from those obligations which survive termination of the Grant Agreement.

13.23 Funding Prohibitions for Sectarian Purposes and Non-Public Schools: Grantee and the Recipients may use or authorize the use of CARB-provided funds only in any manner that is consistent with applicable laws, including California Constitution, article XVI, section 5, article IX, section 8, and federal law. CARB reserves the right to obtain additional information from Grantee and others to determine compliance with California Constitution, article XVI, section 5 and article IX, section 8. Failure to provide any requested information may result in denial of Administrative Fees, Grant Funds, future or termination of this Grant Agreement or any other agreements.

13.24 Governing Law and Venue: This Grant Agreement is governed by and shall be interpreted in accordance with the laws of the State of California. CARB and the Grantee hereby agree that any action arising out of this Grant Agreement shall be filed and maintained in the Superior Court in and for the County of Sacramento, California, or in the United States District Court in and for the Eastern District of California. The Grantee hereby waives any existing sovereign immunity for the purposes of this Grant Agreement.

13.25 Grantee's Responsibility for Work: The Grantee shall be responsible for all work performed pursuant to this Grant Agreement, including but not limited to work performed by any of Grantee's agents, employees, representatives, affiliates, suppliers, or Recipients. The Grantee shall be responsible for any and all disputes arising out of its contract for work performed in relation to, as a result of or as a consequence of this Grant, including, but not limited to, payment disputes with Recipients, employees, agents, affiliates, suppliers, and providers of services. Grantor will not mediate disputes between the Grantee

and any other entity concerning responsibility for performance of work performed pursuant to this Grant Agreement. The Grantee shall only distribute Grant funds on a reimbursement basis. Grantee shall not use Grant funds for advance payments to Recipients, service providers, suppliers, or other third parties.

- a. Upon request by CARB, Grantee shall provide CARB with a copy of any and all contracts and agreements where services or work will be funded using Grant Funds. CARB may also request copies of these documents during or after the Grant Term and Grantee agrees to provide them within five (5) calendar days of the date of the request. For contracts or agreements that are listed as "to be determined" in the Budget, the Schedule or elsewhere in any attachment to this Grant Agreement, the Grantee must submit a revised Budget to CARB, identifying the contractor, subcontractor or other Recipient and specific items of cost expected to be incurred by that Recipient, which in each instance shall be subject to advance approval by CARB. In addition, Grantee must have a fully executed agreement with all Recipients before a Recipient can incur any costs for which the Grantee will seek reimbursement.
- b. The Grantee is required, where feasible, to employ best contracting and procurement practices that promote open competition for all goods and services. Grantee shall obtain price quotes from an adequate number of sources for all contracts and subcontracts.
- c. Upon request, Grantee will provide CARB a copy of all solicitations for services or products used or needed to carry out the terms of this Grant Agreement, including copies of the proposals or bids received.
- d. Grantee is responsible for handling all contractual and administrative issues arising out of or related to any Recipient agreements it enters into to carry out or perform any of the work under this Grant Agreement. Nothing contained in this Grant Agreement or otherwise creates any contractual relationship between CARB and any Recipient, and no Recipient agreement may relieve Grantee of its responsibilities under this Grant Agreement. Grantee is solely liable and responsible for the acts and omissions of each Recipient or persons directly or indirectly employed by any of them.
- e. The Grantee's obligation to pay its Recipients is an independent obligation from CARB's obligation to make payments to the Grantee. As a result, CARB has no obligation to pay or enforce the payment of any funds to any Recipient. The Grantee is responsible for establishing and maintaining contractual agreements with and reimbursing each Recipient for work performed in accordance with the terms of that Recipient agreement and this Grant Agreement.

- f. Without limiting any of CARB's other remedies, failure to comply with the above requirements is a material breach of this Grant Agreement and grounds for immediate termination.

13.26 Indemnification: The Grantee agrees to indemnify, defend, and hold harmless the State of California, CARB, and CARB officers, Board members, employees, agents, representatives, and successors-in-interest against, for and from any and all liabilities, losses, damages, claims and expenses, including reasonable attorneys' fees, arising out of, resulting from or related to any actions or inactions of Grantee or any of its Recipients, affiliates, employees, officers, agents and assigns, including but not limited to the operation of any equipment, vessels, vehicles or engines purchased, acquired, developed, modified or used with Grant Funds in whole or in part. Grantee shall ensure that the same or substantially and materially the same indemnification requirements in favor of the State of California are set out in each Recipient agreement.

13.27 Independent Actor: The Grantee, its agents, employees, affiliates, Recipients, suppliers, officers, and assigns, if any, in their, its, his, or her performance of this Grant Agreement, shall act in an independent capacity and not as officers, employees, or agents of CARB or the State of California.

13.28 Insurance Requirements: The Grantee and each Recipient must comply with all requirements outlined in the (a) General Provisions section and (b) Grant Insurance Requirements section. No payment of Grant Funds will be made under the Grant until the Grantee fully complies with all insurance requirements.

a. General Provisions

- i. Coverage Term - Coverage needs to be in force for the complete Term of the Grant. If insurance is set to expire during the Term of the Grant, a new certificate must be received by the State at least ten days prior to the expiration of this insurance. Any new insurance must comply with the original Grant terms.
- ii. Policy Cancellation or Termination & Notice of Non-Renewal - Grantee is responsible for notifying the State within five business days of any cancellation, non-renewal, or material change that affects required insurance coverage. New certificates of insurance are subject to the approval of the Department of General Services and the Grantee agrees no work or services will be performed prior to obtaining such approval. In the event that the Grantee or a Recipient fails to keep in effect at all times the specified insurance coverage, the State may, in addition to any other remedies it may have, terminate the Grant upon the occurrence of

such event, subject to the provisions of the Grant.

- iii. Premiums, Assessments, and Deductibles – The Grantee and each Recipient is responsible for any premiums, policy assessments, deductibles, or self-insured retentions contained within their insurance program.
- iv. Primary Clause – All required insurance contained in the Grant shall be primary and not excess or contributory, to any other insurance carried by the State.
- v. Insurance Carrier Required Rating – All insurance companies must carry an AM Best rating of at least “A-” with a financial category rating of no lower than VI. If the Grantee is self-insured for a portion or all of its insurance, review of financial information including a letter of credit may be required.
- vi. Endorsements – For any work or activity performed or carried out in whole or in part using Grant Funds or to carry out any term or condition of this Grant Agreement, each insurance policy must name “the State of California, the California Air Resources Board, and each of its and their officers, agents, and employees as additional insureds” by an endorsement that states the names exactly as stated above in this Grant Agreement. A blanket additional insured endorsement is not acceptable. A Waiver of Subrogation or Right to Recover endorsement in favor of the State of California must also be attached to the certificate. Any required endorsements requested by the State or required in this Grant Agreement must be physically attached to all requested certificates of insurance and not substituted by referring to such coverage on the certificate of insurance.
- vii. Inadequate Insurance – Inadequate or lack of insurance does not negate the Grantee’s or any Recipient’s obligations under the Grant.
- viii. Satisfying a Self-Insured Retention (SIR) – All policies with an SIR shall be endorsed to all the State to satisfy the SIR or Deductible at the State’s discretion. The State may deduct from any amounts otherwise due to Grantee to fund the SIR/deductible. Policies shall not contain any provision that limits the satisfaction of the SIR/deductible to the Named Insured. The Grantee’s insurer may also eliminate the SIR/deductible in favor of the State’s interests.
- ix. Use of Contractors or Subcontractors – In the case of the Grantee’s utilization of any Recipients, contractors, subcontractors, or consultants to complete any part of the Grant scope of work, the Grantee shall

include all Recipient, contractors, subcontractors, or consultants as insureds under the Grantee's insurance or supply evidence of the Recipient's, contractor's, Subcontractor's, or consultant's insurance to the State equal or greater to policies, coverages, and limits required of the Grantee. Grantee shall also ensure that Grant Recipients carry the same or greater coverage for the work or services performed.

- b. Grant Insurance Requirements: The Grantee and each Recipient shall display evidence of the following on a certificate of insurance which includes all the required endorsements, including additional insured endorsements and waiver of subrogation/right to recover endorsements. Failure to provide the certificates upon request will result in the termination of the Grant. The following coverages must be evidenced on the certificates of insurance:
 - i. Commercial General Liability - The Grantee, and each Recipient, shall maintain general liability on an occurrence form with limits not less than \$2,000,000 per occurrence for bodily injury and property damage liability combined with a \$5,000,000 annual policy aggregate. A "per project aggregate" endorsement is required. The policy shall include coverage for liabilities arising out of premises, operations, independent contractors, products, completed operations, personal and advertising injury, and liability assumed under an insured contract or grant. This insurance shall apply separately to each insured against whom a claim is made or suit is brought subject to Grantee's or a Recipient's limit of liability. For any work or activity performed or carried out in whole or in part using Grant Funds or to carry out any term or condition of this Grant Agreement, each insurance policy must name "the State of California, the California Air Resources Board, and each of its and their officers, agents, and employees as additional insureds" by an endorsement that states the names exactly as stated above in this Grant Agreement. A blanket additional insured endorsement is not acceptable. A Waiver of Subrogation or Right to Recover endorsement in favor of the State of California must also be attached to the certificate.
 - ii. Automobile Liability - If the Grantee or a Recipient will be using vehicles to complete the Project or driving a vehicle onto State property, automobile liability insurance is required. For vehicles used in a CARB-funded shared mobility services (e.g., electric bikes and scooters, carshare vehicles, shuttles, and buses), the Grantee and each Recipient shall maintain motor vehicle liability with limits of not less than a \$5,000,000 per accident. For any other vehicle that is not used in a CARB-funded shared mobility service (e.g., vehicles used for project planning, rebalancing, maintenance, marketing, outreach, or driving to events), the Grantee and each Recipient shall maintain motor vehicle

liability with limits of not less than \$2,000,000 per accident. Such insurance shall cover liability arising out of a motor vehicle including owned, hired, and non-owned motor vehicles. At the request of CARB, the Grantee and each Recipient must show proof of automobile liability. Failure to provide proof upon request will result in the termination of the Grant. For any work or activity performed or carried out in whole or in part using Grant Funds or to carry out any term or condition of this Grant Agreement, each insurance policy must name "the State of California, the California Air Resources Board, and each of its and their officers, agents, and employees as additional insureds" by an endorsement that states the names exactly as stated above in this Grant Agreement. A blanket additional insured endorsement is not acceptable. A Waiver of Subrogation or Right to Recover endorsement in favor of the State of California must also be attached to the certificate.

1. In the event that the Fleet Owner maintains business automobile liability insurance, the insurance policy must name "the State of California, the California Air Resources Board, and each of its and their officers, agents, and employees as additional insureds" by endorsement that states the names exactly as stated above in this Grant Agreement. A blanket additional insured endorsement is not acceptable.
2. By signing the Grant Agreement, the Grantee certifies that the Grantee and any employees, subcontractors, or servants possess valid automobile coverage in accordance with California Vehicle Code Sections 16450 to 16457, inclusive. The State reserves the right to request proof at any time.
- iii. Workers Compensation and Employers Liability - The Grantee and each Recipient shall maintain statutory worker's compensation and employer's liability coverage for all its employees who will be engaged in the performance of the Grant. In addition, employer's liability limits of \$1,000,000 are required.
- iv. Crime Insurance - Crime insurance requirements are negotiable at CARB's sole discretion. At a minimum, the maximum amount of funding that the Grantee and each Recipient will have on hand at any time should be covered. Coverage shall include but not be limited to employee dishonesty, theft, forgery, or alteration, and inside/outside money and securities coverages including first- and third-party theft for State-owned or leased property in the care, custody, and/or control of the Grantee. The policy shall include as loss payee, the State of California, California Air Resources Board. For any work or activity performed or carried out in whole or in part using Grant Funds or to

carry out any term or condition of this Grant Agreement, each insurance policy must name "the State of California, the California Air Resources Board, and each of its and their officers, agents, and employees as additional insureds" by an endorsement that states the names exactly as stated above in this Grant Agreement. A blanket additional insured endorsement is not acceptable. A Waiver of Subrogation or Right to Recover endorsement in favor of the State of California must also be attached to the certificate.

- v. Non-Profit Organization with Volunteers Only (applicable to non-profit organizations only): A Volunteer Accident Insurance Policy with a limit not less than \$1,000,000. The policy shall contain a waiver of subrogation in favor of the State of California, if such endorsement is available in the open market. Said policy shall be issued by an insurance company with a rating which is acceptable to the Department of General Services, Office of Risk, and Insurance Management. CARB reserves the right to review and adjust insurance requirements as necessary during the Grant Term.
- vi. Cyber Liability coverage, with limits not less than \$2,000,000 per occurrence or claim: Coverage shall be sufficiently broad to respond to the duties and obligations as is undertaken by the Grantee in the Grant Agreement and shall include, but not be limited to, claims involving security breach, system failure, data recovery, business interruption, cyber extortion, social engineering infringement of intellectual property, including but not limited to infringement of copyright, trademark, trade dress, invasion of privacy violations, information theft, damage to or destruction of electronic information, release of private information, alteration of electronic information, extortion, and network security. The policy shall provide coverage for breach response costs, regulatory fines, and penalties, as well as credit monitoring expenses. The Policy shall include or be endorsed to include property damage liability coverage for damage to, alteration of, loss of, or destruction of electronic data and/or information "property" of the state of California in the care, custody, or control of the Grantee. For any work or activity performed or carried out in whole or in part using Grant Funds or to carry out any term or condition of this Grant Agreement, each insurance policy must name "the State of California, the California Air Resources Board, and each of its and their officers, agents, and employees as additional insureds" by an endorsement that states the names exactly as stated above in this Grant Agreement. A blanket additional insured endorsement is not acceptable. A Waiver of Subrogation or Right to Recover endorsement in favor of the State of California must also be attached to the certificate.

- vii. Professional Liability (Errors and Omissions): Insurance appropriate to the Grantee's profession, with limit no less than \$2,000,000 per occurrence or claim, \$5,000,000 aggregate. For any work or activity performed or carried out in whole or in part using Grant Funds or to carry out any term or condition of this Grant Agreement, each insurance policy must name "the State of California, the California Air Resources Board, and each of its and their officers, agents, and employees as additional insureds" by an endorsement that states the names exactly as stated above in this Grant Agreement. A blanket additional insured endorsement is not acceptable. A Waiver of Subrogation or Right to Recover endorsement in favor of the State of California must also be attached to the certificate.
- viii. Self-insurance - If a Grantee has elected to be self-insured it must receive approval of its self-insurance program from the DGS Office of Risk and Insurance Management (ORIM). To obtain ORIM approval, the Grantee must submit the following documents to ORIM.
1. Workers' Compensation - The Grantee will provide a copy of its Certificate of Consent to Self-Insure from the Department of Industrial Relations.
 2. All Other - The Grantee's Risk Manager, or comparable position holder, shall provide a written description of the plan including what is covered, what is not covered, identify the financial limits of the plan, and identify the source of funds for financing the plan.
 - A. Provide the firm's most recent audited annual financial statement including all accounting letters. The report must show the firm's owner's equity of at least \$5,000,000 and annual profit of at least \$500,000.
 - B. Provide a signed written statement from the firm's CPA confirming the annual net profit for each of the prior 4 years has been at least \$500,000.
- ix. Harbors, Ports, Waterways, Vessel, Watercraft - If the Grantee or any of the Recipients (funded in whole or in part with any Grant Funds) will be working with, on, in or around any harbor, dock, marina, port or waterway or will be working with, building, designing, deploying, developing, operating or using any form of watercraft or vessel, then in addition to all other insurance coverage required in this Grant Agreement, the Grantee and said Recipients shall also carry the following insurance coverage:

1. Marine General Liability (MGL) insurance, with no waterborne exclusions, and with a limit of not less than \$5,000,000 per occurrence/\$5,000,000 aggregate. MGL shall include, at a minimum, coverage for:
 - A. Premises Liability
 - B. Contractual Liability
 - C. Products and Completed Operations
 - D. Bodily Injury and Property Damage
 - E. Vessel Owner/Operator Liability
 - F. Sudden and Accidental Pollution
 - G. Vessel Hull & Machinery (H&M).
 - H. Marina Operators Legal Liability
 - I. Terminal Operators/Wharfingers Liability with a limit of not less than \$10,000,000 per claim/\$10,000,000 aggregate.
 - J. United States Longshore and Harbor Workers Compensation Act (USL&H) with statutory limits, for work that will take place on or over a navigable waterway.
 - K. Maritime Employers Liability (MEL) with a limit of liability of not less than \$1,000,000 per claim, for underwater or diving activity. Grantee and Recipients shall only use commercially certified divers for underwater or diving activities.
 - L. Protection & Indemnity (P&I) (including crew and passengers) with a limit of liability of not less than \$1,000,000 per claim for vessels carrying less than 25 persons (passengers or crew), and a limit of liability of not less than \$10,000,000 per claim for vessels carrying greater than 25 persons (passengers or crew).
 - M. Vessel Pollution Liability with a limit of liability of not less than \$1,000,000 per claim for vessels carrying less than 25 persons (passengers or crew), and a limit of liability of not less than \$10,000,000 per claim for vessels capable of carrying greater than 25 persons (passengers or crew).
2. For any work or activity performed or carried out in whole or in part

using Grant Funds or to carry out any term or condition of this Grant Agreement, each insurance policy must name "the State of California, the California Air Resources Board, and each of its and their officers, agents, and employees as additional insureds" by an endorsement that states the names exactly as stated above in this Grant Agreement. A blanket additional insured endorsement is not acceptable. A Waiver of Subrogation or Right to Recover endorsement in favor of the State of California must also be attached to the certificate.

13.29 Non-Compliance

- a. Without limiting any of its other remedies, CARB may, due to Grantee's or any Recipient noncompliance with any term or condition of this Grant Agreement, withhold future payments, demand and be entitled to recapture or repayment of past reimbursements or payments, or suspend or terminate this Grant Agreement. All work and tasks are non-severable, and completion of all of them is material to this Grant Agreement. Thus, CARB, without limiting its other remedies, is entitled to repayment of all Grant Funds if work is not timely completed or for any other breach of this Grant Agreement.
- b. Grantee understands, acknowledges, and agrees that any Recipient's failure to comply in whole or in part with this Grant Agreement or with applicable federal, State, and local air quality rules, regulations, and laws, is, in each instance, a material breach of the Grant Agreement and such breach will result in undue hardship and damages to the State of California and CARB some or all of which is impossible to easily calculate. Grantee understands, acknowledges, and agrees that Grantee's said compliance is a precondition to the award and distribution of Grant Funds and a continuing obligation of Grantee during the Term of the Grant Agreement and for the consecutive three (3) years following expiration, cancellation, or termination of the Grant Agreement, whichever occurs later.
- c. Liquidated Damages. If CARB determines, within its sole and absolute discretion, that a Recipient is in breach or has breached any term or condition set out in this Grant Agreement that pertains to or applies to a Recipient, then Grantee shall ensure that said Recipient, immediately upon demand, pays to CARB, as a recapture of funds or liquidated damages, the full amount of all Grant Funds previously paid to the Recipient to date.
 - i. The Parties agree that quantifying the losses arising from a breach by a Recipient is inherently difficult insofar as breach may cause CARB and the State of California irreparable, serious, or substantial harm or damage to taxpayers or to the environment. The Parties further stipulate

that the agreed upon amount of recaptured funds or liquidated damages is not a penalty, but rather a reasonable measure of damages based upon the Parties' experience and given the nature of the losses that may result from said breach. The Parties hereto have computed, estimated, and agreed upon the sum as an attempt to make a reasonable forecast of probable actual loss because of the difficulty of estimating with exactness the damages which will result.

- d. These obligations shall apply even if there is a concurrent noncompliance or violation of air quality rules, regulations, or laws caused by any third party.
- e. CARB or its designee may also recoup or recapture Grant Funds due to misinformation, misrepresentation, or fraud. CARB also reserves the right to prohibit any entity from participating in existing or future CARB programs, projects, or grants due to non-compliance with any term or condition of this Grant Agreement or any requirement of the Moyer program due to misinformation, misrepresentation, or fraud.
- f. Grantee shall, for each occurrence, document and immediately report to CARB any and all suspected or known substandard work; suspected or actual Recipient breach of agreement, fraud, misrepresentations, abuse of discretion, or misuse of funds; suspected or known violations of any Grant or subgrant terms or conditions, and all misrepresentations and fraud carried out by any third parties including but not limited to Grantee's contractors, subcontractors, consultants, employees, agents, affiliates, officers, directors, or representatives. Grantee shall fully cooperate and work with CARB to investigate, resolve, and take appropriate action to enforce the terms and conditions of each Grant Recipient agreement and this Grant Agreement, including appropriately prosecuting or litigating any civil or criminal claims (including for recapture of Grant Funds from Recipients) as determined necessary by CARB or its representative.
- g. Alternative Enforcement. The remedies set out in this Grant Agreement are contractual in nature. Nothing stated in this Grant Agreement in any way limits, prevents, or precludes the State of California from taking any enforcement action, exercising any police power, or prosecuting any violation of law.

13.30 Nondiscrimination: During the performance of this Grant Agreement, the Grantee and its contractors, subcontractors, consultants, and agents shall ensure that no person is, on the basis of sex, race, color, religion, ancestry, national origin, ethnic group identification, age (40 or over), mental disability, physical disability, medical condition, genetic information, marital status, veteran or military status, gender, gender identity, gender expression,

reproductive health decision making, or sexual orientation, unlawfully denied full and equal access to the benefits of, or unlawfully subjected to discrimination under, any program or activity that is conducted, operated, or administered under this Grant Agreement or funded with Grant Funds. In addition:

- a. During the performance of this Grant Agreement, the Grantee and its contractors, subcontractors, consultants, and agents shall not unlawfully discriminate against, harass, or allow harassment against any employee or applicant for employment, refuse to hire or employ any person, or refuse to select any person for a training program leading to employment, or bar or discharge any person from employment or from a training program leading to employment, or discriminate against any person in compensation or in terms, conditions, or privileges of employment, because of race, religious creed, color, national origin, ethnic group identification, ancestry, physical disability, mental disability, reproductive health decision making (e.g. family-care leave, medical-care leave, or pregnancy-disability leave), medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age (40 or over), sexual orientation, or veteran or military status.
- b. The Grantee and its contractors, subcontractors, consultants, and agents shall ensure that the evaluation and treatment of all persons receiving or applying for Grant Funds or participating in any Grant programs, projects, or activities, along with all respective employees and applicants for employment, are free of such discrimination and harassment.
- c. The Grantee and its contractors, subcontractors, consultants, and agents shall comply with the provisions of the California Fair Employment and Housing Act (Gov. Code section 12900 et seq.) and the applicable regulations promulgated thereunder (California Code of Regulations, title 2, section 10000 et seq.). The applicable regulations (California Code of Regulations, title 2, section 11000 et seq.) of the Civil Rights Council are incorporated into this Grant Agreement by reference and made a part hereof as if set forth in full.
- d. The Grantee and its contractors, subcontractors, agents, and consultants shall give written notice of their respective obligations under this clause to labor organizations with which any may have a collective bargaining or other agreement. The Grantee shall include the nondiscrimination and compliance provisions of this clause in all contracts, subcontracts, and agreements where work is performed to fulfill any term or condition of this Grant Agreement.

13.31 No Third-Party Rights: Except as otherwise expressly stated elsewhere in this

Grant Agreement, this Grant Agreement does not create, and nothing stated in this Grant Agreement creates rights in, or Grant remedies to, any third party as a beneficiary of this Grant Agreement, or of any duty, covenant, obligation, or undertaking establish herein.

13.32 Notice: Any notice, demand, request, consent, or approval that either Party desires or is required to give to the other Party under this Grant Agreement shall be in writing. Notices may be transmitted by any of the following means:

- a. By delivery in person.
- b. By certified U.S. mail, return receipt requested, postage prepaid.
- c. By "overnight" delivery service; provided that next business-day delivery is requested by the sender.
- d. By electronic means.

Notices delivered in person will be deemed effective immediately on receipt (or refusal of delivery or receipt). Notices sent by certified mail will be deemed effective seven (7) calendar days after the date deposited with the U.S. Postal Service. Notices sent by overnight delivery service will be deemed effective one business day after the date deposited with the overnight delivery service. Notices sent electronically will be effective on the date of transmission, where it is documented in writing. Notices shall be sent to the persons and addresses set forth in Section 4, Project Liaisons, of this Grant Agreement. Either Party may, by written notice to the other, designate a different address that shall be substituted for the names of persons identified under Section 4 of this Grant Agreement.

13.33 Office of Foreign Asset Control: The Office of Foreign Assets Control ("OFAC") of the U.S. Department of the Treasury administers and enforces economic and trade sanctions based on U.S. foreign policy and national security goals against targeted foreign countries and regimes, terrorists, international narcotics traffickers, those engaged in activities related to the proliferation of weapons of mass destruction, and other threats to the national security, foreign policy, or economy of the United States. OFAC publishes lists of individuals and companies owned or controlled by, or acting for or on behalf of, targeted countries. It also lists individuals, groups, and entities, such as terrorists and narcotics traffickers designated under programs that are not country specific. These lists can be found at <https://home.treasury.gov/policy-issues/office-of-foreign-assets-control-sanctions-programs-and-information>. Grantee represents, warrants, and agrees that neither Grantee nor any of its Recipients, affiliates, agents, employees, officers, representatives, or assigns are in violation of any federal law or laws pertaining to any entity or individual listed

on any of the OFAC lists. Unless otherwise authorized or exempt, transactions by U.S. persons or in the United States may be or are prohibited if they involve transferring, paying, exporting, withdrawing, or otherwise dealing in the property or interests in property of an entity or individual listed on the Office of Foreign Asset Control's (OFAC) Specially Designated Nationals (SDN) or other Lists. The property and interests in property of an entity that is 50 percent or more owned, whether individually or in the aggregate, directly or indirectly, by one or more persons whose property and interests in property are blocked pursuant to any part of 31 C.F.R. chapter V are also blocked, regardless of whether the entity itself is listed. Refer also to the U.S. Department of the Treasury website: <https://home.treasury.gov/policy-issues/financial-sanctions/sanctions-programs-and-country-information/ukraine-russia-related-sanctions>.

- 13.34 Order of precedence: In the event of any inconsistency between the exhibits, attachments, specifications, or provisions which constitute this Grant Agreement, the following order of precedence shall apply:
- a. Grant Agreement Cover Sheet
 - b. Exhibit A - Grant Provisions
 - c. Exhibit B - Statement of Work
 - d. Exhibit C - FY 2021-22 and FY 2022-23 Grant Solicitation Package
 - e. All other Exhibits incorporated into the Grant Agreement as listed on the Grant Agreement Cover Sheet.
- 13.35 Ownership: All information, data, documents, Intellectual Property, including but not limited to webpages received, managed, or generated by the Grantee under this Grant Agreement is the property of CARB. No such information, data, documents, or Intellectual Property shall be released to any third party without CARB's advance written approval except where allowed under this Grant Agreement. Notwithstanding the above, in the event Grantee is required by deposition, interrogatory, subpoena, or request for documents under the California Public Records Act to disclose information or data received or generated under this Grant Agreement, Grantee shall provide CARB a prompt written notice prior to disclosure with sufficient time (no less than fourteen (14) calendar days) for CARB to challenge or stay any release in an appropriate court of law.
- 13.36 Paragraph Headings: The headings and captions of the various paragraphs, subparagraphs and sections hereof are for convenience only, and they shall not limit, expand, or otherwise affect the construction or interpretation of this

Grant Agreement.

- 13.37 Prevailing Wages and Labor Compliance: Where applicable, the Grantee agrees to be bound by and comply with all the provisions of the California Labor Code including but not limited to Section 1771 et seq. regarding prevailing wages, and other provisions pertaining to recordkeeping and contractor/subcontractor registration. Grantee agrees to monitor all agreements that are funded in whole or in part with Grant Funds to ensure that the provisions of California Labor Code Sections 1720-1861 are being met by Grantee and all Grantee Representatives. Grantee acknowledges, accepts and agrees that wherever any public work (as defined in the Labor Code) is paid for in whole or in part out of public funds, then Grantee and all Grantee Representatives must in all instances comply with the prevailing wage requirements as well as contractor and subcontractor registration requirements under the applicable provisions of the Labor Code. Failure to do so is a material breach of this Grant Agreement and may subject Grantee and/or any of the Grantee Representatives to penalties and other violations imposed by the Department of Industrial Relations.
- 13.38 Professionals: For projects involving installation or construction services, the Grantee agrees that only licensed professionals will be used to perform services or conduct work under this Grant Agreement where such services are called for and licensed professionals are required for those services under California law.
- 13.39 Executive Order N-6-22 - Russia Sanctions: On March 4, 2022, Governor Gavin Newsom issued Executive Order N-6-22 (the EO) regarding Economic Sanctions against Russia and Russian entities and individuals. "Economic Sanctions" refers to sanctions imposed by the U.S. government in response to Russia's actions in Ukraine, as well as any sanctions imposed under State law. The EO directs State agencies to terminate contracts and grants with, and to refrain from entering any new contracts and grants with, individuals or entities that are determined to be a target of Economic Sanctions. Accordingly, should the State determine Contractor or Grantee is a target of Economic Sanctions or is conducting prohibited transactions with sanctioned individuals or entities, that shall be grounds for termination of this agreement. The State shall provide Contractor or Grantee advance written notice of such termination, allowing Contractor or Grantee at least thirty (30) calendar days to provide a written response. Termination shall be at the sole discretion of the State.
- 13.40 Severability: If a court of competent jurisdiction holds any provision of this Grant Agreement to be illegal, unenforceable, or invalid in whole or in part for any reason, the validity and enforceability of the remaining provisions, or portions of those provisions, will not be affected.

- 13.41 Survival: Those terms, conditions, provisions, and exhibits which by their nature should survive termination, cancellation, or expiration of this Grant Agreement, shall so survive, including but not limited to those sections pertaining to indemnity, insurance, recordkeeping, audit, return of funds, data security, confidentiality, transition, ownership, and the general provisions.
- 13.42 Timeliness: Time is of the essence in this Grant Agreement. Grantee and the Recipients shall proceed with and complete all projects in an expeditious and timely manner.
- 13.43 Total Agreement; Entirety: This Grant Agreement constitutes the entire agreement and understanding between the Parties and supersedes and replaces any and all prior negotiations and agreements of any kind, whether written or oral, between the Parties concerning this Grant Agreement.
- 13.44 Waiver of Rights: Any waiver of rights with respect to a default or other matter arising under the Grant Agreement at any time by either Party shall not be considered a waiver of rights with respect to any other default or matter. Any rights and remedies of the State provided for in this Grant Agreement are in addition to any other rights and remedies provided by law.
- 13.45 Compliance with AB794 - Drayage and Short Haul (if applicable): Grantee shall ensure that all agreements with any and all of their Representatives and Grant Recipients who receive or use any Grant Funds to support the purchase, or lease for greater than one year, of new drayage or short-haul trucks contain a requirement to comply at all times with the applicable requirements of AB 794 (2021) and AB 2737 (2022), including all applicable provisions of California Health and Safety Code sections 39680 through 39693, as a condition of Grant Fund receipt or use and as a condition of participation in the Program.
- 13.46 Priority Populations: The Grantee, for the purposes of this program and all projects, will ensure that all projects benefit designated priority populations, as identified by CalEnviroScreen 4.0. The identified priority population census tracts are available at:
<https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40>
The California Climate Investments Priority Populations Map is available at:
<https://webmaps.arb.ca.gov/PriorityPopulations/>

STATEMENT OF WORK (Exhibit B)

Grant No.: G22-ATDP-03

BUDGET SUMMARY (Attachment I)

PROJECT TASKS AND DISBURSEMENTS (Attachment II)

SCOPE OF WORK AND PROJECT SCHEDULE (Attachment III)

KEY PROJECT PERSONNEL (Attachment IV)

BUDGET SUMMARY (Attachment I)

Grant No.: G22-ATDP-03

Grantee: City of Los Angeles Harbor Department

Project: Advanced Technology Demonstration and Pilot Projects: Los Angeles Marine Emission Reduction Project

| Costs | Grant Funding | | Applicant Match Funding | | Total |
|---|------------------|--------------------------|-------------------------|---------|--------------|
| | FY 24/25 GGRF | FY 22/23 General Fund | Cash | In-Kind | |
| Demonstration Technology Funds | \$2,917,477 | \$28,052,899 | \$31,436,492 | \$0 | \$62,406,868 |
| Administrative Funds | \$10,000 | \$0 | \$35,000 | \$0 | \$45,000 |
| Total | \$2,927,477 | \$28,052,899 | \$31,471,492 | \$0 | \$62,451,868 |

In accordance with Assembly Bill (AB) 107, Section 15.14, twenty-five percent (25%) of the Fiscal Year 2024-25 GGRF funds allocated under this Grant, in the amount of \$731,869.25, shall be withheld. Upon determination of the final amount of the fourth quarter Cap-and-Trade Auction and approval from the Department of Finance (DOF), the remaining funds may be encumbered and available for use. A formal Amendment may not be required to encumber and liquidate the remaining funds.

PROJECT TASKS AND DISBURSEMENTS (Attachment II)

Grant No.: G22-ATDP-03

Grantee: City of Los Angeles Harbor Department

Project: Advanced Technology Demonstration and Pilot Projects: Los Angeles Marine Emission Reduction Project

| TASK | DESCRIPTION | PROJECT FUNDING | | MATCH FUNDS | |
|-------|--------------------------------|-----------------|--------------|-------------|---------|
| | | PROJECT FUNDS | ADMIN. FUNDS | CASH | IN-KIND |
| 1 | Administration | \$0 | \$0 | \$0 | \$0 |
| 1.1 | Kick-Off Meeting | \$0 | \$0 | \$0 | \$0 |
| 1.2 | Quarterly Reports | \$0 | \$0 | \$0 | \$0 |
| 1.3 | Critical Progress Reviews | \$0 | \$0 | \$0 | \$0 |
| 2 | Catalina Channel Express Ferry | \$0 | \$0 | \$0 | \$0 |
| 2.1 | Boat Yard Procurement | \$1,484,153 | \$0 | \$989,435 | \$0 |
| 2.2 | Equipment Orders | \$2,226,229 | \$0 | \$1,484,153 | \$0 |
| 2.3 | Vessel Construction | \$9,646,993 | \$0 | \$6,431,329 | \$0 |
| 2.3.1 | Hull Construction | \$19,440 | \$0 | \$19,440 | \$0 |
| 2.3.2 | Superstructure | \$0 | \$0 | \$0 | \$0 |
| 2.3.3 | Metal Work | \$0 | \$0 | \$0 | \$0 |
| 2.4 | Vessel Launch & Acceptance | \$1,542,313 | \$0 | \$1,176,275 | \$0 |
| 2.4.1 | Vessel Launch | \$0 | \$0 | \$0 | \$0 |

| | | | | | | |
|-------|-------------------------------------|-------------|-----|-------------|-----|-----|
| 2.4.2 | Vessel Acceptance & Delivery | \$0 | \$0 | \$0 | \$0 | \$0 |
| 2.5 | Vessel Demonstration | \$0 | \$0 | \$5,269,922 | \$0 | \$0 |
| 2.6 | Emissions Testing & Data Collection | \$125,000 | \$0 | \$125,000 | \$0 | \$0 |
| 3 | Harbor Breeze ZEAT Vessels | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3.1 | Boat Yard Procurement | \$1,594,531 | \$0 | \$1,455,469 | \$0 | \$0 |
| 3.2 | Equipment Orders | \$1,594,531 | \$0 | \$1,455,469 | \$0 | \$0 |
| 3.3 | Vessel Construction | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3.3.1 | Hull Construction | \$2,357,031 | \$0 | \$2,287,500 | \$0 | \$0 |
| 3.3.2 | Metal Work | \$2,357,031 | \$0 | \$2,287,500 | \$0 | \$0 |
| 3.3.3 | Superstructure | \$2,357,031 | \$0 | \$2,287,500 | \$0 | \$0 |
| 3.3.4 | Outfitting & Finishes | \$2,357,031 | \$0 | \$2,287,500 | \$0 | \$0 |
| 3.4 | Vessel Launch & Acceptance | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3.4.1 | Vessel Launch | \$1,594,531 | \$0 | \$1,525,000 | \$0 | \$0 |
| 3.4.2 | Vessel Acceptance & Delivery | \$1,589,531 | \$0 | \$1,525,000 | \$0 | \$0 |
| 3.5 | Vessel Demonstration | \$0 | \$0 | \$0 | \$0 | \$0 |
| 3.6 | Emissions Testing & Data Collection | \$125,000 | \$0 | \$125,000 | \$0 | \$0 |
| 4 | Technology Evaluation | \$0 | \$0 | \$0 | \$0 | \$0 |
| 4.1 | Commercial Market Summary | \$0 | \$0 | \$50,000 | \$0 | \$0 |
| 4.2 | DPF Marinization Report | \$0 | \$0 | \$25,000 | \$0 | \$0 |
| 4.3 | Engine Manufacturer RFI | \$0 | \$0 | \$15,000 | \$0 | \$0 |

| | | | | | |
|---|------------------------------|--------------|----------|--------------|-----|
| 4.4 | ZE Infrastructure Assessment | \$0 | \$0 | \$100,000 | \$0 |
| 4.5 | Roundtable Workshop | \$0 | \$0 | \$10,000 | \$0 |
| 4.6 | Final Evaluation Report | \$0 | \$0 | \$300,000 | \$0 |
| 5 | Workforce Data Collection | \$0 | \$0 | \$25,000 | \$0 |
| 6 | Technology Showcase | \$0 | \$0 | \$180,000 | \$0 |
| 7 | Final Report | \$0 | \$0 | \$0 | \$0 |
| 7.1 | Draft Report | \$0 | \$0 | \$25,000 | \$0 |
| 7.2 | Final Report | \$0 | \$10,000 | \$10,000 | \$0 |
| Subtotals of Project, Admin., Cash, and In-Kind Funds | | \$30,970,376 | \$10,000 | \$31,471,492 | \$0 |
| Grant Total Funding Amount | | \$30,980,376 | | \$31,471,492 | |

SCOPE OF WORK AND PROJECT SCHEDULE (Attachment III)

Grant No.: G22-ATDP-03

Grantee: City of Los Angeles Harbor Department

Project: Advanced Technology Demonstration and Pilot Projects: Los Angeles Marine Emission Reduction Project

| TASK | START DATE | END DATE |
|---|---------------|---------------|
| <p>Task 1 - Project Administration</p> <p>The purpose of this task is to ensure that all project components are completed on time, within budget, and in compliance with CARB requirements. POLA will hold monthly project status meetings with the operators and regular meetings with CARB, including Critical Project Review (CPR) meetings, to ensure timely project execution.</p> | Feb. 01 2025 | April 30 2027 |
| <p>Task 1.1 - Kick-Off Meeting</p> <p>The purpose of this meeting is to confer with all project partners all the project plans to complete the project on time, within budget, and in compliance with CARB and requirements.</p> <p>Deliverable: Kickoff Meeting Agenda, Presentations, and Minutes</p> | Feb. 01 2025 | Feb. 01 2025 |
| <p>Task 1.2 - Quarterly Reports</p> <p>POLA will hold monthly project status meetings with the operators and regular meetings with CARB to ensure timely project execution.</p> <p>Deliverable: Quarterly Reports - will comply with the Americans with Disabilities Act (ADA) and include the quarterly meeting agenda, presentations, and minutes.</p> | April 15 2025 | March 15 2027 |
| <p>Task 1.3 - Critical Progress Reviews</p> <p>As needed. At minimum there will be one meeting prior to finalizing the engine/ emission-reduction technology design for the CCE ferry and one meeting prior to ordering the Harbor Breeze vessel⁴</p> | TBD | TBD |

| | | |
|--|--------------|---------------|
| <p>Task 1.3.1 - Critical Progress Review Meeting #1</p> <p>This Critical Progress Report meeting will take place prior to finalizing the engine/emission-reduction technology design for the CCE ferry.</p> <p>Deliverable: Critical Progress Report - will include meeting agenda, presentations, and minutes</p> | TBD | TBD |
| <p>Task 1.3.2 - Critical Progress Review Meeting #2</p> <p>This Critical Progress Review Meeting will take place prior to ordering the Harbor Breeze vessels.</p> <p>Deliverable: Critical Progress Report - will include meeting agenda, presentations, and minutes</p> | TBD | TBD |
| <p>Task 2 - CCE Low-Emission High-Capacity Ferry</p> <p>Design, construct, launch, and demonstrate a 525-passenger ferry equipped with Tier-4 propulsion engines and DPF. Design will include elements to ensure DPF integration. The DPF will be included if there is a commercialized product that has been CARB-verified and approved by the US Coast Guard for use in a passenger vessel. If the Coast Guard has not approved a DPF for use in this ferry, CCE will only install the Tier 4 engines.</p> | Feb. 01 2025 | Feb. 01 2027 |
| <p>Task 2.1 - Boat Yard Procurement</p> <p>The purpose of this task is to identify a boat yard to build the vessel and to develop initial designs. During this subtask, CCE will sign a contract with a boat yard and place the downpayment on construction.</p> | Feb. 01 2025 | Feb. 15 2025 |
| <p>Deliverable: Quarterly Report with signed boat yard contract and paid invoices</p> <p>Task 2.2 - Equipment Component Orders</p> <p>The purpose of this subtask is to complete the design of the ferry and order all long lead-time components, such as the certified Tier 4 engines and verified DPF. Prior to Work Plan-2 October 2023 finalizing design, CCE will validate whether a CARB-verified and USCG-approved DPF is available for installation, referencing the Technology Evaluation (see Task 4.0).</p> | Feb. 01 2025 | April 01 2025 |
| <p>Deliverable: Quarterly Report with receipts and paid invoices</p> <p>Task 2.3 - Vessel Construction</p> <p>The purpose of this subtask is to build the new ferry. This subtask also includes traveling to the boat yard every month for the duration of construction to observe progress, address issues, and ensure on-time completion of construction.</p> <p>Deliverable: Recurring Quarterly Report with invoices, photographs, and travel receipts</p> | Feb. 01 2025 | April 01 2026 |

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| Task 2.3.1 - Hull Construction Includes hull framing and construction. Deliverable: Recurring Quarterly Report with invoices, photographs, and travel receipts | Feb. 01 2025 | March 01 2025 |
| Task 2.3.2 - Superstructure Includes constructing the deck and cabin and attaching the deck to the hull. Deliverable: Recurring Quarterly Report with invoices, photographs, and travel receipts | April 01 2025 | June 01 2025 |
| Task 2.3.3 - Metal Work Includes welding and fittings. Deliverable: Recurring Quarterly Report with invoices, photographs, and travel receipts | June 01 2025 | Aug. 01 2025 |
| Task 2.4 Vessel Launch, Acceptance, and Delivery The purpose of this subtask is to secure USCG certification, launch the ferry, conduct sea trials, and transport the ferry to Los Angeles. This subtask also includes traveling to the boat yard to observe testing, address issues, and ensure on time launch and delivery. Deliverable: Quarterly Report with USCG certification and acceptance report, invoices, photographs, and travel receipts | Aug. 01 2025 | Dec. 31 2025 |
| Task 2.4.1 - Vessel Launch Secure USCG certification & launch the ferry. This subtask also includes traveling to the boat yard to observe testing, address issues, and ensure on-time launch. | Aug. 01 2025 | Dec. 01 2025 |
| Task 2.4.2 - Vessel Acceptance & Delivery Sea trials & transport the ferry to Los Angeles. This subtask also includes traveling to observe sea trials, address issues, and ensure on-time delivery. | Dec. 01 2025 | Feb. 15 2026 |
| Task 2.5 - Vessel Demonstration Demonstrate the new CCE ferry for one year in full revenue service operation. Deliverable: Quarterly Report with performance data | Feb. 15 2026 | Feb. 15 2027 |

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| <p>Task 2.6 – Emissions Testing & Data Collection</p> <p>Conduct emissions testing on a baseline vessel and the new vessel, to collect the data required in Attachment F and/or any other data requested by CARB, and to produce a demonstration report. CECERT will conduct emissions testing on one representative passenger ferry and the new Tier 4 vessel. Exact emissions testing methods will be determined as part of a CARB-approved test plan and may include a gas analyzer, portable emissions measurement system (PEMs), and a partial dilution system with a micro soot sensor. CECERT will adhere to a test plan that will be developed with and approved by CARB.</p> <p>Deliverable: Emissions Testing Report</p> | <p>Feb. 15 2026</p> | <p>Feb. 15 2027</p> |
| <p>Task 3 – Harbor Breeze Zero-Emission Advanced Technology Vessels</p> <p>Harbor Breeze will design, construct, launch, and demonstrate two zero-emission capable excursion boats. Harbor Breeze will conduct the same activities below for each of the two boats.</p> | <p>Feb. 01 2025</p> | <p>Feb. 01 2027</p> |
| <p>Task 3.1 – Boat Yard Procurement</p> <p>Identify a boat yard to build the vessels and to develop initial designs. Both vessels will use the same design. During this subtask, Harbor Breeze will sign a contract with a boat yard and place the downpayment on construction.</p> | <p>Feb. 01 2025</p> | <p>Feb 15. 2025</p> |
| <p>Deliverable: Quarterly Report with signed boat yard contract and paid invoices</p> | <p>Feb. 01 2025</p> | <p>March 01 2025</p> |
| <p>Task 3.2 – Equipment Component Orders</p> <p>Complete design of the boats. Order all long lead-time components including propulsion engines.</p> | <p>Feb. 01 2025</p> | <p>Jan. 01 2026</p> |
| <p>Deliverable: Quarterly Report with receipts and paid invoices</p> | <p>Feb. 01 2025</p> | <p>April 01 2025</p> |
| <p>Task 3.3 – Vessel Construction</p> <p>The purpose of this subtask is to build the new vessels.</p> | <p>Feb. 01 2025</p> | <p>May 01 2025</p> |
| <p>Task 3.3.1 – Hull Construction</p> <p>Includes hull framing and construction.</p> | <p>April 01 2025</p> | <p>May 01 2025</p> |
| <p>Deliverable: Quarterly Report with invoices and photographs</p> | <p>April 01 2025</p> | <p>May 01 2025</p> |
| <p>Task 3.3.2 – Metal Work</p> <p>Includes completing welding and rolling over the hull.</p> | <p>April 01 2025</p> | <p>May 01 2025</p> |
| <p>Deliverable: Quarterly Report with invoices and photos</p> | <p>April 01 2025</p> | <p>May 01 2025</p> |

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| Task 3.3.3 - Superstructure Includes completing the deck and attaching the cabin to the hull. Deliverable: Quarterly Report with invoices and photos | May 01 2025 | June 01 2025 |
| Task 3.3.4 - Outfitting & Finishes Includes interior finishings, such as seats and galley components. Deliverable: Quarterly Report with invoices and photos | June 01 2025 | Aug. 01 2025 |
| Task 3.4 - Vessel Launch & Acceptance The purpose of this subtask is to secure USCG certification, launch the boats, and conduct sea trials. | Aug. 01 2025 | Dec. 31 2025 |
| Task 3.4.1 - Vessel Launch Secure USCG certifications & launch the vessels. Deliverable: Quarterly Report with USCG certification, invoices, and photographs | Aug. 01 2025 | Dec. 01 2025 |
| Task 3.4.2 - Vessel Acceptance & Delivery Conduction of sea trials. Delivery of vessels. Deliverable: Quarterly Report with acceptance reports, delivery receipts, invoices, and photographs | Dec. 01 2025 | Feb. 15 2026 |
| Task 3.5 - Vessel Demonstration Demonstrate the new excursion boats for one year in full revenue service operation. Deliverable: Quarterly Report with performance data | Feb. 15 2026 | Feb. 15 2027 |
| Task 3.6 - Emissions Testing & Data Collection Conduct emissions testing on a baseline vessel and the new vessel, to collect the data required in Attachment F and/or any other data requested by CARB, and to produce a demonstration report. CECERT will conduct emissions testing on one representative excursion boat and one new ZEAT vessel. Exact emissions testing methods will be determined as part of a CARB-approved test plan and may include a gas analyzer, portable emissions measurement system (PEMS), and a partial dilution system with a micro soot sensor. CECERT will adhere to a test plan that will be developed with and approved by CARB. Deliverable: Emissions Testing Report | Feb. 15 2026 | Feb. 15 2027 |

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| <p>Task 4 - Next Generation Harbor Craft Technology Evaluation</p> <p>The purpose of this task to develop a technology evaluation of emission-reduction technologies for ferries, pilot boats, and tugboats. Although technology/feasibility assessments have been conducted in the past, including by CARB, this evaluation will focus on the specific duty cycles found in San Pedro Bay for the three vessel types, and it will incorporate the most updated findings from engine manufacturers and technology developers. POLA and POLB will identify a qualified consultant to conduct the study.</p> | <p>Feb. 1 2025</p> | <p>May 01 2026</p> |
| <p>Task 4.1 - Commercial Market Summary</p> <p>Summarize the current state of commercially available harbor craft technologies applicable to ferries, tugboats, and pilot boats serving San Pedro Bay.</p> <p>Deliverable: Commercial Market Status Summary</p> | <p>Feb. 01 2025</p> | <p>May 01 2025</p> |
| <p>Task 4.2 - DPF Marinization Review/Report</p> <p>Assess the status of DPFs for harbor craft. The selected consultant, in consultation with the project partners, work with the partners, engine manufacturers, and the US Coast Guard to conduct this assessment. If DPFs are not certified for harbor-craft use at the time of the review, the consultant will identify what must be done to marinize DPFs for safe and effective use in harbor craft. The timeline is expected to identify whether it will be feasible for CCE to install a DPF on the Tier-4 ferry.</p> <p>Deliverable: DPF Marinization Review Report</p> | <p>Feb. 01 2025</p> | <p>June 01 2025</p> |
| <p>Task 4.3 - Manufacturer Request For Information (RFI)</p> <p>Issue an RFI to marine engine manufacturers to understand the status and future prospects for next-generation emission-reduction technologies and low- and no-carbon marine fuels, such as green methanol and green ammonia.</p> <p>Deliverable: Responses from engine manufacturer RFIs</p> | <p>Aug. 01 2025</p> | <p>Oct. 31 2025</p> |
| <p>Task 4.4 - Infrastructure Assessment</p> <p>Assess the needs for charging or fueling infrastructure to support zero-emission tugboats, ferries, and pilot boats. It involves understanding energy needs and load capacity and identifying possible locations within the Port complex to install infrastructure. This task will be informed by tasks 4.1 and 4.3.</p> <p>Deliverable: Infrastructure Assessment Report</p> | <p>Oct. 01 2025</p> | <p>March 01 2026</p> |

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| Task 4.5 - Roundtable | | | May 01 2026 |
| Share the technology evaluation results at a roundtable workshop for discussion. Invitees will include Work Plan-6 October 2023 POLB, permitting and regulatory partners, engine manufacturers, and harbor craft operators. Separately, POLA will present its findings to the Clean Air Action Plan Implementation Stakeholder Advisory Group comprised of community members, environmental justice organizations, and industry representatives. | | March 01 2026 | |
| Deliverable: Roundtable Workshop agenda, presentations, and participants list | | | |
| Task 4.6 - Technology Evaluation Report | | | Dec. 01 2026 |
| Compile the findings and analysis into a cohesive and readable final report. In addition to the technical findings, the report will include information on future workforce needs for safe, clean harbor craft. The report will be shared publicly and posted on POLA's Web site. | | May 01 2026 | |
| Deliverable: Final Technology Evaluation Report | | | |
| Task 5 - Workforce Data Collection | | | Feb. 01 2027 |
| The purpose of this task is to collect data on workforce outputs and outcomes resulting from this project. | | Feb. 01 2025 | |
| Deliverable: Quarterly report with workforce development report | | | |
| Task 6 - Technology Showcase | | | March 15 2027 |
| The purpose of this task is to showcase the new technologies deployed and demonstrated by sharing the results and lessons learned from the project to other owners and operators, end-user fleets and equipment operators. Activities include public harbor tours on the new ZEAT vessels and presentations at community and industry events. | | Feb. 01 2025 | |
| Deliverable: Included in Final Report, Task 7 | | | |
| Task 7 - Final Report | | | April 30 2027 |
| The purpose of this task is to summarize the results of this project. The report will include, but is not limited to, all aspects of style and information required by CARB. | | Dec. 01 2026 | |
| Task 7.1 - Draft Final Report | | | March 31 2027 |
| Deliverable: Draft Report | | Dec. 01 2026 | |
| Task 7.2 - Final Report | | | April 30 2027 |
| Deliverable: Final Report | | Dec. 01 2026 | |

KEY PROJECT PERSONNEL (Attachment IV)

Grant No.: G22-ATDP-03

Grantee: City of Los Angeles Harbor Department

Project: Advanced Technology Demonstration and Pilot Projects: Los Angeles Marine Emission Reduction Project

| NAME | POSITION | DUTIES |
|------------------------------------|--|--|
| Jacob Goldberg (POLA) | Marine Environmental Supervisor | Lead staff, manages, project coordination, and partners. |
| Teresa Pisano (POLA) | Environmental Affairs Officer | Provides overall leadership and executive oversight for the project. |
| Laura Hunter (POLA) | Environmental Specialist | Oversees grant administration and day-to-day project management needs. |
| Ralph Dan Salas (Harbor Breeze) | President | Provide overall leadership and executive oversight for the project. |
| Chris Batts (Harbor Breeze) | Senior Captain | Assist the training of all employees to be up to date on all operational procedures. |
| Ignacio Lopez (Harbor Breeze) | Chief Port Engineer | Responsible for all repairs and maintenance of all vessels. |
| Michael Hadley (Harbor Breeze) | Port Captain | Oversee safety and operational training for vessels. |
| Maria Mendoza (Harbor Breeze) | CO-Project Manager/Grant Administrator | Manages the project and grant administrative duties. Work on staffing each vessel. |
| Scott Louie (Harbor Breeze) | Operations Manager | Working with the General Manager, will oversee staffing for each vessel. |
| Jeff Forney (Harbor Breeze) | Co-Project Manager/Grant Administrator | Manages the project and oversees grant administrative duties. |

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| Greg Bombard (Catalina Express) | President/CEO | Responsible for overall direction and project accountability. |
| Erik Bombard (Catalina Express) | Vice President of Operations | Responsible for quality assurance and assists with overall direction of project. |
| Anthony J. Ross (Catalina Express) | Vice President, Vessel Engineering | Directs the maintenance of vessels. |
| Koral Shishido (Catalina Express) | Vice President, Finance | Monitors and controls all financial aspects of the operations of the vessels. |
| Craig Tallman (Catalina Express) | Operations Manager | Responsible for oversight of vessel crew members, scheduling, and training. |
| Chuck Madic (Catalina Express) | Engineering Manager | Assists in the maintenance of vessels. |
| Matt Vaughan (Catalina Express) | Training, Safety, and Compliance Manager | Oversight of vessel crew member training, company safety, and security regulations |
| Dr. Erica Alvarado (Tetra Tech) | Air Quality Manager | Project Manager for Tetra Tech team and primary liaison to POLA staff. |
| Dr. Wayne Miller (CE-CERT) | Associate Director | Data collection and analysis oversight. |
| Dr. Tom Eckel (CE-CERT) | Student Researcher | UCR lead, data collection, and analysis. |

Incorporated into this grant agreement by reference:

FY 2021-22 AND FY 2022-23 GRANT SOLICITATION PACKAGE (Exhibit C)

Advanced Technology Demonstration and Pilot Projects

Mobile Source Control Division

California Air Resources Board

July 2023



Incorporated into this grant agreement by reference:

GRANTEE APPLICATION PACKAGE (Exhibit D)