CHAPTER 7: MARINE VESSELS

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I. Guidance

This chapter describes the minimum criteria and requirements for Carl Moyer Program Air Quality Standards Attainment Program (Moyer Program) marine vessel projects. Air quality management districts or air pollution control districts (air districts) may set more stringent requirements based on local priorities.

Please note that to fund projects in this category, Chapters 2 and 3 include general provisions and administrative requirements. Appendices A-E provide additional supporting information.

A. Projects Eligible for Funding

The California Air Resources Board (CARB or the Board) has adopted two regulations that impact funding opportunities for marine vessel projects: 1) Amendments to the Commercial Harbor Craft (CHC) Regulation (Cal. Code Regs, title 17, Section 93118.5) and 2) the 2020 Control Measure for Ocean-Going Vessels At Berth (At Berth Regulation) (Cal. Code Regs, title 17, Section 93130 *et seq.*). There are limited Carl Moyer Program funding opportunities for marine vessels subject to these regulations.

Table 7-1
Summary of Funding Opportunities

Project Type	Subject to CARB Rule	Moyer Funding Opportunities[1]
Vessels subject to Commercial Harbor Craft Regulation (ex: barge, crew & supply, dredge, excursion, ferries, towboat, tugboat, commercial passenger fishing vessel (CPFV), pilot, workboat, research, tank barge, commercial fishing vessels) not including Short Run Ferries	Commercial Harbor Craft Regulation[2]	Opportunities depend on compliance status
Vessels *not* subject to Commercial Harbor Craft Regulation Schedules for Meeting Tier 2 or Tier 3 Standards (ex: registered historic vessels and dedicated emergency use vessels)	No	Not limited by regulation
Shore power - vessel retrofit	At Berth Regulation	Limited opportunity

Project Type	Subject to CARB Rule	Moyer Funding Opportunities(1)
Short Run Ferries	Commercial Harbor Craft CARB Regulation(2)	Opportunities limited to Tier 4 Final and Zero-Emission Replacement Projects only

(1) A fleet's compliance status with CARB regulations must be determined. Contact air district Moyer Program staff.
(2) Commercial Harbor Craft Program: https://ww2.arb.ca.gov/our-work/programs/commercial-harbor-craft
(3) At Berth CARB Program Regulation: https://ww2.arb.ca.gov/our-work/programs/ocean-going-vessels-berth-regulation

1. Project Types:

(A) Combustion Engine Repower: Replacing an old vessel engine with a newer, lower emission diesel, alternative fuel engine or motor. Limited opportunities remain for those vessel engines subject to the in-use compliance requirements of the CHC regulation. Repower must be completed at least one year prior to the vessel's in-use compliance date[1] to be eligible for funding. Based on the vessel's operation, the newer engine's emission reductions must be surplus to the currently required United States Environmental Protection Agency (U.S. EPA) marine engine emission standard (i.e., Tier 3, 4, or cleaner) or the currently required U.S. EPA Tier 4 Final off-road standards if using a marinized off-road engine.

(B) Zero-Emission or Zero-Emission Capable Hybrid System Repower: The installation of a CARB Executive Officer approved zero-emission or zero-emission capable hybrid system via Zero-Emission and Advanced Technology (ZEAT) application as required by Commercial Harbor Craft regulation, California Code of Regulations (CCR), title 17, Section 93118.5 (e)(10) or (e)(11). A hybrid system implements various strategies (e.g., engine switching, electric power) to reduce emissions of NOx, ROG, and PM. A zero-emission or zero-emission capable hybrid system must create a surplus in emission reductions greater than that required under the Commercial Harbor Craft Regulation to be eligible for funding.

(C) Vessel Replacement: The purchase of a new vessel in lieu of a vessel repower.

(D) Retrofit Device: The installation of CARB verified retrofit device must be installed at least one year prior to the vessel's in-use compliance date.

[1] Harbor Craft

Commercial fishing vessels are not required by the regulation to install any retrofit devices, therefore all commercial fishing vessel retrofit projects are surplus to the regulation and eligible for funding.

(E) Engine Remanufacture Kit: Kits are comprised of engine component parts that, when installed, reduce the engine's emissions. Limited Moyer funding opportunities remain for those vessel engines subject to the in-use compliance requirements of the CHC. The engine must be remanufactured to meet the most stringent emission standards in effect on the date of the rebuild. Remanufacture must be completed at least one year prior to the vessel's in-use compliance date[2] to be eligible for funding.

(F) Ship-Side Shore Power Projects: The retrofit of a marine vessel to enable shore power connection. Ship-side shore power projects are not eligible unless the applicant can demonstrate that it will be surplus to the implementation requirements of CARB's At Berth Program Regulation and Commercial Harbor Craft Regulation or is associated with a zero-emission capable hybrid or zero- emission vessel project. For marine infrastructure projects, including Shore- Side Shore Power, see Chapter 10: Infrastructure.

(G) Marine Vessel Exhaust Capture and Control System: The purchase of a CARB verified marine vessel exhaust capture and control system. CARB verifications of exhaust capture systems include specific percentage reductions of NOx and PM. The capture and control system must be relevant to the vessels frequenting the berth or facility at which the capture and control system is located.

Please see Section C (Project Criteria) for detailed minimum eligibility requirements.

B. Maximum Eligible Funding Amounts

Table 7-2 to Table 7-5 summarizes the maximum funding for each project type as a percentage of eligible costs. All projects are also subject to the cost-effectiveness threshold defined in Appendix C.

Table 7-2
Maximum Percentage of Eligible Costs for Moyer Program Marine Engine Repower or Remanufacture Kit Projects for Vessels (except Commercial Fishing Vessels) Subject to the CHC Regulation

Vessels subject to CHC Regulation Schedule for Meeting Tier 3 or Tier 4 Marine Standards (or marinized off-road Tier 4 Final) + Diesel Particulate Filter (DPF) (ex: barge, crew & supply, dredge, excursion, ferry (except short-run-ferries, which can only be replaced with Tier 4 Final engines), towboat, tugboat, CPFV, pilot, workboat, research, tank barge)).

Baseline Engine	Replacement Engine	Maximum Percentage Eligible
Tier 0,1	Tier 3 (2)	50%
Tier 0,1	Tier 4(1)	85%
Tier 2	Tier 3 (2)	80%
Tier 2,	Tier 4(1)	85%
Tier 3	Tier 4(3)	85%

(1) Engines using a Family Emission Limit (FEL) or Averaging, Banking, and Trading (ABT) to meet the Tier 4 emission standards will be funded at Tier 3 engine levels. Tier 3 emission factors will be used for funding calculations.
(2) Commercial Harbor Craft regulation, California Code of Regulations, title 17, Section 93118.5(e)(12)(B)2: for engines <600 kW, if Tier 4 Marine standards are not available, and repowered after 1/1/2023 to Tier 3, vessel does not need to repower to Tier 4 marine standard when it becomes available.
(3) Tier 4 engines participating in the averaging, banking, and trading program that are certified to family emission limits (FELs) higher than the applicable emission standards are ineligible to participate in the Carl Moyer Program.

Table 7-3
Maximum Percentage of Eligible Costs for Moyer Program Marine Engine Repower or Remanufacture Kit Projects for Commercial Fishing Vessels Subject to the CHC Regulation

Commercial Fishing Vessels are subject to Commercial Harbor Craft Regulation schedules for meeting Tier 3 standards.

Baseline Engine	Replacement Engine	Maximum Percentage Eligible
Tier 0,1,2	Tier 3	85%
Tier 0,1,2	Tier 4(1)	85%
Tier 3	Tier 4(2)	85%

(1) Engines using a Family Emission Limit (FEL) or Averaging, Banking, and Trading (ABT) to meet the Tier 4 emission standards will be funded at Tier 3 engine levels. Tier 3 emission factors will be used for funding calculations.
(2) Tier 4 engines participating in the averaging, banking and trading program that are certified to family emission limits (FELs) higher than the applicable emission standards are ineligible to participate in the Carl Moyer Program.

Table 7-4
Maximum Percentage of Eligible Costs for Moyer Program Marine Engine Repower or Remanufacture Kit Projects for Vessels *Not* Subject to the CHC Regulation

Vessels not subject to Regulation Schedules for Meeting Performance Standards (Tier 3 or Tier 4 + DPF) (ex: registered historic vessels and dedicated emergency use vessels)

Baseline Engine	Replacement Engine	Maximum Percentage Eligible
Tier 0,1,2	Tier 3	80%
Tier 0,1,2,	Tier 4(1)	85%
Tier 3	Tier 4(2)	85%

(1) Engines using a Family Emission Limit (FEL) or Averaging, Banking, and Trading (ABT) to meet the Tier 4 emission standards will be funded at Tier 3 engine levels. Tier 3 emission factors will be used for funding calculations.
(2) Tier 4 engines participating in the averaging, banking and trading program that are certified to family emission limits (FELs) higher than the applicable emission standards are ineligible to participate in the Carl Moyer Program.

Table 7-5
Maximum Percentage of Eligible Costs for Other Moyer Program Marine Projects

Project	Maximum Percentage Eligible
CARB-Verified Level 3 Retrofit Device	85%
Ship-side Shore Power	85%
Vessel Replacement	85%
Zero-Emission or Zero-Emission Capable Hybrid Repower	85%
Purchase of an CARB verified marine vessel exhaust capture and control system	85%
Optional cost-share plus up for fleets voluntarily going zero-emission	15%

C. Project Criteria

The minimum qualifications for marine vessels are listed below. All projects must also conform to the requirements in Chapter 2: General Criteria, and in Chapter 3: Program Administration, except as updated in this chapter. Participating air districts retain the authority to impose additional requirements in order to address local concerns.

1. General Marine Project Criteria

(A) To be eligible for Carl Moyer Program funding, an applicant for harbor craft funding must have a United States Coast Guard Documentation Number, except in cases where such documentation is not required (such as fishing boats constructed outside the United States, vessels of less than five net ton displacement, or vessels owned by non-United States citizens). In such cases, the applicant must include with the application documentation at least one of the following:

(1) A valid California vessel registration (CF) number and a copy of the California Department of Fish and Game license can be provided instead of a Coast Guard Documentation Number.

(2) The vessel's Lloyd's/International Maritime Organization (IMO) number for an oceangoing vessel that does not have any of the above documentation.

(B) Both propulsion and auxiliary engines may be eligible for Carl Moyer Program funding.

(C) Only marine vessel activity in Regulated California Waters (RCW), as defined in the Commercial Harbor Craft regulation, California Code of Regulations, title 17, Section 93118.5 (d), and internal waters may be used to determine project emission reductions.

(D) Marine projects are not required to meet the minimum California usage requirement in Chapter 2, Section P. Air districts may impose more stringent operational requirements.

(E) Noncaptive California fleets and vessels may be considered for funding on a case-by-case basis if their operation in California coastal waters can be properly documented.

(F) Funding is not available for projects where spark-ignition engines are replaced with diesel engines. Repowering a diesel engine to a spark-ignited engine may be considered on a case-by-case basis.

(G) Harbor craft engines of all power ratings on regulated in-use vessels are subject to the Commercial Harbor Craft Regulation, California Code of Regulations, title 17, Section 93118.5 and may be eligible for Moyer funding. Portable engines permanently affixed to CHC regulated vessels may be considered for Carl Moyer funding eligibility.

(H) Engines on marine vessels with wet exhaust systems are eligible for Carl Moyer Program funding if the project vessel meets all other applicable program requirements. The wet exhaust systems themselves are not eligible for Carl Moyer Program funding. The cost of parts and labor required to adapt a new engine to the existing wet exhaust system are eligible for funding. A wet exhaust factor of 0.80 must be applied to the baseline and reduced emission propulsion and auxiliary engine emission calculations for all projects on vessels with wet exhaust systems.

(I) New engines must be installed and operational at least one year prior to the applicable compliance deadline specified by the CHC regulation. Project life for an engine cannot extend beyond that engine's compliance deadline.

(1) Regulatory compliance extensions must be obtained in accordance with the extension application and renewal deadlines specified in application process found in the Commercial Harbor Craft regulation, CCR, title 17, Section 93118.5 (e)(12) (E). Applicants must submit documentation of Executive Officer-granted compliance extensions. Districts may consider applicant's proposed compliance extensions when evaluating projects and determining project life, so long as the extension is approved prior to contract execution date.

(J) Air districts have the option of calculating the project cost-effectiveness on a per vessel basis.

(K) All harbor craft vessels are required to install and maintain a functioning hour meter as required by the CHC CARB Program, CCR, title 17, Section 93118.5(e)(2).

(L) Carl Moyer Program funding can be based on engine hours or fuel use. Hours of operation are the preferred basis for project cost-effectiveness calculations and eligibility. Applicants must submit historical usage data as part of the application process. This data must be based on the previous two years of historical usage documentation specific to the vessel being funded. Acceptable forms of documentation may include hour meter readings, maintenance records, fuel logs, purchase receipts or ledger entries. If hours of operation are not available, then grant funding that is based on historical fuel usage may be used. If applicant provides engine hours and fuel logs, the more conservative calculation must be used. For projects in which the two most recent years of documented usage are not available, the minimum annual usage is required to be specified in the contract (Chapter 3, Section X.6.(B)).

(M) Owners and operators of engines subject to the CHC Regulation must include a copy of the most recent Initial Report or Annual Report in their project application. The reporting requirements are outlined under CCR, title 17, Section 93118.5(o). In instances where an Executive Officer-approved compliance deadline extension, ACE, or ZEAT Application/Credit is associated with a project, all pertinent documentation validating the extension, ACE, or ZEAT Application/Credit approval must be included with the project application documentation.

2. Combustion Engine Repower.

Repower projects involving the replacement of an older harbor craft engine with a newer, cleaner combustion engine must meet the following criteria:

(A) All new engines and replacement engines purchased for Carl Moyer Program marine vessel repower projects must meet the requirements of the CHC Regulation set forth under CCR, title 17, subsection 93118.5(e). The regulation includes requirements for newly acquired engines and requirements for replacement engines in vessels subject to the schedules to meet Tier 3 and Tier 4 + DPF standards. Use of an off-road certified engine must adhere to the requirements set forth under California Code of Regulations, title 17, Sections 93118.5(e)(8) and (e)(9), especially the marinization requirements set forth in Code of Federal Regulations, title 40, part 1042.605. Documentation that engines meeting the current applicable standards are unavailable must be included in the air district's project file.

(B) **Funding of marine repower projects:**

(1) Due to the absence of emission factors for Tier 4 engines below 600 kW (below 800 HP), Tier 4 emission standards (Appendix D, Table D-26a) will be used for emission reduction calculations. Please use Table D-24b for emission factors for Tier 4 propulsion engines above 800 HP and Appendix D, Table D-25b for Tier 4 auxiliary engines above 800 HP.

(2) Tier 4 Engines using a Family Emission Limit (FEL) or Averaging, Banking, and Trading (ABT) to meet the Tier 4 emission standards will be funded at Tier 3 engine levels. Tier 3 emission factors will be used for emission reduction calculations.

(3) Tier 3 Engines using Family Emission Limit (FEL) or Averaging, Banking, and Trading (ABT) to meet Tier 3 emission standards are not eligible for funding.

(C) The maximum project life for a marine vessel repower project is 9 years. The maximum project life does not consider regulatory requirements and may be shorter. Regulatory requirements may reduce actual project lives below the maximum value.

(D) **The total project repower cost may include the following:**

(1) The cost of the new engine.

(2) Purchase of or modifications to the cooling system; fuel and exhaust system; wiring, panel, and harness system; power take-offs; propulsion control system; gauges and alarms; and radiator and ventilation, if attached to or integral to the functioning of funded engine or system.

(3) Costs related to the purchase and/or installation of a new transmission may be eligible when it is a necessary part of the engine repower; and an ineligible expense when it is required for maintenance or repair purposes. Ordinarily, a statement from the vendor or applicant that the new reduced emissions engine is not compatible with the existing baseline transmission is sufficient justification for eligibility; please retain a copy of the vendor or applicant's statement(s) or other documentation in the project file.

(4) Frames needed to be extended or other parts needed to be cut or modified in order to accommodate the new engine or transmission, as well as paint or coating needed to protect those specific areas that were cut or modified.

(5) Taxes and transport cost for eligible parts or expenses.

(6) Labor for installation of or modification to parts eligible for funding.

(7) Repowers with retrofit projects included Level 3 DPFs that reduce diesel PM emissions by 85 percent or greater or reduces engine diesel PM emissions to less than or equal to 0.01 grams per brake horsepower-

hour (g/bhp-hr) are an eligible cost up to retrofit funding limits.

(8) Dry docking when needed for repower.

(E) **The total project repower cost may not include charges for the following:**

(1) Rudders or propellers.

(2) Steering system.

(3) Sea trials.

(4) Paint, coatings, or hull work not directly related to the engine repower.

(5) Taxes and transport cost for ineligible parts or expenses.

(6) Labor for installation of or modification to parts ineligible for funding.

(7) Any parts or labor typically included as part of the vessel or engine overhaul, maintenance, repair, or upkeep.

(8) These and other items may be eligible for funding on a case-by-case basis if it can be proven that they are not part of the typical vessel overhaul, repair, upkeep or maintenance and are a necessary part of the engine repower.

(F) All engines replaced as part of a marine vessel repower project must be scrapped. At a minimum, the destruction must include the following:

(1) A hole must be put into the engine block with a diameter of at least three inches at the narrowest point. The hole must be irregularly shaped (i.e. no symmetrical squares or circles).

(2) A section of the oil pan flange must be removed as part of the hole or have a line cut through it that connects the hole.

(3) At the district's discretion, an alternative method of destruction may be used so long as the engine is destroyed and rendered useless and the method is consistent with the air district's Policies and Procedures, per Chapter 3, Section AA.4.

3. Zero-Emission and Zero-Emission Capable Hybrid Systems.

Zero-Emission or Zero-Emission Capable Hybrid System projects must meet the following criteria:

(A) The zero-emission system or the zero-emission capable hybrid system is required to be approved by CARB's Executive Officer via ZEAT application process as required by Commercial Harbor Craft regulation, CCR, title 17, Section 93118.5 (e)(10) or (e)(11). Vessels adopting zero-emission capable hybrid technology must demonstrate that 30 percent or more of combined main propulsion and auxiliary power will be derived from a zero-emission

tailpipe emission source when averaged over a calendar year.

(B) The vessel must be in compliance with the CHC Regulation engine replacement schedule for meeting Tier 3 or Tier 4 marine standards or Tier 4 Final off-road standards, or ZEAT requirements, as applicable.

(C) For zero-emission capable hybrid systems, the replacement engines in the vessel must meet applicable Tier 3 or Tier 4 Performance Standards outlined in the Commercial Harbor Craft regulation, CCR, title 17, Section 93118.5 (e)(9).

(D) The applicant must be able to provide individual usage history for each engine on the baseline vessel.

(E) Zero-emission and zero-emission capable hybrid system installation projects have a maximum project life of five years. The maximum project life does not consider regulatory requirements and may be shorter. Regulatory requirements may reduce actual project lives below the maximum value.

(F) The zero-emission or zero-emission capable hybrid system must include a 3-year manufacturer's warranty.

(G) Eligible costs for a zero-emission or zero-emission capable hybrid system project include the components and labor costs directly related to the purchase and installation of the system. For zero-emission capable hybrid or zero-emission repower projects, US Coast Guard inspection fees, design, and engineering, dry docking when needed for repower, and third-party sea trials are also eligible costs. Batteries, controls, ship-side charging and ship-side zero-emission fueling systems directly associated with repower are eligible for funding.

(H) **Ineligible costs for a zero-emission or zero-emission capable hybrid system include the following:**

(1) Paint, coatings, or hull work not directly related to the zero-emission or zero- emission capable hybrid system installation.

(2) Taxes and transport cost for ineligible parts or expenses.

(3) Labor for installation of or modification to parts ineligible for funding.

(4) Any parts or labor typically included as part of the vessel or engine overhaul, maintenance, repair, or upkeep.

(5) Other items may be eligible for funding on a case-by-case basis if it can be proven that they are not part of the typical vessel overhaul, repair, upkeep, or maintenance and are a necessary part of the zero-emission capable hybrid or zero-emission system.

(I) All baseline engines replaced as part of zero-emission capable hybrid system or zero-emission project must be scrapped, consistent with the requirements of Chapter 7: Section C.2(F).

4. Vessel Replacement.

Vessel replacement projects are eligible when the applicant can demonstrate that no suitable engines or CARB-verified Level 3 DPFs physically fit within the existing vessel structure, and no amount of modifications can be made to the vessel structure without compromising its structural integrity or stability, consistent with CCR, title 17, Section 93118.5 (e)(12) or that a repower project would necessitate extensive vessel modifications which would cost more than the purchase of a new vessel or reduce the passenger capacity of the vessel by 25 percent or greater. Vessel specific technical feasibility analysis must be provided by a third-party naval architect demonstrating that no modifications are feasible to repower and retrofit the vessel. For zero-emission and zero- emission capable hybrid vessel replacement projects, applicants must provide a copy of the CARB Executive Officer ZEAT approval letter to districts.

(A) The replacement vessel must serve the same function and perform the same work equivalent as the existing vessel. In addition, for the purposes of the Carl Moyer Program marine source category, the replacement vessel must be of similar dimensions, capacities (e.g., persons and cargo), and capabilities. Vessel replacement projects are Moyer eligible when the repower costs exceed the cost for vessel replacement. However, if a repower is feasible, but the vessel owner chooses to replace the vessel, the maximum funding amount will be based on the lower cost of the two options.

(B) The total project replacement cost may include charges for the following:

(1) Eligible costs for a diesel-to-diesel vessel replacement include equipment and parts included in the certified engine configuration and/or are required to ensure the effective installation and functioning of the new technology such as parts and materials, and installation needed for the construction of the replacement vessel. For zero-emission capable hybrid or zero-emission vessel replacements: costs required for design and engineering, third-party sea trials, batteries, controls, ship-side charging and ZE fueling systems needed to meet US Coast Guard regulations are also an eligible cost.

(2) Only items essential to the operation of the vessel and the minimum features installed on the original vessel, as determined by the air district, are eligible for reimbursement on the replacement vessel.

(C) The existing engines and vessel will be destroyed, disassembled, dismantled, or rendered otherwise inoperable and permanently removed from service. The district shall include a detailed description of vessel destruction method(s) to CARB for approval.

5. Retrofits.

Retrofits include selective catalytic reduction, diesel oxidation catalysts or diesel particulate filters. A retrofit device must be verified by CARB to reduce emissions from the project engine in order to be eligible for funding. Diesel particulate filter may be included with an engine replacement or repower project or be a stand-alone DPF project which are an eligible cost up to retrofit funding limits. It must be Level 3 DPF that reduces diesel PM emissions by 85 percent or greater or reduces engine diesel PM emissions to less than or equal to 0.01 grams per brake horsepower-hour (g/bhp- hr).

6. Engine Remanufacture Kit.

Engine remanufacture kit projects must meet the following criteria:

(A) A remanufacture kit for vessels may be certified by the U.S. EPA, IMO, or approved by CARB to meet the requirements of the CHC Regulation but must be surplus to the current in-use requirements of CHC Regulation.

(1) Engine remanufacture kits for vessels not subject to the in-use requirements of the CHC Regulation must meet U.S. EPA Tier 3 or Tier 4 marine or Tier 4 Final off- road engine emission standards or cleaner.

(2) Engine remanufacture kits for vessels subject to the in-use requirements of the CHC Regulation must be surplus to the current requirements of the program ~~regulation~~.

(B) If approved by CARB, the applicant must provide a copy of the regulatory compliance letter from CARB (similar to an Executive Order) to the air district demonstrating that the remanufacture kit is compliant with the CHC Regulation. Engine remanufacture kits which reduce NOx only are not eligible for Carl Moyer Program funding.

(C) Engine remanufacture kit projects have a maximum project life of six years. The maximum project life does not consider regulatory requirements and may be shorter. Regulatory requirements may reduce actual project lives below the maximum value.

(D) If the U.S. EPA Emissions Warranty for the engine remanufacture kit requires fuel injectors to be replaced before the end of the project life, the applicant must replace the injectors with equivalent low-emission injectors. The Carl Moyer Program project cost may include the replacement injectors. The project annual report must include documentation that all required maintenance identified in the U.S. EPA Emissions Warranty (if applicable) is completed on schedule. Maintenance other than replacement of low-emission fuel injectors is not eligible for Carl Moyer Program funding.

7. Ship-Side Shore Power Projects.

The retrofit of a marine vessel to enable shore power connection. For shore-side projects see Chapter 10: Infrastructure.

(A) Only a marine vessel owner may apply to receive Carl Moyer Program funding for a ship-side power project.

(B) **Vessels subject to the At Berth Regulation:**

(1) Applications for Carl Moyer Program funding of shore power projects must include a copy of the most recent port and terminal plans as specified in Section 93130.14 of the At Berth CARB Regulation for all applicable terminals that the applicant's vessel visits. Applications must also include any applicable vessel visit reports as part of the vessel compliance checklist for vessel operators in Section 93130.7 (e)(4) and for terminal operators in Section 93130.9 (d)(5) of the At Berth Regulation. All subsequent project reports to air districts must include any new or updated port or terminal plans and vessel visit reports in order to evaluate compliance with the project contract.

(2) The commitment of visits and hours made by the applicant, above those required by the At Berth Regulation, must be used in the project cost-effectiveness calculation and is required in the contract between the applicant and the air district.

(3) The entire fleet roster and all the California ports of harbor the fleet will be visiting are included in the project report. From the locales submitted, the fleet must indicate per location, the number of vessel visits and hours per year the fleet will be utilizing shore-side power.

(C) Docking at ports or terminals funded by the Proposition 1B Goods Movement Program is not prohibited; however, vessel retrofits funded with Carl Moyer Program funds cannot claim emission reductions resulting from ship visits to ports or terminals during the active Proposition 1B Goods Movement Program contract period.

(D) The Carl Moyer Program shall not pay for energy costs (fuel or electricity), shore power routine maintenance, or labor costs for connection and disconnection of the vessel to shore-side power.

(E) All contracts for Carl Moyer Program funding of shore power projects must include a stipulation that receipt of program funding is contingent on the project being post-inspected and operational.

(F) Shore power projects have a maximum project life of 20 years. A longer project life may receive case-by-case approval if applicants provide justifying documentation. The maximum project life does not consider regulatory requirements and may be shorter.

(G) The emissions from vessels using grid power in lieu of auxiliary engines when the vessel is at berth are assumed to be reduced by 90 percent. The

emission reductions from a shore-side transformer project are calculated as the total emission reductions from each participating ship. Each ship's emission reductions are calculated as: (Ship emission rate * berthing time * power requirements * number of visits * 0.9).

(H) Estimated berthing time shall include the time needed to connect and disconnect the vessel to shore power. Ship emission rates and power requirements are included in Appendix D.

8. Marine Vessel Exhaust Capture and Control System.

Funding for the purchase of exhaust capture and control systems may be approved on a case-by-case basis.

II. Acronyms

Acronym	Definition
ABT	Average Banking and Trading
ACE	Alternative Control of Emissions
ATB	Articulated Tug Barge
CARB or Board	California Air Resources Board
C/E	Cost-Effectiveness
CBC	Case-by-Case
CCR	California Code of Regulations
CF	California Vessel Registration Number
CHC	Commercial Harbor Craft
CPFV	Commercial Passenger Fishing Vessel
DPF	Diesel Particulate Filter
EF	Emission Factor
EMY	Engine Model Year
FEL	Family Emission Limit
H&SC	Health and Safety Code
IMO	Lloyd's/International Maritime Organization number
MY	Model Year
NOx	Oxides of Nitrogen

Acronym	Definition
PM	Particulate Matter
RCW	Regulated California Waters
SIP	State Implementation Plan
U.S. EPA or EPA	United States Environmental Protection Agency
ZE	Zero-Emission
ZEAT	Zero-Emission and Advanced Technology

III. Definitions

Air District or District: An air pollution control district or an air quality management district.

Applicant Cost Share: The 15 percent or more of Moyer Eligible Cost that is paid by the applicant, except when waived for public entity applicants.

Auxiliary Engine: An engine that is not the propulsion engine but for which the fuel, cooling, and/or exhaust systems are an integral part of the equipment or vehicle.

Articulated Tug Barge (ATB): A petrochemical tank barge that is mechanically linked with a paired tug that functions as a tug-barge combination.

Barge: A vessel having a single or double hull that is typically flat bottomed but may have a rounded hull form and built with or without a propulsion engine. Examples of barges include deck barges, derrick or crane barges, dredging scow barges, autonomous drone barges, towed or pushed petrochemical tank barges, and barges operating as part of an ATB combination.

Baseline Technology: Engine technology applied under normal business practices, such as the existing engine in a vehicle or equipment for replacements, repowers, and retrofits.

Berth: A vessel's allotted place at a wharf, pier, or dock. This does not include anchorages, such as at the off-shore tanker terminal at El Segundo, or where passenger

vessels tender at anchor, such as at Santa Barbara or Catalina.

Bulk Vessel: A self-propelled ocean-going vessel constructed or adapted primarily to carry unpackaged dry bulk cargo. A bulk vessel may use vessel-based or shore-based equipment for loading and discharging of cargo.

California Ports (Ports): Any port or independent marine terminal in California that receives an ocean-going vessel, including:

(A) Landlord ports where the port owns the wharves which it rents or leases to a terminal operator;

(B) Operational ports where the port functions as a terminal operator; and

(C) Independent marine terminals.

CARB Approved Emission Control Strategy: A method of reducing emissions from an ocean-going vessel at berth to a satisfactory level for compliance with the Control Measure and is verified and approved by CARB.

Case-by-Case Determination: A process in which local air districts may request Moyer Program staff to review and approve a project that varies from the specific requirements of these Guidelines only if such approval will not adversely affect the achievement of real, surplus, quantifiable, enforceable and cost-effective emission reductions. See Chapter 3: Program Administration, Section W for additional information.

Certification: A finding by the California Air Resources Board (CARB) or the U.S. EPA that a mobile source or emissions control device has satisfied applicable criteria for specified air contaminants.

Certified Marine Engine: An engine that is certified by U.S. EPA as meeting the requirements of title 40, Code of Federal Regulations (CFR), Part 94 or Part 1042.

Certified Nonroad Engine: An engine that is certified by U.S. EPA as meeting the requirements of Title 13, CCR, Section 2423(b)(1)(A) or Title 40, CFR, Part 89 or Part 1039.

Coast Guard Vessel: Any vessel or boat owned or operated by the U.S. Coast Guard, including, but not limited to, U.S. Coast Guard cutters and patrol boats that are used for law enforcement, defense operations, marine science, search and rescue missions, training missions, coastal surveillance, servicing aids to navigation, and marine environmental response.

Commercial Fishing Vessel: A vessel dedicated to the search for and collection of fish to be sold at market or directly to a purchaser or prior to January 1, 2023, a charter vessel used for hire by the general public and dedicated to the search for, and collection of, fish

for the purpose of general consumption.

"Commercial Passenger Fishing Vessel (also called "Charter Fishing Vessel" or "Sportfishing Vessel"): Any coastal or offshore vessel used for sportfishing, charter fishing, or any other type of fishing activity where individuals other than the owners or operators of the vessel are onboard the vessel to perform fishing activities in exchange for payment to the vessel owner/operator. Commercial passenger fishing vessels include vessels operated on both day and overnight trips, including trips that may traverse in and out of Regulated California Waters.

Container Vessel: A self-propelled ocean-going vessel constructed or adapted primarily to carry uniformly sized ocean freight containers.

Cost-Effectiveness: A measure of the dollars provided to a project for each ton of covered emission reduction (H&SC Section 44275(a)(4)).

Cost-Effectiveness Limit: The maximum amount of funds the Moyer Program will pay per weighted ton of emission reductions, using the methodology in Appendix C.

Covered Emissions: Emissions of oxides of nitrogen, particular matter, and reactive organic gases from any covered source.

Covered Source: On-road vehicles, off-road nonrecreational equipment and vehicles, locomotives, marine vessels, agricultural sources of air pollution as defined in Section 39011.5 and as determined by the State Board, other categories necessary for the State and Air Districts to meet air quality goals (H&SC Section 44275(a)(7)).

Crew and Supply Vessel: A self-propelled vessel used for carrying personnel and/or supplies to and from off-shore and in-harbor locations (including, but not limited to, off-shore work platforms, construction sites, and other vessels).

Dedicated Emergency Use Vessel: A vessel that is used to perform fire suppression, police response or activities to protect public safety, or emergency rescue as its only specified vocation reported to CARB. Vessels performing training or certification for, or actual operations in, oil spill response are not dedicated emergency use vessels. Vessels operated by the California Department of Fish and Wildlife to enforce provisions of the California Fish and Game Code or implement regulations are not dedicated emergency use vessels, even if they may be called upon to enforce other California laws. Vessels used to perform channel deepening, levee repair, and debris removal are not dedicated emergency use vessels.

Diesel Particulate Filter (DPF): An emission control technology that reduces diesel PM emissions in engine exhaust gases by trapping the particles in a flow filter substrate and

periodically removes the collected particles by either physical action or by oxidizing (burning off) the particles in a process called regeneration. On and after January 1, 2023, "DPF" means a CARB Level 3 Verified Diesel Emission Control Strategy (VDECS).

Dredge: A vessel designed to remove earth from the bottom of waterways, by means of including, but not limited to, a scoop, a series of buckets, or a suction pipe. Dredges include, but are not limited to, hopper dredges, clamshell dredges, or pipeline dredges. On and after January 1, 2023, dredges also include suction hopper dredges, barge-mounted dredges, and dredges with engines having a per-cylinder displacement above 30 liters.

Emission Factor (EF): A category specific estimate of emissions per unit of activity. On-road emission factors are based on CARB mobile source emission inventory model values. Off- road emission factors are based on values applied in CARB category specific inventory models.

Escort Tugboat: A tugboat with a primary vocation involving intercepting and escorting ATBs, or any ocean-going vessel entering or departing Regulated California Waters with the purpose of providing maneuvering or stopping assistance in case of loss of propulsion or steering power while in route to or departing from docks and terminals. Escort tugs will typically work with ship-assist harbor tugs to dock or undock their escorted ATBs or ocean- going vessels. Escort tugs may also stay with ATBs or oceangoing tanker vessels while they are offloading or loading petrochemical products for fire suppression assistance or emergency undocking.

Excursion Vessel: A self-propelled vessel that transports passengers for purposes such as dinner cruises; harbor, lake, or river tours; scuba diving expeditions; lessons, or training; sailing expeditions; parasailing expeditions; any type of for-hire charters for pleasure purposes; and whale watching tours. Excursion vessels do not include crew and supply vessels, ferries, or recreational vessels.

Executed Contract: A legally binding contract signed by the local air district Air Pollution Control Officer, or other air district designated representative, and the grantee to fund an eligible engine, equipment, or vehicle project that will reduce covered emissions. An executed contract is a program milestone in which parties agree to meet the obligations within the contract by a specified date.

Executive Officer: The Executive Officer of CARB, or his or her designee.

Extended Warranty: Any warranty purchased to extend the time period for coverage in addition to the standard warranty provided by the manufacturer.

Family Emission Limit (FEL): An emission level declared by the manufacturer to serve in

place of an otherwise applicable emission standard under a federal or State averaging, banking, and trading program.

Ferry: A harbor craft having provisions only for deck passengers or vehicles, operating on a short run, on a frequent schedule between two points over the most direct water route, and offering a public service of a type normally attributed to a bridge or tunnel. On and after January 1, 2023, "Ferry" means a harbor craft having provisions only for deck passengers or vehicles, operating between two points over the most direct water route, and offering a public service of a type normally attributed to a bridge or tunnel. "Ferry" also includes vessels operated by a public or private company to transport passengers commercially, on a regularly scheduled or on-demand basis, for purposes other than pleasure. Examples of ferry vessels include water taxis and any vessels subject to Vessel Common Carrier requirements as set forth by the California Public Utilities Commission in title 20, CCR, division 1, chapter 1, as it existed on April 1, 2018.

Funding Amount: The amount of funds dedicated to a contracted project for reporting purposes in CARL; this value may never exceed the grant amount.

General Cargo Vessel: A self-propelled ocean-going vessel that may use vessel-based or shore-based equipment for loading and discharging of cargo and is constructed or adapted primarily to carry cargo that must be loaded individually, and that may or may not be in uniform-sized ocean freight containers.

Grant Amount: Contracted amount of Moyer funds for a project, which may not exceed the maximum dollar amount or maximum percentage of eligible cost specified by source category and project type.

Harbor Craft: Any private, commercial, government, or military marine vessel including, passenger ferries, excursion vessels, tugboats, ocean-going tugboats, towboats, push-boats, crew and supply vessels, work boats, pilot vessels, supply boats, fishing vessels, research vessels, barge and dredge vessels, commercial passenger fishing vessels, oil spill response vessels, United States Coast Guard vessels, hovercraft, emergency response harbor craft, and barge vessels that do not otherwise meet the definition of ocean-going vessels or recreational vessels.

Home Port: The port in which a vessel is registered or permanently based.

International Maritime Organization (IMO) Number: An identification number made up of the three letters "IMO" followed by a unique seven-digit number assigned to vessels.

In-Use Marine Engine: A marine engine that is not a new marine engine.

Maximum Grant Amount: The maximum amount of money a grantee is eligible to

receive for a cost-effective Moyer Program project. The maximum grant amount for a project is the lowest of the three following values: (a) the grant amount at the cost-effectiveness limit; (b) the maximum percentage of eligible cost; or (c) any maximum dollar amount specified in the relevant source category chapter.

Maximum Percentage: The maximum percentage of eligible cost that may be expended on a project as specified by source category and project type, often to reflect incremental cost.

Memorandum of Agreement (MOA) or Memorandum of Understanding (MOU): A document recording the basic terms of a proposed transaction or setting forth the principles and guidelines under which parties will work together.

Moyer Eligible Cost: Costs associated with projects that are eligible for reimbursement under the Moyer Program, prior to considering the cost-effectiveness limit or any project funding cap restrictions. This includes the sum of Moyer Paid Cost and Remaining Eligible Cost.

Moyer Ineligible Cost: Costs associated with a project that are not eligible under the Moyer Program guidelines, but are eligible project costs under other funding sources.

Moyer Program Funds: State funds awarded by CARB to local air districts to implement the Moyer Program, including project and administrative, and interest revenue from the awarded funds, and revenues from salvage of equipment scrapped under the program. Local funds that are under the air district's budget authority may also qualify as Moyer Program funds or match funds (see H&SC Section 44287(e)); however, certain limitations apply (see H&SC Section 44287(j)).

Newly Acquired Harbor Craft: A harbor craft that was not owned or operated inside of Regulated California Waters prior to January 1, 2023.

Ocean-going Tugboats or Towboats: Tugboats or towboats with a "registry" (foreign trade) endorsement on their United States (U.S.) Coast Guard certificates of documentation, or tugboats or towboats that are registered under the flag of a country other than the United States.

Ocean-going Vessel: A self-propelled commercial, government, or military vessel meeting any one of the following criteria: (A) a vessel greater than or equal to 400 feet in length overall (LOA) as defined in 50 CFR Section 679.2, as adopted June 19, 1996; (B) a vessel greater than or equal to 10,000 gross tons (GT ITC) per the convention measurement (international system) as defined in 46 CFR 69.51-.61, as adopted September 12, 1989; or

(C) a vessel propelled by a marine compression-ignition engine with a per-cylinder displacement of greater than or equal to 30 liters.

Pilot Vessel: A vessel designed and utilized for, but not limited to, the transfer and transport of maritime pilots to and from oceangoing vessels while such vessels are underway, at anchor, or at dock.

Policies and Procedures: An air district manual for local implementation of the Moyer Program. For more information see Chapter 3, Section D.

Project Life: The period for which the Moyer Program funds surplus emission reductions for a given project.

Project Funds: Moyer Program funds are designated for eligible project costs to reduce covered emissions from covered sources.

Propulsion Engine: An engine that provides power to move a vessel through the water or directs the movement of a vessel. For purposes of this section, "Propulsion engine" is interchangeable with "Main engine."

Public Entity: The State of California, a public university or college, a county, city, district, public authority, public agency, public corporation, another State government, the federal government, or any other subdivision or agency of a State government or the federal government.

Public Funds: Funds provided toward project costs by local, State or federal public entities, including grants, rebates and vouchers.

Push Boat: Any self-propelled vessel engaged in or intending to engage in the service of pulling, pushing, or hauling along side barges or other vessels, or any combination of pulling, pushing, or hauling along side barges or other vessels. "Push boats" is interchangeable with "towboats."

Rebuilt or Remanufactured: Engines offered by the original engine manufacturer (OEM) or by a non-OEM rebuilder who demonstrates to CARB that the rebuilt engine and parts are functionally equivalent from an emissions and durability standpoint to the OEM engine and components being replaced.

Reduced Technology: Newer technology that is used by the applicant to obtain surplus emission reductions.

Refrigerated Cargo Vessel (commonly known as "reefer"): A self-propelled vessel constructed or adapted primarily to carry refrigerated cargo. Refrigerated cargo vessels

include vessels where the cargo may be stored in large refrigerated rooms within the vessel or vessels that primarily carry refrigerated cargo containers.

Registered Historic Vessel: A vessel listed in the National Register of Historic Places pursuant to the National Historic Preservation Act of 1966 (16 U.S.C. Section 470).

Regulated In-Use Vessel: A vessel that operates as one of the vessel categories subject to in- use engine standards in subsection Commercial Harbor Craft regulation, California Code of Regulations, title 17, Section 93118.5 (e)(6). On and after January 1, 2023, this applies to vessels subject to performance standards requirements in subsection Commercial Harbor Craft regulation, California Code of Regulations, title 17, Section 93118.5 (e)(12).

Remaining Eligible Cost: Project costs that are eligible under the Moyer Program but are to be paid by other sources of funding. Remaining eligible costs exist when the Moyer Paid Cost and Applicant Cost Share provide less than 100 percent of the Moyer Eligible Cost.

Repower: A repower is the replacement of the existing engine with an electric motor or a newer emission-certified engine instead of rebuilding the existing engine to its original specifications.

Research Vessel: All vessels subject to requirements of 46 CFR Chapter 1, Subchapter U (October 1, 2012), incorporated herein by reference, plus any others that have highly advanced mobile research stations, and vessels that provide dedicated platforms from which explorers can deploy equipment, divers, or submersibles.

Retrofit: Modifications to the engine and fuel system so that the retrofitted engine does not have the same emissions specifications as the original engine, or the process of installing a CARB-verified emissions control system on an existing engine.

Roll-on/Roll-off Vessel (commonly known as “ro-ro”, “auto”, or “vehicle carrier”): A self-propelled vessel constructed or adapted primarily to carry wheeled cargo that can be rolled on and off. Ro-ro vessels may carry exclusively automobiles (commonly known as a “pure car carrier”) and/or a mixture of bulk equipment on wheels.

Selective Catalytic Reduction (SCR): An emission control system that reduces NOx emissions through the catalytic reduction of NOx in diesel exhaust by injecting nitrogen-containing compounds, such as ammonia or urea, into the exhaust stream.

Ship-Assist Tugboat: A harbor tug having a primary vocation of assisting ATBs and ocean- going vessels while docking and undocking.

Shore Power (also called "Harbor Craft Shore Power"): Refers to electrical power provided by either the electric utility or distributed generation to a vessel at dock that can be used to provide house load, or any other onboard auxiliary power normally provided by onboard diesel generators.

Short-Run Ferry: A vessel dedicated to providing regularly scheduled round-trip ferry service between two points whose straight-line distance apart is less than three nautical miles. Vessels that make multiple stops to load or unload passengers in a single round-trip, where half or more of the single trip lengths are less than three nautical miles, and the longest single trip length is less than six nautical miles, are considered short-run ferries.

Vessels that provide ferry round-trip service between two points that are less than three nautical miles apart, but account for less than 20 percent of the service trips from one fleet or operator between those two points during a given calendar year, are not considered short-run ferries.

Skiff: A small runabout commercial harbor craft (CHC) vessel that is hauled out of the water and transported on the main deck of larger CHC vessels. Skiffs are deployed operationally by the larger CHC vessels during various work modes to assist the larger main vessel crew. Skiffs are typically diesel-powered. Skiff vessels and their respective diesel engines are required to be included in annual CHC fleet reports to CARB CHC Program as separate CHC vessels distinct from the main CHCs that carry and deploy them. For example, some commercial fishing vessels may deploy skiffs to assist crew with line and net handling when actively fishing.

Slip: Means the same as "berth."

State Funds: Funds provided by a state agency for the purpose of co-funding projects under the Moyer Program. State agencies include every State office, department, division, bureau, board, commission, the University of California, and the California State University.

State Implementation Plan: Under the Clean Air Act, the plan submitted by a state that demonstrates attainment or maintenance of an air quality standard through implementation of specified control measures.

Supply Vessel: a self-propelled vessel used for carrying crew and supplies to and from off- shore and in-harbor locations including, but not limited to, off-shore work platforms, construction sites, islands, and other vessels.

Tank Barge: A non self-propelled vessel constructed or adapted primarily to carry, or that carries, oil, petrochemicals, sewage, or other noxious liquid substances hazardous

material in bulk as cargo or cargo residue. Tank barges also include both petrochemical tank barges and barges carrying gaseous or liquid fuels, such as those performing fuel bunkering services.

Tank Vessel or Tanker: A self-propelled vessel constructed or adapted primarily to carry, or that carries, oil or hazardous material in bulk as cargo or cargo residue.

Tier 1, 2, and 3 Engines: Engines that are subject to California Code of Regulations, title 13, Section 2423(b)(1)(A) and/or Code of Federal Regulations, title 40, part 89.112(a). This also includes engines certified under the averaging, banking, and trading program with respect to the Tier 1, 2, and 3 Family Emission Limits (FEL) listed in California Code of Regulations, title 13, Section 2423(b)(2)(A) and/or Code of Federal Regulations, title 40, part 89.112(d).

Tier 4 Engine: Engines that are subject to interim or final after-treatment based Tier 4 emission standards in California Code of Regulations, title 13, Section 2423(b)(1)(B) and/or Code of Federal Regulations, title 40, part 1039.101. This also includes engines certified under the averaging, banking, and trading program with respect to the Tier 4 FEL listed in California Code of Regulations, title 13, Section 2423(b)(2)(B) and/or Code of Federal Regulations, title 40, part 1039.101. For locomotives, the term refers to the Tier 4 (2015 engine model year) emission standards in the Code of Federal Regulations, title 40, Part 1033.

Tier 1 Marine Engine Emission Standards (Tier 1 Marine Standards): The U.S. EPA marine engine Tier 1 emission standards, as promulgated by U.S. EPA and set forth in "Control of Emissions of Air Pollution from New Marine Compression-Ignition Engines at or Above 37 kW" (64 Federal Register (FR) 73299-73373, December 29, 1999)(40 CFR Part 94), both of which are incorporated herein by reference. In the event of a conflict between a Tier 1 marine standard in this section and its corresponding standard in 40 CFR Part 94, the standard in 40 CFR Part 94 controls.

Tier 2 Marine Engine Emission Standards (Tier 2 Marine Standards): The U.S. EPA marine engine Tier 2 emission standards, as promulgated by U.S. EPA and set forth in "Control of Emissions of Air Pollution from New Marine Compression-Ignition Engines at or Above 37 kW" (64 FR 73299-73373, December 29, 1999) (40 CFR Part 94), both of which are incorporated herein by reference. In the event of a conflict between a Tier 2 marine standard in this section and its corresponding standard in 40 CFR Part 94, the standard in 40 CFR Part 94 controls.

Tier 3 Marine Engine Emission Standards (Tier 3 Marine Standards): The U.S. EPA marine engine Tier 3 emission standards, as promulgated by U.S. EPA and set forth in "Final Rule: Control of Emissions of Air Pollution from Locomotive and Marine Compression-Ignition Engines Less Than 30 Liters Per Cylinder" (73 FR 25245 et seq., May 6, 2008) (40 CFR Part 1042), both of which are incorporated herein by reference. In the event of a

conflict between a Tier 3 marine standard in this section and its corresponding standard in 40 CFR Part 1042, the standard in 40 CFR Part 1042 controls. [Note: No Tier 3 marine standards apply for commercial Category 1 engines at or above 3700 kW. See "Tier 4 Marine Engine Emission Standards" for the standards that apply to these engines.

Tier 4 Marine Engine Emission Standards (Tier 4 Marine Standards): The U.S. EPA marine engine Tier 4 emission standards, as promulgated by U.S. EPA and set forth in "Final Rule: Control of Emissions of Air Pollution from Locomotive and Marine Compression-Ignition Engines Less Than 30 Liters Per Cylinder" (73 FR 25245 et seq., May 6, 2008) (40 CFR Part 1042), both of which are incorporated herein by reference. In the event of a conflict between a Tier 4 marine standard in this section and its corresponding standard in 40 CFR Part 1042, the marine standard in 40 CFR Part 1042 control.

Tow Boat: Any self-propelled vessel engaged in or intending to engage in the service of pulling, pushing, or hauling alongside barges or other vessels, or any combination of pulling, pushing, or hauling alongside barges or other vessels.

Tug Boat: Any self-propelled vessel engaged in, or intending to engage in, the service of pulling, pushing, maneuvering, berthing, or hauling alongside other vessels, or any combination of pulling, pushing, maneuvering, berthing or hauling alongside such vessels in harbors, over the open seas, or through rivers and canals. Tug boats generally can be divided into three groups: harbor or short-haul tugboats, ocean- going or long-haul tugboats, and barge tugboats. "Tug boat" is interchangeable with "tow boat" and "push boat" when the vessel is used in conjunction with barges. On and after January 1, 2023, "tugboat" also includes ship-assist and escort tugboats, ocean-going ATB and line towing tugboats, and near-shore pushing and towing tugboats.

Vessel or Marine Vessel: Any tugboat, tanker, freighter, passenger ship, barge, or other boat, ship, or watercraft, except those used primarily for recreation.

Water Taxi: A ferry, including U.S. Coast Guard uninspected passenger vessels carrying six or fewer passengers for hire and U.S. Coast Guard inspected passenger vessels carrying seven or more passengers for hire, that transits paying passengers to any destination rather than operating over a fixed route and schedule.

Work Boat: A self-propelled vessel that is used to perform duties such as fire/rescue, law enforcement, hydrographic surveys, spill/response, research, training, and construction (including drilling). On and after January 1, 2023, "Work boat" means a self-propelled vessel that is used to perform any duty not specifically listed by another category of commercial harbor craft.

Zero-Emission: A propulsion system or auxiliary power system that generates no tailpipe exhaust emissions other than water vapor or diatomic nitrogen from the onboard

source(s) of power. This includes vessels utilizing a zero-emission propulsion and auxiliary power system.

Zero-Emission and Advanced Technology (ZEAT): Includes zero-emission capable hybrid vessels and zero-emission vessels.

Zero-Emission Capable Hybrid Vessel: A commercial harbor craft utilizing a hybrid power system with two or more onboard power sources, one or more of which is approved by CARB's Executive Officer to be capable of providing a minimum of 30 percent of vessel power required for main propulsion and auxiliary power operation with zero tailpipe emissions when averaged over a calendar year.

Zero-Emission Infrastructure: Installed dockside infrastructure necessary to support operation of a ZEAT vessel. For example, charging equipment for propulsion system batteries, on-dock hydrogen storage tanks, and fueling infrastructure.

IV. References

California Air Resources Board Commercial Harbor Craft Regulation: Fact Sheets.

https://ww2.arb.ca.gov/our-work/programs/commercial-harbor-craft/commercial-harbor-craft-factsheets

California Air Resources Board Commercial Harbor Craft Regulation: Homepage
http://www.arb.ca.gov/ports/marinevess/harborcraft.htm

California Code of Regulations: Amended title 13 Section 2299.5 and Title 17, Section 93118.5; Amended Section 2299.5, title 13, division 3, chapter 5.1;
https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2021/chc2021/chcfro.pdf

California Air Resources Board Commercial Harbor Craft Regulation: Resources
https://ww2.arb.ca.gov/our-work/programs/commercial-harbor-craft/resources

California Air Resources Board Commercial Harbor Craft Regulation: Application Templates https://ww2.arb.ca.gov/CHCapplicationtemplates-2023

California Air Resources Board Ocean-Going Vessels At Berth Regulation: Regulatory Documents

https://ww2.arb.ca.gov/our-work/programs/ocean-going-vessels-berth-regulation/ocean-going-vessels-berth-regulatory

California Code of Regulations: Amended title 13, division 3, chapter 5.1, Section 2299.3; and title 17, division 3, chapter 1, subchapter 7.5, Section 93118.3; California Code of

Regulations (CCR), and Adopted new title 17, division 3, chapter 1, subchapter 7.5, Sections 93130- 93130.22
https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2019/ogvatberth2019/fro.pdf

California Air Resources Board Ocean-Going Vessels At Berth Regulation: Homepage
https://ww2.arb.ca.gov/our-work/programs/ocean-going-vessels-berth-regulation

California Air Resources Board Ocean-Going Vessels At Berth Regulation: Resources
https://ww2.arb.ca.gov/our-work/programs/ocean-going-vessels-berth-regulation/resources