

PROPOSED AMENDMENTS TO THE CARL MOYER MEMORIAL AIR QUALITY STANDARDS ATTAINMENT PROGRAM 2017 GUIDELINES

This document contains only proposed changes to the existing Carl Moyer Memorial Air Quality Standards Attainment Program 2017 Guidelines Chapter 7: Marine Vessels, pages 7-1 – 7-XX. The pre-existing guideline text are in normal type. The potential revisions are shown as underline to indicate additions and ~~striketrough~~ to indicate deletions.

CHAPTER 7: MARINE VESSELS

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 upon local priorities.

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 ~~Regulations to Reduce Emissions from Diesel Engines on Commercial Harbor Craft Operated Within California Waters and 24 Nautical Miles of the California Baseline (Commercial Harbor Craft regulation or (CHC) Regulation~~ and 2) the Control Measure for Ocean-Going Vessels At Berth (At Berth Regulation)~~Regulations to Reduce Emissions from Diesel Auxiliary Engines on Ocean-Going Vessels While At Berth at a California Port (Shore Power Regulation)~~. 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 <u>CARB</u> Rule	Moyer Funding Opportunities ^(a)
Vessels subject to Commercial Harbor Craft Regulation Schedules for Meeting Tier 2 or Tier 3 Standards (ex: barge, crew & supply, dredge, excursion, <u>ferryies</u> towboat, tugboat,	Commercial Harbor Craft Regulation ^(b)	Opportunities depend on compliance status

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commercial passenger fishing vessel (CPFV), pilot, workboat, research, tank barge, commercial fishing vessels) - engine repower, remanufacture, retrofit or vessel replacement new purchase		
Vessels <i>not</i> subject to Commercial Harbor Craft Regulation Schedules for Meeting Tier 2 or Tier 3 Standards (ex: <u>registered historic vessels and dedicated emergency use vessels</u> fishing vessel or pilot/work boat) - engine repower, remanufacture, retrofit or new purchase	No	Not limited by regulation
Shore power - vessel retrofit	Shore Power At Berth Regulation ^(c)	Limited opportunity

^(a) A fleet's compliance status with the CARB regulations must be determined. Contact air district Moyer Program staff or consult CHC regulation ~~Carl Moyer Implementation Charts at:~~

~~http://www.arb.ca.gov/msprog/moyer/guidelines/supplemental_docs.htm in addition to these guidelines.~~

^(b) Harbor Craft Regulation: <https://ww2.arb.ca.gov/our-work/programs/commercial-harbor-craft>

<http://www.arb.ca.gov/ports/marinevess/harborcraft.htm>

^(c) ~~Shore Power At Berth Regulation:~~ <https://ww2.arb.ca.gov/our-work/programs/ocean-going-vessels-berth-regulation>

~~<http://www.arb.ca.gov/ports/shorepower/shorepower.htm>~~

Project Types:

- 1. Engine Repower.** Replacing an old vessel engine with a newer, lower emission diesel, alternative fuel, hybrid, or zero-emission 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 ~~three~~ one years prior to the vessel's in-use compliance date¹ to be eligible for funding. Based on the vessel's operation, the newer engine's emission reductions must

¹<http://www.arb.ca.gov/ports/marinevess/harborcraft.htm>

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be surplus to the currently required United States Environmental Protection Agency (U.S. EPA) marine engine emission standard (i.e., Tier 3 or 4, or cleaner) or the currently required U.S. EPA Tier 4 Final off-road standards if using a marinized off-road engine.

2. **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 ~~three~~ one years prior to the vessel's in-use compliance date² to be eligible for funding.
3. **Retrofit Device.** ~~The installation of an CARB verified retrofit device-diesel emission control strategy (VDECS) must be installed at least one year prior to the vessel's in-use compliance date, except for commercial fishing vessels. This project type will be considered for funding on a case-by-case basis.~~
4. **Hybrid System.** The installation of an approved ~~EPA-verified~~ hybrid system via ZEAT application process as required by Commercial Harbor Craft regulation, California Code of Regulations, title 17, Section 93118.5 (e)(10). A hybrid system implements various strategies (e.g. engine switching, electric power) to reduce emissions of NOx, ROG, and PM. A hybrid system must create a surplus in emission reductions greater than that required under the Commercial Harbor Craft Regulation to be eligible for funding.
5. **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 Regulation Shore Power Regulation and Commercial Harbor Craft Regulation or is associated with a hybrid or zero emission vessel project. For marine infrastructure projects, including Shore-Side Shore power, see Chapter 10: Infrastructure.
6. **Marine Vessel Exhaust Capture and Control System.** The purchase of an EPA verified marine vessel exhaust capture and control system. EPA

² <http://www.arb.ca.gov/ports/marinevess/harborcraft.htm>

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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. In lieu of EPA verification a CARB Executive Order will suffice.

- 7. Vessel Replacement.** The purchase of a new vessel in lieu of a vessel repower. This project type will be considered for funding on a case-by-case basis.

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

B. Maximum Eligible Funding Amounts

Table 7-2 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 Projects**

<u>Project Type</u>	<u>Baseline Technology</u>	<u>Project Type</u>	<u>Maximum Percentage</u>
Vessels subject to Commercial Harbor Craft Regulation Schedules for Meeting Tier 2 or Tier 3 Standards (ex: barge, crew & supply, dredge, excursion, ferry, towboat, tugboat)	Tier 0,1 ⁽⁴⁾	Engine repower or remanufacture kit compliant to EPA marine Tier 3	50%
		Engine repower or remanufacture kit compliant to EPA marine Tier 4 ^(2,3)	85%
Vessels subject to Commercial Harbor Craft Regulation Schedules for Meeting Tier 2 or Tier 3 Standards (ex: barge, crew & supply, dredge, excursion, ferry, towboat, tugboat)	Tier 2	Engine repower or remanufacture kit compliant to EPA marine Tier 3	80%

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Project Type	Baseline Technology	Project Type	Maximum Percentage
		Engine repower or remanufacture kit compliant to EPA marine Tier 4 ^(2,3)	85%
<u>Vessels subject to Commercial Harbor Craft Regulation Schedules for Meeting Tier 3 or Tier 4 Marine Standards (or marinized off-road Tier 4 Final) +DPF (ex: barge, crew & supply, dredge, excursion, ferry (except short-run), towboat, tugboat, commercial passenger fishing vessel (CPFV), pilot, workboat, research, tank barge).</u>	<u>Tier 0,1⁽¹⁾</u>	Engine repower or remanufacture kit compliant to EPA marine Tier 3 ⁽⁴⁾	50%
		<u>Engine repower or remanufacture kit or vessel replacement compliant to EPA marine Tier 4^(2,3)</u>	85%
<u>Vessels subject to Commercial Harbor Craft Regulation Schedules for Meeting Tier 3 or Tier 4 Marine Standards (or marinized off-road Tier 4 Final) +DPF (ex: barge, crew & supply, dredge, excursion, ferry (except short-run),</u>	<u>Tier 2</u>	Engine repower or remanufacture kit compliant to EPA marine Tier 3 ⁽⁴⁾	80%

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Project Type	Baseline Technology	Project Type	Maximum Percentage
<u>towboat, tugboat, commercial passenger fishing vessel (CPFV), pilot, workboat, research, tank barge).</u>			
		<u>Engine repower or remanufacture kit or vessel replacement compliant to EPA marine Tier 4^(2,3)</u>	85%
Vessels not subject to Commercial Harbor Craft Regulation Schedules for Meeting Tier 2 or Tier 3 Standards (ex: fishing, pilot, work boat)	Tier 0,1,2	Engine repower or remanufacture kit compliant to EPA marine Tier 3	80%
		Engine repower or remanufacture kit compliant to EPA marine Tier 4^(2,3)	85%
<u>Commercial Fishing Vessels subject to Commercial Harbor Craft Regulation schedules for meeting Tier 3 standards.</u>	Tier 0,1, 2	<u>Engine repower or remanufacture kit or vessel replacement compliant to EPA marine Tier 3</u>	85%
Any vessel propulsion engine repower with an off-road Tier 3 or cleaner certified engine			Case-by-Case Basis

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Project Type	Baseline Technology	Project Type	Maximum Percentage
EPA Verified CARB Level 3 Marine Retrofit Device			Case by Case Basis 85%
Installation of an EPA verified Hybrid System			85%
Shore Power ship-side Ship-side Shore Power			100% of the retrofit cost and 50% of the transformer cost
Any vessel propulsion engine repower with an off-road Tier 3 or cleaner certified engine			Case by Case basis
<u>Vessel replacement</u>			<u>85%</u>
<u>Zero-emission or hybrid repower</u>			<u>85%</u>
Purchase of an EPA verified marine vessel exhaust capture and control system.			Case-by-case basis

- (1) ~~Chapter 1, Section A, Part 2 requires projects to provide three years of surplus reductions prior to any applicable regulatory compliance deadline~~
- (2) Due to the absence of emission factors, 2016 and newer model year Tier 4 emission standards (Table D-16) will be used for funding calculations.
- (3) 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.
- (4) Commercial Harbor Craft regulation, California Code of Regulations, title 17, Section 93118.5(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

C. Project Criteria

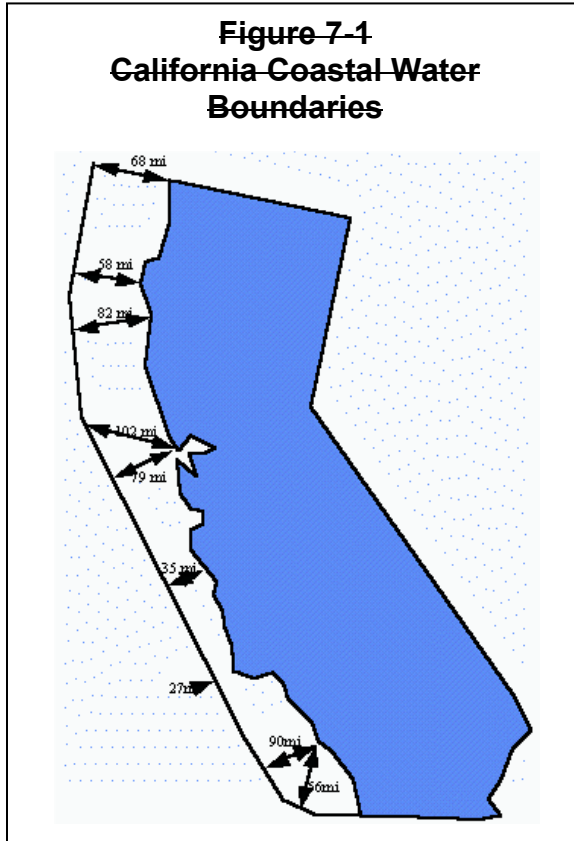
The minimum qualifications for marine vessels are listed below. All projects must also conform to the requirements in Chapter 2: General Criteria, and in Chapter 3: Program Administration. Participating air districts retain the authority to impose additional requirements in order to address local concerns.

1. General Marine Project Criteria

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- (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:
- a. 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.
 - b. 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 ~~California coastal~~ 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. ~~Figure 7-1 depicts the boundary of California coastal waters (defined as that area between the California Coastline and a line starting at the California-Oregon border at the Pacific Ocean, thence to 42.0°N 125.5°W, thence to 41.0°N 125.5°W, thence to 40.0°N 125.5°W, thence to 39.0°N 125.0°W, thence to 38.0°N 124.5°W, thence to 37.0°N 123.5°W, thence to 36.0°N 122.5°W, thence to 35.0°N 121.5°W, thence to 34.0°N 120.5°W, thence to 33.0°N 119.5°W, thence to 32.5°N 118.5°W, and ending at~~

the California-Mexico border at the Pacific Ocean).



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

(E) Non-captive 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) Only marine engines equal to or greater than 25 horsepower are eligible for Carl Moyer Program funding.~~

(H) Harbor craft engines of all power ratings on regulated in-use vessels are subject to the less than 50 horsepower are exempt from the in-use compliance

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requirements of the Commercial Harbor Craft Regulation, California Code of Regulations, title 17, Section 93118.5 and may be eligible for Carl Moyer funding. Emission reductions from projects involving these engines are surplus. Portable engines permanently affixed to CHC regulated vessels may be considered for Carl Moyer funding eligibility.

- (I) 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. 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.
- (J) New engines must be installed and operational at least three one year prior to the compliance deadline specified by the CHC regulation. Project life for an engine cannot extend beyond that engine's compliance deadline.
 - a. Regulatory compliance extensions must be obtained and approved by CARB's Executive Officer (EO) in advance of compliance deadlines.
 - b. Applicants must submit documentation of EO granted compliance extensions. For compliance deadlines, see implementation charts at: <http://www.arb.ca.gov/msprog/moyer/guidelines/supplemental-docs.htm>.
- (K) Air districts have the option of calculating the project cost-effectiveness on a per vessel basis.
- (L) All harbor craft vessels are required to install and maintain a functioning hour meter as required by the CHC Regulation, California Code of Regulations (CCR), title 17, Section 93118.5(e)(2)
- (M) 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. Grant funding that is based on historical fuel usage may not exceed the grant funding amount that would be based on hours of operation; the more conservative calculation must be used.

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(N) 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 California Code of Regulations, title 17, section 93118.5(h)(1)(e).
In instances where an EO 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. Repower. Repower projects involving the replacement of an older harbor craft engine with a newer, cleaner 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 California Code of Regulations, title 17, subsections 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 23 and Tier 34 + 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)(38) and (e)(4-9), especially the marinization requirements set forth in Code of Federal Regulations, title 40, part 1042.605-
- (B) For all marine engine repower projects, the replacement engine must provide at least a 15 percent NOx reduction relative to the baseline engine. The replacement engine cannot be significantly modified or reconfigured in any way during the project life.
- (C) Funding of Tier 4 marine repower projects:
 - (1) Due to the absence of emission factors, 2016 and newer model year Tier 4 emission standards (Table D-16) will be used for emission reduction calculations.
 - (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.
- (D) The maximum project life for a marine vessel repower project is 16 years. A longer project may receive case-by-case approval if applicants provide

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justifying documentation. The maximum project life does not consider regulatory requirements and may be shorter.

- (E) The total project repower cost may include charges for the following:
- (1) The capital cost of the new diesel engine, hybrid engine, or zero emission system.
 - (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, transmission, or hybrid or zero-emission system as well as paint or coating needed to protect those specific areas that were cut or modified.
 - (5) Tax and transport for eligible parts or costs.
 - (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) Batteries, controls, ship-side charging and ship-side zero-emission fueling systems directly associated with repower.
- (F) The total project repower cost may not include charges for the following:

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- (1) Rudders or propellers.
- (2) Steering system.
- (3) Sea trials and dry docking.
- (4) Paint, coatings, or hull work not directly related to the engine repower.
- (5) Tax and transport for ineligible parts or costs.
- (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.
- (9) All engines replaced as part of a marine vessel repower project must be scrapped, consistent with the requirements of Chapter 3: Section BB.

3. Engine Remanufacture Kit. Engine remanufacture kit projects must meet the following criteria:

- (A) A remanufacture kit for a specific vessel type 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 specific to vessels not subject to the in-use requirements of the CHC Regulation must meet U.S. EPA Tier ~~3~~ 4 marine or Tier ~~3~~ 4 Final off-road non-road engine emission standards or cleaner (e.g., Tier ~~3~~ or higher).
 - (2) Engine remanufacture kits specific to vessels subject to the in-use requirements of the CHC Regulation must be surplus to the current requirements of the regulation.

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- (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. Remanufacture kits which reduce NOx only are not eligible for Carl Moyer Program funding.
 - (C) Remanufacture kit projects have a maximum project life of six years.
 - (D) If the U.S. EPA Emissions Warranty for the project 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.
- 4. 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. This project type will be considered for funding on a case-by-case basis. 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).
- 5. Hybrid System.** A Hybrid System project must meet the following criteria:
- (A) The hybrid system must utilize a power system with two or more onboard power sources, one or more of which is approved by CARB's Executive Office via ZEAT application process as required by Commercial Harbor Craft regulation, California Code of Regulations, title 17, Section 93118.5 (e)(10). be verified by the United States EPA to reduce the total vessel emissions of NOx, ROG, and PM 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. Zero-emission power sources include battery plug-in hybrid propulsion systems using electricity from the electric grid or grid-neutral source, or hydrogen fuel cells, or other power sources with zero tailpipe emissions. ~~by specific percentages compared to the baseline vessel.~~

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- (B) The hybrid system must be verified to reduce NOx by at least 15 percent compared to the baseline vessel.
- (C) The vessel must meet the EPA verification parameters (i.e. vocation, duty cycle, horsepower range) for the proposed hybrid system.
- (D) The vessel must be in compliance with the CHC Regulation engine replacement schedule for meeting Tier 32 or Tier 43 marine standards or Tier 4 Final off-road standards, or ZEAT requirements, as applicable.
- (E) The vessel must have Tier 3 or Tier 4 or cleaner propulsion engines and Tier 3 or Tier 42 or cleaner auxiliary engines.
- (F) The applicant must be able to provide individual usage history for each engine on the baseline vessel.
- (G) Hybrid system installation projects have a maximum project life of five years.
- (H) The hybrid system must include a manufacturer's warranty for the duration of the project life.
- (I) Eligible costs for a Hybrid System project include the components and labor costs directly related to the purchase and installation of a hybrid system.
- (J) Ineligible costs for a hybrid system include the following:
 - (1) Paint, coatings, or hull work not directly related to the hybrid system installation.
 - (2) Tax and transport for ineligible parts or costs.
 - (3) Sea trials and dry docking.
 - (4) Labor for installation of or modification to parts ineligible for funding.
 - (5) Any parts or labor typically included as part of the vessel or engine overhaul, maintenance, repair, or upkeep.
 - ~~(6)~~ 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,

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repair, upkeep or maintenance and are a necessary part of the hybrid system.

- (K) All engines replaced as part of Hybrid System project must be scrapped, consistent with the requirements of Chapter 3: Section BB.

6. 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 ~~Shore Power~~At Berth Regulation:
 - (1) Applications for Carl Moyer Program funding of shore power projects must include a copy of the most recent Vessel Plan, Annual Statement of Compliance as identified in Section (g) of the Shore Power Regulation. All subsequent project reports to air districts must include any new or updated Vessel Plans 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 ~~Shore Power~~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) Up to 100 percent of necessary vessel (non-transformer) retrofit costs, specifically required to allow the vessel to plug into shore-side power, are eligible for Carl Moyer Program funding. Up to 50 percent of any necessary transformer costs on board the vessel are eligible for Carl Moyer Program funding.
- (D) 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.

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- (E) 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.
 - (F) 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. The project contract must include a provision that if the shore power is not used for the total hours committed to in the contract, the project participant shall return the pro-rated contract amount (commensurate with the shortfall in usage) to the air district. If the contract activity is not met, air districts may refer to Chapter 3 Section FF.4. to address this underutilization. However, the contract must include language prohibiting the grantee from obtaining a waiver from the contracted usage, specifically Section FF.4.(D).
 - (G) Shore power projects have a maximum project life of 20 years. A longer project may receive case-by-case approval if applicants provide justifying documentation. The maximum project life does not consider regulatory requirements and may be shorter.
 - (H) 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 calculated as: (Ship emission rate * berthing time * power requirements * number of visits * 0.9).
 - (I) 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.
7. **Vessel Replacement.** Vessel replacement projects are not eligible unless the applicant can demonstrate that no suitable engines (Tier 3 or Tier 4 marine, or marinized Tier 4 Final off-road) or CARB-verified 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, to meet requirements of California Code of Regulations, 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.

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- (A) The replacement vessel must adhere to like-for-like considerations. Like-for-like for the purposes of the Carl Moyer Program marine source category means a vessel of similar dimensions, capacities (e.g. persons and cargo), and capabilities.
 - (B) Moyer eligible vessel replacement projects are only eligible when the vessel replacement cost is less than the cost to repower the existing 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 as part of the CBC submittal.
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.