

Titles 13 and 17. California Air Resources Board

Notice of Public Hearing to Consider Proposed Amendments to the Commercial Harbor Craft Regulation

The California Air Resources Board (CARB or Board) will conduct a public hearing at the date and time noted below to consider the proposed amendments to the Commercial Harbor Craft Regulation.

Date: November 19, 2021

Time: 9:00 A.M.

Please consult the public agenda, which will be posted ten days before the November 19, 2021, Board Meeting, for important details, including, but not limited to, the order in which this item will be considered and any appropriate direction regarding a remote-only Board Meeting. If the meeting is to be held in person – in addition to remote access – it will be held at the California Air Resources Board, Haagen-Smit Auditorium, 4001 Iowa Avenue, Riverside, California 92507.

Written Comment Period and Submittal of Comments

In accordance with the Administrative Procedure Act, interested members of the public may present comments orally or in writing during the hearing and may provide comments by postal mail or by electronic submittal before the hearing. The public comment period for this regulatory action will begin on September 24, 2021. Written comments not submitted during the hearing must be submitted on or after September 24, 2021, and received **no later than November 8, 2021**. Comments submitted outside that comment period are considered untimely. CARB may, but is not required to, respond to untimely comments, including those raising significant environmental issues. The Board also encourages members of the public to bring to the attention of staff in advance of the hearing any suggestions for modification of the proposed regulatory action. Comments submitted in advance of the hearing must be addressed to one of the following:

Postal mail: Clerks' Office, California Air Resources Board
1001 I Street, Sacramento, California 95814

Electronic submittal: <https://www.arb.ca.gov/lispub/comm/bclist.php>

Please note that under the California Public Records Act (Gov. Code, § 6250 et seq.), your written and oral comments, attachments, and associated contact information (e.g., your address, phone, email, etc.) become part of the public record and can be released to the public upon request.

Additionally, the Board requests but does not require that persons who submit written comments to the Board reference the title of the proposal in their comments to facilitate review.

Authority and References

This regulatory action is proposed under the authority granted in California Health and Safety Code, sections 38505, 38510, 38560, 38566, 38580, 39600, 39601, 39650, 39658, 39659, 39666, 39730, 39730.5, 41511, 43013, 43018, and 43019.1. This action is proposed to implement, interpret, and make specific Health and Safety Code, sections 38505, 38510, 38560, 38566, 38580, 39000, 39001, 39515, 39516, 39600, 39601, 39730, 39730.5, 41510, 41511, 43013, 43016, 43018, and 43019.1.; and *Western Oil and Gas Ass'n v. Orange County Air Pollution Control District*, 14 Cal.3rd 411, 121 Cal.Rptr. 249 (1975).

Informative Digest of Proposed Action and Policy Statement Overview (Gov. Code, § 11346.5, subd. (a)(3))

Sections Affected: Proposed amendments to section 2299.5, California Code of Regulations, title 13, and section 93118.5, California Code of Regulations, title 17.

Documents Incorporated by Reference (Cal. Code Regs., tit. 1, § 20, subd. (c)(3)):

The following documents would be incorporated in the regulation by reference:

- 46 Code of Federal Regulations (CFR) Subchapter U, as it existed on April 27, 2010, incorporated in subsection (d) Definitions, (e) Fuel Use and Engine Emission Requirements, and (q) Methods to Demonstrate Compliance with Engine and Fuel Standards.
- International Organization for Standardization (ISO) 22241, as it existed in February 2019, incorporated in subsection (d) Definitions.
- Society of Automotive Engineers (SAE) J1667 Recommended Practice, as it existed in February 1996, incorporated in subsection (k) Opacity Testing and Emission Control Repair Requirements.

Background and Effect of the Proposed Regulatory Action:

Commercial Harbor Craft (“CHC” or “harbor craft”) are a vital part of California’s economy, and are essential for moving cargo and providing services to Ocean-Going Vessels (OGV) and various seaports, harbors, and marinas throughout California. While these vessels are reliable and operationally efficient, many of them are powered by and utilize diesel engines that emit significant amounts of air pollutants, including diesel particulate matter (DPM), fine particulate matter (PM_{2.5}), oxides of nitrogen (NO_x), oxides of sulfur (SO_x), reactive organic gases (ROG), and greenhouse gases (GHG). Communities located near California’s seaports, marinas, harbors, coastal waters, and internal waters throughout the State continue to be impacted by emissions generated from approximately 3,159 CHC operating near California seaports and marine terminals.

In 2008, the Board adopted the initial Airborne Toxic Control Measure for Diesel Engines on Commercial Harbor Craft (“Original Regulation”) to reduce emissions of DPM, NO_x, and ROG from diesel engines used in CHC. The Board subsequently amended the Original Regulation in 2010 to expand the applicability of the Original Regulation to additional categories of CHC, including crew and supply, barge, and dredge vessels. Both the Original Regulation and its subsequent amendment have resulted in substantial reductions of the air pollutants emitted by CHC, but the current regulation will be fully implemented by the end of 2022 and California needs to ensure additional emissions reductions are achieved by CHC.

Communities located near California’s seaport complexes bear a disproportionate health burden due to their proximity to the emissions generated from freight activity associated with the seaports, including CHC operating in and around seaports and harbors. The DPM emitted by CHC continues to impact nearby communities, including communities located in regions of the State that are in nonattainment with national ambient air quality standards (NAAQS) for ozone and PM_{2.5}. DPM is a toxic air contaminant that can substantially increase the risk of developing cancer and other health problems such as increased respiratory illnesses, risk of heart disease, and premature death. DPM emissions from CHC engines are projected to become even more significant due to the continued operation of CHC while emissions from other mobile sources are decreasing due to more stringent regulations and cleaner technologies. The emissions from CHC impose uncompensated health and environmental costs to the nearby communities and must be reduced to the greatest possible extent.

In addition, as mentioned above, California is facing challenges in attaining compliance with NAAQS for ozone and PM_{2.5} throughout many regions of the State. Two areas of the State in particular face the most critical air quality challenges – the South Coast Air Basin and the San Joaquin Valley Air Basin. The South Coast Air Basin has the highest ozone levels in the nation, while the San Joaquin Valley Air Basin has

the greatest PM2.5 challenge. To meet the 2023 and 2031 NAAQS for ozone, the South Coast Air Basin will require an approximate 70 percent NOx reduction from current levels by 2023 and an overall 80 percent NOx reduction by 2031. Because NOx is a precursor to both ozone and to secondary PM2.5 formation, reductions in NOx emissions will also provide benefits for meeting the PM2.5 standards. CHC emit both NOx and PM2.5, and such emissions affect five air basins or counties in California that have not attained compliance with the NAAQS for ozone and PM2.5. CHC also constitute one of the largest sources of NOx emissions in the South Coast Basin in 2023, so achieving reductions in NOx and PM emissions from CHC will assist California in attaining ambient air quality standards.

CHCs also emit greenhouse gases (GHGs), that contribute to anthropogenic climate change and black carbon (BC), or soot, which is classified as a short-lived climate pollutant (SLCP). SLCPs are powerful climate forcers that can have an immediate and significant impact on climate change, compared to longer-lived GHGs such as CO2. California Health and Safety Code section 39730 authorizes and directs CARB to develop a comprehensive strategy to reduce emissions of SLCPs, and Health and Safety Code section 39730.5 directs CARB to approve and to implement that strategy.

In response to Assembly Bill (AB) 617 (Garcia, Chapter 136, Statutes of 2017), CARB created the Community Air Protection Program (CAPP) to address the environmental and health inequities from air pollution experienced by certain disadvantaged communities (DAC) in the State. The CAPP Blueprint contains a list of statewide actions that should be undertaken to achieve reductions in these disproportionately burdened communities.¹ Many CHC operate in or adjacent to DACs, and emission reductions from these vessels will directly benefit these communities experiencing cumulative exposure burden.

Additionally, Governor Newsom's Executive Order N-79-20 directed CARB and other State agencies to transition off-road vehicles and equipment to 100 percent zero-emission by 2035 where feasible. To address this, staff proposes provisions to accelerate deployment of Zero-Emission and Advanced Technologies (ZEAT) to CHC, which includes requiring all short-run ferries to switch to zero-emissions propulsion and auxiliary power systems, and for new excursion vessels to be equipped with zero-emission capable hybrid systems. There are other use cases of CHC operations that can be transitioned to zero-emission over the coming decade. Therefore, in response to Executive Order N-79-20, CARB staff has proposed amendments that creates compliance flexibility for introducing zero-emission technology into the marine market.

¹ CARB, Community Air Protection Blueprint, October 2018, last accessed July 6, 2021, https://ww2.arb.ca.gov/sites/default/files/2020-03/final_community_air_protection_blueprint_october_2018_acc.pdf.

CARB may also consider other changes to the sections affected, as listed on page two of this notice, or other sections within the scope of this notice, during the course of this rulemaking process.

Objectives and Benefits of the Proposed Regulatory Action:

The Proposed Amendments would establish more stringent requirements for in-use and new CHC, expand the regulatory requirements to vessel categories that were previously exempt from in-use vessel requirements, and apply reporting, infrastructure, and other requirements to facilities, such as seaports, terminals, marinas, and harbors that conduct business with CHC. The Proposed Amendments would further reduce emissions from CHC by establishing requirements that specified categories of CHC must deploy zero emitting technologies. The Proposed Amendments are expected to reduce emissions of PM_{2.5}, DPM, NO_x, ROG, and greenhouse gases.

Staff estimated that from 2023 through 2038, the Proposed Amendments would reduce cumulative statewide emissions by approximately 1,610 tons of PM_{2.5}, 1,680 tons of DPM, 34,340 tons of NO_x, 2,460 tons of ROG, and 462,330 metric tons (MT) of GHG, relative to baseline conditions.

The Proposed Amendments are expected to improve California residents' health benefits, especially those in communities located near California's seaports and marine terminals. Many of these communities are disadvantaged and bear a disproportionate health burden due to their close proximity to emissions from CHC (at dock, and in transit) and other emission sources including trucks, locomotives, and terminal equipment serving the seaports. These improvements in health benefits are anticipated to include reductions of 531 premature deaths reduced, 73 hospital admissions for cardiovascular illness, 88 hospital admissions for respiratory illness and 236 emergency room visits. The total statewide valuation due to avoided health outcomes between 2023 and 2038 totaled \$5.25 billion.

Additionally, potential cancer risks are expected to decrease as exposure to DPM is reduced. In addition to regional and local air quality benefits, passengers onboard vessels would have the potential for substantially less exposure to air pollutants, such as DPM and NO_x.

In 2038 without the Proposed amendments, in the San Francisco Bay Area Air Basin, about 7 million people, including 0.5 million people who live in DACs, are estimated to be exposed to a potential cancer risk of greater than 1 chance per million from exposure to DPM. Under the Proposed Amendments compared to a baseline of the Current Regulation in 2038:

- the population weighted-average cancer risk would be reduced from 12 chances per million to 1 chance per million;

- the population exposure to a potential cancer risk level of greater than 50 chances per million would be eliminated; and,
- the population that would be exposed to a potential cancer risk greater than 1 chance per million would reduce to 2 million.

In 2038 without the Proposed Amendments, in the South Coast Air Basin, about 15 million people, including 6 million people who live in DACs, are estimated to be exposed to a potential cancer risk of greater than 1 chance per million from exposure to DPM. Under the Proposed Amendments compared to a baseline of the Current Regulation in 2038:

- the population weighted-average cancer risk would be reduced from 10 chances per million to 1 chance per million;
- the population exposure to a potential cancer risk level of greater than 100 chances per million would be eliminated; and,
- the population that would be exposed to a potential cancer risk greater than 1 chance per million would reduce to 5 million.

In addition, the Proposed Amendments will assist California in attaining the NAAQS set by the U.S. Environmental Protection Agency (U.S. EPA) for ozone and PM2.5. Most of the emission reductions expected from the adoption of the Proposed Amendments will occur in areas with significant challenges with air quality, and reductions will assist the State to attain the NAAQS.

The following is a summary of the key provisions introduced in the Proposed Amendments.

1. In-Use and New-Build Vessel Emissions Performance Standards

Staff proposes more stringent engine emissions performance standards for NO_x and particulate matter (PM). Vessel owners and operators would need to meet performance standards between 2023 and 2032 according to a schedule based on vessel category and engine model year. To meet the required emissions performance standards, vessel owners and operators could choose to repower and retrofit engines on in-use vessels or obtain a new-build vessel. For engines rated less than or equal to 600 kilowatts (kW), the Proposed Amendments would require a performance standard equivalent to Tier 3 marine engine plus a diesel particulate filter (DPF), or Tier 4 marine or off-road engine plus a DPF if there is an available engine model certified to the Tier 4 marine or off-road engine standards by the compliance date of the engine. Engines rated greater than 600 kW would need to meet a performance standard equivalent to a Tier 4 marine or off-road engine plus a DPF. Staff is proposing a performance standard that is more stringent than the U.S. EPA standards for marine Tier 3 and marine Tier 4 engines. It is important to note that in the Proposed Amendments to the CHC Regulation, CARB is not proposing new emission standards for marine engine manufacturers selling engines in California.

2. Expanded Vessel Categories

Subjecting additional CHC vessel categories to in-use requirements would achieve additional emission reductions that are needed in the areas where CHC operate. Staff is proposing to add the following vessel categories to the in-use requirements of the Proposed Amendments: commercial passenger fishing vessels (CPFV), commercial fishing vessels, all tank barges, pilot vessels, and workboats. Including these categories will regulate 2,095 more vessels out of the approximately 3,159 CHC that are estimated to operate in Regulated California Waters (RCW) in 2023.

3. Mandates for Zero-Emission and Advanced Technologies (ZEAT)

The Proposed Amendments include ZEAT mandates where technology is more feasible: new excursion vessels would need to be zero-emission capable by 2025, and new and in-use short-run ferries to be zero-emission by 2026. In addition, CARB staff is proposing a regulatory incentive framework that would encourage adoption as ZEAT technology advancements are made in the marine sector. If a vessel owner or operator adopts ZEAT early or where not otherwise required, additional compliance time could be granted to other engines or vessels within the fleet.

4. Renewable Diesel

The Proposed Amendments would require vessels to use renewable diesel when operating in California beginning on January 1, 2023. Renewable diesel is a drop-in fuel that is already being used widely in diesel engines across the State, including those in the marine sector. The use of renewable diesel will achieve immediate NOx and PM emission reductions, resulting in health benefits for workers and residents. Additionally, substituting fossil diesel with renewable diesel will reduce the State's GHG emissions and help California achieve its climate targets.

5. Low-Use Compliance Pathway

The Current Regulation provides a low-use compliance pathway that exempts engines from in-use requirements if engine hours do not exceed an annual threshold of 80 hours for dredges and barges, and 300 hours for all other regulated in-use vessel categories. The Proposed Amendments would change this pathway to reflect the distinctions between engine tiers, in order to provide flexibility to stakeholders who have already upgraded to cleaner engines, while continuing to remove engines with the lowest emissions performance standards. Pre-Tier 1, Tier 1, Tier 2 and Tier 3 or 4 engines will be exempted from in-use requirements if they operate below a threshold of 80, 300, 400, and 700 hours, respectively. If vessels operate in Disadvantaged Communities, the annual threshold is halved (to 40, 150, 200, and 350 hours, respectively) to ensure that emission reductions are prioritized in these areas.

6. Proposed Compliance Extensions

Staff is proposing several compliance extensions in the Proposed Amendments to allow for more time for compliance in cases of scheduling, feasibility, or infrastructure challenges. Because some in-use vessels will need to be replaced to accommodate Tier 4 engines and/or DPF aftertreatment, there is an extension that would allow operators to receive additional compliance time if they cannot not afford a replacement by compliance dates. In the pre-rulemaking releases of draft regulatory text (dated September 21, 2020, and April 1, 2021), the extension for lack of technical and financial feasibility was limited to 6 years and must not be extended beyond December 31, 2034.

In the Proposed Amendments, staff has lengthened the extension for lack of technical and financial feasibility from 6 years to 8 years for passenger carrying vessels, including ferries, CPFVs, and excursion vessels that have engines with a first compliance deadline on or before December 31, 2024. This extension is in response to staff review and analysis of the impacts of the global situation that began in 2020 that may continue to impact these three categories of passenger vessels.

7. Alternative Control of Emissions

Staff is also proposing to modify the preexisting Alternative Control of Emissions (ACE) provision. The ACE currently allows and would continue to allow vessel owners and operators to comply with the Proposed Amendments through an alternative means other than directly complying with the calendar year schedule for engine or vessel compliance. Under an ACE, an applicant would be able to comply by receiving approval from the Executive Officer (EO) to pursue an alternative that includes, but is not limited to, any combination of engine modifications, exhaust treatment control, engine repowers, use of alternative fuels or additives, fleet averaging, or any other measures that, when implemented, will sufficiently reduce emissions equivalent to the emissions performance standards identified in the Proposed Amendments.

8. Facility Owner and Operator Responsibilities

Staff also proposes adding new requirements on facility owners and operators that conduct business with CHC. Facilities would be required to report information about vessels that use those facilities, which will improve data quality and compliance. Facilities owners and operators would be required to install and maintain infrastructure to support shore power that enables harbor craft auxiliary engines to operate using electricity while at dock. Facility owners and operators would be jointly responsible for assuring infrastructure is available to support ZEAT vessels, and would be required to assist vessel owners and operators as needed for the permitting, construction, installation, and maintenance of such infrastructure.

9. Administrative changes

CARB staff is proposing additional administrative changes to the program, including the addition of opacity testing, addition of vessel labeling requirements, and collection of new compliance fees.

CARB staff is proposing that all main propulsion diesel engines operating on harbor craft be required to perform opacity testing and meet applicable opacity limits whenever the test procedure is administered. If a main engine fails an opacity test, the owner or operator has 30 calendar days to repair the engine, retest, and retain records of the passed opacity test, or the engine must be taken out of service. If an auxiliary engine fails an opacity test, the owner or operator has 30 calendar days to repair the engine and notify CARB.

To increase reporting compliance, CARB Unique Vessel Identifiers (UVI) would be issued under the Proposed Amendments. All CHC would need to have their identifier affixed to the vessel by January 1, 2024.

CARB staff developed a draft fee schedule based on costs of personnel, equipment, and administration for implementation and enforcement equaling \$2.1 million per year (includes currently budgeted and future personnel costs). Fees are assessed based on the number of main engines and number of vessels. Fees are not assessed for auxiliary engines operating on harbor craft.

Comparable Federal Regulations:

The U.S. EPA has promulgated Tier 3 and Tier 4 standards for new marine and off-road (nonroad) engines, but has not promulgated federal standards for addressing emission reductions from in-use commercial harbor craft engines. Under federal Clean Air Act (CAA) section 213, U.S. EPA is without authority to adopt in-use standards for off-road (nonroad) engines, including off-road engines used in CHC. Consequently, the Proposed Amendments do not conflict with or duplicate any federal regulations.

California is the only governmental entity in the United States authorized by the CAA, in the first instance, to adopt emission requirements for in-use off-road engines. (See *Engine Manufacturers Association v. U.S. EPA* 88 F3d. 1075 (D.C. Cir. 1996). Section 209(e)(1) of the CAA preempts states, including California, from adopting requirements for new off-road engines less than 175 horsepower that are used in farm or construction equipment, and new engines used in new locomotives and locomotive engines. However, the proposed amendments address off-road engines used in marine vessels, rather than those used in farm or construction equipment, or locomotives.

An Evaluation of Inconsistency or Incompatibility with Existing State Regulations (Gov. Code, § 11346.5, subd. (a)(3)(D)):

During the process of developing the proposed regulatory action, CARB conducted a search of any similar regulations on this topic and concluded these regulations are neither inconsistent nor incompatible with existing State regulations.

Disclosure Regarding the Proposed Amendments

Fiscal Impact/Local Mandate Determination Regarding the Proposed Action(Gov. Code, § 11346.5, subs. (a)(5)&(6)):

The determinations of the Board's Executive Officer concerning the costs or savings incurred by public agencies and private persons and businesses in reasonable compliance with the proposed regulatory action are presented below.

Under Government Code sections 11346.5, subdivision (a)(5) and 11346.5, subdivision (a)(6), the Executive Officer has determined that the proposed regulatory action would create costs or savings to any State agency, would not create costs or savings in federal funding to the State, would create costs or mandate to any local agency or school district, whether or not reimbursable by the State under Government Code, title 2, division 4, part 7 (commencing with section 17500), or other nondiscretionary cost or savings to State or local agencies.

Cost to any Local Agency or School District Requiring Reimbursement under section 17500 et seq.

Pursuant to Government Code section 11346.5, subdivision (a)(5) and 11346.5, subdivision (a)(6), the proposed Amendments constitute a mandate that would create costs and cost-savings to local agencies and school districts. However, such costs are not reimbursable by the State under Government Code, title 2, division 4, part 7 (commencing with section 17500). The mandate is not reimbursable because this action neither compels local agencies to provide new governmental functions (i.e, it does not require such agencies to provide new or additional governmental services to the public), nor imposes requirements that apply only on local agencies or school districts. Rather, the requirements apply generally to all entities that that own or operate regulated vessels and facilities. Therefore, the regulation does not constitute a "Program" imposing any unique requirements on local agencies as set forth in section 17514 of the California Government Code.

Cost or Savings for State Agencies:

The Proposed Amendments would have a small fiscal impact on State government agencies that own/operate fleet or vessel facilities, relative to the total estimated cost of the Proposed Amendments. State government is estimated to incur direct costs to

comply with this regulation including: costs to repower and/or retrofit vessel, costs to replace vessels, facility shore power infrastructure costs, zero-emissions infrastructure costs and a variety of administrative costs. The estimated direct costs to State government equipment and facility owners are \$14.3 million in the period between 2023-2038.

Indirect costs the State agencies might face include: changes in sales taxes due to reduced use of diesel and increased sales of equipment and vessels, increased energy resource fees from increased use of electricity, increased costs to CARB due to increased staff and other expenses to implement and enforce the proposed regulatory actions, and increased collected compliance fees. Collectively, these will increase the State's revenue by \$30.0 million in the period between 2023-2038

In summary, the fiscal impact on State government is expected to increased net revenues by \$14.8 million over the regulatory implementation period.

Other Non-Discretionary Costs or Savings on Local Agencies:

The Proposed Amendments would have a small fiscal impact on local government agencies that own/operate fleet or vessel facilities, relative to the total estimated cost of the Proposed Amendments. Local governments are estimated to incur direct costs to comply with this regulation including: costs to repower and/or retrofit vessel, costs to replace vessels, facility shore power infrastructure costs, zero-emissions infrastructure costs and a variety of administrative costs. The estimated direct costs to local government equipment and facility owners are \$40.6 million in the period between 2023-2038.

Indirect costs the local government agencies might face include: changes in sales taxes due to reduced use of diesel and increased sales of equipment and vessels, and increased utility sales taxes due to increased use of electricity. Collectively, these will increase revenues of local governments by the by \$25.0 million in the period between 2023- 2038.

In summary, the fiscal impact on local government is expected to increased net costs by \$15.6 million over the regulatory implementation period.

Housing Costs (Gov. Code, § 11346.5, subd. (a)(12)):

The Executive Office has also made the initial determination that the proposed regulatory action will not have a significant effect on housing costs.

Significant Statewide Adverse Economic Impact Directly Affecting Business, Including Ability to Compete (Gov. Code, §§ 11346.3, subd. (a), 11346.5, subd. (a)(7), 11346.5, subd. (a)(8)):

The Executive Officer has made an initial determination that the proposed regulatory action would not have a significant statewide adverse economic impact directly

affecting businesses, including the ability of California businesses to compete with businesses in other states, or on representative private persons.

Results of The Economic Impact Analysis/Assessment (Gov. Code, § 11346.5, subd. (a)(10)):

Major Regulation: Statement of the Results of the Standardized Regulatory Impact Analysis (SRIA) (Gov. Code, § 11346.3, subd. (c))

In July 2021, CARB submitted a SRIA to the Department of Finance (DOF) for their review. To determine the economic impacts of the proposed regulatory action, CARB modeled the economic impacts of the Proposed Amendments to the CHC on the California economy. The economics impacts have minor negative impacts on economic indicators. Overall, the change in the growth of jobs, gross State product (GSP), and output is projected to not exceed 0.01 percent of the baseline. Certain sectors are expected to experience significant costs or gains.

(A) The creation or elimination of jobs within the State

The Proposed Amendments are anticipated to have a slightly positive impact on employment growth in 2023 through 2030, corresponding with demand for cleaner technology and ZEAT engines and demand for labor and installation of new engines that would likely occur at California-based shipyards. From 2031 through 2038, the Proposed Amendments are estimated to result in slightly slower employment growth as the overall costs of the Proposed Amendments offset the positive impacts of additional in-state demand.

(B) The creation of new businesses or elimination of existing businesses within the State

The Proposed Amendments do not guarantee business creation or elimination of businesses. However, the Proposed Amendments increase the demand for shipyard services, construction, engine manufacturers, which may translate to increase demand of related ancillary services. However, the Proposed Amendments do not guarantee the creation of in-State jobs.

Industries that operate CHC would face costs and see net decreases in output growth and employment. Some of these businesses are large and would not be anticipated to face business elimination. However, many are small businesses and potentially would face significant compliance costs. If these businesses are unable to pass on the costs of the Proposed Amendments to customers or if there is a significant change in demand for services, it is possible that some businesses would be eliminated.

(C) The competitive advantages or disadvantages for businesses currently doing business within the State.

The Proposed Amendments would impose requirements on nearly all CHC owners and operators. Regardless of whether vessels are homeported in or outside of California, vessel operators still need to comply with the same requirements when operated in RCW. Therefore, the Proposed Amendments would not create a competitive advantage or disadvantage for in-state versus out-of-state vessels or fleets in these vessel categories for operations in RCW.

The Proposed Amendments would increase costs for many commercial fishing vessels operating in RCW, and in some cases, could potentially make them less competitive against out of state or international fleets. CARB staff expects that commercial fishing vessel operators that harvest fish species that can only be caught in California would not face a competitive advantage or disadvantage relative to fishing operations outside of California. Conversely, fishing operations that harvest species that can also be harvested outside of California may face a slight competitive disadvantage compared with out-of-state and international fleets.

Vessels that operate within RCW near the Oregon or Mexico borders may face a competitive disadvantage compared with similar vessel operations in Oregon or Mexico because tourism-related activities, such as commercial passenger fishing, could potentially shift to those operations conducted exclusively outside of RCW.

(D) The increase or decrease of investment in the State.

The Proposed Amendments will likely have a small impact on private investment growth in the State. Private investment growth is expected to increase slightly in the early years after the onset of the new requirements. In later years, private investment growth is expected to grow slightly less quickly. In any given year these impacts represent changes of less than 0.01 percent of baseline investment.

(E) The incentives for innovation in products, materials, or processes.

The Proposed Amendments would provide a strong signal for the development of zero-emission technologies in the off-road sector and help in building a robust market for advanced technologies. Growth in the industries that manufacture ZEAT will also strengthen the supply chain and promote technology improvements that may not have happened otherwise. The Proposed Amendments would result in deploying ZEAT into the marine sector in California, which responds to Governor Newsom's EO N-79-20 by establishing a strategy to achieve zero-emission off-road equipment operations, where feasible and cost effective, by 2035.

(F) The benefits of the regulation, including, but not limited to, benefits to the health, safety, and welfare of California residents, worker safety, and the

State's environment and quality of life, among any other benefits identified by the agency.

CARB anticipates the Proposed Amendments will have the following general benefits to Californians:

- Reductions in air pollutants and toxic contaminants including reduction in PM2.5, NO_x, DPM, ROG, and GHG emissions. Reducing these emissions would benefit individuals by reducing incidents of premature death, hospital admissions, and emergency room visits, as well as reduce criteria pollutants and GHGs. Staff estimates that the total number of cases statewide that would be reduced (from 2023 to 2038) from the implementation of the Proposed Amendments are as follows: 531 premature deaths reduced, 73 hospital admissions for cardiovascular illness reduced, 88 hospital admissions for respiratory illness reduced, and 236 emergency room visits reduced. The total statewide valuation due to avoided health outcomes between 2023 and 2038 totaled \$5.25 billion.
- There are several benefits to terminal and vessel owners and operators and facility owners and operators: fuel savings from reduced use of diesel, Low Carbon Fuel Standard (LCFS) credits from increased use of low carbon fuels, and health benefits. Fuel cost savings depend on fuel and electricity costs. Facility owners and operators might benefit from generating LCFS credits if they opt-in to the LCFS program and provide shore power or hydrogen refueling to ZEAT vessels.
- The Proposed Amendments may result in financial benefits to many different industries whose products will be needed to comply with the Proposed Amendments. These businesses include CHC engine original equipment manufacturers (OEMs), battery systems manufacturers, hydrogen fueling system manufacturers, diesel engine repair shops and boatyards, opacity testing equipment manufacturers, companies offering opacity testing services, manufacturers of emission control technologies, including but not limited to DPFs, DPF installation, repair, and maintenance centers, electrical suppliers and design, engineering, and construction firms. Some of the businesses that will benefit may be small businesses.

(G) Department of Finance Comments and Responses

1. **DOF comment #1:** Given that the timing of costs and benefits depends on the compliance scenario assumptions, underlying fitment factors, and uptake of extensions, the SRIA should disclose the feasible range of these parameters and discuss the sensitivity of the cost and benefit estimates to these parameters. For example, the compliance scenarios are based on the assumption that technological growth increases the feasibility of repowering over time, but it is not clear what that rate of technological advancement is, how it influences

compliance timing, or how many businesses would fail to come into compliance if repower feasibility does not grow at the assumed rate. The SRIA should also clarify whether the same compliance scenario assumptions were used in the estimation of avoided adverse health outcomes as in the cost estimates.

Response: Staff prepared cost estimates for high and low technology feasibility growth scenarios, which are described further below. However, staff would like to clarify that if repower and retrofit feasibility does not grow at the assumed rate, the Proposed Amendments provide a pathway for entities to apply for and receive compliance extensions rather than “fail to come into compliance” as DOF’s comment states. Failure to come into compliance and receiving a compliance extension do not represent the same circumstances because receiving a compliance extension would allow an entity to remain in compliance with the regulation even if repower and retrofit technology does not advance at the rate expected.

As DOF has pointed out, the presentation of costs and benefits (including health benefits) in the SRIA are based on compliance assumption scenarios including fitment factors for repowers and retrofits, vessel replacement, and the usage of low-use extensions or low-use exceptions. To address DOF’s comment on the feasible range of these parameters and the sensitivity of the cost and benefits associated with these assumptions, staff analyzed two alternative compliance assumption scenarios, which are discussed in detail in Appendix C-2 of the Staff Report: Initial Statement of Reason (ISOR).

The first compliance assumption scenario considered a more advanced technology scenario whereby the majority of vessels would be able to repower and retrofit to meet the initial compliance deadline and the use of extensions would be non-existent. For the second compliance assumption scenario, staff analyzed a less advanced technology scenario whereby fewer vessels would be able to repower and retrofit by their initial compliance date due to limitations on meeting the required technology requirements.

Under the first compliance assumption scenario, staff assumed that fewer vessels would need to be replaced, and instead would be repowered, which has a lower unit cost (\$/hp) than vessel replacement. Therefore, the costs associated with this scenario would decrease compared with the original scenario analyzed in the SRIA. The non-amortized costs would decrease from \$2.11 billion to \$1.67 billion and the amortized costs would decrease from \$1.82 billion to \$1.71 billion.

Under the second compliance assumptions scenario, staff assumes that only half of the original vessel repowers and retrofits assumed in the SRIA would be able to occur by the initial compliance date due to decreased marine engine technological advancement. Under this scenario, fewer vessels would be able to repower or retrofit by the initial compliance date due to insufficient marine engine technological advancements. Therefore, vessel owners would need to seek extensions to remain in

compliance until the required technology was made available, or replace their vessels. Both the amortized and nonamortized costs to vessel owners associated with this scenario would increase due to the higher rate of vessel replacements that would be required if extensions were not applied for and granted. The non-amortized costs would increase from \$2.11 billion to \$3.02 billion and the amortized costs would increase from \$1.82 billion to \$2.30 billion.

2. **DOF Comment #2:** The SRIA should report costs and benefits separately from any offsetting benefits or costs, and annual fiscal impacts should be disclosed clearly. While the SRIA reports a lot of detailed information that helps communicate the nuances of the proposed regulations, the SRIA can gain transparency by adding a summary table that indicates the total costs (without netting savings), total benefits, and fiscal impacts in an aggregated annual table.

Response: Aggregated summary tables are provided in Appendix C-2 of the ISOR.

Business Report (Gov. Code §§ 11346.5, subd. (a)(11); 11346.3, subd. (d)):

In accordance with Government Code section 11346.5, subdivision (a)(11) and 11346.3, subdivision (d), the Executive Officer finds the reporting requirements of the proposed regulatory action which applies to businesses are necessary for the health, safety, and welfare of the people of the State of California.

Cost Impacts on Representative Private Persons or Businesses (Gov. Code, §11346.5, subd. (a)(9)):

The Proposed Amendments would not result in any direct costs to individuals. However, staff anticipates the Proposed Amendments would result in indirect costs to individuals to the extent that compliance costs are passed through ultimately to consumers of services and cargo. These costs are discussed in Appendix C of the SRIA.

Effects on Small Businesses (Cal. Code Regs., tit. 1, § 4, subds. (a) and (b)):

The Executive Officer has determined under California Code of Regulations, title 1, section 4, that the proposed regulatory action would affect small businesses.

Seventy percent of vessel fleets that need to comply with these Proposed Amendments are considered small businesses. Similar to the case of typical businesses, the compliance costs for a small business will vary depending on the compliance option and the number of vessels owned/operated. Staff analyzed scenarios for two typical small businesses in detail in Chapter C of Appendix C of the ISOR.

Small businesses that sell products or services that are needed to comply with the Proposed Amendments may experience financial benefits as their products and services will face increased demand.

Consideration of Alternatives (Gov. Code, § 11346.5, subd. (a)(13)):

Before taking final action on the proposed regulatory action, the Board must determine that no reasonable alternative considered by the Board, or that has otherwise been identified and brought to the attention of the Board, would be more effective in carrying out the purpose for which the action is proposed, would be as effective and less burdensome to affected private persons than the proposed action, or would be more cost-effective to affected private persons and equally effective in implementing the statutory policy or other provisions of law.

The Executive Officer analyzed several alternatives to the proposed regulations and summarized the findings of this analysis in Chapter XI of the ISOR, and the rationale behind rejecting them in favor for the proposed amendments. The following is a brief summary of the alternatives proposed and the rationale for rejecting them:

1. Alternative 1 would amend the Current Regulation. For this alternative, there would be no low -use exception and no extension for vessels with Tier 4 engines and limited operating hours. All vessels would need to comply with the Proposed Amendments, even if they only operate for a limited number of hours. Alternative 1 was rejected because it would cost more, be less cost -effective to implement than the Proposed Amendments, and provides less flexibility. It would increase the overall cost of the Proposed Amendments by 16 percent while achieving 2 percent more reductions for NOx, and 2 percent more reductions for DPM and PM2.5 between 2023 to 2038, a relatively small amount of emission reductions.
2. Alternative 2 differs from the Proposed Amendments because it does not include emission control requirements for commercial fishing vessels. The Proposed Amendments currently require commercial fishing vessels to begin using engines certified to Tier 2 or newer levels between 2030 and 2032. Alternative 2 was rejected because excluding commercial fishing vessels would forgo feasible emission reductions and result in fewer health benefits to the local communities, compared to the Proposed Amendments. Alternative 2 would fail to provide significant additional public health and air quality benefits for California's residents, especially communities adjacent to seaports and terminals.

State Implementation Plan Revision

The Proposed Amendments are an action in addition to existing commitments or measures in the State Implementation Plan (SIP) required by the federal Clean Air Act (CAA). If the Proposed Amendments are adopted, CARB may include the new requirements for CHC as part of future SIP revisions. Requirements of the Proposed Amendments would reduce emissions of air pollutants in order to attain and maintain the National Ambient Air Quality Standards promulgated by U.S. EPA pursuant to the federal CAA.

Environmental Analysis

CARB, as the lead agency for the Proposed Amendments, has prepared a draft environmental analysis (EA) under its certified regulatory program (California Code of Regulations, title 17, sections 60000 through 60008) to comply with the requirements of the California Environmental Quality Act (CEQA; Public Resources Code section 21100 et seq.). The draft EA assesses the potential for significant adverse and beneficial environmental impacts associated with the proposed actions and provides a programmatic environmental analysis of the reasonably foreseeable compliance responses that could result from implementation of the Proposed Amendments.

The draft EA concluded implementation of the Proposed Regulation could result in: less than significant impacts, or no impacts, to energy demand, land use, mineral resources, air quality, greenhouse gases, population, employment and housing, public services, recreation, and wildfire; and potentially significant adverse impacts to aesthetics, agriculture and forest resources, biological resources, cultural resources, tribal cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, noise and vibration, transportation and traffic, and utilities and service systems.

The potentially significant and unavoidable adverse impacts are primarily related to short-term, construction-related activities. This explains why some resource areas are identified above as having both less-than-significant impacts and potentially significant impacts. Please refer to the draft EA for further details.

The draft EA, included as Appendix D-1 to the ISOR, is entitled *Draft Environmental Analysis Prepared for the Proposed Amendments to the Airborne Toxic Control Measure for Commercial Harbor Craft*. Written comments on the draft EA will be accepted during a 45-day public review period starting on September 24, 2021 and ending on November 8, 2021.

Special Accommodation Request

Consistent with California Government Code section 7296.2, special accommodation or language needs may be provided for any of the following:

- An interpreter to be available at the hearing;
- Documents made available in an alternate format or another language; and
- A disability-related reasonable accommodation.

To request these special accommodations or language needs, please contact the Clerks' Office at cotb@arb.ca.gov or (916) 322-5594 as soon as possible, but no later than ten business days before the scheduled Board hearing. TTY/TDD/Speech to Speech users may dial 711 for the California Relay Service.

Consecuente con la sección 7296.2 del Código de Gobierno de California, una acomodación especial o necesidades lingüísticas pueden ser suministradas para cualquiera de los siguientes:

- Un intérprete que esté disponible en la audiencia;
- Documentos disponibles en un formato alternativo u otro idioma; y
- Una acomodación razonable relacionados con una incapacidad.

Para solicitar estas comodidades especiales o necesidades de otro idioma, por favor llame a la oficina del Consejo al cotb@arb.ca.gov o (916) 322-5594 lo más pronto posible, pero no menos de 10 días de trabajo antes del día programado para la audiencia del Consejo. TTY/TDD/Personas que necesiten este servicio pueden marcar el 711 para el Servicio de Retransmisión de Mensajes de California.

Agency Contact Persons

Inquiries concerning the substance of the proposed regulatory action may be directed to the agency representative David Quiros, Manager, Freight Technology Section, at (916) 327-7213 or Firas Abu-Sneh, Staff Air Pollution Specialist, Freight Technology Section, at (916) 323-1009.

Availability of Documents

CARB staff has prepared a Staff Report: Initial Statement of Reasons (ISOR) for the proposed regulatory action, which includes a summary of the economic and environmental impacts of the proposal. The report is entitled: *Public Hearing to Consider the Proposed Amendments to the Commercial Harbor Craft Regulation*.

Copies of the ISOR and the full text of the proposed regulatory language, in underline and strikeout format to allow for comparison with the existing regulations, may be accessed on CARB's website listed below, on September 21, 2021. Please contact

Chris Hopkins, Regulations Coordinator, at Chris.Hopkins@arb.ca.gov or (916) 445-9564 if you need physical copies of the documents. Because of current travel, facility, and staffing restrictions, the California Air Resources Board's offices have limited public access. Pursuant to Government Code section 11346.5, subdivision (b), upon request to the aforementioned Regulations Coordinator, physical copies would be obtained from the Public Information Office, California Air Resources Board, 1001 I Street, Visitors and Environmental Services Center, First Floor, Sacramento, California, 95814.

Further, the agency representative to whom nonsubstantive inquiries concerning the proposed administrative action may be directed is Chris Hopkins, Regulations Coordinator, at Chris.Hopkins@arb.ca.gov or (916) 445-9564. The Board staff has compiled a record for this rulemaking action, which includes all the information upon which the proposal is based. This material is available for inspection upon request to the contact persons.

Hearing Procedures

The public hearing will be conducted in accordance with the California Administrative Procedure Act, Government Code, title 2, division 3, part 1, chapter 3.5 (commencing with section 11340).

Following the public hearing, the Board may vote on a resolution directing the Executive Officer to: make any proposed modified regulatory language that is sufficiently related to the originally proposed text that the public was adequately placed on notice and that the regulatory language as modified could result from the proposed regulatory action, and any additional supporting documents and information, available to the public for a period of at least 15 days; consider written comments submitted during this period; and make any further modifications as may be appropriate in light of the comments received available for further public comment. The Board may also direct the Executive Officer to: evaluate all comments received during the public comment periods, including comments regarding the Draft Environmental Analysis, and prepare written responses to those comments; and present to the Board, at a subsequently scheduled public hearing, the final proposed regulatory language, staff's written responses to comments on the Draft Environmental Analysis, along with the Final Environmental Analysis for action.

Final Statement of Reasons Availability

Upon its completion, the Final Statement of Reasons (FSOR) will be available and copies may be requested from the agency contact persons in this notice, or may be accessed on CARB's website listed below.

Internet Access

This notice, the ISOR and all subsequent regulatory documents, including the FSOR, when completed, are available on CARB's website for this rulemaking at <https://ww2.arb.ca.gov/rulemaking/2021/chc2021>

California Air Resources Board



Richard W. Corey
Executive Officer

Date: September 7, 2021

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see [CARB's website](http://www.arb.ca.gov) (www.arb.ca.gov).