TITLES 13 AND 17. CALIFORNIA AIR RESOURCES BOARD

NOTICE OF PUBLIC HEARING TO CONSIDER PROPOSED CONTROL MEASURE FOR OCEAN-GOING VESSELS AT BERTH

This notice announces the availability of the proposed Control Measure for Ocean-Going Vessels at Berth and a Draft Environmental Analysis (Draft EA) for public comment. The California Air Resources Board (CARB or Board) will conduct a public hearing at the time and place noted below to consider the proposed Control Measure for Ocean-Going Vessels At Berth.

DATE: December 5, 2019

TIME: 10:00 A.M.

LOCATION: DeFremery Park Recreation Center
1651 Adeline Street
Oakland, California 94607

This item will be considered at a meeting of the Board, which will commence at 10:00 a.m., December 5, 2019. Please consult the agenda for the hearing, which will be available at least ten days before December 5, 2019, to determine the time at which this item will be considered.

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 at 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 October 18, 2019. Written comments not physically submitted at the hearing must be submitted on or after October 18, 2019, and received **no later than** December 2, 2019. Any written comments on the Draft EA must be submitted on or after October 18, 2019, and received **no later than** December 2, 2019. CARB requests that when possible, written and email statements be filed at least 10 days before the hearing to give CARB staff and Board members additional time to consider each comment. 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: http://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 REFERENCE

This regulatory action is proposed under the authority granted in California Health and Safety Code, sections 38560, 38562, 39600, 39601, 39650, 39658, 39659, 39666, 43013, and 41511. This action is proposed to implement, interpret, and make specific sections 38510, 38530, 38562, 38566, 38580, 39600, 39650, 39658, 39659, 39666, 39674, 41510, 41511, 41701, and 43016.

CARB has authority under California law to adopt the proposed regulations. Health and Safety Code section 43013 provides broad authority for CARB to adopt emission standards and other regulations to reduce emissions from new and in-use vehicular, nonvehicular and other mobile sources. CARB is expressly authorized to adopt emission standards and other regulations for marine vessels, to the extent permitted by federal law. (Health & Safety Code § 43013(b).) The Legislature has also directed CARB to "act as expeditiously as is feasible to reduce nitrogen oxide emissions from diesel vehicles, marine vessels, and other categories of vehicular and mobile sources which significantly contribute to air pollution problems." (Health & Safety Code § 43013(h).)

CARB is further mandated to reduce air toxics emissions under California's air toxics laws. Health & Safety Code section 39666 directs CARB to adopt ATCMs to "reduce emissions of toxic air contaminants from non-vehicular sources" for identified TACs such as diesel PM, formaldehyde, benzene, and 1,3 butadiene.

CARB is also mandated under Health & Safety Code sections 38500 et seq. to reduce greenhouse gas emissions, which are emitted at substantial levels by ships hotelling at California ports. For example, section 38560 mandates CARB to adopt rules and regulations "to achieve the maximum technologically feasible and cost-effective greenhouse gas emission reductions from sources or categories of sources, subject to the criteria and schedules set forth in this part."

Additionally, other statutes mandate CARB to do all things necessary and proper to achieve its statutory mandates. Section 39600 requires CARB to "do such acts as may be necessary for the proper execution of the powers and duties granted to, and imposed upon, the state board by this division and by any other provision of law." Section 39601 requires CARB to adopt "standards, rules, and regulations" which are

“necessary for the proper execution of the powers and duties granted to, and imposed upon, the state board by this division and by any other provision of law.”

INFORMATIVE DIGEST OF PROPOSED ACTION AND POLICY STATEMENT OVERVIEW (GOV. CODE, § 11346.5, subd. (a)(3))

Sections Affected:

Proposed amendment to California Code of Regulations, title 13, division 3, chapter 5.1, section 2299.3; and title 17, division 3, chapter 1, subchapter 7.5, section 93118.3.

Proposed adoption of California Code of Regulations, title 13, sections 93130 through 93130.20.

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

The following documents, test methods, and model would be incorporated in the regulation by reference as specified by section:

- ISO 8217 Petroleum products – Fuels (class F) Specifications of marine fuels, Fourth edition June 15, 2010, section 93130.2(b)(38)
- ISO 8217 Petroleum products – Fuels (class F) Specifications of marine fuels, Third edition November 1, 2005, section 93130.2(b)(38)
- ISO 8178, Reciprocating internal combustion engines – Exhaust emission measurement – Part 1: Test-bed measurement of gaseous and particulate exhaust emissions, August 15, 1996, section 93130.5(g)(1);
- ISO 8178, Reciprocating internal combustion engines – Exhaust emission measurement – Part 2: Measurement of gaseous and particulate exhaust emissions at site, August 15, 1996, section 93130.5(g)(1);
- ISO 8178, Reciprocating internal combustion engines – Exhaust emission measurement – Part 4: Test cycles for different engine applications, August 15, 1996, section 93130.5(g)(1);
- CARB - FRAC (Excel) - Fraction data for source categories, February 21, 2019, section 93130.5(g)(3)
- CARB - PMPROF REF (Excel) - Reference number for PM profiles, July 8, 2019, section 93130.5(g)(2)
- Source Test Procedure ST-1B Ammonia Integrated Sampling, January 20, 1982, section 93130.5(g)(6);
- ISO 8754, Petroleum products – Determination of sulfur content – Energy-dispersive X-ray fluorescence spectrometry, July 15, 2003, section 93130.5(g)(7);
- CARB - Method 100, Procedures for Continuous Gaseous Emission Stack Sampling, July 28, 1997, section 93130.5(g)(8);
- California Environmental Protection Agency Air Resource Board Recommended Emissions Testing Guidelines for Ocean-going Vessels, June 20, 2012, section 93130.5(h)(4);

- Bureau of Mines Information Circular 8333 Ringelmann Smoke Chart (Revision of IC 7719), May 1967, 93130.6(a)(1); and
- 40 CFR Pt. 60, App. A-7, Method 25A – Determination of Total Gaseous Organic Concentration Using a Flame Ionization Analyzer, December 23, 1971, section 93130.5(g)(3)
- 40 CFR Pt. 60, App. A-4, Method 9 – Visual Determination of the Opacity of Emissions from Stationary Sources, December 23, 1971, section 93130.6(b)
- United Nations, International Law Commission, Responsibility of States for Internationally Wrongful Acts, 2001, section 93130.4(a)(1)(B)

Background and Effect of the Proposed Regulatory Action:

Existing Regulation

In December 2007, CARB approved the *Airborne Toxic Control Measure for Auxiliary Diesel Engines Operated on Ocean-Going Vessels At-Berth in a California Port* Regulation (Existing Regulation).[1] The purpose of the Existing Regulation is to reduce emissions from diesel auxiliary engines on container vessels, reefer vessels, and passenger cruise vessels, while berthing at a California port. At berth, auxiliary engines are used by vessels to run power for lighting, ventilation, pumps, communication, heating, and other onboard equipment while a vessel is docked. Under the Existing Regulation, container, reefer, and cruise vessel fleets that visit specified California ports, as described below, are the regulated parties.

Container or reefer vessels that make 25 visits or more per calendar year to a regulated port and cruise vessels that make 5 or more visits per year to a regulated port are subject to the requirements of the Existing Regulation. Smaller vessel fleets (i.e., fleets that are comprised of container and reefer vessels that make fewer than 25 visits or cruise with fewer than 5 visits) and vessels that do not often frequent California ports are exempt from the Existing Regulation. The California ports included in the Existing Regulation are Ports of Los Angeles (POLA), Long Beach (POLB), Oakland, Richmond, San Diego, San Francisco, and Hueneme.

- The Existing Regulation provides fleet operators two different pathway options to comply: the Reduced On-board Power Generation (ROPG or Shore Power) option, or the Equivalent Emissions Reduction (EER or Equivalent) option.

Compliance requirements for the ROPG pathway began in 2014 with a 50 percent visit and 50 percent power reduction requirement. This means a fleet must reduce its auxiliary engine power by 50 percent from the fleet's baseline power generation (baseline power generation equals a fleet's berthing time multiplied by the auxiliary engine[s] power requirement) during the vessel's stay on 50 percent of the fleet's

[1] 17 CCR § 93118.3. Airborne Toxic Control Measure for Auxiliary Diesel Engines Operated on Ocean-Going Vessels At-Berth in a California Port, https://ww3.arb.ca.gov/regact/2007/shorepwr07/93118-t17.pdf.

annual vessel visits. These percentage requirements increased to 70 percent in 2017, and will increase to 80 percent in 2020, which will represent full implementation of the Existing Regulation. [2]

The EER pathway requires a percentage of emissions reduction below a fleet's baseline emissions. The baseline emissions for a vessel fleet is calculated by multiplying each individual vessel's berthing time with the vessel's electrical power requirements. Fleets following this pathway can comply using shore power or a CARB approved alternative control technology, such as a barge-based capture and control system. Compliance under this option began in 2010 with a 10 percent reduction and phased in to 50 percent in 2014 to match the ROPG pathway. Since 2014, the reduction requirements for both pathways have aligned at 70 percent in 2017 and 80 percent in 2020. [3]

The majority of vessels subject to the Existing Regulation comply using shore power. A small percentage of vessels that have not installed shore power use a CARB approved barge-based capture and control system for compliance. Barge-based capture and control systems can also be used in the event of shore power equipment failure or when a shore power berth is unavailable. Currently there are two barge-based CARB approved alternative technologies available for vessels to use for compliance in lieu of shore power. One system is located at POLA and the other at POLB.

Proposed Regulation

CARB staff are proposing adoption of the *Control Measure for Ocean-Going Vessels At Berth*, hereafter referred to as the "*Proposed Regulation*." The Proposed Regulation would supersede the Existing Regulation effective January 1, 2021, as specified in the proposed regulatory text.

The Proposed Regulation is designed to achieve added public health and air quality benefits. These benefits result from additional emissions reductions of oxides of nitrogen (NO_x), diesel particulate matter (DPM), particulate matter 2.5 (PM2.5), reactive organic gas (ROG), greenhouse gas (GHG) emissions, and black carbon beyond those realized by the Existing Regulation. The Proposed Regulation accomplishes this by introducing emission control requirements to: additional ports and terminals, including marine terminals that operate independently from a port or port authority, and vessels not covered by the Existing Regulation.

The Proposed Regulation intends to simplify and streamline enforcement of the current regulatory requirements by using a regulatory structure different than the Existing

[2] 17 CCR § 93118.3. (d)(1), Reduced Onboard Power Generation Option, Airborne Toxic Control Measure for Auxiliary Diesel Engines Operated on Ocean-Going Vessels At-Berth in a California Port, page 8, https://ww3.arb.ca.gov/regact/2007/shorepwr07/93118-t17.pdf.
[3] 17 CCR § 93118.3. (d)(2), Equivalent Emissions Reduction Option, Airborne Toxic Control Measure for Auxiliary Diesel Engines Operated on Ocean-Going Vessels At-Berth in a California Port, page 12, https://ww3.arb.ca.gov/regact/2007/shorepwr07/93118-t17.pdf.

Regulation. The Existing Regulation is a vessel fleet-based regulation with annual reporting requirements, whereas the Proposed Regulation contains emission control and reporting requirements based on individual vessel visits.

CARB may also consider other changes to the sections affected, as listed under "Objectives and Benefits of the Proposed Regulatory Action" of this notice, during the course of this rulemaking process. In developing the Proposed Regulation, staff continues to consider various provisions, including provisions that may incorporate elements of the Existing Regulation into the Proposed Regulation.

State policy and Plans Direct CARB to Secure Further Reductions from Vessels at Berth

In April 2015, CARB released the "*Sustainable Freight Pathways to Zero and Near-Zero Discussion Document* (Discussion Document)"[4] in response to Board Resolution 14-2,[5] which directed CARB to engage with stakeholders to identify and prioritize actions to move California toward a sustainable freight transport system. The Discussion Document set out CARB's vision of a clean freight system, and listed immediate and potential near-term CARB actions that staff would develop for future Board consideration. The near-term CARB measures identified in the Discussion Document included amending the Existing Regulation to include other vessel types to achieve additional emissions reductions.

In July 2015, Governor Brown signed Executive Order B-32-15[6] directing the secretaries of the California State Transportation Agency, CalEPA, and Natural Resources Agency to lead other relevant State departments in developing an integrated action plan by July 2016 that "establishes clear targets to improve freight efficiency, transition to zero-emission technologies, and increase competitiveness of California's freight system." The 2016 California Sustainable Freight Action Plan includes strengthening the Existing Regulation as a State agency action to advance the objectives of the Executive Order and the Sustainable Freight Action Plan.[7]
In September 2016, the Board approved the 2016 State SIP Strategy, which describes CARB's proposed commitment to achieve the emissions reductions from mobile

[4] California Air Resources Board, Sustainable Freight Pathways to Zero and Near-Zero Emissions Discussion Document (April 2015), California Sustainable Freight Initiative, https://www.arb.ca.gov/gmp/sfti/sustainable-freight-pathways-to-zero-and-near-zero-emissions-discussion-document.pdf.
[5] CARB Board Resolution 14-2, Sustainable Freight Strategy Update, January 23, 2014, https://arb.ca.gov/board/res/2014/res14-2.pdf.
[6] Executive Order B-32-15, July 17, 2015, https://www.ca.gov/archive/gov39/2015/07/17/news19046/index.html.
[7] California Department of Transportation et al., California Sustainable Freight Action Plan, Appendix C. (July 2016), http://dot.ca.gov/hq/tpp/offices/ogm/cs_freight_action_plan/Documents/CSFAP_AppendixC_FINAL_07272016.pdf.

sources and consumer products needed to meet federal air quality standards over the next 15 years.[8] The State SIP Strategy includes an enforceable commitment for specific emissions reductions, along with commitments to develop and propose a list of specific measures. CARB's list includes actions to strengthen the emission controls from vessels at berth by including additional vessel fleets, types, and operations.

In July 2017, Governor Brown took action to continue California's work to reduce air pollution by signing a legislative package establishing a new program to improve air quality in local communities (AB 617; Garcia, Stats. 2017, ch. 136).[9,10] The legislation helps ensure California continues to meet its air quality standards while addressing air pollution in communities with the dirtiest air. More work is needed to reduce the public health impacts in these communities that experience a significant burden from air pollution. With respect to AB 617, CARB has begun work to implement a new community-focused air quality program, including monitoring and emissions reduction plans. The Proposed Regulation would address community air quality objectives.

In 2006, California enacted AB 32 to address climate-changing greenhouse gas emissions (GHGs) by requiring cost-effective reductions in GHGs and by codifying a target of reducing California GHGs to 1990 levels by 2020. AB 32 directed CARB to continue its leadership role on climate change and to develop a scoping plan identifying integrated and cost-effective regional, national, and international GHG reduction programs.[11] In 2015, Governor Brown issued Executive Order B-30-15 (EO B-30-15),[12] which set a goal of reducing statewide GHG emissions to 40 percent below 1990 levels by 2030. In 2016, the Legislature passed, and Governor Brown signed, SB 32, which codified the 40 percent GHG reduction goal from 1990 levels by 2030.[13]

Objectives and Benefits of the Proposed Regulatory Action:

The Proposed Regulation is designed to accomplish two main goals: achieve public health and air quality benefits, and address implementation challenges with the Existing Regulation. To achieve further emissions reductions from vessels at berth, reduce adverse health impacts to communities surrounding ports and terminals, and streamline enforcement of regulatory requirements for vessels, the Proposed Regulation includes the following requirements and associated goals and benefits:

- Require vessels to control at berth emissions at additional ports and terminals beyond those covered under the Existing Regulation in order to increase the

[8] California Air Resources Board, Revised Proposed 2016 State Strategy for the State Implementation Plan March 7, 2017, http://www.arb.ca.gov/planning/sip/2016sip/2016sip.htm.
[9] AB 398, 25.5 California H.S.C. § 38501, 38562, 38594, 8505.5, 38590.1, 38591.1-38591.3, 38592.5, 38592.6, 4213.05 (2017).
[10] 25.5 California H.S.C. § 40920.6, 42400, 42402, 39607.1, 40920.8, 42411, 42705.5, 44391.2 (2017).
[11] AB 32, 25.5 California H.S.C. § 38500 – 38599, California Global Warming Solutions Act Of 2006
[12] Executive Order B-30-15, April 29, 2015, https://www.gov.ca.gov/2015/04/29/news18938/
[13] SB 32, Pavley, 25.5 California H.S.C. § 38566, https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB32

emissions reductions and reduce associated health impacts in additional communities.

- Require terminals that exceed the threshold of annual visits made by regulated vessels to control emissions from regulated vessels at berth. This allows ports growing in activity, and consequently their emissions burden to surrounding port communities, to be easily included in the regulation.

- Expand covered vessels to include ro-ro (roll-on/roll-off)[14] and tankers. Tanker vessel emissions make up the highest source of unregulated emissions from all vessels at berth statewide,[15] and the majority of ro-ro and tanker terminals exist in communities identified by CARB's Community Air Protection Program (CAPP) as priority for the deployment of community air monitoring systems and/or community emissions reduction programs. Adding control requirements for ro-ro and tanker vessels plays a vital role in reducing vessel at berth emissions in these impacted port communities.

- Require small fleets to have compliance requirements in order to achieve the emissions reductions goals of the Proposed Regulation and provides a level playing field for all vessels of the same category.

- Include previously exempted auxiliary engines that operate on liquefied natural gas (LNG) or other alternative fuels to ensure that vessels are obtaining the require emissions reductions.

- Require tankers operating boiler steam powered pumps (for off-loading cargoes like crude oil) to control their boiler emissions in order to capture the majority of emissions from this category of tanker vessel. Tanker boilers make up nearly 40 percent of NOx emissions, 75 percent of PM2.5 emissions, and over 80 percent of GHG emissions from tanker vessels.[16]

- Require all regulated vessel visits to use a CARB approved emissions control strategy to reduce auxiliary engine emissions and boiler emissions (for a subset of tanker vessels) on every visit to a regulated terminal, unless the visit qualifies for certain exceptions (to be discussed later in this list). Requiring every vessel to reduce emissions while at berth is necessary to achieve more emissions reductions from vessels at berth, particularly for the already regulated container, reefer, and cruise vessel categories.

[14] Ro-ro vessels carry cargo that can be rolled on and rolled off, such as cars and trucks.
[15] California Air Resources Board, DRAFT: 2018/2019 Update to Inventory for Ocean-Going Vessels: Methodology and Results, (January, 2019), https://www.arb.ca.gov/msei/ordiesel/draft2019ogvinv.pdf.
[16] California Air Resources Board, DRAFT: 2018/2019 Update to Inventory for Ocean-Going Vessels: Methodology and Results, (January, 2019), https://www.arb.ca.gov/msei/ordiesel/draft2019ogvinv.pdf.

- Implement a regulatory structure that is based on individual vessel visits. Placing control requirements on every visit simplifies compliance compared to the regulatory structure based on annual fleet visits in the Existing Regulation.

- Require ports and terminals to submit a plan to CARB describing what CARB approved emissions reduction strategy will be available to vessels visiting the terminal, and describing the necessary terminal and berth infrastructure modifications needed to reduce emissions from vessels at berth and the implementation timeline. Port and terminal plans are essential to help CARB staff understand and track how ports and terminals are planning to reduce emissions from vessels visiting their berths.

- Require both terminals and vessel operators to report corroborating information on vessel visits, including what technology was used to control emissions. Requiring both entities to report improves the accuracy of the data reported to CARB, allowing CARB enforcement staff the ability to corroborate visit information in the event of non-compliance during a visit.

- Require terminals and vessel operators to follow a compliance checklist that outlines all the steps necessary for a compliant visit. Compliance checklists allow regulated parties to determine compliance in a much shorter time frame than the Existing Regulation, where compliance may not be known for several months due to the annual fleet compliance structure of the regulation.

- Provide compliance options to address challenges with meeting requirements while a vessel is at berth. To address this, the Proposed Regulation provides mechanisms to account for both foreseeable and unforeseeable challenges that may prevent emissions reductions while not sacrificing significant emissions reductions. These provisions include safety exceptions and compliance options for shore power commissioning, research, terminal and incident events, and a remediation fund option.

- Require control technology developers to obtain CARB approval for their systems to be utilized as an emission control option and conduct periodic source testing. This ensures these technologies are achieving the emissions reductions required by the Proposed Regulation.

- Require all vessels visiting California regardless of port and terminal applicability, to maintain opacity standards at berth and at anchor.[17] This provision enforces

[17] Opacity in relation to vessels at berth or anchor refers to the visual appearance of smoke emitting from the vessel's exhaust stack. There are standards set for non-vehicular air pollution sources of how dark the exhaust smoke can be, including for ocean-going vessels. These standards are defined in Health and Safety Code section 41701. https://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=HSC&division=26.&title=&part=4.&chapter=3.&article=1.

existing state opacity standards, and provides clear authority for CARB enforcement staff to cite vessels at berth and at anchor if an opacity violation occurs.

CARB anticipates that the proposed regulation would have the following general benefits to California businesses and individuals:

Reduced Adverse Health Outcomes

CARB staff estimated the potential statewide PM mortality and illness impacts associated with exposure to PM2.5 from the Proposed Regulation. These health outcomes include cardiopulmonary mortality, hospital admissions, and emergency room visits. Based on the analysis, staff estimates that the total number of cases that would be reduced from implementation of the Proposed Regulation are as follows:

- 230 premature deaths (180 to 281, 95 percent confidence interval (CI))
- 72 hospital admissions (9 to 135, 95 percent CI)
- 116 emergency room visits (73 to 158, 95 percent CI)

Worker safety

Emission reductions also reduce occupational exposure for workers at ports and terminals and on vessels. This specific benefit was not quantified, as it was beyond the scope of staff's analysis for the rulemaking.

Reduced Ambient Ozone Levels

Although CARB staff did not quantify reduced adverse health outcomes associated with lower ozone levels, the Proposed Regulation would further reduce emissions of NOx and ROG that are precursors to the formation of ozone in the lower atmosphere. Exhaust from diesel engines including auxiliary engines on vessels at berth, contributes to the basin-wide inventory of ozone-formation precursors. Consequently, the Proposed Regulation would provide reductions to support attainment of the NAAQS for ozone, which are health-based standards set to minimize prevalence of respiratory problems, particularly asthma and lung damage.

GHG and Black Carbon

The Proposed Regulation will achieve GHG and black carbon emission reductions, both of which have the potential to help combat global climate change. Climate scientists agree that global warming and other shifts in the climate system observed over the past century are caused by human activities. These recorded changes are occurring at an unprecedented rate. According to new research, unabated GHG emissions could cause sea levels to rise up to 10 feet by the end of this century—an outcome that could devastate coastal communities in California and around the world. California is already

feeling the effects of climate change, and projections show that these effects will continue and worsen over the coming centuries. The impacts of climate change on California have been documented by Office of Environmental Health Hazard Assessment (OEHHA) in the Indicators of Climate Change Report.

Technology Providers

Compliance with the Existing Regulation is currently limited to shore power and alternative barge-based emissions capture and control systems. With the Proposed Regulation, CARB anticipates economic benefits associated with vessel owners or operators utilizing these alternative compliance options.

Vessels complying with shore power would provide additional opportunities for electrical infrastructure original equipment manufacturers (OEMs) as well as equipment installers to enter the market to install shore power equipment at the ports.

Vessels complying with capture and control systems would provide substantial economic benefit to technology companies operating and developing these systems. Based on CARB's estimates, more than 30 capture and control (either land- or barge-based) systems needed to control emissions from approximately 2,600 vessel visits annually. At the time of drafting this Staff Report, there are currently two companies who each own and operate a single barge-based emission capture system: Advanced Environmental Group at POLB, and Clean Air Engineering Maritime at POLA. CARB foresees both the opportunity for growth of these two existing companies to build, deploy, and operate additional systems, and a new market for additional entrants to develop technologies to meet demand to comply with the Proposed Regulation. Anticipated growth of the development and deployment of capture and control systems would also provide benefits to OEMs of ancillary equipment such as flatbed trailers, barges, tugs, gantry cranes, boom lifts, and any other equipment required to build and operate the systems.

Construction

The Proposed Regulation would provide opportunities for both larger and smaller engineering, construction, and design firms to redesign and expand existing port infrastructure to accommodate CARB approved compliance strategies to be developed. The Proposed Regulation would also benefit alternative fuel suppliers or utilities to construct additional pipeline networks to feed directly to the ports, providing additional benefits for other freight equipment.

Technology Research and Development

Although the current compliance strategies for the Existing Regulation is limited to shore power and emission capture and control technologies, CARB anticipates the timing of the Proposed Regulation to further accelerate the development of novel technologies

and strategies for newly regulated vessel categories to meet the requirements. This would provide an incentive for both university research centers and OEMs to expand into the market. In addition, the Proposed Regulation may accelerate the development of alternative fuels such as renewable diesel, renewable natural gas, and renewable hydrogen to power the CARB approved compliance strategies. This would have an additional benefit of meeting CARB's Low carbon Fuel Standards (LCFS) requirements.

Out-of-State and International Benefits

California has been a world leader in establishing clean air policies and programs. Unlike source categories that operate more locally, ocean-going vessels operate around the globe. Consequently, California programs for ocean-going vessels directly benefit other regions of the world where vessels travel. The Existing Regulation has required use of shore power on many vessels visiting California, and regions around the world have begun to also use shore power. For example, several ports in China have taken action to install shore power infrastructure. Successful adoption of the Proposed Regulation would incentivize more countries to adopt shore power, which provides enormous potential for additional health benefits in port communities worldwide.

Furthermore, for select ports outside the United States to adopt CARB approved compliance strategies for use may incentivize international standards governing organizations such as the International Maritime Organization (IMO) and the Institute of Electrical and Electronic Engineers (IEEE) to harmonize design and performance standards. This would streamline the approval process for maritime industry stakeholders to develop novel compliance strategies.

Staff conducted public outreach prior to the formal rulemaking, including multiple public workshops, see Chapter XII in the Initial Statement of Reasons (ISOR) for a detailed discussion.

Comparable Federal Regulations:

There are no comparable federal regulations which address the same issues as CARB's Proposed Regulation. The federal government has not adopted regulations that restrict emissions from ocean-going vessels while at berth. Furthermore, CARB has developed the Proposed Regulation to include a "sunset" clause that would cause the Proposed Regulation to cease to apply if the federal government does adopt and enforce requirements that will achieve emissions reductions within the Regulated California Waters equivalent to those achieved by the Proposed Regulation. Therefore, the Proposed Regulation does not conflict with nor duplicate any federal regulations.

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. As noted above and throughout the Staff Report, the currently effective Existing Regulation contains requirements for some similar categories of vessels. CARB has carefully drafted the Proposed Regulation to supersede the Existing Regulation, as appropriate.

DISCLOSURE REGARDING THE PROPOSED REGULATION

Fiscal Impact/Local Mandate Determination Regarding the Proposed Action (Gov. Code, § 11346.5, subds. (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 but not a 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.:

The Proposed Regulation has direct impacts on eight regulated ports (Los Angeles, Long Beach, San Diego, Hueneme, San Francisco, Oakland, Stockton, and Richmond), which are all semi-autonomous public agencies. The ports are each run by a Board of Commissioners, which are generally appointed by local city and/or county governments, or elected locally. While each port has unique operating characteristics, the ports are generally self-funded and raise their own revenue through terminal leases or berthing fees. These funds are then used for infrastructure development and operational costs. The costs and cost-savings to ports varies annually. Specific costs to each port are expected to vary based on its business model, and the vessel types that visit. Ports would face fiscal impacts to finance, design and build, and maintain shore power infrastructure, and/or infrastructure associated with land-based capture and control projects. Staff understands that infrastructure costs for projects occurring at port-based terminals would initially be incurred by the ports, but could be passed on to port tenants through their lease agreements, to vessel operators through berthing fees, or would be absorbed by the ports. Ports may need to conduct feasibility assessments, engineering

analysis and design, and secure required permits to construct terminal infrastructure projects needed to support the land-based capture and control systems for their terminals. The ports would also incur administrative costs to cover the preparation of Port Plans that would be required by the Proposed Regulation. Further, operating ports that act as terminal operators, would incur costs for updating terminal plans, reporting vessel visits and cost of labor the land-based capture and control systems at terminals.

Land-based capture and control systems would also require local air district permits, or inclusion in the facility's federal Title V operating permit for systems located at major sources of air pollution. District permits would require review by local air district staff. For purposes of the cost analysis, staff assumed that the equivalent of one person year (PY) across multiple agencies would be needed starting in 2021 and throughout the implementation timeframe of the Proposed Regulation to account for local permitting activities.

Cost or Savings for State Agencies:

The Proposed Regulation will impose costs on CARB, which estimates seven additional positions are necessary:

- For the technical duties on review of plans and technologies, as well as infrastructure development;

- To draft guidance documents, evaluate required at berth reports submitted in the Freight Regulations Reporting System (FRRS) and flag/resolve any issues, and work with environmental justice communities near ports;

- To staff the hotline for industry questions, and respond to industry/port requests for compliance assistance;

- To perform enforcement activities for an expanded number of ports, terminals, vessel types, vessel fleets, and vessel visits.

Other State Agencies

- Staff assumes that infrastructure improvements would be needed at locations on State-owned lands and that are under the jurisdiction of the California State Lands Commission (CSLC). Discussion with CSLC indicated that one PY would be needed.

- CSLC is not a permitting agency, however, permitting agencies typically will not issue permits for infrastructure projects until CSLC has reviewed and approved the project. State agencies directly involved in permitting may include the San Francisco Bay Conservation and Development Commission (BCDC), applicable to projects in the San Francisco Bay, the applicable Regional Water Quality

Control Board, and the California Department of Fish and Wildlife (CDFW). Based on the number of project to be reviewed, staff estimates one PY will be needed to account for project review and permitting activities.

Other Non-Discretionary Costs or Savings on Local Agencies:

The Proposed Regulation affects ports, which are local agencies. The non-discretionary costs have been described above in the section titled "Cost to any Local Agency or School District Requiring Reimbursement under section 17500 et. seq." There are no other costs or savings than those described.

Cost or Savings in Federal Funding to the State:

The Proposed Regulation is not expected to impose any costs or saving in Federal Funding to the State.

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

The Executive Officer 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 August 2019, CARB submitted a Standardized Regulatory Impact Analysis (SRIA) to the Department of Finance (DOF) for its review. CARB has updated the Proposed Regulation since the original SRIA submittal and to address DOF comments. The revisions are discussed in the ISOR, Chapter IX.

(A) The creation or elimination of jobs within the state.

The Proposed Regulation is anticipated to result in a relatively small decrease in total employment growth in most years of the Proposed Regulation. Directly impacted

terminal operators, vessel operators, and ports may see negative impacts to employment due to increased costs of the regulation. In some years, there may be small positive job impacts associated with feasibility studies, and construction activity related to vessel, berth, and land-based retrofits. Overall, the change in total employment is anticipated to be small, relative to the baseline employment for the California economy. Analysis performed in the SRIA estimates less than a 0.02 percent decrease in employment growth in any given year. Changes to the Proposed Regulation since the SRIA are not anticipated to significantly impact the estimated impacts on employment growth.

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

Overall, the Proposed Regulation is expected to have a small impact on business creation or elimination. Vessel operators and terminals face compliance costs, but are large entities that would be unlikely to be eliminated.

Staff expects the Proposed Regulation to provide substantial incentives for barge-based capture and control providers. There are currently two companies providing capture and control services to container vessels at POLA and POLB. However, to meet demand for capture and control services at California ports, staff have estimated seven barges would need to be deployed, likely resulting in the expansion of businesses in the transportation support industries.

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

The Proposed Regulation increases costs to California ports and terminals, and the vessels that visit them. To date, the available data and research has been insufficient to quantify the impact on the competitive advantage or disadvantage of the Proposed Regulation as it relates to cargo diversion. Cargo owners and international cargo transport delivery companies rely on sophisticated proprietary models and factors to guide decisions on where to ship goods. The factors include access to consumer markets and intermodal transportation networks; reliability and velocity of transport modes; port and trans-loading infrastructure; the overall efficiency of the supply chain as it is impacted by the availability of labor; congestion delays and other impediments; and costs, including compliance costs for all regulations.

Quantifying the potential for the Proposed Regulation to cause cargo diversion requires either a detailed understanding of how increased regulatory costs would impact each beneficial cargo owner's use of a specific port; or would require causal estimates from historical data to understand the contributing factors, and to estimate the impact of regulatory costs on cargo diversion. CARB staff directly engaged industry stakeholders for their experience or data, and found that a company's decision to divert cargo from one port to another is complex and unique to individual businesses. CARB staff was

unable to obtain information on business level responses to regulatory costs due to the highly competitive nature of the freight industry.

In addition, CARB staff did not find empirical research that focused on the impact of regulatory costs on cargo diversion. A number of studies have explored the relationship between general cost increases and the likelihood of cargo diversion. These studies found that there is a very wide range of estimates for how increased costs may impact cargo volumes, that the estimates are highly uncertain, and that these responses may change markedly in the span of only several years due to the dynamics of industry and global economics.

One case study on the potential impact of a container fee suggested that cargo diversion is unlikely for modest per twenty foot equivalent unit (TEU) cost increases, up to $30 per TEU. To put this into context, the Proposed Regulation would add additional costs of $1.11 per TEU in 2030 for container and reefer vessels. Although the per unit cost of the Proposed Regulation for other vessels types are not directly comparable to the TEU statistic, for illustrative purposes they are: approximately $4.60 per passenger for cruise vessels, approximately $7.50 per automobile for ro-ros, and less than $0.01 per gallon of refinery product[18] for tankers.

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

The SRIA analysis analyzed the impact of the Proposed Regulation on the California economy, including private domestic investment. Private domestic investment consists of purchases of residential and nonresidential structures and of equipment and software by private businesses and nonprofit institutions. It is used as a proxy for impacts on investments in California because it provides an indicator of the future productive capacity of the economy.

The SRIA analysis estimated a decrease of private domestic investment of about $90 million in 2032, or about 0.02 percent of baseline private domestic investment. Since the SRIA analysis, the Proposed Regulation has changed as described in the Changes since the SRIA section. The updated proposal is not anticipated to significantly change the overall impacts on investments in California as presented in the SRIA.

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

The Proposed Regulation can require and provide impetus for vessel and terminal operators and ports to pursue the cleanest available technologies to reduce emissions at berth. Currently there are two CARB approved emission control strategies (shore

[18] Including compliant gasoline, conventional gasoline, reformulated blendstock for oxygenate blending gasoline, CARB diesel, EPA diesel, “other” diesel, commercial jet fuel, military jet fuel, and other products derived from crude oil from all major import sources.

power and barge-based capture and control system) to assist with compliance.

Compared to the Existing Regulation, approximately 2,600 additional vessels visits annually would be required to reduce emissions under the Proposed Regulation. This need is expected to create a market for additional strategies to assist in compliance and to accelerate development of emission reduction technologies in marine applications that could compete with the available barge-based emissions control systems and shore power. Technologies are available that can be adapted to reduce ocean-going vessel auxiliary engine emissions, and potentially auxiliary boiler exhaust, that would move vessels toward CARB's long-term goal of zero and near-zero emissions to ensure compliance with the Proposed Regulation. This includes, but is not limited to advanced boiler and engine technologies, marine exhaust gas scrubbing systems, diesel emission control devices with selective catalytic reduction (SCR) after-treatment, distributed generation equipment, non-grid based shore power, alternative fuels and capture and control technologies adapted to land-based systems.

(F) The benefits of the regulations, 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.

The Proposed Regulation reduces NOx, DPM, PM2.5, ROG, GHG, and black carbon emissions from vessels at berth in California ports Californians will directly benefit in the form of health benefits from the lower levels of these emissions.

The Proposed Regulation will result in a reduction in the risk for premature deaths, hospital visits, emergency room visits, and a variety of other health effects, especially in sensitive receptors including children, elderly, and people with chronic heart or lung disease. Emission reductions also reduce occupational exposure for workers at ports and terminals and on vessels, as well as passengers on cruise vessels.

(G) Department of Finance Comments and Responses.

DOF Comment:

The SRIA must include non-annualized capital costs. Capital costs are almost half of the direct costs of the package. However because new facilities are required for compliance, these capital costs may not be spread evenly across the effective period of the regulation as ARB assumes, but will depend on the availability of parties to finance up-front costs. The SRIA should disclose the cost of capital construction to the year the money will actually be spent, as well as the assumed amortization.

Response:

In the SRIA, staff assumed that capital costs for infrastructure and equipment for shore power and capture and control systems would be financed with interest. If the regulated

entities are not able to obtain loans then the upfront costs in a given year would be higher than the annualized cost.

Table 1 (Appendix C-2) shows the annualized and the upfront cost in the year incurred for infrastructure and equipment for vessel and terminal operators, and ports. The costs in each year account for the aggregated and compounded annual growth factors.

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

In accordance with Government Code sections 11346.5, subdivisions (a)(11) and 11346.3, subdivision (d), the Executive Officer finds the reporting requirements of the proposed regulatory action which apply 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)):

In developing this regulatory proposal, CARB staff evaluated the potential economic impacts on representative private persons or businesses. The Proposed Regulation impacts vessel operators, terminal operators, and ports. There are no direct regulatory costs incurred by individuals as a result of the Proposed Regulation. However, staff anticipates the Proposed Regulation may result in indirect costs to individuals to the extent that compliance costs are passed through to the ultimate consumers of cargo and cruise vessel passengers.

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

The Executive Officer has also determined under California Code of Regulations, title 1, section 4, that the proposed regulatory action would not affect small businesses because the Proposed Regulation directly impacts vessel and terminal operators, which do not fall under the small business definition and ports, which are a part of local governments. As noted in the Staff Report, the Proposed Regulation would not result in any direct costs to small businesses and individuals. However, staff anticipates the Proposed Regulation would result in indirect costs to individuals and small businesses to the extent that compliance costs are passed through to the ultimate consumers of cargo and cruise vessel passengers.

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 analysis of such alternatives can be found in Chapter X of the ISOR. There are three regulatory alternatives that are discussed in the ISOR including, Implementation Fixes Through an Amendment to Existing Regulation Only, Shore Power Only Compliance Pathway for Container/Reefer, Cruise, Auto/Ro-Ro and Tanker Vessels, and "Alternative Proposal for Amendments to At-Berth Regulations" provided by California Association of Port Authorities (CAPA), Cruise Lines International Association (CLIA), Pacific Merchant Shipping Association (PMSA), Western States Petroleum Association (WSPA), and World Shipping Council (WSC) on February 15, 2019.

Alternative 1 would involve amending the Existing Regulation. For this Alternative, implementation of the amended Regulation would begin in 2021. Alterative 1 would address implementation challenges associated with the Existing Regulation, without adding any additional requirements. Alternative 1 would provide less NOx, ROG, PM2.5, DPM, GHG, and black carbon emissions reductions compared to the Proposed Regulation. As a result, Alternative 1 would fail to provide significant additional public health and air quality benefits for California's residents, especially communities adjacent to ports and terminals. Additionally, by not including tanker vessels Alternative 1 fails to capture boiler emissions from tanker vessels that utilize boilers to operate steam-driven pumps for off-loading crude products.

Alternative 2 would include container, reefer, and cruise vessels and the addition of ro-ro and tanker vessels visiting regulated California ports and terminals. For Alternative 2, shore power is the only allowable strategy to reduce emissions at berth. Alternative 2 would cost more, would be less cost effective to implement than the Proposed Regulation, and provides less flexibility than allowing site-specific selection of most the feasible and cost effective strategies.

Alternative 3 would involve amending the Existing Regulation, consisting of addressing implementation challenges for the regulated (container, reefer and cruise vessels) vessel fleets and calls for feasibility and cost effectiveness studies prior to future expansion of the regulation. Alternative 3 may result in reduced costs relative to the Proposed Regulation but would achieve substantially less emissions reductions for NOx, ROG, PM2.5, DPM, GHG, and black carbon. As a result, it would fail to provide significant additional public health benefits including communities adjacent to ports and terminals throughout the state.

No alternative proposed was found to be less burdensome and equally effective in achieving the purposes of the regulation in a manner that ensures full compliance with the authorizing law.

STATE IMPLEMENTATION PLAN REVISION

If adopted by CARB, CARB plans to submit the proposed regulatory action to the United States Environmental Protection Agency (U.S. EPA) for approval as a revision to the California State Implementation Plan (SIP) required by the federal Clean Air Act (CAA). The adopted regulatory action would be submitted as a SIP revision because it adopts regulations intended to 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 CAA.

ENVIRONMENTAL ANALYSIS

CARB, as the lead agency for the Proposed Regulation, 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 21080.5). 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 regulations.

The draft EA concluded implementation of the Proposed Regulation could result in: less than significant impacts, or no impacts, to energy demand, land use, air quality, greenhouse gases, population, employment and housing, public services, and recreation; and potentially significant adverse impacts to aesthetics, agriculture and forest resources, biological resources, cultural resources and tribal resources, geology and soils, hazards and hazardous materials, hydrology and water quality, mineral resources, 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 to the ISOR, is entitled Draft Environmental Analysis Prepared for the Proposed Control Measure for Ocean-Going Vessels At Berth in California. Written comments on the draft EA will be accepted during a 45-day public review period starting on October 18, 2019 and ending at 5pm on December 5, 2019.

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 Clerk of the Board at (916) 322-5594 or by facsimile at (916) 322-3928 as soon as possible, but no later than 10 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 alterno 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 (916) 322-5594 o envié un fax a (916) 322-3928 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, Angela Csondes, Manager, Marine Strategies Section at (916) 323-4882 or (designated back-up contact) Nicole Light Densberger, Air Pollution Specialist at (916) 445-6012.

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: Staff Report: Initial Statement of Reasons—Public Hearing to Consider the Proposed Control Measure for Ocean-Going Vessels At Berth.

Copies of the ISOR and the full text of the proposed regulatory language, may be accessed on CARB's website listed below, or may be obtained from the Public

Information Office, California Air Resources Board, 1001 I Street, Visitors and Environmental Services Center, First Floor, Sacramento, California, 95814, on October 15, 2019.

Further, the agency representative to whom nonsubstantive inquiries concerning the proposed administrative action may be directed is Chris Hopkins, Regulations Coordinator, (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).

The public may request a copy of the modified regulatory text from CARB's Public Information Office, California Air Resources Board, 1001 I Street, Visitors and Environmental Services Center, First Floor, Sacramento, California, 95814.

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/2019/ogvatberth2019.

CALIFORNIA AIR RESOURCES BOARD

Richard W. Corey
Executive Officer

Date: October, 1, 2019

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 our website at www.arb.ca.gov.