

Title 13. California Air Resources Board

Notice of Public Hearing to Consider Proposed Heavy-Duty Inspection and Maintenance Regulation

The California Air Resources Board (CARB or Board) will conduct a public hearing at the date and time noted below to consider approving for adoption the proposed Heavy-Duty Inspection and Maintenance (HD I/M) Regulation.

Date: December 9, 2021

Time: 9:00 A.M.

This public meeting may continue at 8:30 a.m., on December 10, 2021. Please consult the public agenda, which will be posted ten days before the December 9, 2021, Board Meeting, for important details, including, but not limited to, the day on which this item will be considered and any appropriate direction regarding a possible 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, Byron Sher Auditorium, 1001 I Street, Sacramento, California 95814.

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 October 15, 2021. Written comments not submitted during the hearing must be submitted on or after October 15, 2021, and received **no later than November 29, 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): <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 Reference

This regulatory action is proposed under the authority granted in California Health and Safety Code, sections 39002, 39003, 39600, 39601, 43000, 43008.6, 43013, 43016, 43018, 43701, 44011.6, and 44152; and California Vehicle Code, sections 2813, 4000.17, 24019, 27153, 27158.1, 27158.2, and 27159. This action is proposed to implement, interpret, and make specific sections 1797.84, 39042, 39042.5, 39055.5, 43014, 43701, 44011.6, 44152, 44154, and 44156, Health and Safety Code; and sections 165, 260, 305, 410, 505, 2813, 4000.17, 4156.5, 5004, 24019, 27153, 27156, 27158.1, 27158.2, and 27159, Vehicle Code.

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

Sections Affected: Proposed amendments to California Code of Regulations, title 13, section 2193. Proposed adoption to California Code of Regulations, title 13, section(s) 2195, 2195.1, 2196, 2196.1, 2196.2, 2196.3, 2196.4, 2196.5, 2196.6, 2196.7, 2196.8, 2197, 2197.1, 2197.2, 2197.3, 2198, 2198.1, 2198.2, 2199, and 2199.1.

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

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

- "California Standards for Heavy-Duty Remote On-board Diagnostic Devices," adopted [Insert Date of Adoption], incorporated by reference in 13 California Code of Regulations (CCR) section 2195.1.
- Society of Automotive Engineers (SAE) J1667 Recommended Practice "Snap Acceleration Smoke Test Procedure for Heavy-Duty Powered Vehicles," as issued February 1996 ("1996-02"), incorporated in reference in 13 CCR section 2195.1.

The "California Standards for Heavy-Duty Remote On-board Diagnostic Devices," is being adopted by this regulation and thus the adoption date will be the date that the regulation is approved by CARB.

The following documents are incorporated by reference in the Proposed "California Standards for Heavy-Duty Remote On-board Diagnostic Devices":

- Section 86.010-18, title 40, CFR, "On-board Diagnostics for engines used in applications greater than 14,000 pounds GVWR", 2009.
- International Organization for Standardization (ISO) 11898-1 "Road vehicles – Controller area network (CAN) – Part 1: Data link layer and physical signaling," 2015.

- ISO 11898-2 "Road vehicles – Controller area network (CAN) – Part 2: High-speed medium access unit," 2016.
- ISO 15031-4 "Road vehicles — Communication between vehicle and external equipment for emissions-related diagnostics — Part 4: External test equipment," 2014.
- SAE J1699-2 "Test Cases for OBD-II Scan Tools and I/M Test Equipment," 2017.
- SAE J1962 "Diagnostic Connector," July 2016.
- SAE J1978 "OBD II Scan Tool – Equivalent to ISO/DIS 15031-4," April 2002.
- SAE J1979 "E/E Diagnostic Test Modes," February 2017.
- SAE J1979-DA "Digital Annex of E/E Diagnostic Test Modes," May 2019.
- ISO 15765-4 "Road Vehicles-Diagnostics Communication over Controller Area Network (DoCAN) - Part 4: Requirements for emission-related systems," April 2021.
- SAE J1939 Recommended Practice for a Serial Control and Communications Heavy Duty Vehicle Network – Top Level Document," August 2018.
- SAE J1939-DA "Digital Annex of Serial Control and Communication Heavy Duty Vehicle Network Data," March 2020.
- SAE J1939-3 "On Board Diagnostics Implementation Guide," 2015.
- SAE J1939-13 "Off-Board Diagnostic Connector," October 2016.
- SAE J1939-21 "Data Link Layer," October 2018.
- SAE J1939-73 "Application Layer – Diagnostics," June 2019.
- SAE J1939-81 "Network Management," March 2017.
- SAE J3005-1 "Permanently or Semi-Permanently Installed Diagnostic Communication Devices," February 2019.
- SAE J3005-2 "Permanently or Semi-Permanently Installed Diagnostic Communication Devices, Security Guidelines," March 2020.
- SAE J1979-2 "E/E Diagnostic Test Modes: OBDOnUDS," April 2021.

Background and Effect of the Proposed Regulatory Action:

This action would substantially reduce emissions of dangerous pollutants from existing heavy-duty (HD) vehicles by implementing an inspection and maintenance program as directed by the Legislature. Once fully in force, the program will help protect Californians by ensuring these vehicles are properly maintained, cutting air pollution.

HD vehicles, i.e., those with gross vehicle weight rating (GVWR) greater than 14,000 pounds, continue to be major contributors to statewide mobile air pollution, even though this sector only makes up about three percent of the total on-road vehicles operating in California. In 2020, HD vehicles emitted approximately 52 percent of the statewide on-road mobile source oxides of nitrogen (NOx) emissions and about 54 percent of the statewide on-road mobile source particulate matter (PM) 2.5 emissions¹.

HD vehicles' NOx and PM emissions harm human health and the environment. In 1998, CARB listed PM as one of the identified carcinogenic toxic air contaminants due to its contribution

¹ PM 2.5 is particulate matter with a diameter of less than 2.5 micrometers.

to increased mortality, cancer risk, and serious illness. NO_x is a precursor of ozone formation and several other air toxics including PM. Exposure to PM and ozone can lead to serious adverse health effects such as asthma, cardiopulmonary and respiratory diseases, and premature deaths.

Despite continuing efforts by CARB and air districts which have substantially reduced air pollution, most densely populated areas in California, such as South Coast and San Joaquin Valley air basins, are still not in attainment with the federal ozone and PM 2.5 standards and CARB is focused on rapidly cutting remaining air pollution. About 70 percent of Californians live in areas that exceed the federal ozone and PM 2.5 standards. To achieve federal air quality standards and improve public health in these regions as well as across the State, it is critical to substantially further reduce NO_x and PM emissions from on-road HD vehicles beyond what CARB's current programs are already doing. As many major populated regions and economically disadvantaged communities are near heavy trucking traffic areas, by reducing in-use HD truck emissions, the Proposed Regulation would help achieve equitable clean air quality for all Californians, and would especially benefit Californians exposed to freight-related pollution from HD vehicles.

To limit excess emissions from in-use HD vehicles, CARB currently implements two in-use vehicle inspection programs, the HD Vehicle Inspection Program (HDVIP) and the Periodic Smoke Inspection Program (PSIP). This program would, if approved, generally replace these programs with a more comprehensive and effective structure.

In the early 1990s, CARB adopted the HDVIP, which allows CARB staff to inspect HD trucks and buses operating in California for excessive smoke, tampering, and engine certification label compliance. CARB inspections are typically performed at border crossings, California Highway Patrol (CHP) Commercial Vehicle Enforcement Facilities (commonly known as "weigh stations"), fleet facilities, and randomly selected roadside locations. Vehicle owners found in violation are subject to monetary penalty and required to provide proof of correction to clear violations. In addition to HDVIP, CARB adopted the PSIP to control HD vehicle smoke emissions. Under the PSIP regulation, fleet owners of two or more HD diesel vehicles are required to perform annual smoke opacity tests following the SAE J1667 testing procedure, keep the smoke test records for potential auditing purposes, and repair vehicles that exceed the allowed smoke opacity limits. CARB staff randomly audits fleets, reviews maintenance and inspection records, and tests a representative sample of vehicles at the roadside to enforce the PSIP regulation. Upon initial implementation in the early 1990s, the smoke opacity limits for both HDVIP and PSIP were established at 40 percent for 1991 and newer model year (MY) HD diesel engines and 55 percent for pre-1991 MY HD diesel engines. Recent Board adopted amendments in 2018 to the HDVIP and PSIP established a more stringent set of smoke opacity limits, such as five percent for any HD vehicle powered by a 2007 or subsequent MY diesel engine and five percent for any HD vehicle required to be equipped or retrofitted with a Level 3 Verified Diesel Emissions Control Strategy, regardless of its diesel engine MY. Chapter I of the Initial Statement of Reasons (ISOR) provides more details on the smoke opacity limits associated with the current HDVIP and PSIP regulations.

The recent Board amendments to the HDVIP and PSIP improved the ability to identify some emissions related issues, such as malfunctioning diesel particulate filters. However, these programs still rely on the smoke opacity test for emissions related diagnosis and thus can only identify and ensure repairs on a subset of HD vehicle emissions control-related issues, leaving NOx related emissions issues unchecked. Considering the substantial proportion of statewide NOx emissions attributed to HD vehicles, it is critical to develop improved testing methods to ensure the diagnosis of all emissions related issues that may result from HD vehicles.

Recognizing that a revamped and robust HD vehicle inspection and maintenance program could provide significant and critically needed NOx and PM reductions, Senator Connie Leyva introduced Senate Bill (SB) 210 (Leyva; Chapter 5.5, Statutes of 2019) to direct CARB, in consultation with its partner State agencies, to develop a new, comprehensive HD I/M program applicable to non-gasoline HD vehicles operating in California with a GVWR above 14,000 pounds. Governor Newsom signed SB 210 into law on September 20, 2019.

Summary of Proposal

The Proposed Regulation would implement a more robust and enforceable, yet streamlined, inspection and maintenance test procedure for non-gasoline combustion HD vehicles with GVWR greater than 14,000 pounds operating in California. It would help curb on-road HD NOx and PM emissions by ensuring HD vehicles' emission control systems are well maintained and functioning as designed throughout their vehicle life. The Proposed Regulation would consist of the following elements:

1. Vehicle Applicability

All non-gasoline combustion vehicles above 14,000 pounds GVWR that operate in California would be subject to the Proposed Regulation to ensure that emissions control systems on these vehicles are operating as designed and get repaired in a timely manner when they malfunction, thereby reducing in-use HD truck emissions to provide cleaner air quality for all Californians. This would include out-of-state and out-of-country registered vehicles when operating within the State of California as these vehicles account for up to 50 percent of the vehicles that operate in California and make up about 27 percent of total NOx emissions, and 36 percent of total PM 2.5 emissions from all HD vehicles operating in California each day. The Proposed Regulation would not apply to:

- Zero-emission HD vehicles,
- Authorized emergency vehicles,
- Military tactical vehicles,
- New vehicles certified to the most stringent optional NOx certification standard for the first four years of the Proposed Regulation,
- Non-California registered motor homes used for recreational purposes,
- Vehicles operating under a CARB-issued experimental permit,
- Historical plated vehicles, or
- Vehicles operating under an Emergency Declaration.

2. Reporting Requirements

Under the Proposed Regulation, owners of HD vehicles operating in California (including out-of-state vehicles) would be required to report owner and vehicle information to CARB and ensure their fleet information is current. Owners would first need to establish an account in the CARB's HD I/M database system and then report the required vehicle information for vehicles within their fleet.

To reduce redundancies in state database systems, CARB staff would coordinate with California Department of Motor Vehicles (DMV) to obtain vehicle information for applicable vehicles that are registered with the DMV and/or International Registration Plan databases. Only owners that have vehicles not registered in one of these two databases or with critical data gaps in these databases (e.g., vehicle identification number (VIN), license plate, etc.) would need to report such vehicle information.

3. Vehicle Compliance Testing Requirements

HD vehicle owners would demonstrate their emissions control systems are properly functioning through required vehicle compliance tests. For on-board diagnostic (OBD)-equipped vehicles, vehicle owners would submit OBD data, while for non-OBD vehicles, vehicle owners would submit the results of a smoke opacity test and visual emissions control inspection.

a. OBD Testing for HD OBD-Equipped Vehicles

For OBD-equipped vehicles, staff is proposing that vehicle owners comply through OBD data submission. The OBD-based vehicle compliance test would rely on the submission of the OBD data parameters specified by CARB's HD OBD regulation (Section 1971.1, Title 13, CCR). These OBD data parameters have been standardized through regulation and verified through CARB's certification process to monitor and detect for emissions related issues. This required OBD data would include information such as emissions related fault codes, monitor test results, and live stream data parameters necessary to determine whether a vehicle has an emissions related issue present during the inspection. It would also include additional parameters to help assess whether the test was performed properly and whether any fraudulent activity may have occurred during the inspection test.

Owners of HD OBD-equipped vehicles would have multiple options for the required compliance testing, allowing vehicle owners to select a test method that best meets their vehicle operation and business needs. OBD test results could be submitted through a continuously connected remote OBD device, generically referred to as a telematics submission. Telematics allow for an automated test inspection and submission without human interaction or vehicle downtime. Telematics technology has been utilized by HD fleets for logistic managements or preventive maintenance notification through fleets' subscription to telematics companies for many years. The proposed CC-ROBD testing submission approach could be incorporated into the current telematics services offered to fleets. Alternatively, OBD test results could be submitted through a non-continuously connected remote OBD

device, referred as a plug-in test device. Such testing could be performed anywhere and submitted remotely to the HD I/M database system. Although not an automated inspection as with the telematics submission, tests performed via a plug-in test device would take less than five minutes to complete.

b. Smoke Opacity and Visual Inspection for HD Non-OBD Vehicles

For HD vehicles that are not equipped with OBD systems, staff is proposing a smoke opacity test following the SAE J1667 testing procedure, along with a visual inspection of a vehicle's emissions control systems as the required compliance test. The SAE J1667 smoke opacity testing currently is required as part of CARB's HDVIP/PSIP regulations. Smoke opacity testing is limited to monitoring PM emissions control systems and not as comprehensive as OBD testing, staff is also proposing a visual inspection of emissions control systems as part of the vehicle compliance testing procedure for non-OBD vehicles. The proposed visual inspection would require an inspector to verify all emissions control components are in the manufacturer-approved configuration.

Compliance testing for non-OBD vehicles would be required to be performed by a HD I/M-approved tester. The proposed testing would take about 30 minutes per vehicle: 15 minutes for the smoke opacity test and another 15 minutes for the visual inspection. Because the SAE J1667 smoke opacity test is specific to diesel vehicles, non-OBD alternative fuel vehicles subject to the Proposed Regulation would not be required to perform the smoke opacity test. Such vehicles would be subject solely to the visual inspection requirements during their vehicle inspection, thus, the proposed testing would take about 15 minutes per inspection.

4. Periodic Testing Requirements

Affected HD vehicles would be subject to semiannual (once every six months) compliance testing. Non-commercial motor homes would be subject to annual testing. Owners would be required to have a passing compliance test submitted for their vehicle by each periodic testing deadline. For California registered vehicles, the periodic compliance deadlines would align with a vehicle's DMV registration date and the date six months from a vehicle's DMV registration date (i.e., if a vehicle's DMV registration date is January 15, the second compliance deadline would be July 15). The compliance deadline for motorhomes subject to an annual testing requirement would be the vehicle's DMV registration date. Compliance deadlines for out-of-state vehicles would be based on the last number of a vehicle's VIN, with each number representing a different month of the year. For example, an out-of-state vehicle with a VIN ending in "4" would have a compliance deadline in February, with its second compliance deadline six months later. Spreading out testing deadlines throughout the year would help ensure the effective implementation of the Proposed Regulation by avoiding the risk of surges in program activity at select times of the year.

5. HD I/M Tester Requirements

The Proposed Regulation would require any individual performing vehicle compliance testing to complete a CARB-approved training course and obtain a testing credential. Such training

would include instruction on how to properly perform the required vehicle compliance tests and the regulatory requirements of the Proposed Regulation. These training requirements would establish minimum competency and knowledge required of a tester, encourage consistent testing procedures, and thereby ultimately mitigate improper testing habits.

6. Referee Testing Network

Analogous to the responsibilities performed by referees in Bureau of Automotive Repair's (BAR) light-duty smog check program, staff is proposing to establish a referee testing network to provide independent evaluations of HD vehicles and services for vehicles with inspection incompatibilities or compliance issues. The referees would provide a critical testing backstop for vehicles that struggle to comply with the testing requirements or submit testing that suggests potential fraud.

7. Parts Unavailability Compliance Time Extension Provisions

CARB staff is proposing a compliance time extension provision for small fleets of ten vehicles or fewer who cannot obtain the parts needed to repair a vehicle in time. In case of such a lack of parts availability, a one-time compliance extension could be granted to the vehicle owner to allow the vehicle to operate up through the vehicle's next periodic testing deadline. Upon seeking approval of such a request from the Executive Officer, the vehicle owner would be required to provide documentation that provides supporting evidence that they made a good faith effort to bring the vehicle into compliance, what parts are not available to make the required repairs and why, and when such parts are expected to become available.

8. HD I/M Compliance Certificate

As authorized by SB 210, the Proposed Regulation would require HD vehicle owners to have a valid HD I/M compliance certificate available for each of their applicable vehicles when operating in California, and to present it to a CARB inspector and/or CHP officer upon request. Under the provisions of the Proposed Regulation, a vehicle owner would be issued a HD I/M compliance certificate after the vehicle has demonstrated compliance with the Proposed Regulation by doing the following:

- Reporting vehicle and fleet information,
- Passing the required vehicle compliance tests,
- Resolving any outstanding enforcement actions on the vehicle for which the compliance certificate is being issued, and
- Paying the program's annual compliance fee of \$30 per vehicle through CARB's HD I/M database system.

Similar to BAR's smog check program, compliance with the Proposed Regulation would be tied to California DMV registration. Thus, owners of California-registered HD vehicles would be unable to renew their DMV vehicle registrations unless they demonstrate that an applicable vehicle is fully compliant with the HD I/M program and obtain a valid HD I/M compliance certificate by a vehicle's DMV registration renewal date. out-of-state vehicle

owners would be required to meet the same testing requirements as in-state vehicle owners and obtain a valid HD I/M compliance certificate to operate legally in California.

9. HD I/M Roadside Inspections

The proposed HD I/M enforcement tools described below are intended to help maintain a more level playing field among all vehicles operating within the State and to enhance program compliance by increasing the overall enforcement presence available to support the Proposed Regulation.

a. Roadside Monitoring

Roadside Emissions Monitoring Devices (REMD), which may include remote sensing devices (RSD), CARB's Portable Emissions AcQuisition System (PEAQS), and automatic license plate recognition (ALPR) cameras would assist with enforcement efforts for the Proposed Regulation. These systems would detect potentially high-emitting vehicles or those lacking a valid compliance certificate operating in California. CARB's PEAQS units are already deployed in California to assist with mobile regulatory enforcement efforts. Staff projects to increase the number of systems in statewide operation over the coming years. These systems help support regulatory enforcement efforts by enhancing the ability to screen vehicles for potential compliance issues. When a vehicle is flagged for potential high emissions, the vehicle would have to submit to CARB a vehicle compliance test to ensure the emissions control systems are functioning as required. Furthermore, vehicles identified passing through the monitoring systems and cross-referenced within the HD I/M database system as not having a valid compliance certificate may be subject to citations and penalties for non-compliant operation.

b. Field Inspections

Under the Proposed Regulation, CARB staff would perform field inspections on HD vehicles operating in California, similar to the current field inspections performed in HDVIP. Inspectors may issue citations to vehicle owners to take corrective action on vehicles found to be in non-compliance. Additionally, SB 210 specifically codifies CHP's authority to perform HD I/M field inspections to check for valid HD I/M compliance certificates, malfunction indicator light issues, and visible smoke during their normal day-to-day safety inspections at weigh stations and other roadside locations throughout the State. CHP's participation would enhance the Proposed Regulation's enforcement presence in the field.

10. Freight Contractor Requirements

To assist with the implementation and enforcement of the Proposed Regulation, CARB staff is proposing that freight contractors, applicable freight facilities, and brokers verify fleet and vehicle HD I/M compliance as part of their business processes. These proposed requirements, which also include recordkeeping provisions, are consistent with those in existing CARB regulations. By incorporating all levels of the supply chain into HD I/M compliance verification, CARB staff intends to maintain a level playing field for vehicles and fleets conducting business in California. By encouraging the hiring of only HD I/M compliant

vehicles, CARB's goal is to reduce the monetary advantage of "bad actor" fleet and vehicle owners that try to circumvent the requirements of the Proposed Regulation.

11. OBD Testing Device Requirements and Certification

Under the Proposed Regulation, staff is proposing technical specifications that OBD devices used for vehicle compliance testing must meet. CARB staff is also establishing a certification process for vendors to demonstrate that their devices comply with the technical specifications. The proposed technical specifications would standardize key functionality requirements, including:

- 1) The diagnostic connector that must be used for the device to connect to the vehicle;
- 2) The communication protocols required between the device and the vehicle;
- 3) The OBD data that must be collected from the vehicle and submitted to CARB's HD I/M database; and
- 4) The format and transmission method of that data.

Standardizing these functionalities and establishing a formal certification process would provide vendors and developers a pathway for offering devices that meet the demands of the market while also ensuring that the devices can connect and communicate effectively with vehicles' OBD systems. Such requirements would also enable an automated compliance test submission process and time-efficient analysis of the compliance test results within the HD I/M database, thus streamlining compliance determinations for vehicle owners.

12. Phase-in Approach

The Proposed Regulation would begin in 2023 with requirements implemented in three phases as follows:

- a. Phase 1 starting on January 1, 2023: The initial phase of the Proposed Regulation would rely on CARB's network of REMD to monitor vehicles operating within the State and screen for HD vehicles potentially operating with excess emissions. Owners of vehicles that are flagged by CARB as high-emitting vehicles with a potential emissions control issue would be required to complete a vehicle compliance test and submit the results to CARB. Vehicle owners would also be required to complete the reporting of their vehicle and fleet information to obtain a compliance certificate for each vehicle.
- b. Phase 2 starting in July 2023: Phase 2 of the Proposed Regulation would begin active enforcement of the compliance certificate requirement. All HD non-gasoline combustion vehicles, including out-of-state vehicles, operating in California would be required to possess a valid HD I/M compliance certificate to legally operate in the State. Vehicles identified as operating in California without a valid compliance certificate would be issued citations for non-compliant operation. During this stage of implementation, freight contractors, applicable freight facilities, and brokers would begin to be required to verify HD I/M program compliance status for

vehicles with which they do business with. Also, HD I/M program compliance would be tied to DMV vehicle registration for California-registered vehicles. Thus, any in-state vehicle not in the possession of a valid compliance certificate would be denied vehicle registration with DMV until they meet the requirements of the HD I/M program.

- c. Phase 3 starting in January 2024: During this phase, i.e., full implementation of the Proposed Regulation, periodic testing requirements would begin. All owners of vehicles operating in the State would need to perform the applicable periodic testing, resolve any outstanding CARB-issued program citations, and pay the required annual compliance fee to obtain the vehicle's next compliance certificate. CARB's network of REMDs would continue to identify potential high emitting vehicles that may require further testing. This network would continue to be expanded as the program is implemented to provide greater coverage of the HD vehicles operating in the California.

13. Amending and Sunsetting Current HDVIP and PSIP Regulations

To avoid unnecessary duplication between regulations, staff is proposing to sunset the HDVIP regulation upon the effective date of the Proposed Regulation. The HD I/M roadside inspections as part of the Proposed Regulation would replace the HDVIP regulation. The Proposed Regulation would establish updated opacity test standards for off-road motive engines equipped in on-road vehicles. Thus, to ensure consistency, staff is proposing to amend the PSIP to align the smoke opacity standards with those in the Proposed Regulation. Furthermore, upon the implementation of the new periodic testing requirements in the Proposed Regulation, staff is proposing to sunset the PSIP regulation. This would eliminate any overlapping and duplicative periodic testing requirements.

CARB may also consider other changes to the sections affected, as listed on page 2 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:

Objective

The overall goal of the Proposed Regulation is to reduce NOx and PM emissions from HD vehicles with a GVWR greater than 14,000 pounds. The Proposed Regulation is critical for helping California to meet the State Implementation Plan's commitment of achieving federal ambient air quality attainment in the San Joaquin Valley and South Coast air basins by 2024 and 2031, respectively. As described above, the Proposed Regulation would institute a revamped HD I/M program to more effectively identify and repair malfunctioning emissions control systems on HD vehicles operating in California. As a result, the Proposed Regulation would help ensure HD vehicles are properly functioning and low-emitting throughout their operating lives. As many major populated regions and economically disadvantaged

communities are near heavy trucking traffic areas, the Proposed Regulation would help provide more equitable clean air for all Californians.

Benefits

Protection of Public Health and Safety. The Proposed Regulation is designed to ensure that HD vehicles operating in California are properly maintained and that those with broken emissions control systems get repaired in a timely manner. Hence, it would further reduce NOx and PM emissions from on-road vehicles. NOx and PM emissions contribute to increased asthma, cardiopulmonary and respiratory diseases, and mortality. The Proposed Regulation would reduce statewide NOx emissions by approximately 680,333 tons and PM emissions by approximately 6,023 tons relative to legal baseline for the 2023-2050. The statewide NOx emission benefits from the Proposed Regulation are projected to be 30.3 tons per day (tpd) and PM emission benefits are projected to be 0.324 tpd for 2024. The San Joaquin Valley and South Coast NOx emission benefits are projected to be 8.6 and 8.4 tpd respectively and PM emission benefits are projected to be 0.089 and 0.083 tpd respectively for 2024. The anticipated emission reductions due to the Proposed Regulation would improve public health and reduce Californian's exposure to harmful pollutants. These emission reductions would in turn reduce the projected number of emergency room and doctor's office visits for asthma, hospitalizations for heart disease, as well as premature deaths that result from poor air quality. A detailed analysis is discussed in Chapter VI of the ISOR.

Environmental and Health Benefits. The Proposed Regulation would reduce toxic PM2.5 diesel exhaust and NOx, which would benefit California residents by reducing harmful emissions exposure that leads to adverse health impacts. The estimated statewide reductions in health outcomes resulting from the Proposed Regulation from 2023 to 2050 relative to the legal baseline are the following:

- Cardiopulmonary Mortality - 7,545
- Hospitalizations for Cardiovascular Illness - 1,154
- Hospitalizations for Respiratory Illness - 1,378
- Emergency Room Visits - 3,483

It is important to note that the estimates above represent only a portion of the full health benefits of the Proposed Regulation and do not include all the adverse health outcomes from PM2.5 or from additional pollutants such as toxic air contaminants. An expansion of the emissions inputs and an assessment for other health outcomes, including, but not limited to, additional cardiovascular and respiratory illnesses, nonfatal/fatal cancers, nervous system diseases, and lost workdays would provide a more complete picture of the benefits, and CARB staff is considering adopting an expanded assessment for future rulemakings.

In addition, although it is difficult to quantitatively determine the emission benefits in the high-risk areas near major trucking and freight corridors, such as ports and rail yards, the Proposed Regulation is expected to provide the largest PM and NOx emission reductions in

these regions, consequently, leading to larger health benefits in regions with the most HD truck traffic.

Economic Impacts. The Proposed Regulation would result in direct cost impacts on regulated entities, specifically owners of HD vehicles operating in California. The Proposed Regulation would require additional reporting, testing, and training, as well as a compliance fee associated with operating in California. Furthermore, the Proposed Regulation would also lead to additional vehicle repairs to bring vehicles into compliance, thus imposing additional costs on HD vehicle owners. The Proposed Regulation is projected to cost \$4.12B over 2023-2050 period, with a maximum annual cost of \$350M in 2024. The incremental costs are estimated to be \$136M, \$131M, and \$153M for 2031, 2037, and 2050 respectively. The majority of costs stem from HD vehicle testing, repairs, and compliance fee costs. The cost effectiveness of the Proposed Regulation is about \$62.27/pound PM and \$1.84/pound NOx. A detailed analysis is discussed in Chapter IX of the ISOR.

Benefits to Businesses. Typical businesses such as HD vehicle emission testing equipment manufacturers, vehicle emission testers, telematics providers, HD part manufacturers and suppliers, and HD repair shops would be expected to benefit from the Proposed Regulation. HD in-state vehicle fleets would also benefit from reduced smoke opacity testing costs due to the sunset of the PSIP regulation proposed as part of the Proposed Regulation. Finally, to the extent that the emission benefits from the Proposed Regulation benefit the health of truck drivers and employees who work in and around HD vehicles, such fleets and companies would benefit from their employees taking slightly fewer sick days.

Like typical businesses, small businesses in HD vehicle emission testing and vehicle repair sectors are expected to benefit from the Proposed Regulation due to the anticipated increase in vehicle testing and repair demands. Some HD vehicle part suppliers are small businesses and would see benefits due to increased demand for emission control parts. Furthermore, small businesses that work in and around HD vehicles would see benefits resulting from reduced exposure to PM and NOx emissions, which can lead to fewer sick days. A detailed analysis is discussed in Chapter V of the ISOR.

Promotion of Fairness. The Proposed Regulation would provide a more level playing field for HD fleets already investing in vehicle maintenance by helping ensure all fleets operating in California practice proper emission-related maintenance.

Comparable Federal Regulations:

There are no federal programs comparable to the Proposed Regulation. Federal regulations focus on new vehicle emissions standards, while leaving the development and implementation of in-use vehicle monitoring programs to state jurisdictions. As a result, many states have established I/M testing programs for both light-duty and HD vehicle populations. The Proposed Regulation is consistent with this regulatory structure.

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.

The Proposed Regulation supersedes the requirements of HDVIP and PSIP to avoid duplicative inspection elements, while at the same time, imposing more comprehensive vehicle testing requirements relative to the current programs. Upon the start of the Proposed Regulation, the current HDVIP regulation would be superseded by the proposed HD I/M roadside inspections. The current HDVIP allows CARB staff to perform roadside inspections on HD vehicles operating in California. The Proposed Regulation would provide the ability to perform similar inspections, thus making the current HDVIP regulation redundant.

Staff is proposing to update the smoke opacity limits within the PSIP regulation to align with the Proposed Regulation to ensure consistency between the two programs. Thus, staff is proposing to include the opacity standards for off-road engines within the PSIP regulation itself. This would ensure that vehicles are held to the same opacity standards if potentially flagged by REMD as they would be for the annual smoke inspection within PSIP. Once periodic testing starts in the Proposed Regulation, the PSIP regulation would be superseded. The proposed periodic inspection requirements would institute new periodic testing requirements for vehicles operating in California. Thus, to ensure there are no overlapping or duplicative requirements such as alternative periodic testing requirements, staff is proposing to sunset the PSIP regulation.

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, and would create costs or mandates 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 would have cost impacts on local government fleets that own non-gasoline combustion HD vehicles because they would be subject to the same proposed requirements as other private entities operating in California. Such costs would be mainly for performing the required vehicle compliance inspections and repairing any non-compliant vehicles. Based on projected vehicle populations, local government fleets are estimated to make up about seven percent of the total affected HD vehicles operating in California. The total incremental costs on local government fleets from 2023 through 2050 are estimated to be \$276M, with the largest one-year cost projected to be \$23M in year 2024. In addition to costs, local government fleets would also have cost savings from the removal of smoke opacity testing requirements on OBD-equipped vehicles. The total cost savings for local government fleets from 2023 through 2050 would be \$58M, with the largest one-year cost savings of \$2.5M occurring in year 2050. A detailed analysis is discussed in Chapter IX of the ISOR.

The Proposed Regulation is a mandate that would create costs and cost-savings to local agencies and school districts. Under SB 210, no reimbursement to local agencies and school districts for costs resulting from the Proposed Regulation mandate is required. Furthermore, these costs are not reimbursable by the State pursuant to Government Code, title 2, division 4, part 7 (commencing with section 17500) because this action neither compels local agencies to provide new governmental functions (i.e., it does not require such agencies to provide additional services to the public), nor imposes requirements that apply only on local agencies or school districts.² Instead, this regulatory action establishes requirements that apply to all entities that own or operate HD vehicles that are subject to the requirements of the Proposed Regulation. This action also does not compel local agencies to increase the actual level or quality of services that they already provide the public.³ For the foregoing reasons, any costs incurred by local agencies to comply with the Proposed Regulation are not reimbursable.⁴

Cost or Savings for State Agencies:

Proposed Regulation Compliance Costs

The Proposed Regulation would impose incremental costs to State government, which include costs on State government fleets that own HD non-gasoline combustion vehicles, and costs on State agencies to implement and enforce the Proposed Regulation. State government fleets are estimated to make up about two percent of the total affected HD vehicles operating in California. The total incremental costs on State government fleets from 2023 through 2050 would be \$92M, with the largest one-year cost projected to be \$8M in year 2024. In addition to costs, State government fleets would also have cost savings from the avoided smoke opacity testing need on their OBD-equipped vehicles. The total cost

² County of Los Angeles v. State of California (1987) 43 Cal.3d 46, 56.

³ San Diego Unified School Dist. v. Commission on State Mandates (2004) 33 Cal.4th 859, 877.

⁴ County of Los Angeles v. State of California, 43 Cal.3d. 46, 58.

savings for State government fleets from 2023 through 2050 would be \$19M, with the largest one-year cost savings of \$817K occurring in year 2050.

Proposed Regulation Implementation Costs

The Proposed Regulation would create additional workload on CARB staff that would be impossible to absorb with existing staff resources. Staff requested 4.0 positions (1.0 Air Resources Supervisor (ARS) I and 3.0 Air Resources Engineers (ARE)) in fiscal year (FY) 2020–2021 to support the development of the Proposed Regulation. These positions will continue supporting the implementation of the Proposed Regulation once it takes effect starting in 2023. CARB would need an additional 26.0 positions (2.0 AREs, 7.0 Air Pollution Specialists (APS), 8.0 Air Resources Technician (ART) IIs, 1.0 Information Technology Manager (ITM) II, 3.0 Information Technology Specialist (ITS) IIs, 2.0 ITS IIIs, 2.0 Associate Governmental Program Analysts (AGPA), and 1.0 Attorney III) for 2022–2023, 2023–2024, and 2024–2025 FYs to effectively implement and enforce the Proposed Regulation. The staffing needs are described further below:

- 2022–2023 Fiscal Year (14.0 new permanent full-time positions)
 - 2.0 AGPA positions are required to provide support for the Proposed Regulation implementation contracting efforts.
 - 1.0 ITM II, 1.0 ITS II, and 1.0 ITS III positions are required to support the implementation of the CARB’s HD I/M database system. The ITM II, ITS II, and ITS III positions are needed for the overall design, implementation of the hosting environment for the HD I/M system. The IT team would ensure that all security measures are met for security compliance and handling of sensitive data that resides in the system.
 - 1.0 ARE position is required to support the implementation of the proposed OBD testing device certification requirements and help manage the activities of the HD implementation contractor.
 - 1.0 ARE and 4.0 ART II positions are required to help support the enforcement of HD I/M program via physical roadside emissions monitoring systems, data science, software development, and enforcement support.
 - 2.0 data analyst (APS) positions are required to begin developing the Enforcement Decision Support System (EDSS) and requested to perform data analysis of incoming vehicle data, including performing quality assurance/quality control on vehicle emissions data collected from PEAQS. Furthermore, the positions would support the analysis of submitted test data for any suspicious or fraudulent data submission activity, and assessing vehicle compliance based on the submitted vehicle data.
 - 1.0 APS position is required to support emissions assessments and modeling efforts. Such efforts are needed to determine emissions benefits and program validation of the HD I/M program to ensure the program is as effective at reducing emissions as possible.
- 2023–2024 Fiscal Year (8.0 new permanent full-time positions)
 - 2.0 APS positions are required to be added to the call center to support additional call volumes as the proposed HD I/M program would impact more

- vehicles and fleets relative to current regulations (approximately one million vehicles would be affected by the proposed program, increasing with time).
- 1.0 APS position is required for HD I/M related outreach efforts. As the proposed HD I/M program impacts all vehicles entering California, it will be critical to constantly outreach not only to stakeholders within the State of California itself, but also out-of-state fleets whose vehicles operating in California.
 - 1.0 APS position is required to provide data management oversight for HD I/M data extraction and processing to create useful and readily accessible versions of raw data collected through the HD I/M program, and data analytics to process data.
 - 1.0 ART II position is required to assist in performing data quality checks (QA/QC) of PEAQS, EDSS, and the Core Tracker enforcement process management system.
 - 2.0 ITS II and 1.0 ITS III are required to help support the continued development of data security and data transfer protocols between the contractor and CARB, hosting environments, and the system architecture for serving data to other CARB stakeholders as the tasks become more complex.
 - 2024–2025 Fiscal Year (4.0 new permanent full-time positions)
 - 3.0 ART II positions are required to help support the enforcement of HD I/M program via physical roadside emissions monitoring systems, data science, software development, and enforcement support.
 - 1.0 Attorney III position is required to help support establishing cases to prosecute potential fraudulent activity, support increased citation activity, and provide legal support related to staff’s interaction and management of the implementation contractor.

Furthermore, in support of the implementation of the Proposed Regulation, third-party external contractors would be hired to develop and manage a HD I/M database system, as well as run the day-to-day operations once the HD I/M program is implemented. The initial costs for external contractors are estimated to be approximately \$18.2M, with annual on-going costs of approximately \$10.4M for a five-year contract period.

The costs on State agencies to implement the Proposed Regulation would be covered by the proposed HD I/M compliance fee collected from owners of HD vehicles operating in California. The proposed annual compliance fee of \$30 per affected HD vehicle is projected to provide sufficient funding for State to implement the Proposed Regulation. The proposed compliance fee would be annually adjusted to reflect changes in the CCPI as published by the Department of Industrial Relations. A detailed analysis is discussed in Chapter IX of the ISOR.

Other Non-Discretionary Costs or Savings on Local Agencies:

No other non-discretionary costs or savings to local agencies are expected.

Cost or Savings in Federal Funding to the State:

No costs or savings in federal funding is anticipated.

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. The rationale for this determination is set forth below in the result of the economic impact analysis and Chapter IX and Appendix F of the ISOR.

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 its review. CARB has updated the economic analysis of the Proposed Regulation since the original SRIA submittal. The revisions are discussed in Chapter IX and in Appendix F - Further Details on Costs and Economic Analysis of the ISOR.

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

Across the California economy, the Regional Economic Models, Inc. (REMI) simulation shows a small increase in job growth in 2023 followed by small decreases in job growth relative to the baseline in subsequent years of the analysis. It is important to note that the expected total number of jobs in California would still increase each year, and that the impact of the Proposed Regulation is insignificant when compared to the entire economy (never in any year registering a statewide impact of more than 0.00 percent). Job increases in 2023 are primarily due to increased demand from repair and testing which outweigh negative impacts associated with costs of the Proposed Regulation. The maximum negative impact is a decrease in job growth of 698 jobs in 2028.

As the requirements of the Proposed Regulation are implemented, the sectors that see direct increases in production costs or rely heavily on industries that see increases in production costs would see decreases in employment growth. Sectors that see increases in final demand or spending would see an increase in employment growth. The largest negative job growth

impacts would be seen in the Transportation, Construction, and the Retail and Wholesale Trade sectors. These sectors rely most on services from the Truck Transportation industry, which bears the direct costs of the Proposed Regulation. Within these sectors, impacts would never exceed 0.02 percent of the baseline. The Services sector is estimated to have increased employment growth in the first few years of the assessment as businesses within this sector would be expected to benefit from increased demand for vehicle testing and repair. In later years of the assessment, the services sector is estimated to have a decrease in employment growth. This is due the decrease in final demand in the Automotive Repair and Maintenance industry associated with HD OBD-equipped vehicles no longer being required to perform the annual smoke opacity testing as currently required under the PSIP. This decrease in demand, along with the broader costs to the Truck Transportation industry, offsets the positive impacts associated with increased demand for vehicle testing and repair. The government sector is also estimated to see small increases in employment growth as compliance fee revenue is used to fund implementation and enforcement activities.

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

The Proposed Regulation does not directly result in the creation or elimination of businesses. The REMI model cannot directly estimate the creation or elimination of businesses, but changes in jobs and output for the California economy can be used to understand some potential impacts. The trend of increasing production costs for the Truck Transportation industry has the potential to result in a contraction or decrease in business in this industry if sustained over time. However, the macroeconomic analysis results only show impacts up to 0.02 percent for the transportation sector. On the other hand, the projected increase in demand for automotive repair and services, motor vehicle parts manufacturing, testing equipment, and database management resulting from the Proposed Regulation has the potential to result in an increase in growth for businesses in those industries if maintained for a long duration. The macroeconomic analysis results only show impacts up to 0.01 percent for these sectors.

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

All non-gasoline combustion HD vehicles with gross vehicle weight rating greater than 14,000 pounds operating in California (including out-of-state vehicles) would be subject to the Proposed Regulation. The Proposed Regulation would result in comparable operating cost increases for Californian and non-Californian fleet operators whose HD vehicles operate in California. For in-state fleets, the DMV registration link to program compliance would provide a strong incentive to comply. However, since there is no link between registration for out-of-state vehicles and compliance, some out-of-state fleets may be tempted to not comply with the Proposed Regulation to avoid the testing and repair costs associated with the Regulation. Therefore, it is possible that certain non-compliant out-of-state fleets would see a competitive advantage under this Proposed Regulation compared to a compliant in-state fleet.

Staff is proposing multiple enforcement measures to minimize any potential competitive advantage out-of-state vehicles may see due to the lack of a DMV registration hold. These include the proposed roadside monitoring systems and an increased field presence through enhanced coordination with CHP. These would significantly increase CARB's enforcement coverage on non-compliant vehicles operating in California, including out-of-state vehicles, which would help level the playing field between in-state and out-of-state vehicles. Additionally, the proposed vehicle compliance verification requirements for freight contractors, brokers, and facilities when doing businesses with vehicles subject to the Proposed Regulation would incentivize both in-state and out-of-state vehicles to be compliant with the Proposed Regulation to do businesses in California.

Zero-emission HD vehicles would not be subject to the Proposed Regulation. Hence, fleets of these vehicles could see a competitive advantage under this Proposed Regulation compared to other HD combustion vehicles due to the avoided incremental compliance costs.

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

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 relative changes to growth in private investment for the Proposed Regulation show a decrease of private investment of about \$65M in 2025, the year with highest impact. The impacts are primarily linked to residential investment, which is indirectly impacted by the Truck Transportation industry. Over the analysis period, the Proposed Regulation is estimated to result in an annual average decrease in private investment growth of \$24M. All impacts in the period of analysis do not exceed 0.01 of baseline investment in any year.

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

The Proposed Regulation would provide incentives for innovation. The proposed OBD testing requirement on HD OBD-equipped vehicles would promote innovation in remote OBD testing technologies such as telematics systems and OBD testing devices. Vendors of such devices would be incentivized to further improve their OBD testing technologies and services for their fleet customers to better compete in the market. Additionally, there could also be opportunities for manufacturers to improve upon existing HD vehicle emission reduction technology to produce more durable vehicle emissions control parts. Given the more stringent vehicle inspection and maintenance requirements under the Proposed Regulation, fleet owners would tend to buy vehicles with more durable emissions control parts to prevent frequent repairs to comply with the Proposed Regulation.

(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.

As discussed, the Proposed Regulation is expected to reduce NOx by approximately 680,333 tons and PM emissions by approximately 6,023 tons from in-use HD vehicles for 2023 through 2050. The estimated total statewide monetized health benefits due to emission reductions from 2023 through 2050 are estimated to be \$75.8B, with \$75.7B resulting from reduced premature cardiopulmonary mortality and \$143M resulting from reduced hospitalizations and ER visits. The anticipated emission reductions would improve the health and welfare of California's residents and reduce exposure to harmful pollutants. The Proposed Regulation would also result in benefits to businesses and the State of California as a whole, as summarized in this notice and discussed in detail in Chapter V of the ISOR.

(G) Department of Finance Comments and Responses.

DOF Comments: Finance generally concurs with the methodology used to estimate impacts of the Proposed Regulations, with two exceptions.

1. The SRIA notes in multiple places that estimates are on the conservative side, leading to benefits being understated and direct costs estimated on the high side. While the inclusion of a range or an upper bound can be useful, the SRIA must be based on CARB's best judgment on what the most likely scenario is and must include an estimation of all likely costs, benefits, and cost savings.
2. The SRIA must disclose assumptions and calculations for fiscal costs, notably the \$30 million annual average for statewide implementation and enforcement costs as well as for the additional sales tax revenue. While the SRIA discloses an estimate for CARB staffing resources, an estimate for the implementation contractor and each of the other state agencies providing support should also be provided. Given that contracts and other agency costs are still being finalized, the SRIA should provide a potential range of impacts and most likely scenario, including likely compliance fee ranges. Given that the \$30 compliance fee – the maximum fee that can be assessed per statute – is based on this estimate, changes in projected enforcement costs would also impact HD vehicle owner's compliance costs, including government fleets. The SRIA notes additional sales tax revenue from an increase in testing devices, engine parts, and vehicle parts sale, and discloses the estimate total, but offers no specific calculations.

Responses:

1. Even though staff noted in the SRIA that some estimated costs and cost savings were on the conservative side, those assumptions reflected staff's best estimates given the currently available data and ensured all relevant costs were included in the SRIA. For example, staff noted that there could be potential cost savings to fleet owners due to the proposed periodic testing requirements because it would

promote fleets' vehicle preventive maintenance practices and decrease the likelihood of having catastrophic vehicle failures. Consequently, fleet owners could have cost savings through reduced vehicle operating costs due to minimizing expensive repairs and less vehicle downtime due to less vehicle failures in the long run. However, because the extent of such savings is unknown, staff did not quantify such savings.

As another example, in the SRIA staff noted that fleets that do not opt for OBD data submission through telematics were assumed to opt for OBD data submission through purchasing plug-in OBD test devices instead of opting for the free CARB-provided testing device pathway. Since it is difficult to predict the uptake of the free-testing option at this time, staff assumed the higher testing costs of purchasing the OBD testing devices to ensure all the relevant costs are included in staff's program cost estimates.

If new data becomes available in the future, staff will update the Proposed Regulation's cost and benefit impacts accordingly in the Final Statement of Reasons of the Proposed Regulation.

2. At the time of the SRIA development, CARB staff was still in the process of firming up the cost estimates for other State agencies and external contracts needed to support the Proposed Regulation implementation. Until data was available to say otherwise, staff assumed the maximum allowable compliance fee of \$30 per vehicle for the State implementation and enforcement costs. This was done with the intention that a more detailed analysis of the compliance fee cost discussion would be provided in the ISOR, as staff would have a better understanding of implementation costs and compliance fee costs at this time. CARB staff has added cost estimates for external contracts and other State agencies that support the implementation of the Proposed Regulation, along with an analysis of how the per vehicle compliance fee was determined, in Chapter IX and Appendix F of the ISOR. Table IX-18 in the ISOR provides estimates of costs for other State agencies. Table IX-19 in the ISOR provides estimates of costs for implementation contractors. The compliance fee analysis was used to establish the per vehicle compliance fee requirement in the Proposed Regulation. Sales tax revenue assumptions are also discussed in Chapter III.A.2. and Chapter III.B.3. of Appendix F of the ISOR.

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. CARB is not aware of any cost impacts that a representative private person would necessarily incur in reasonable compliance with the proposed action. There are no cost impacts to individuals as a result of this Proposed Regulation. Individuals may see health benefits as described in Chapter V of the ISOR due to emissions reduction resulted from the decrease in non-compliant vehicles driven on the road under the Proposed Regulation. Typical businesses affected by the regulatory proposal consist of trucking fleets. Staff estimated typical trucking business costs on a California fleet of seven vehicles where six out of the fleet's seven vehicles are OBD equipped, and one of their vehicles is non-OBD vehicle. The initial costs on this typical business is estimated to be, on average, \$705 in the year 2023. Staff estimates that fleets would likely pass the costs to individuals in the State (for example, customers of trucking firms). A detailed analysis is discussed in Chapter IX of the ISOR.

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 affect small businesses.

For HD trucking fleets, CARB staff defined small businesses as HD fleets of three or fewer vehicles. Based on 2018 DMV vehicle registration data, these small businesses represent about 89 percent of fleets in California, however, they have only 44 percent of the vehicle population. Among the California small businesses, single-vehicle fleets are the largest groups, 79 percent of the small businesses; hence, staff estimated the direct costs on a small business to be the costs on a single-vehicle fleet.

Beginning in 2024, annual ongoing costs on a small business would range from \$225 to \$701. A detailed analysis of costs is discussed in Chapter IX of the ISOR. As discussed previously, staff is planning to establish designated locations throughout the state where fleets can check out testing equipment. This network would help minimize testing cost associated for small fleets demonstrating compliance with the Proposed Regulation. Furthermore, staff's proposed phase-in approach of the various program elements will help fleets adjust to the new requirements in a step-wise process, instead of being by the changes all at once. This will help minimize the financial impact to fleet business practices and allow a longer transition time for fleets than if all the various program elements were implemented at once.

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.

Alternatives to the proposed rulemaking that were considered are described in Chapter X of the ISOR. Staff has discussed two alternative concepts in the ISOR, including less stringent periodic testing requirements than the Proposed Regulation and more stringent periodic testing requirements than the Proposed Regulation. 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. The Proposed Regulation is considered a performance standard. Even if certain requirements within the Proposed Regulation were thought to be relatively directive, for example the OBD testing device requirements and certification process, given the rigor and transparency required for standardized testing procedures, a less explicit alternative would not be effective to achieve the necessary level of certainty needed for such requirements.

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 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 concluded that this action is exempt from CEQA, as described in CEQA Guidelines §15061, because the action is an Action Taken by Regulatory Agencies for Protection of the Environment (as described in CEQA Guidelines §15308 for “class 8” exemptions), an action affecting Existing Facilities (as described in CEQA Guidelines 15301), an action for Information Collection (as described in CEQA Guidelines 15306), and it is also exempt as described in CEQA Guidelines §15061(b)(3) (“common sense” exemption). A brief explanation of the basis for reaching this conclusion is included in Chapter VII of the ISOR.

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 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 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 Krista Fregoso, Air Pollution Specialist, Strategic Planning and Development Section at krista.fregoso@arb.ca.gov or (designated back-up contact) James Goldstene, Vehicle Program Specialist, Enforcement Division, at james.goldstene@arb.ca.gov.

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 Heavy-Duty Inspection and Maintenance Regulation.

Copies of the ISOR and the full text of the proposed regulatory language, may be accessed on CARB's website listed below, on October 8, 2021. Please contact Chris Hopkins, Regulations Coordinator, at chris.hopkins@arb.ca.gov (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, (916) 445-9544. 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 take action to approve for adoption the regulatory language as originally proposed, or with non-substantial or grammatical modifications. The Board may also approve for adoption the proposed regulatory language with other modifications if the text as modified 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. If this occurs, the full regulatory text, with the modifications clearly indicated, will be made available to the public, for written comment, at least 15-days before final adoption.

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

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/hdim2021>

California Air Resources Board



Richard W. Corey
Executive Officer

Date: September 24, 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).