

**Proposed**  
State of California  
Air Resources Board

## **Proposed Zero-Emission Forklift Regulation**

### **Resolution 24-8**

**June 27, 2024**

Agenda Item No.: 24-3-2

Whereas, sections 39600 and 39601 of the Health and Safety Code authorize the California Air Resources Board (CARB or Board) to adopt standards, rules and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

Whereas, sections 39001, 39002, and 39003 of the Health and Safety Code direct the Board to coordinate efforts to attain and maintain ambient air quality standards, to conduct research into the causes of and solution to air pollution, and to systematically attack the serious problem caused by motor vehicles, which are the major source of air pollution in many areas of the State;

Whereas, section 39500 of the Health and Safety Code states that it is the intent of the Legislature that CARB is responsible for controlling emissions from motor vehicles, and that CARB shall coordinate, encourage, and review the efforts of all levels of government as they affect air quality;

Whereas, section 39607 of the Health and Safety Code authorizes the Board to establish a program to secure data on air quality and inventory sources of air pollution;

Whereas, the Board is implementing, interpreting, or making specific sections 39658, 43009, 43011, and 43600 of the Health and Safety Code;

Whereas, sections 43000 and 43000.5 of the Health and Safety Code state the Legislature's finding that dependence on petroleum-based fuels in motor vehicles substantially degrades air quality and threatens public health;

Whereas, sections 43013, 43018, 43101, 43102, 43104, 43150, and 43151 of the Health and Safety Code authorize the Board to adopt emission standards, in-use performance standards, and test procedures to control air pollution caused by motor vehicles and motor vehicle engines;

Whereas, section 43017 of the Health and Safety Code allows the Board to enjoin any violation of any provision of this part, or of any rule, or regulation of the state board, in a civil action, except the Board shall not be required to allege facts necessary to show, or tending to show, lack of adequate remedy at law or to show, or tending to show, irreparable damage or loss;

Whereas, section 43013(h) of the Health and Safety Code states that it is the intent of the Legislature that the Board act as expeditiously as feasible to reduce oxides of nitrogen (NOx) emissions from internal combustion engine powered vehicles and other categories of vehicular and mobile sources which significantly contribute to air pollution problems;

Whereas, section 43104 of the Health and Safety Code directs the Board to adopt testing and other procedures necessary to determine whether vehicles are in compliance with the Board's emissions standards;

Whereas, section 43152 of the Health and Safety Code provides no person in this state in the business of selling, or renting or leasing new motor vehicles or new motor vehicle engines, including, but not limited to, manufacturers, distributors, and dealers, shall intentionally or negligently import, deliver, purchase, receive, or otherwise acquire a new motor vehicle, new motor vehicle engine, or vehicle with a new motor vehicle, which has not been certified pursuant to this chapter. No person shall attempt or assist in any such act;

Whereas, section 43153 of the Health and Safety Code provides no person in this state in the business of selling to an ultimate purchaser or renting or leasing new motor vehicles or new motor vehicle engines, including, but not limited to, manufacturers, distributors, and dealers, shall intentionally or negligently sell, or offer to sell, to an ultimate purchaser who is a resident of or doing business in this state, or lease, offer to lease, rent, or offer to rent, in this state any new motor vehicle, new motor vehicle engine, or vehicle with a new motor vehicle engine, which is intended primarily for use or for registration in this state, and which has not been certified pursuant to this chapter. No person shall attempt or assist in any such action;

Whereas, section 43205.5 of the Health and Safety Code requires manufacturers of applicable motor vehicles and motor vehicle engines to warrant to the purchasers of said equipment that the equipment are designed, built, and equipped to conform with applicable emission standards set by the state board, and are free from defects that would cause said equipment to fail to conform with these emission standards within an established period of use;

Whereas, section 43016 of the Health and Safety Code provide for civil penalties and fines for violations and provide for corrective actions to address vehicles that do not meet the requirements;

### **The National Ambient Air Quality Standards Require Action to Protect Public Health**

Whereas, under the federal Clean Air Act, the United States Environmental Protection Agency (U.S. EPA) has established National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health, including fine PM<sub>2.5</sub> and ozone, and states that exceed the NAAQS are required by federal law to develop State Implementation Plans (SIP) describing how they will attain the standards by certain deadlines;

Whereas, section 39602.5 of the Health and Safety Code designates the Board as the air pollution control agency for the State of California for all purposes under federal law, including as the agency responsible for preparing the SIP required by the Clean Air Act, and direct the Board to adopt regulations to attain and maintain the NAAQS for criteria air pollutants established under the Clean Air Act;

Whereas, in March 2017, CARB approved the 2016 State Strategy for the California State Implementation Plan, which included a commitment to propose the Zero-Emission Off-Road Forklift Regulation Phase 1, which was estimated by 2031 to reduce NO<sub>x</sub> by 2 tons per day

(tpd), ROG by 0.2 tpd, and PM2.5 by <0.1 tpd, to support attainment and maintenance of the NAAQS in California;<sup>1</sup>

Whereas, in September 2022, CARB approved the 2022 State Strategy for the SIP, which included the Zero-Emission Forklift (ZEF) Regulation, and which recognized that additional emission reductions, beyond the 2016 State SIP Strategy, will be needed to attain the ozone NAAQS of 70 parts per billion (ppb);<sup>2</sup>

### **Climate Change Goals**

Whereas, the Legislature has enacted the California Global Warming Solutions Act of 2006 (Assembly Bill 32, codified at Health and Safety Code, §§ 38500 et seq.) (AB 32), which declares that global warming poses a serious threat to the economic well-being, public health, natural resources, and environment of California, and requires a comprehensive multi-year program to reduce California's greenhouse gas (GHG) emissions to 1990 levels by 2020, and to maintain the emission levels and continue reductions thereafter;

Whereas, AB 32 added section 38501 to the Health and Safety Code, which expresses the Legislature's findings that global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California, and the Legislature's intent that CARB coordinate with State agencies and consult with the environmental justice community, industry sectors, business groups, academic institutions, environmental organizations, and other stakeholders in implementing AB 32, and design emissions reduction measures to meet the statewide emissions limits for GHGs in a manner that minimizes costs and maximizes benefits for California's economy, maximizes additional environmental and economic co-benefits for California, and complements the State's efforts to improve air quality;

Whereas, as U.S. EPA has recognized, the effects of climate change and rising temperatures from GHG emissions make it more difficult to reduce ozone air pollution that threatens public health;

Whereas, zero-emission technologies, reduce both greenhouse gas emissions and toxic air pollutants that disproportionately burden our disadvantaged communities of color;

### **All Californians Deserve Equitable Access to Clean Air Statewide**

Whereas, CARB and California have greatly improved air quality in the State over the past half century. Smog alerts, which peaked at one almost every other day during the 1960s, have been eliminated, while, during this time, the State has grown its economy and become a world leader in environmental policies and clean technologies;

Whereas, despite California's great progress reducing air pollution, more than half (21 million out of nearly 40 million) of all Californians live in urban and rural downwind areas that exceed the most stringent NAAQS for ozone of 70 ppb and California has the only two areas in the nation that are designated in extreme nonattainment of this standard;

---

<sup>1</sup> CARB, 2016 State Strategy for the State Implementation Plan for Federal Ozone and PM2.5 Standards, [CARB Staff Report - Revised Proposed 2016 State Strategy for the State Implementation Plan, March 2017](#)

<sup>2</sup> CARB, 2022 State Strategy for the State Implementation Plan, [2022 State SIP Strategy \(ca.gov\)](#)

Whereas, despite the significant public health improvements produced by CARB's air quality programs, California's disadvantaged communities, low-income communities, and communities of color continue to experience disproportionate impacts from air pollutants and GHGs, among other inequities that increase State residents' health vulnerabilities;

Whereas, CARB's statewide strategy to address these goals, known as the Community Air Protection Program Blueprint 2.0, identifies propane and gasoline forklifts as a source of emissions that require additional emission reductions to reduce exposure to criteria pollution in burdened communities;<sup>3</sup>

Whereas, the Legislature enacted AB 197,<sup>4</sup> which declares that continuing to reduce GHG emissions is critical for protecting all areas of the State, but especially for the State's most disadvantaged communities, as those communities are affected first and most frequently by adverse impacts of climate change, including increased frequency of extreme weather events such as drought, heat waves, and flooding;

### **Zero-Emission Vehicle Advancements**

Whereas, in September 2020, California Executive Order (EO) N-79-20 ordered the Board, to the extent consistent with State and federal law, to develop and propose strategies, in coordination with other state agencies, United States Environmental Protection Agency (U.S. EPA), and local air districts, to achieve 100 percent zero-emission from off-road vehicles and equipment operations in the State by 2035, where feasible;

### **Other State Policies Supporting the Proposed Regulation**

Whereas, the 2016 Sustainable Freight Action Plan identified state agencies' actions needed to accelerate the use of clean vehicle and equipment technologies and fuels for freight through the targeted introduction of zero- and near-zero emission technologies;

Whereas, zero-emission forklift fueling is eligible under the California's Low Carbon Fuel Standard (LCFS) regulations (Cal. Code Regs. tit. 17, §§ 95480 et seq.) to generate credit value that can be used to reduce operational costs or otherwise benefit users of zero emission fuels;

### **The Proposed Zero-Emission Forklift Regulation Will Significantly Reduce Emissions and Protect Public Health**

Whereas, staff has proposed the Zero-Emission Forklift Regulation, as set forth in Appendix A-1, and A-3.1 to the Initial State of Reasons (ISOR) released to the public on November 7, 2023;

Whereas, the primary objectives of the Proposed Regulation include the following:

- Accelerate the operation of Zero-Emission Forklifts (ZEFs), which achieve the maximum emissions reduction possible to assist in the attainment of NAAQS for criteria air pollutants (Health & Safety Code Sections 43000.5(b) and 43018(a)).

---

<sup>3</sup> CARB, Community Air Protection Blueprint 2.0, [Community Air Protection Program Blueprint 2.0 \(ca.gov\)](https://www.ca.gov/Community-Air-Protection-Program-Blueprint-2.0).

<sup>4</sup> Gov. Code § Article 7.6 (commencing with section 9147.10) to Chapter 1.5 of Part 1 of Division 2 of Title 2 and to amend Health & Saf. Code §§ 39510 and 39607 and add 38506, 38531, 38562.5, and 38562.7 (E. Garcia, ch. 250, Stats. of 2016).

- Decrease and eliminate emissions from petroleum and fossil-fuel use by forklifts by setting standards that eliminate exhaust emissions from forklifts. Emissions from petroleum use as an energy resource contribute substantially to the following public health and environmental problems, among others: air pollution and its associated health impacts, acid rain, global warming, and the degradation of California's marine environment and fisheries (PRC Section 25000.5[b], [c]).
- Decrease GHG emissions in support of statewide GHG reduction goals by adopting strategies to deploy ZEFs in California to support the Scoping Plan, which was developed to reduce GHG emissions in California, as directed by Assembly Bill (AB) 32 (Nunez, Chapter 488, Statutes of 2006) and Executive Order S-3-05 (Ch. 249, Stats. 2016, Pavley).
- Develop a regulation that is consistent with and meets the goals of the SIP, providing necessary emissions reductions for all of California's nonattainment areas to meet NAAQS (Health & Safety Code Sections 39002, 39003, 39602.5, 43000, 43000.5, 43013, and 43018).
- Maintain and continue reductions in emissions of GHGs beyond 2020, in accordance with Senate Bill (SB) 32 (Health & Safety Code Sections 38551(b), 38562, 38562.5, 38566); and pursue measures that implement reduction strategies covering the State's GHG emissions in furtherance of California's mandate to reduce GHG emissions to the 1990 level by 2020 and 40 percent below the 1990 level by December 31, 2030. In addition, target and achieve carbon neutrality in California as soon as possible, but no later than 2045, pursuant to SB 100 (De León, Chapter 312, Statutes of 2018) and AB 1279 (Muratsuchi, Chapter 337, Statutes of 2022), maintain net negative emissions thereafter in accordance with AB 1279 and Executive Order B-55-18, and to ensure that by 2045, statewide anthropogenic greenhouse gas emissions are reduced to at least 85 percent below the 1990 levels, pursuant to AB 1279.
- Complement existing programs and plans to ensure, to the extent feasible, that activities undertaken pursuant to the measures complement, and do not interfere with, existing planning efforts to reduce GHG emissions, criteria pollutants, petroleum-based transportation fuels, and toxic air contaminant emissions.
- Incentivize and support emerging zero-emission technology that will be needed to achieve CARB's SIP goals.
- Achieve emission reductions that are real, permanent, quantifiable, verifiable, and enforceable (Health & Safety Code Sections 38560, 38562(d)(1)).
- Take steps to ensure all Californians can live, work, and play in a healthful environment free from harmful exposure to air pollution. Protect and preserve public health and well-being, and prevent irritation to the senses, interference with visibility, and damage to vegetation and property (Health & Safety Code Section 43000(b)).
- Spur economic activity of zero-emission technologies in the off-road sectors. Incentivize innovation that will transition California's economy into greater use of clean and sustainable zero-emission technologies and promote increased economic and employment benefits that will accompany this transition (AB 1493, Section 1(g) (Pavley, Chapter 200, Statutes of 2002); Health & Safety Code Section 38501(e)).
- Establish a fair and level playing field among fleet operators, forklift manufacturers, forklift dealers, and forklift rental agencies.
- Craft requirements in a way that ensures institutional capacity for CARB to manage, implement, and enforce requirements.

Whereas, the Proposed Regulation would establish phase-out requirements applicable to the most-common internal-combustion forklifts used in industrial and other applications across the State.

Whereas, since 2020, CARB staff has held three public workshops, two workgroup meetings, and numerous individual meetings with stakeholders to provide information to the public and solicit feedback;

Whereas, staff has proposed the Zero-Emission Forklift Regulation, as set forth in Appendix A to the Initial Statement of Reasons (Staff Report) released to the public on November 7, 2023;

Whereas, staff analyzed several alternatives, as set forth in the Staff Report released to the public on November 7, 2023, and no alternatives analyzed were found to be more effective at carrying out the purpose for which the regulation is proposed or as effective and less burdensome to affected entities than the Proposed Regulation;

Whereas, the Proposed Amendments were developed using generally accepted scientific bases or scientific portions and not a new methodology;

Whereas, CARB's regulatory program that involves the adoption, approval, amendment, or repeal of standards, rules, regulations, or plans has been certified by the Secretary for Natural Resources under Public Resources Code section 21080.5 of the California Environmental Quality Act (CEQA; California Code of Regulations, title 14, section 15251(d)), and CARB conducts its CEQA review according to this certified program (California Code of Regulations, title 17, sections 60000-60007);

Whereas CARB prepared a Draft Environmental Impact Analysis (Draft EIA) for the Zero Emission Forklift (ZEF) Regulation, herein referred to as the Proposed Regulation (i.e., the proposed project under the California Environmental Quality Act [CEQA]), entitled "*Draft Environmental Impact Analysis for the Proposed Zero Emission Forklift Regulation*" and circulated it as Appendix C to the Staff Report on November 7, 2023, for a 45-day public review and comment period that closed on December 26, 2023.

Whereas, the Draft EIA concluded that implementation of the Proposed Regulation has the potential to result in: beneficial impacts to air quality (long-term operational related), greenhouse gas emission (short-term construction and long-term operational related); less than significant impacts to energy (short-term construction-related and long term operational-related), mineral resources, population and housing, public services, recreation, and wildfire; and potentially significant [indirect/secondary] adverse impacts to aesthetics, agriculture and forestry resources, air quality (short-term construction related), odors, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use planning, noise and vibration, transportation, tribal cultural resources, and utilities and service systems;

Whereas, following the 45-day comment period, modified regulatory language and supporting documentation were circulated for an additional 15-day public comment period(s), with the changes to the originally proposed text clearly indicated, according to provisions of California Code of Regulations, title 1, section 44 and Government Code section 11340.85, from May 21, 2024, through June 05, 2024;

Whereas, staff reviewed written comments received on the Draft EIA and prepared written responses to those comments in a document entitled Response to Comments on the Environmental Analysis Prepared for Zero-Emission Forklifts (Response to EIA Comments);

Whereas, prior to the June 27, 2024, Board Hearing, staff posted on the rulemaking page the Final EIA, which includes minor revisions, and the Response to EIA Comments;

Whereas, prior to the duly noticed public hearing held on June 27, 2024, staff presented the Final EIA and the Response to EIA Comments, as released to the public and distributed to the Board for consideration;

Whereas, a public hearing and other administrative proceedings have been held according to the provisions of Chapter 3.5 (commencing with section 11340), part 1, division 3, title 2 of the Government Code;

### **The Findings of the California Air Resources Board**

Whereas, in consideration of the Notice of Proposed Rulemaking for this regulation, the documents and evidence referenced and incorporated therein and in this resolution, and written comments and public testimony on the Proposed Regulation to the Zero-Emission Forklift Regulation, the Board finds that:

California continues to face unique air quality goals and challenges statewide;

The vehicles that would be subject to the Proposed Regulation are a significant source of NOx statewide that needs to be controlled and reduced to meet CARB's air quality mandates and goals;

The Proposed Regulation will provide criteria pollutant emission reductions that are required to meet California's SIP targets statewide;

The Proposed Regulation is necessary, cost-effective, and technologically feasible, to carry out the purposes of Division 26 of the Health and Safety Code;

The Proposed Regulation was developed using the best available economic and scientific information, will achieve technologically feasible and cost-effective criteria pollutant emission reductions from internal combustion forklifts statewide that are necessary to achieve additional criteria emissions reductions in order to meet California's SIP targets and attain the NAAQS in California;

The Proposed Regulation ensures effective enforcement of the Zero-Emission Forklift Regulation in California, such that real emission reductions can be verified and achieved;

The economic and fiscal impacts of the Proposed Regulation have been analyzed as required by California law;

The Proposed Regulation is within the scope of CARB's authority and legislative direction to address the serious problem of air pollution in California, and, in particular, to meet CARB's statutory obligations identified in the following sections of the Health and Safety Code:

- Sections 39003, 39602.5, and 43018, because the regulations help attain federal and State ambient air quality standards, are premised on the best available research

into the cause of air pollution, and attack air pollution from motor vehicles, which are a major source of air pollution in the State;

- Sections 43000 and 43000.5, because the regulations control and limit air pollution from motor vehicles, adopt uniform procedures for compliance with the regulations, and reduce the State's dependence on petroleum-based fuels;
- Sections 43013 and 43018, because the regulations are necessary, cost-effective, and technologically feasible, considering their impact on the economy of the State;

The Proposed Regulation was developed using generally accepted scientific bases or scientific portions and not a new methodology, and thus no peer review as set forth in Health and Safety Code section 57004 needed to be performed;

The Proposed Regulation was developed in an open public process, in consultation with affected parties, through numerous public workshops, individual meetings, and other outreach efforts;

No reasonable alternatives to the Proposed Regulation considered to date, or that have otherwise been identified and brought to the attention of CARB, would be more effective at carrying out the purpose for which the regulation is proposed or would be as effective and less burdensome to affected entities than the Proposed Regulation; and

The Proposed Regulation is consistent with CARB's environmental justice policies and does not disproportionately impact people of any race, culture, income, or national origin.

### **The Resolutions of the California Air Resources Board**

Now, therefore, be it resolved that the Board hereby certifies that the Final EIA (including the Response to EIA Comments), as released to the public prior to the June 27, 2024, Board Hearing, was completed in compliance with CARB's certified regulatory program to meet the requirements of CEQA, reflects the agency's independent judgment and analysis, and was presented to the Board, whose members reviewed and considered the information therein before taking action to approve the regulations.

Be it further resolved that in consideration of the Final EIA, the Response to EIA Comments, and the entirety of the record, the Board adopts the Findings and Statement of Overriding Considerations.

Be it resolved that the Board hereby approves for adoption the Proposed Regulation to California Code of Regulations, title 13, sections 3000, 3001, 3002, 3003, 3004, 3005, 3006, 3007, 3008, 3009, 3010, 3011, and 2775.1, as set forth in Appendices A-1 and A-3.1 of the Initial Statement of Reasons released to the public on November 7, 2023, and updated via 15-day changes to the Proposed Regulation released on May 21, 2024, for a 15-day comment period closing on June 05, 2024.

Be it further resolved that the Board directs the Executive Officer to determine if additional sufficiently related modifications to the regulations are appropriate, and that if no additional modifications are appropriate, the Executive Officer shall take CARB's final step for final approval of such amendments through submittal of the Board-approved rulemaking package to the Office of Administrative Law. The Executive Officer may revise the adopted regulations with grammatical and other non-substantial changes, indicate them as such, and add them to the rulemaking record. If the Executive Officer determines that additional sufficiently related



substantial modifications are appropriate, the modified regulatory language shall be made available for public comment, with any additional supporting documents and information, for at least 15 days, and the Executive Officer shall consider written comments submitted during the public review period and make any further modifications that are appropriate available for public comment for at least 15 days. The Board delegates to the Executive Officer the authority to both (1) either approve or disapprove proposed changes in regulatory language under Government Code section 11346.8(c), and (2) conduct any appropriate further environmental review associated with such changes, consistent with the Board's Certified Regulatory Program regulations, at California Code of Regulations, title 17, sections 60000-60008, for those sufficiently related substantial modifications. Alternatively, rather than taking action on the proposed modifications, the Executive Officer may instead present the modifications, and any appropriate further environmental review associated with the modifications, to the Board for further consideration, if the Executive Officer determines further Board consideration is warranted.

Be it further resolved that the Board directs the Executive Officer to transmit the Notice of Decision to the Secretary of the Natural Resources Agency for posting.

Be it further resolved that the Executive Officer shall, upon adoption, submit the proposed regulatory action to the U.S. EPA for approval as a revision to the California SIP as required by the federal CAA. The adopted regulatory action would be submitted as a SIP revision because it amends regulations intending to reduce emissions of air pollutants to attain and maintain the National Ambient Air Quality Standards promulgated by U.S. EPA under the CAA.

Be it further resolved that the Board hereby determines that the regulations adopted herein will not cause California off-road engine emission standards, in the aggregate, to be less protective of public health and welfare than applicable federal standards.

Be it further resolved that, pursuant to section 209(e) of the Clean Air Act, the Executive Officer shall, upon adoption, forward the amendments to the U.S. EPA with a request for authorization or for confirmation that the amendments are within the scope of an existing authorization, as appropriate.