



## Facts About ...

### Amendments to COMAR 26.11.34

### Low Emissions Vehicle Program

2/27/23

An update to the Low Emissions Vehicle Program to stay consistent and identical to the California regulations that are Incorporated by Reference.

#### Purpose

The purpose of these amendments is to update COMAR 26.11.34.02 Incorporation by Reference to reflect the changes made to the California regulations since their last update.

#### Submission to EPA as Revision to Maryland's State Implementation Plan (SIP)

The amendments pertaining to the Low Emissions Vehicle Program will be submitted to the U.S. Environmental Protection Agency (EPA) for approval as part of Maryland's State Implementation Plan (SIP).

#### Background

Vehicles sold in the United States must be certified under one of two certification programs: the federal program administered by the U.S. Environmental Protection Agency or the California program (the Clean Car Program). Section 177 of the Clean Air Act Amendments of 1990 provides states with the ability to adopt the California program in lieu of the federal program as long as the adopted state program is identical to the California program and the state allows two model years lead time from adoption to implementation.

The Maryland Clean Cars Act of 2007 required the Maryland Department of the Environment (MDE) to adopt regulations implementing the California Clean Car Program (also referred to as the California Low Emissions Vehicle, or CALEV, Program, and more recently as the Advanced Clean Cars, or ACC, Program) in Maryland. Maryland's implementing regulations adopted, through incorporation by reference, the applicable California regulations. The CALEV program is a dynamic, changing program in which many of the relevant California regulations are continuously updated to maintain currency with vehicular technology advancement and environmental science. To retain California's standards, Maryland must remain consistent with their regulations, hence when California updates its regulations, Maryland must reflect these changes by amending our regulations.

The proposed changes have been approved by the California Air Resources Board on August 25, 2022 and were effective November 30, 2022. The proposed regulatory changes approved by the California Air Resources Board require Maryland to update the Incorporation by Reference section. These updates will not have any impact on the administrative costs of implementing the CALEV program in Maryland, but they do have



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impacts on both the benefits associated with the program and the cost of compliance for regulated parties, as described below.

#### Sources Affected and Location

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These amendments apply to automobile manufacturers that produce new motor vehicles for sale in Maryland. All vehicle types that have a gross vehicle weight rating of less than 14,000 pounds are affected.

#### Requirements

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The proposed amendments update Maryland's program requirements to be consistent with California's program requirements. This action is necessary since some of the California regulations that are incorporated into the Maryland regulation have been updated since the last Maryland program revisions.

The Maryland program update will adopt the ACC II program approved by the California Air Resources Board on August 25, 2022 and effective November 30, 2022. The ACC II program is a major update to the California program. The ACC I program (currently in effect in Maryland and California) included requirements for vehicles through model year 2025. The ACC II program adopts new requirements for model year 2026 and later vehicles. Maryland's implementation of the ACC II program will begin with the 2027 model year. Although there are a substantial number of conforming revisions, the major revisions associated with the ACC II program consist of a requirement that vehicle manufacturers continue to offer more Zero Emission Vehicles for sale, culminating in a 100% sales requirement by model year 2035, and a requirement that internal combustion engine vehicles meet increasingly stringent pollutant standards during the period in which they continue to be sold.

Zero Emission Vehicles (ZEVs) essentially consist of pure electric vehicles with a minimum range of 150 miles and plugin hybrid electric vehicles (PHEVs) with a minimum all electric range of 50 miles.<sup>1</sup> PHEVs are allowed to satisfy 20% of overall ZEV sales requirements. Additional flexibility options are available in model years 2027 through 2030. Vehicle manufacturers are also allowed to carry forward and use compliance credits generated prior to model year 2027. To ensure that vehicles sold under the program are reliable and perform as well or better than their internal combustion engine counterparts, stringent requirements related to vehicle (and battery) durability, vehicle charging capability, on-board diagnostics, warranty, and reporting are established to ensure that ZEVs perform as designed throughout their full useful life.

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<sup>1</sup> The indicated vehicle ranges are "real-world" estimates, equivalent to those that would appear on a vehicle fuel economy label. The minimum ranges required during vehicle certification are 200 and 70 miles for pure electric and PHEVs respectively.



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#### Projected Emission Reductions

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The updated CALEV program will result in significant additional emission reductions in Maryland as compared to the program currently in effect. Between 2027 and 2040, the updated program will deliver additional vehicular reductions of 5,978 tons of NO<sub>x</sub> and 585 tons of PM-2.5, as well as additional vehicular and power plant CO<sub>2</sub> emission reductions of 76.7 million metric tonnes.<sup>2</sup> By 2040, these reductions provide net health benefits equal to about 603.5 million dollars per year due to decreases in respiratory and cardiovascular illness and associated lost work days.

#### Economic Impact on Affected Sources, the Department, other State Agencies, Local Government, other Industries or Trade Groups, the Public

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The updated CALEV program will not have any impact on program administrative costs, including all associated Motor Vehicle Administration activities related to vehicle registration, data management, and dealer oversight. The program will, however, impose additional burdens on various regulated parties due to the increased cost of vehicle technology that will be required to meet program requirements. Between model year 2026 and 2031, the average cost of compliance for vehicle manufacturers is estimated to increase from \$1250 per vehicle to \$2400 per vehicle, after which per-vehicle costs are estimated to decline by \$100-\$150 per year as electric vehicle technology matures. Vehicle manufacturers are expected to pass these costs on to consumers, so the latter, including governmental fleet purchasers, will be subject to increased vehicle purchase costs. These increased costs do not take into account the availability of either federal or state incentives, so actual consumer purchase cost burdens are likely to be substantially lower. Moreover, because consumers also accrue costs savings in terms of lower fuel and maintenance costs, the total cost of ownership for CALEV vehicles is less than the vehicles they replace. During the first model year of the program, consumers can expect payback of their increased initial investment in about 5.5 years. By model year 2035, the payback period decreases to 1.3 years. Neither payback period considers the effects of purchase incentives, so actual cash flow may turn positive far earlier. On a statewide basis, the total cost of ownership is expected to turn negative by 2032 and increase each year thereafter, resulting in annual savings of over 1.5 billion dollars by 2040. The majority of this savings will accrue from reduced gasoline costs and this will have a negative effect on state gasoline tax revenue, with the revenue reduction estimated to increase from about 28 million dollars in 2026 to 483 million dollars by 2040.

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<sup>2</sup> The indicated vehicular and power plant emission reductions are the net reductions that result from a decline in vehicular emissions and an increase in power plant emissions due to electric vehicle charging requirements. Total vehicular plus power plant emissions are lower under the updated program by 82.6 million metric tonnes (as compared to total vehicular plus power plant emissions under the current program).



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#### Economic Impact on Small Businesses

Some small businesses are also vehicle consumers and they will face the same impacts as non-business consumers. Vehicle purchase costs will increase, but will be offset by operating cost savings. As is the case with non-business consumers, business consumers will recoup initial increased costs in about 5.5 years during the first year of the updated program and in about one year by model year 2035.

#### Is there an Equivalent Federal Standard to this Proposed Regulatory Action?

Yes, the EPA's national emission standards for light-duty vehicles apply to the same types of vehicles under 40 CFR Parts 85, 86, and 600. The California standards are aligned with, but more stringent than the federal program.

#### Documents to be Incorporated by Reference

Six new reference documents will be added to COMAR 26.11.34.02 and forty-six existing references in that same regulation will be amended to reflect new effective dates to maintain consistency with the latest California requirements.

The six new incorporated documents are:

*Title 13, California Code of Regulations (CCR), Division 3, Chapter 1, Article 2, §1961.4 Exhaust Emission Standards and Test Procedures - 2026 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles, as adopted on August 25, 2022 by the California Air Resources Board.*

*Title 13, California Code of Regulations (CCR), Division 3, Chapter 1, Article 2, §1962.4 Zero-Emission Vehicle Requirements for 2026 and Subsequent Model Year Passenger Cars and Light-Duty Trucks, as adopted on August 25, 2022 by the California Air Resources Board.*

*Title 13, California Code of Regulations (CCR), Division 3, Chapter 1, Article 2, §1962.5 Data Standardization Requirements for 2026 and Subsequent Model Year Light-Duty Zero Emission Vehicles and Plug-in Hybrid Electric Vehicles, as adopted on August 25, 2022 by the California Air Resources Board.*

*Title 13, California Code of Regulations (CCR), Division 3, Chapter 1, Article 2, §1962.6 Battery Labeling Requirements, as adopted on August 25, 2022 by the California Air Resources Board.*

*Title 13, California Code of Regulations (CCR), Division 3, Chapter 1, Article 2, §1962.7 In-Use Compliance, Corrective Action and Recall Protocols for 2026 and Subsequent Model Year Zero-Emission and Plug-in Hybrid Electric Passenger Cars and Light-Duty Trucks, as adopted on August 25, 2022 by the California Air Resources Board.*



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*Title 13, California Code of Regulations (CCR), Division 3, Chapter 1, Article 2, §1962.8 Warranty Requirements for Zero Emission and Batteries in Plug-in Hybrid Electric 2026 and Subsequent Model Year Passenger Cars and Light-Duty Trucks, as adopted on August 25, 2022 by the California Air Resources Board.*

The forty-six revised incorporated documents are existing documents 1, 6, 7, 10, 11, 12, 13, 15, 17, 19, 22, 23, 24, 26, 34, 35, 37, 38, 39, 40, 41, 42, 43, 45, 47, 49, 50, 51, 52, 53, 54, 55, 57, 61, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, and 79 (all but documents 1, 6, and 7 will be renumbered to reflect the insertion of the six new documents):

*Title 13, California Code of Regulations (CCR), Division 3, Chapter 1, Article 1, §1900 Definitions, as [effective July 25, 2016] effective November 30, 2022.*

*Title 13, California Code of Regulations (CCR), Division 3, Chapter 1, Article 2, §1961.2 Exhaust Emission Standards and Test Procedures-2015 [and Subsequent] through 2025 Model Year Passenger Cars[,] and Light-Duty Trucks, and 2015 through 2028 Model Year Medium-Duty Vehicles, as [effective December 12, 2018] effective November 30, 2022.*

*Title 13, California Code of Regulations (CCR), Division 3, Chapter 1, Article 2, §1961.3 Greenhouse Gas Exhaust Emission Standards and Test Procedures - 2017 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Passenger Vehicles, as [effective December 12, 2018] effective November 30, 2022.*

*Title 13, California Code of Regulations (CCR), Division 3, Chapter 1, Article 2, §1962.2 Zero-Emission Vehicle Standards for 2018 [and Subsequent] through 2025 Model Year Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles, as [effective January 1, 2016] effective November 30, 2022.*

*Title 13, California Code of Regulations (CCR), Division 3, Chapter 1, Article 2, §1962.3 Electric Vehicle Charging Requirements, as [effective August 7, 2012] effective November 30, 2022.*

*Title 13, California Code of Regulations (CCR), Division 3, Chapter 1, Article 2, §1965 Emission Control, Smog Index, and Environmental Performance Labels - 1979 and Subsequent Model-Year Motor Vehicles, as [effective October 8, 2015] effective November 30, 2022.*

*Title 13, California Code of Regulations (CCR), Division 3, Chapter 1, Article 2, §1968.2 Malfunction and Diagnostic System Requirements - 2004 and Subsequent Model[-] Year Passenger Cars, Light[-] Duty Trucks, and Medium[-] Duty Vehicles and Engines, as [effective July 25, 2016] effective November 30, 2022.*

*Title 13, California Code of Regulations (CCR), Division 3, Chapter 1, Article 2, §1969 Motor Vehicle Service Information - 1994 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Engines and Vehicles, and 2007 and Subsequent Model Heavy-Duty [Vehicles] Engines, as [effective July 15, 2007] effective November 30, 2022.*

*Title 13, California Code of Regulations (CCR), Division 3, Chapter 1, Article 2, §1976 Standards and Test Procedures for Motor Vehicle Fuel Evaporative Emissions, as [effective October 8, 2015] effective November 30, 2022.*



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Title 13, California Code of Regulations (CCR), Division 3, Chapter 1, Article 2, §1978 Standards and Test Procedures for Vehicle Refueling Emissions, as [effective October 8, 2015] *effective November 30, 2022.*

Title 13, California Code of Regulations (CCR), Division 3, Chapter 1, Article 6, §2035 Purpose, Applicability, and Definitions, as effective [November 9, 2007] *April 1, 2022.*

Title 13, California Code of Regulations (CCR), Division 3, Chapter 1, Article 6, §2037 Defects Warranty Requirements for 1990 and Subsequent Model Passenger Cars, Light-Duty Trucks, Medium-Duty Vehicles, and Motor Vehicle Engines Used in Such Vehicles, as [effective December 5, 2014] *effective November 30, 2022.*

Title 13, California Code of Regulations (CCR), Division 3, Chapter 1, Article 6, §2038 Performance Warranty Requirements for 1990 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles, and Motor Vehicle[s] Engines Used in Such Vehicles, as [effective August 7, 2012] *effective November 30, 2022.*

Title 13, California Code of Regulations (CCR), Division 3, Chapter 1, Article 6, §2040 Vehicle Owner Obligations, as effective [December 26, 1990] *October 1, 2019.*

Title 13, California Code of Regulations (CCR), Division 3, Chapter 2, Article 2.1, §2111 Applicability, as effective [December 8, 2010] *April 1, 2022.*

Title 13, California Code of Regulations (CCR), Division 3, Chapter 2, Article 2.1, §2112 Definitions, undated, as [effective December 5, 2014] *effective November 30, 2022.*

Title 13, California Code of Regulations (CCR), Division 3, Chapter 2, Article 2.1, §2113 Initiation and Approval of Voluntary and Influenced Emission-Related Recalls, as effective [January 26, 1995] *April 1, 2022.*

Title 13, California Code of Regulations (CCR), Division 3, Chapter 2, Article 2.1, §2114 Voluntary and Influenced Recall Plans, as effective [November 27, 1999] *April 1, 2022.*

Title 13, California Code of Regulations (CCR), Division 3, Chapter 2, Article 2.1, §2115 Eligibility for Repair, as effective [January 26, 1995] *April 1, 2022.*

Title 13, California Code of Regulations (CCR), Division 3, Chapter 2, Article 2.1, §2116 Repair Label, as effective [January 26, 1995] *April 1, 2022.*

Title 13, California Code of Regulations (CCR), Division 3, Chapter 2, Article 2.1, §2117 Proof of Correction Certificate, as effective [January 26, 1995] *April 1, 2022.*

Title 13, California Code of Regulations (CCR), Division 3, Chapter 2, Article 2.1, §2118 Notification, as effective [January 26, 1995] *April 1, 2022.*

Title 13, California Code of Regulations (CCR), Division 3, Chapter 2, Article 2.1, §2119 Recordkeeping and Reporting Requirements, as effective [November 27, 1999] *April 1, 2022.*

Title 13, California Code of Regulations (CCR), Division 3, Chapter 2, Article 2.1, §2121 Penalties, as effective [January 26, 1995] *April 1, 2022.*

Title 13, California Code of Regulations (CCR), Division 3, Chapter 2, Article 2.2, §2123 Initiation and Notification of Ordered Emissions-Related Recalls, as effective [January 26, 1995] *April 1, 2022.*



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Title 13, California Code of Regulations (CCR), Division 3, Chapter 2, Article 2.2, §2125 Ordered Recall Plan, as effective [January 26, 1995] *April 1, 2022*.

Title 13, California Code of Regulations (CCR), Division 3, Chapter 2, Article 2.2, §2126 Approval and Implementation of Recall Plan, as effective [January 26, 1995] *April 1, 2022*.

Title 13, California Code of Regulations (CCR), Division 3, Chapter 2, Article 2.2, §2127 Notification of Owners, as effective [January 26, 1995] *April 1, 2022*.

Title 13, California Code of Regulations (CCR), Division 3, Chapter 2, Article 2.2, §2128 Repair Label, as effective [January 26, 1995] *April 1, 2022*.

Title 13, California Code of Regulations (CCR), Division 3, Chapter 2, Article 2.2, §2129 Proof of Correction Certificate, as effective [January 26, 1995] *April 1, 2022*.

Title 13, California Code of Regulations (CCR), Division 3, Chapter 2, Article 2.2, §2130 Capture Rates and Alternative Measures, as effective [November 27, 1999] *April 1, 2022*.

Title 13, California Code of Regulations (CCR), Division 3, Chapter 2, Article 2.2, §2131 Preliminary Tests, as effective [January 26, 1995] *April 1, 2022*.

Title 13, California Code of Regulations (CCR), Division 3, Chapter 2, Article 2.2, §2133 Recordkeeping and Reporting Requirements, as effective [January 26, 1995] *April 1, 2022*.

Title 13, California Code of Regulations (CCR), Division 3, Chapter 2, Article 2.3, §2137 Vehicle and Engine Selection, as effective [December 28, 2000] *April 1, 2022*.

Title 13, California Code of Regulations (CCR), Division 3, Chapter 2, Article 2.3, §2139 Testing, as [effective December 5, 2014] *effective November 30, 2022*.

Title 13, California Code of Regulations (CCR), Division 3, Chapter 2, Article 2.3, §2140 Notification and Use of Test Results, as [effective December 5, 2014] *effective November 30, 2022*.

Title 13, California Code of Regulations (CCR), Division 3, Chapter 2, Article 2.4, §2141 General Provisions, as effective [December 8, 2010] *April 1, 2022*.

Title 13, California Code of Regulations (CCR), Division 3, Chapter 2, Article 2.4, §2142 Alternative Procedures, as effective [February 23, 1990] *April 1, 2022*.

Title 13, California Code of Regulations (CCR), Division 3, Chapter 2, Article 2.4, §2143 Failure Levels Triggering Recall, as effective [November 27, 1999] *April 1, 2022*.

Title 13, California Code of Regulations (CCR), Division 3, Chapter 2, Article 2.4, §2144 Emission Warranty Information Report, as effective [November 27, 1999] *April 1, 2022*.

Title 13, California Code of Regulations (CCR), Division 3, Chapter 2, Article 2.4, §2145 Field Information Report, as effective [August 7, 2012] *April 1, 2022*.

Title 13, California Code of Regulations (CCR), Division 3, Chapter 2, Article 2.4, §2146 Emissions Information Report, as effective [November 27, 1999] *April 1, 2022*.



**Maryland**  
Department of  
the Environment

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Title 13, California Code of Regulations (CCR), Division 3, Chapter 2, Article 2.4, §2147 Demonstration of Compliance with Emission Standards, as [effective December 5, 2014] *effective November 30, 2022.*

Title 13, California Code of Regulations (CCR), Division 3, Chapter 2, Article 2.4, §2148 Evaluation of Need for Recall, as effective [November 27, 1999] *April 1, 2022.*

Title 13, California Code of Regulations (CCR), Division 3, Chapter 2, Article 2.4, §2149 Notification and Subsequent Action, as effective [February 23, 1990] *April 1, 2022.*

Title 13, California Code of Regulations (CCR), Division 3, Chapter 4.4, §2235 Requirements, as effective [August 8, 2012] *October 1, 2019.*