

# Title 13. California Air Resources Board

## Notice of Public Hearing to Consider Proposed Amendments to On-Road Motorcycle Emission Standards and Test Procedures and Adoption of New On-Board Diagnostics and Zero-Emission Motorcycle Requirements

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 amendments to the On-Road Motorcycle (ONMC) emission standards and test procedures and adoption of new provisions relating to ONMCs under Division 3, Chapter 1, Article 2 (Approval of Motor Vehicle Pollution Control Devices) under Title 13, California Code of Regulations (collectively "Proposed Regulatory Action").

Date: January 25, 2024

Time: 9:00 A.M.

In-Person Location:

California Air Resources Board  
Byron Sher Auditorium  
1001 I Street, Sacramento, California 95814

Remote Option: Zoom

This public meeting may continue at 8:30 a.m., on January 26, 2024. Please consult the public agenda, which will be posted ten days before the January 25, 2024, Board Meeting, for important details, including, but not limited to, the day on which this item will be considered, how to participate via Zoom, and any appropriate direction regarding a possible remote-only Board Meeting if needed.

### 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 December 1, 2023. Written comments not submitted during the hearing must be submitted on or after December 1, 2023, and received **no later than January 16, 2024**. 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, § 7920.000 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 38501, 38505, 38510, 38560, 39010, 39600, 39601, 39602.5, 39667, 43013, 43018, 43019, 43019.1, 43100, 43101, 43104, 43105, 43105.5, 43106, 43107, 43202.6 and 43806; and California Vehicle Code, section 28114. This action is proposed to implement, interpret, and make specific sections California Health and Safety Code, sections 38501, 38505, 38510, 38560, 38562, 39002, 39003, 39010, 39018, 39500, 39600, 39601, 39602.5, 43000, 43000.5, 43009.5, 43013, 43016, 43018, 43018.5, 43019, 43019.1, 43100, 43101, 43101.5, 43102, 43104, 43105, 43105.5, 43106, 43107, 43151, 43152, 43153, 43154, 43202, 43204, 43205, 43205.5, 43206, 43210, 43211, 43212, 43213, 43806, 44004, 44010, 44011, 44012, 44015 and 44017; and California Vehicle Code, section 28114.

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

Existing statutes declare that emissions from motor vehicles with internal combustion engines are a significant public health threat. Existing statutes direct the Board to "endeavor to achieve the maximum degree of emission reduction possible from vehicular and other mobile sources to accomplish the attainment of the state [ambient air quality] standards [for air pollution] at the earliest practicable date."

The Board has adopted numerous regulations to reduce harmful emissions from motor vehicles and ONMCs. These existing regulations establish emission standards for ONMC exhaust and evaporative emissions from ONMCs with internal combustion engines.

The Proposed Regulatory Action will amend and extend these existing regulations, identified below under Sections Affected, to further reduce harmful pollution from ONMCs.

The Proposed Regulatory Action will increase the stringency of existing regulations to ensure emissions are reduced under a wider range of conditions under which vehicles are used and will transition new ONMC sales in California to 50% zero-emission by 2035.

## **Sections Affected:**

Proposed adoption to the California Code of Regulations, Title 13, Division 3, Chapter 1, Article 2, Sections 1958.1 through 1958.7.

Proposed amendment to the California Code of Regulations, Title 13, Division 3, Chapter 1, Article 2, Sections 1958, and 1976; Article 6, Section 2036; Chapter 2, Article 2.1, Section 2112; and Chapter 16, Article 2, Sections 2903, and 2904.

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

The following documents and test methods are incorporated in the regulation by reference as specified by section:

- The following sections of Subparts E and F, Part 86, Title 40, Code of Federal Regulations (CFR), as they existed on April 15, 1978, in section 1958, subsection (c). These CFR sections were adopted on January 5, 1977<sup>1</sup>, and several specified sections were amended on October 28, 1977.<sup>2</sup>
  - Subpart E, Part 86, Title 40, CFR
    - The following sections of Subpart E, Part 86, Title 40, CFR that are incorporated by reference in section 1958, (c) “as they existed on April 15, 1978” were adopted January 5, 1977 and do not include any subsequent amendments: 86.401-78, 86.403-78, 86.404-78, 86.405-18, 86.406-78, 86.407-78, 86.408-78, 86.409-78, 86.410-78, 86.410-80, 86.411-78, 86.412-78, 86.414-78, 86.415-78, 86.417-78, 86.418-78, 86.419-78, 86.420-78, 86.421-78, 86.422-78, 86.423-78, 86.424-78, 86.425-78, 86.427-78, 86.428-80, 86.429-78, 86.430-78, 86.431-78, 86.433-78, 86.434-78, 86.435-78, 86.438-78, 86.439-78, 86.441-78, 86.443-78, 86.444-78.
    - The following sections of Subpart E, Part 86, Title 40, CFR that are incorporated by reference in section 1958, (c) “as they existed on April 15, 1978” were adopted January 5, 1977 and amended October 28, 1977: 86.402-78, 86.413-78, 86.416-78, 86.416-80 (new section), 86.426-78, 86.428-78, 86.432-78, 86.436-78, 86.437-78, 86.440-78, 86.442-78.
  - Subpart F, Part 86, Title 40, CFR

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<sup>1</sup> 42 Fed. Reg. 1121-1161 (January 5, 1977).

<sup>2</sup> 42 Fed. Reg. 56729-56748 (October 28, 1977).

- The following sections of Subpart F, Part 86, Title 40, CFR that are incorporated by reference in section 1958, (c) “as they existed on April 15, 1978” were adopted January 5, 1977 and do not include any subsequent amendments: 86.501-78, 86.502-78, 86.503-78, 86.504-78, 86.505-78, 86.506, 86.507, 86.509-78, 86.510, 86.511-78, 86.512, 86.514-78, 86.515-78, 86.516-78, 86.517, 86.518-78, 86.520, 86.521-78, 86.522-78, 86.523-78, 86.524-78, 86.525, 86.526-78, 86.527-78, 86.528-78, 86.529-78, 86.530-78, 86.531-78, 86.532-78, 86.533, 86.534, 86.536-78, 86.538, 86.539, 86.541, 86.543.
    - The following sections of Subpart F, Part 86, Title 40, CFR that are incorporated by reference in section 1958, (c) “as they existed on April 15, 1978” were adopted January 5, 1977 and amended October 28, 1977: Sections 86.508-78, 86.513-78, 86.519-78, 86.535-78, 86.537-78, 86.540-78, 86.542-78, 86.544-78.
  - The following sections of Subparts E and F, Part 86, Title 40, CFR, as they existed on July 7, 1986<sup>3</sup>, in section 1958, (c), as adopted or as last amended on the dates shown below.
    - Subpart E, Part 86, Title 40, CFR
      - § 86.401-78, January 5, 1977
      - § 86.402-78, December 10, 1984
      - § 86.403-78, January 5, 1977
      - § 86.404-78, January 5, 1977
      - § 86.405-78, January 5, 1977
      - § 86.406-78, January 5, 1977
      - § 86.407-78, January 5, 1977
      - § 86.408-78, January 5, 1977
      - § 86.409-78, January 5, 1977
      - § 86.410-80, December 10, 1984
      - § 86.411-78, January 5, 1977
      - § 86.412-78, January 5, 1977
      - § 86.413-78, October 28, 1977
      - § 86.414-78, January 5, 1977
      - § 86.415-78, December 10, 1984

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<sup>3</sup> 40 CFR §§ 86.401-86.444 & 86.501-86.544 (July 1, 1986).

- § 86.416-80, December 10, 1984
- § 86.417-78, January 5, 1977
- § 86.418-78, January 5, 1977
- § 86.419-78, January 5, 1977
- § 86.420-78, August 17, 1979
- § 86.421-78, January 5, 1977
- § 86.422-78, January 5, 1977
- § 86.423-78, December 10, 1984
- § 86.425-78, January 5, 1977
- § 86.426-78, October 28, 1977
- § 86.427-78, December 10, 1984
- § 86.428-80, January 5, 1977
- § 86.429-78, January 5, 1977
- § 86.430-78, December 10, 1984
- § 86.431-78, December 10, 1984
- § 86.432-78, December 10, 1984
- § 86.434-78, December 10, 1984
- § 86.435-78, December 10, 1984
- § 86.436-78, December 10, 1984
- § 86.437-78, November 2, 1982
- § 86.438-78, January 5, 1977
- § 86.439-78, December 10, 1984
- § 86.440-78, December 10, 1984
- § 86.441-78, January 5, 1977
- § 86.442-78, October 28, 1977
- § 86.443-78, January 5, 1977
- § 86.444-78, January 5, 1977
- Subpart F, Part 86, Title 40, CFR
  - § 86.501-78, January 5, 1977

- § 86.502-78, January 5, 1977
- § 86.503-78, January 5, 1977
- § 86.504-78, January 5, 1977
- § 86.505-78, January 5, 1977
- § 86.508-78, October 28, 1977
- § 86.509-78, January 5, 1977
- § 86.511-78, January 5, 1977
- § 86.513-82, November 2, 1982
- § 86.514-78, January 5, 1977
- § 86.515-78, January 5, 1977
- § 86.516-78, January 5, 1977
- § 86.518-78, January 5, 1977
- § 86.519-78, October 28, 1977
- § 86.521-78, January 5, 1977
- § 86.522-78, January 5, 1977
- § 86.523-78, January 5, 1977
- § 86.524-78, January 5, 1977
- § 86.526-78, January 5, 1977
- § 86.527-78, January 5, 1977
- § 86.528-78, January 5, 1977
- § 86.529-78, January 5, 1977
- § 86.530-78, January 5, 1977
- § 86.531-78, January 5, 1977
- § 86.532-78, January 5, 1977
- § 86.535-78, October 28, 1977
- § 86.536-78, January 5, 1977
- § 86.537-78, December 10, 1984
- § 86.540-78, October 28, 1977
- § 86.542-78, October 28, 1977

- § 86.544-78, November 16, 1983
- “California 2028 and Subsequent Model Year Exhaust Emission Standards and Test Procedures for On-Road Motorcycles,” adopted [INSERT ADOPTION DATE], State of California, Air Resources Board, in section 1958, (h)(4)
- “Regulation (EU) No 168/2013 of the European Parliament and of the Council of 15 January 2013 on the approval and market surveillance of two- or three-wheel vehicles and quadricycles, 02013R0168 - EN - 14.11.2020,” in sections 1958, (i); 1958.2, (b)(1) and 1958.3, (a)(3)
- “Commission Implementing Regulation (EU) No 901/2014 of 18 July 2014 Implementing Regulation (EU) No 168/2013 of the European Parliament and of the Council with regard to the administrative requirements for the approval and market surveillance of two- or three-wheel vehicles and quadricycles, 02014R0901 - EN - 12.03.2020,” in sections 1958, (i) and 1958.2, (d)(1)
- “Commission Delegated Regulation (EU) No 44/2014 of 21 November 2013 supplementing Regulation (EU) No 168/2013 of the European Parliament and of the Council with regard to the vehicle construction and general requirements for the approval of two- or three-wheel vehicles and quadricycles, 02014R0044 - EN - 20.03.2018,” in sections 1958.2, (b)(1) and 1958.3, (a)(3)
- “Commission Delegated Regulation No 134/2014 of 16 December 2013 supplementing Regulation (EU) No 168/2013 of the European Parliament and of the Council with regard to environmental and propulsion unit performance requirements and amending Annex V thereof, 02014R0134 - EN - 20.03.2018,” in sections 1958.2, (c)(1)(A); 1958.3, (a)(3); and 1958.4, (e)
- SAE International (SAE), J1978 "OBD II Scan Tool - Equivalent to ISO/DIS 15031-4: December 14, 2001", April 2002, in section 1958.2, (b)(3)
- SAE International (SAE), J1979 "E/E Diagnostic Test Modes," May 2007 (SAE J1979), in section 1958.2, (b)(3)
- SAE International (SAE), "J1979-2 E/E - Diagnostic Test Modes:OBDonUDS," April 22, 2021, in section 1958.2, (b)(3)
- ISO 15765-4:2016 "Road Vehicles-Diagnostic communication over Controller Area Network (DoCAN) - Part 4: Requirements for emissions-related systems," April 2016, In section 1958.2, (h)(1)(A)
- SAE International (SAE), "J2982\_202210 - Riding Range Test Procedure for On-Highway Electric Motorcycles," revised 10-13-2022, in section 1958.4, (e)(1)
- SAE International (SAE), "J2572\_201410 - Recommended Practice for Measuring Fuel Consumption and Range of Fuel Cell and Hybrid Fuel Cell Vehicles Fueled by Compressed Gaseous Hydrogen," revised 10-16-2014, in section 1958.4, (e)(2)

- SAE International (SAE), "Surface Vehicle Recommended Practice SAE J1772, SAE Electric Vehicle and Plug in Hybrid Electric Vehicle Conductive Charger Coupler," 10-13-2017, in section 1958.5, (c)(1)(A)
- "TP-934 Test Procedure for Determining Evaporative Emissions from Model Year 2028 and Subsequent On-Road Motorcycles," adopted [INSERT ADOPTION DATE], State of California, Air Resources Board, in section 1976, (c)(4)
- "California 2026 and Subsequent Model Year Criteria Pollutant Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles," adopted August 25, 2022, California Environmental Protection Agency, Air Resources Board, in section 1958.2, (c)(1)(A)(1.)
- "California Evaporative Emission Standards and Test Procedures for 2001 through 2025 Model Year Passenger Cars, Light-Duty Trucks, Medium-Duty Vehicles, and Heavy-Duty Vehicles and 2001 through 2027 Model Year Motorcycles," adopted August 5, 1999, amended [INSERT DATE], State of California, Air Resources Board, in section 1976, (c)(2)

The following documents are incorporated by reference in the "California 2028 and Subsequent Model Year Exhaust Emission Standards and Test Procedures for On-Road Motorcycles":

- "California 2026 and Subsequent Model Year Criteria Pollutant Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles," adopted August 25, 2022, California Environmental Protection Agency, Air Resources Board
- "TP-934 Test Procedure for Determining Evaporative Emissions from Model Year 2028 and Subsequent On-Road Motorcycles," adopted [INSERT ADOPTION DATE], State of California, Air Resources Board
- The following sections of Subparts E and F, Part 86, Title 40, CFR, as adopted or as last amended on the dates shown below
  - Subpart E, Part 86, Title 40, CFR
    - § 86.401-2006, January 15, 2004
    - § 86.402-78, October 25, 2016
    - § 86.402-98, January 15, 2004
    - § 86.403-78, October 30, 2009
    - § 86.404-78, January 5, 1977
    - § 86.405-78, January 5, 1977
    - § 86.406-78, March 11, 1998
    - § 86.407-78, January 15, 2004



- § 86.408-78, June 29, 2021
- § 86.409-78, January 5, 1977
- § 86.410-90, September 21, 1994
- § 86.410-2006, October 25, 2016
- § 86.411-78, January 5, 1977
- § 86.412-78, January 5, 1977
- § 86.413-2006, July 13, 2005
- § 86.414-78, January 5, 1977
- § 86.415-78, April 30, 2010
- § 86.416-80, August 30, 2006
- § 86.417-78, January 5, 1977
- § 86.418-78, January 5, 1977
- § 86.419-2006, June 29, 2021
- § 86.420-78, August 17, 1979
- § 86.421-78, January 5, 1977
- § 86.422-78, January 5, 1977
- § 86.423-78, December 10, 1984
- § 86.425-78, January 5, 1977
- § 86.426-78, October 28, 1977
- § 86.427-78, June 29, 2021
- § 86.428-80, January 5, 1977
- § 86.429-78, January 5, 1977
- § 86.430-78, December 10, 1984
- § 86.431-78, October 30, 2009
- § 86.432-78, October 25, 2016
- § 86.434-78, December 10, 1984
- § 86.435-78, June 29, 2021
- § 86.436-78, June 29, 2021
- § 86.437-78, August 30, 2006

- § 86.438-78, January 5, 1977
- § 86.439-78, December 10, 1984
- § 86.440-78, December 10, 1984
- § 86.441-78, January 5, 1977
- § 86.442-78, October 28, 1977
- § 86.443-78, October 25, 2016
- § 86.444-78, October 25, 2016
- § 86.445-2006, January 15, 2004
- § 86.446-2006, January 15, 2004
- § 86.447-2006, July 13, 2005
- § 86.448-2006, July 13, 2005
- § 86.449, January 15, 2004
- § 86.450, January 24, 2023
- Subpart F, Part 86, Title 40, CFR
  - § 86.501-78, January 5, 1977
  - § 86.502-78, January 5, 1977
  - § 86.503-78, January 5, 1977
  - § 86.504-78, January 5, 1977
  - § 86.505-2004, January 15, 2004
  - § 86.508-78, October 28, 1977
  - § 86.509-90, June 30, 1995
  - § 86.511-90, April 11, 1989
  - § 86.513, June 29, 2021
  - § 86.514-78, June 30, 1995
  - § 86.515-78, April 28, 2014
  - § 86.516-90, June 30, 1995
  - § 86.518-78, March 11, 1998
  - § 86.519-90, June 30, 1995
  - § 86.521-90, June 30, 1995

- § 86.522-78, January 5, 1977
  - § 86.523-78, June 30, 1995
  - § 86.524-78, January 5, 1977
  - § 86.526-90, April 11, 1989
  - § 86.527-90, June 30, 1995
  - § 86.528-78, January 5, 1977
  - § 86.529-98, February 19, 2015
  - § 86.530-78, January 5, 1977
  - § 86.531-78, June 29, 2021
  - § 86.532-78, January 5, 1977
  - § 86.535-90, April 11, 1989
  - § 86.536-78, January 5, 1977
  - § 86.537-90, June 30, 1995
  - § 86.540-90, June 30, 1995
  - § 86.542-90, June 30, 1995
  - § 86.544-90, October 25, 2016
- “Regulation (EU) No 168/2013 of the European Parliament and of the Council of 15 January 2013 on the approval and market surveillance of two- or three-wheel vehicles and quadricycles, 02013R0168 – EN – 14.11.2020”
  - “Commission Delegated Regulation No 134/2014 of 16 December 2013 supplementing Regulation (EU) No 168/2013 of the European Parliament and of the Council with regard to environmental and propulsion unit performance requirements and amending Annex V thereof, 02014R0134 – EN – 20.03.2018”
  - “Commission Implementing Regulation (EU) No 901/2014 of 18 July 2014 Implementing Regulation (EU) No 168/2013 of the European Parliament and of the Council with regard to the administrative requirements for the approval and market surveillance of two- or three-wheel vehicles and quadricycles, 02014R0901 – EN – 12.03.2020”

The following documents are incorporated by reference in “TP-934 Test Procedure for Determining Evaporative Emissions from Model Year 2028 and Subsequent On-Road Motorcycles”:

- “California 2026 and Subsequent Model Year Criteria Pollutant Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty

Vehicles," adopted August 25, 2022, California Environmental Protection Agency, Air Resources Board

- "California 2015 through 2025 Model Year Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2017 and Subsequent Model Year Greenhouse Gas Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles," adopted March 22, 2012, amended August 25, 2022, California Environmental Protection Agency, Air Resources Board
- "Small Off-Road Engine Evaporative Emissions Test Procedure TP-901 Test Procedure for Determining Permeation Emissions from Small Off-Road Engine Fuel Tanks," adopted July 26, 2004, amended May 6, 2019, California Environmental Protection Agency, Air Resources Board
- "California Evaporative Emission Standards and Test Procedures for 2001 through 2025 Model Year Passenger Cars, Light-Duty Trucks, Medium-Duty Vehicles, and Heavy-Duty Vehicles and 2001 through 2027 Model Year Motorcycles," adopted August 5, 1999, amended [INSERT DATE], State of California, Air Resources Board,
- "Commission Delegated Regulation No 134/2014 of 16 December 2013 supplementing Regulation (EU) No 168/2013 of the European Parliament and of the Council with regard to environmental and propulsion unit performance requirements and amending Annex V thereof, 02014R0134 - EN - 20.03.2018"
- Japanese Standards Association. "Japanese Industrial Standard. JIS Z 8901:1995 - Test Powders and Test Particles," published June 2001
- Title 40, CFR, Part 86, sections: 86.107-96 (April 28, 2014), 86.108-00 (October 22, 1996), 86.130-96 (June 29, 2021), 86.133-96 (August 23, 1995), 86.138-96 (April 30, 2010), 86.143-96 (January 24, 2023), 86.508-78 (October 28, 1977), and 86.515-78 (April 28, 2014)
- Title 40, CFR, Part 1051, section: 1051.515 (January 24, 2023)
- Title 40, CFR, Part 1060, section: 1060.520 (January 24, 2023)
- Title 40, CFR, Part 1066, sections: 1066.210 (June 29, 2021), 1066.925 (April 28, 2014), 1066.955 (April 28, 2014), and 1066.965 (April 28, 2014)

## **Background and Effect of the Proposed Regulatory Action:**

The California 2020 Mobile Source Strategy shows mobile sources, including ONMCs contribute a significant amount of smog-forming NO<sub>x</sub> and the largest portion of greenhouse gas (GHG) emissions in California.<sup>4</sup> While ONMCs are a small portion of on-road emissions, they are a disproportionately large contributor of non-GHG emissions.

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<sup>4</sup> CARB, 2020 Mobile Source Strategy. October 28, 2021.

Statewide ONMCs account for 0.4% of vehicle miles traveled (VMT) of all on-road sources, yet they contribute 0.6% of oxides of nitrogen (NO<sub>x</sub>), 6.3% of reactive organic gases (ROG), and 3.6% of carbon monoxide (CO). Without action, ONMC emissions will continue to grow in relation to emissions from other mobile sources that are subject to increasingly stringent emissions control requirements, including zero-emission vehicle requirements. The Proposed Regulatory Action is a draft measure in the 2022 State Strategy for the State Implementation Plan (SIP) and a significant part of CARB's comprehensive effort to meet air quality standards.<sup>5</sup>

The Proposed Regulatory Action would create a legally binding framework to significantly transition toward zero-emission motorcycle (ZEM) ONMC sales in California while also reducing emissions from remaining internal combustion-powered vehicle sales by greatly harmonizing with more stringent European Union 5 (Euro 5) exhaust emissions standards, imposing more stringent evaporative emissions standards, and adopting additional on-board diagnostic (OBD) requirements beyond Euro 5. Further, new ONMCs sales that are under 50 cubic centimeters (cc) of engine displacement will be required to be fully transitioned to ZEMs by 2028. The proposal will drive the sales of ZEMs to 50 percent in California by the 2035 model year, thereby reducing GHG and smog forming emissions, while also reducing smog-forming emissions from newer internal combustion engine (ICE) motorcycles. Doing so is critical to meeting California's public health goals, including its climate and state and federal air quality targets. This is because mobile sources are the greatest contributor to emissions of criteria pollutants and GHG in California, accounting for about 80% of ozone precursor emissions (e.g., NO<sub>x</sub>) and approximately 40% of statewide GHG emissions, when accounting for transportation fuel production and delivery.<sup>6</sup> In 2020 ONMCs accounted for a disproportionately high 2.6% of all NO<sub>x</sub> and ROG (NO<sub>x</sub> + ROG) emitted from mobile sources in California while only accounting for 0.4% of VMT. NO<sub>x</sub> is a precursor to ozone and secondary particulate matter (PM) formation. Exposure to ozone and PM<sub>2.5</sub> is associated with increased premature death, hospitalizations, visits to doctors, use of medication, and emergency room visits due to exacerbation of chronic heart and lung diseases and other adverse health conditions.

## **Objectives and Benefits of the Proposed Regulatory Action:**

The objective of the Proposed Regulatory Action is to transition new ONMCs sold in California significantly toward ZEMs while also providing cleaner gasoline-powered ONMC options to consumers in order to provide much needed emissions reductions to the state of California addressing the goals of the 2022 SIP Strategy and Governor Gavin Newsom's Executive Order N-79-20 requiring more ZEM sales of on-road vehicles.

Staff's proposal aims to curb emissions through increased ONMC program stringency, requirements to ensure emissions are reduced under real-world operating conditions that

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<sup>5</sup> CARB, Draft 2022 State Strategy for the State Implementation Plan January 31, 2022.

<sup>6</sup> CARB, 2020 Mobile Source Strategy. 2021.

are not adequately addressed by existing test procedures, and by transition to ZEMs beginning with the 2035 model year.

Staff's proposal builds upon many decades of CARB regulations seeking to reduce emissions from ONMCs. Transitioning to zero-emission technology for every on- and off-road mobile sector is essential for meeting near and long-term emission reduction goals mandated by statute, with regard to both ambient air quality and climate requirements. This has been affirmed by every planning document released by CARB in the last 10 years. Not only is zero-emission technology needed to reduce smog-forming emissions from mobile sources, it is also the key strategy for reducing GHGs.

The Proposed Regulatory Action would require new vehicle sales of ZEMs and reduce emissions from the remaining new internal combustion ONMCs sold. Increased use of ZEMs penetrating the California fleet will reduce emissions from every stage of the use of conventional combustion fuels for transportation. These are upstream emissions from petroleum extraction, transportation, refining, and distribution, called well-to-tank (WTT), and downstream, or tank-to-wheel (TTW) vehicle emissions from tailpipes and evaporative emissions from fuel systems. Together, these emissions are called well-to-wheel, or WTW.

Transitioning new ONMC sales to zero emission will produce real public benefits. By 2040, the proposal will result in approximately 281,554 cumulative ZEMs sold statewide over baseline. From this, staff expects a reduction in cumulative carbon dioxide (CO<sub>2</sub>) emissions by an estimated 0.58 million metric tons (MMT) relative to the baseline by 2045. The cumulative total emissions reductions by 2045 are estimated to be 16,536 tons of ROG, 4,805 tons of NO<sub>x</sub>, and 28 tons of fine particulate matter (PM<sub>2.5</sub>) relative to the baseline leading to an estimated 42 lives saved and other avoided hospital visits. These estimates account for only downstream (TTW) emissions, and any additional reduction in upstream emissions (WTT) will increase overall benefits of the Proposed Regulatory Action. ZEMs are currently more expensive than the comparable equivalent internal combustion motorcycle. However, for the individual vehicle owner, operational savings from ZEM use will offset any incremental costs over time as described later under direct costs. The incremental cost difference of ZEMs compared to gasoline-powered internal combustion vehicles is expected to decrease over time as zero emission technologies reach economies of scale. Staff estimates that by the 2036 model year, it is expected that operational savings of a ZEM would offset the higher retail cost difference in less than ten years of ownership.

## **Comparable Federal Regulations:**

The Proposed Regulatory Action addresses two aspects of motor vehicle emissions, one for exhaust and evaporative emissions from gasoline-powered motorcycles and another for ZEMs. There are no comparable federal ZEM regulations, and the regulations for gasoline-powered motorcycles do not duplicate or conflict with federal regulations that address the same issues. To the extent they are different from existing federal regulations they are authorized by law and are justified by their substantial additional benefits to human health,

public welfare, and the environment described throughout this Notice, the Staff Report: Initial Statement of Reasons (ISOR), and other supporting material.

Currently, California's<sup>7</sup> and the U.S. Environmental Protection Agency's (U.S. EPA)<sup>8</sup> motorcycle exhaust emission standards and test procedures have largely been harmonized, to enable the regulated industry to design and produce a single product line of vehicles that can be certified to both U.S. EPA and CARB emission standards and sold in all 50 states. However, as discussed in Section B of the ISOR, California needs additional reductions of smog-forming pollutants in order to meet federal ambient air quality standards. The proposed regulation would reduce emission from motorcycles by imposing more stringent evaporative and exhaust emissions limits and test procedures for gasoline-powered motorcycles and requiring an increasing percentage of ZEMs as a portion of the overall statewide motorcycle sales between model years 2028 and 2035, reaching 50% ZEMs in 2035 and beyond.

CARB has authority under state and federal law to set California's own standards to reduce emissions from motor vehicles to meet federal and state ambient air quality standards. It also has authority to require additional and separate reporting than required under federal law. California has plenary authority under the state and federal constitutions to protect public health and welfare. The California Health and Safety Code directs CARB to exercise this authority to reduce and eliminate harmful emissions from motor vehicles. These statutory obligations are identified in the authority citations for the Proposed Regulatory Action. The federal Clean Air Act directs the Administrator of the U.S. EPA to waive federal preemption of California's motor vehicle emission standards when they meet the listed criteria, which have been met here. As shown in this notice and accompanying ISOR and analyses, the cost of the state regulations is justified by the benefit to human health, public welfare, and the environment. The Proposed Regulatory Action will provide significant benefits for all these factors. They will reduce emissions harmful to human health and the environment. The value of the benefits outweighs the costs, and the regulations will reduce overall costs for transportation. These improvements and savings will improve the public welfare.

The Proposed Regulatory Action will control emissions of criteria pollutants from the exhaust and fuel systems of motorcycles starting with model year 2028. They are more stringent than the existing federal standards for the same pollutants that were set by the U.S. EPA.<sup>9</sup> Thus, vehicles that comply with CARB's proposed standards will comply with federal emission standards. This does not present a conflict with federal regulations because CARB's standards may be more stringent than federal standards, under a provision in the Clean Air

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<sup>7</sup> Cal. Code Regs. tit. 13, CCR, §1958.

<sup>8</sup> 40 CFR Subparts E and F, Part 86.

<sup>9</sup> 40 CFR § 86.410-2006.

Act that directs U.S. EPA to waive federal preemption of California's motor vehicle emission standards except under limited circumstances not present here.<sup>10</sup>

**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. They build upon, amend, and further existing state regulations of the same emission sources to reduce emissions beyond existing regulations.

**Mandated by Federal Law or Regulations (Gov. Code, §§ 11346.2, subd. (c), 11346.9)**

Not applicable.

**Other Statutory Requirements (Gov. Code, § 11346.5 subd. (a)(4))**

None.

**Disclosure Regarding the Proposed Regulatory Action**

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

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

Under Government Code sections 11346.5, subdivision (a)(5) and 11346.5, subdivision (a)(6), the Executive Officer has determined that the Proposed Regulatory Action, through the purchase of new motorcycles meeting the proposed standards, would create costs or savings to any State agency (although not in the current fiscal year), would not create costs or savings in federal funding to the State, and would create costs or mandate to any local agency or school district (although not in the current fiscal year), 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.

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<sup>10</sup> Clean Air Act, § 209(b); 42 U.S.C. § 7543(b).



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

The costs of the regulation, as passed through to local government through the purchase of new motorcycles, are not reimbursable by the State pursuant to Government Code, title 2, division 4, part 7 (commencing with section 17500) for several reasons. To the extent they impose costs at the time of purchase, the proposed regulations apply generally to private and public entities, so they do not impose unique new requirements on the state and local agencies and are not a reimbursable mandate. Further, they do not mandate a new program or a higher level of service of an existing program on local agencies or school districts. Public agencies are not required by the regulation to purchase new motorcycles. They do so at their own option. Therefore, the Proposed Regulatory Action does not impose "costs mandated by the state" under section 17514 of the California Government Code. Costs are also not reimbursable when they may be fully financed by local agencies raising their own fees. Local government may raise fees, if needed, to address the costs of this regulation. Therefore, this is not a reimbursable mandate.

The State, counties, and cities could see some changes to revenue due to the Proposed Regulatory Action. Many cities and counties in California levy a Utility Users Tax on electricity. By increasing the amount of electricity used, there will be an increase in the amount of utility user tax revenue collected. Fuel taxes on gasoline fund transportation improvements at the State, county, and local levels. Displacing gasoline fuel with electricity will decrease the amount of gasoline dispensed in the State, resulting in a reduction in fuel tax revenue.

Cost or Savings for State Agencies:

From 2028 to 2045, the net cumulative impact of the Proposed Regulatory Action to State Agencies is a net gain of \$2.7 million. This consists of \$3.0 million increase in revenue driven mainly by increased retail sales tax and registration of ZEM ONMCs due to higher earlier cost differentials with ICE ONMC. There is a minor net offset in State ONMC fleet costs of \$226 thousand.

Other Non-Discretionary Costs or Savings on Local Agencies:

From 2028 to 2040, the net impact of the Proposed Regulatory Action on local government is a cumulative net cost of \$2.7 million. This is primarily driven by a net decrease in revenue of \$1.3 million mostly from local vehicle sales tax of ZEM ONMCs due to higher earlier cost differentials with ICE ONMC along with an increase in local government fleet costs of \$1.4 million.

**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. It is anticipated the industries that manufacture ZEMs and related components will grow in California under the proposal. While staff is not aware of any evidence of the extent to which this is occurring under existing requirements, automakers that are already producing ZEMs may have an advantage in growing market share over manufacturers that have not yet come to market with a widely available product. Though some consumers may be holding out for a specific manufacturer's product, many consumers will purchase products that have wide distribution networks. As the ZEM sales requirement becomes more stringent, this advantage may decline as every ONMC maker invests in ZEM technology and products at a wide scale.

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

In July 2022, CARB submitted a Standardized Regulatory Impact Analysis (SRIA) to the Department of Finance (DOF) for its review. CARB has updated several aspects of the proposal since the original submittal. The revisions are discussed below and in the ISOR, Appendix C.

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

The Proposed Regulatory Action is estimated to have a marginally negative impact on statewide employment starting 2028. The negative impact increases overtime as the proposal becomes more stringent. The results suggest that the estimated negative employment impact primarily results from the increased in upfront vehicle costs and changes in consumer spending induced by the proposal; as more is expended on new vehicles, consumers will spend less on other goods and services within the economy. Overall, the change in total employment is anticipated to be small, relative to the baseline employment for the California economy. The average annual job loss estimated to be caused by the Proposal is approximately 334.

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

The Proposal does not directly result in business creation or elimination and the Regional Economic Models, Inc. (REMI) model cannot directly estimate the creation or elimination of businesses. However, changes in the jobs and output for California can be used to understand some of the potential impacts. Reductions in output could indicate elimination

of businesses. Conversely, increased output within an industry could signal the potential for additional business creation if existing businesses cannot accommodate all future demand. There is no threshold that identifies the creation or elimination of business.

The trend of increasing demand for electricity in the electric power sector sees slight increases in sales starting from 2033, but its services are provided primarily by existing utilities. New utilities are not expected to be created to meet this relatively small increased demand. The decreasing trend in demand for gasoline has only slight potential to result in the elimination of businesses in this industry and downstream industries, such as gasoline stations and vehicle repair businesses, as ONMCs are a very small portion of on-road gasoline consuming vehicles. As described above, the vehicle repair and maintenance service industry is estimated to see negative impacts as ZEMs become a greater portion of the ONMC fleet. This trend would suggest that the number of businesses providing the services may decrease along with the reduced demand.

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

Staff analysis of the California Department of Motor Vehicle (DMV) database through model year 2020 found the approximate number of ONMC manufacturers that would have to meet ZEM sales requirements, which is the most substantial burden of the regulation, to be 13 based upon manufacturers exceeding minimum threshold new sales of 750 ONMCs. ZEM only manufacturers are not affected negatively by the proposal as they are not required to participate but may choose to participate for the purpose of selling ZEM credits corresponding to California sales of their ZEMs. Of all these ONMC manufacturers, staff is only aware one ZEM manufacturer that is located within California.

(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 proposal show a decreasing trend. The highest decrease is estimated to be about \$28 million in both 2034 and 2035. In any given year this represents changes of no larger than 0.004% of baseline investment.

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

The Proposed Regulatory Action will further reduce emissions from ONMCs operating in California by harmonizing the exhaust requirements and the OBD system with the Euro 5 standard. In addition, the proposal will introduce new CARB evaporative emissions testing standards and require the phase-in of ZEMs. CARB will lead in developing new cutting-edge evaporative emissions testing standards under the proposal. The ZEM certification and quality assurance requirements and the tradeable credit program under the proposal will provide flexibilities and give manufacturers the incentive to innovate and identify lower cost

strategies for achieving the ZEM sales requirement. Innovations leading to lower cost ZEM models likely will result in increased sales within the mass market. In addition, manufacturers are incentivized to innovate and bring ZEM models to secure their place in the growing ZEM segment in California.

- (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.

Gasoline-powered ICE ONMCs emit harmful pollutants, which this proposal would help to reduce or eliminate. These pollutants include NO<sub>x</sub> and PM<sub>2.5</sub>. ROG and NO<sub>x</sub> are precursors to ozone and secondary PM formation. Exposure to ozone and to PM<sub>2.5</sub>, which are inhalable particles with diameters that are generally 2.5 micrometers and smaller, is associated with increases in premature death, hospitalizations, visits to doctors, use of prescription medication, and emergency room visits due to exacerbation of chronic heart and lung diseases and other adverse health conditions. California's South Coast air basin has the highest ozone pollution levels in the nation. The San Joaquin Valley has some of the highest levels of PM<sub>2.5</sub> in the nation. Reducing this pollution would benefit Californians by reducing emergency room and doctor's office visits for asthma, hospitalizations for heart diseases, and premature deaths. This in turn would result in reduced asthma-related school absences, sick days off from work, health care costs and increased economic productivity.

- (G) Department of Finance comments and responses.

As required by Government Code section 11346.5, subdivision (a)(10), CARB has prepared responses to the comments of DOF on the SRIA for the Proposed Regulatory Action.

The California Air Resources Board (CARB) responds as follows to the comments of the Department of Finance (DOF) on the Standardized Regulatory Impacts Analysis (SRIA) prepared for the proposed regulations, as required by Government Code section 11346.5, subdivision (a)(10).

**DOF Comment:**

The SRIA assumes that charging infrastructure will accelerate as the private sector continues its rollout of zero-emission vehicles. However, slower adoption of charging infrastructure may hinder consumers' willingness to purchase zero emission vehicles (ZEVs) and faster adoption may accelerate the rate at which benefits are realized. The SRIA should include a sensitivity analysis to show how impacts may vary under different infrastructure adoption scenarios or justify the current adoption rate assumptions.

**Staff Response:**

Because zero emission motorcycles (ZEMs) have smaller batteries and different rider demands than other ZEVs, the charging needs are different than they are for ZEVs. Staff has characterized riders into two different cohorts based upon usage: recreational and nonrecreational riders. For nonrecreational riders who are commuting short distances back

and forth to work and running errands within the city, battery sizes are more than adequate to cover the riding in a typical day, with ranges easily exceeding 100 miles. Many of these ZEMs can easily access existing level 1 level 2 charging. In fact, the small size of ZEMs and their batteries makes them more amenable to parking inside a home or garage to access ubiquitous level 1 charging. Further, in many cases these batteries are small enough to remove from the ZEM. We are seeing some manufacturers specifically design around this for the purpose of charging the battery off of the vehicle, making these much more amenable to overnight charging for people who otherwise might have a hard time charging a vehicle, such as apartment residents. Therefore, for this type of rider, staff anticipates very little impact from limited availability of public charging stations.

However, for recreational riders, access to public chargers in remote areas capable of fast charging is critically important for public adoption of ZEM technology. Recreational riders represent a very large portion of the on-road motorcycle (ONMC) market as shown in a 2011 survey by the Institute for Social Research at California State University Sacramento (CSUS) in which they found that 56 percent of riders characterized their riding as recreational only and an additional 34 percent characterized their riding as both recreational and commuting.<sup>1</sup> Recreational riders include riders who do their riding as touring over long distances in remote areas, riders who prefer the aesthetics of classic ONMC designs with pronounced exhaust features, and riders who prefer the performance characteristics of ICE ONMCs. Often recreational riding is done at freeway speeds which coincides with the most restricted range of ZEMs, currently less than 100 miles. This limited freeway speed range is most constraining when riding in remote areas with limited ability for ZEM riders to recharge their vehicles as charge times may take as much as two hours under level 2 charging conditions. Level 3 charging capability might address some of this need, but currently level 3 charging is not offered on most ZEMs and level 3 charging stations are much less common than level 1 and 2 charging stations. Although there are many ZEM offerings available that can satisfy many rider's needs for city riding and commuting, ultimately it is a challenge for ZEM manufacturers to meet the wide range of recreational rider's needs and desires. If many riders are left with no new ONMC purchase options in California to satisfy their needs, they may ultimately be pushed to buy higher emitting used ONMCs from out of state, with the net effect of bringing more emissions into California while at the same time hurting the California economy by driving sales to other states. The Proposal ultimately tries to address this problem by allowing for a sales mix of ZEMs and state-of-the-art low emitting ICE ONMCs that can satisfy all riders needs and desires.

In either case of recreational and nonrecreational riders, it is unlikely that simply increasing the number of charging stations will have much impact on ZEM ridership.

**DOF Comment:**

The regulation is implementing a voluntary tradeable ZEM credit program to incentivize manufacturers to begin early compliance with the target ZEM sales. The SRIA must disclose any administrative costs that may be incurred from tracking the generation or trading of ZEM credits or clarify why there is no expected change in administrative costs to implement and track the program.

**Staff Response:**

It is assumed that Staff will shift responsibilities coinciding with shifting the statewide ONMC fleet away from ICE and towards electric. Therefore, it is not likely that additional staff will be needed for this Proposal. Further, because the number of participants holding ZEM credits is limited to a small number of manufacturers, likely less than 20 when considering both ICE and ZEM manufacturers, staff does not anticipate tracking ZEM credits will be very burdensome.

**DOF Comment:**

The SRIA must include comprehensive estimates of disparate impacts. Finance acknowledges the SRIA broadly discusses state and local government programs that will be impacted by the reduction in tax revenue. However, the SRIA currently reports statewide costs for state and local government but does not include estimates for any government program(s) that are expected to be disproportionately impacted. Similarly, some state and/or local agencies such as police motorcycle fleets, as mentioned in the SRIA, own a larger share of the government fleet, and are expected to bear a disproportionate share of the government ownership costs.

**Staff Response:**

There is not sufficient data to disaggregate effect on local government. The only State-owned fleet which Staff obtained information on was the California Highway Patrol (CHP), which staff was informed from CHP fleet management was just over 400 ONMCs. It is very unlikely that this fleet would be able to be replaced by ZEMs due to range limitations of less than 100 miles at freeway speeds. As a rough approximation, the average estimated cost increase per ICE ONMC from 2028 to 2045 is approximately \$285 per ONMC. Including sales tax, this is \$310 per ONMC. Because CHP currently prefers ICE ONMCs for range and performance issues, there would be no change in fueling and maintenance cost from their current fleet from current ICE ONMCs. If we assume that only 10 percent of the fleet is replaced every year (40 ONMC), the annualized cost would be approximately \$12,404 to the CHP.

**DOF Comment:**

The SRIA does not discuss the potential disparate impacts of mandating incrementally higher-priced vehicles and the consequent need for electrical charging on lower income individuals or the potential for higher used motorcycle prices as the more expensive cleaner motorcycles cycle into the used motorcycle market and as the stock of cheaper conventional motorcycles is being gradually depleted.

**Staff Response:**

In the early years of the Proposal, ICE ONMCs would likely have modest price increases of several hundred dollars due to improved emissions control technology and ZEMs are expected to cost more than comparable ICE ONMCs. However, in the long run it is

anticipated that consumers will experience a net savings due to falling battery prices along with fuel and maintenance savings.

Nonrecreational ZEM users, whose primary purpose is commuting and errands, will not likely be impacted by the number of available charging stations due to the ability of ubiquitous level 1 charging to satisfy most charging needs of these ZEM owners. Due to the small size of the ZEMs and their batteries they are more amenable to parking inside a home or garage to access level 1 charging. Further, in many cases these batteries are small enough to remove from the ZEM for charging the battery off of the vehicle, making these much more amenable to overnight charging for people who otherwise might have a hard time charging a vehicle, such as apartment residents.

For purchasers of used vehicles, the pool of used conventional ONMCs in California will not become completely depleted as this regulation only requires a maximum of 50 percent ZEM sales by 2035. The price of California used ICE ONMCs is expected to be checked by the availability of used ICE ONMCs sold in other nearby states, as no regulatory changes are expected in the near term for any of the other 49 states. Nothing prevents a California rider from purchasing and registering a used ONMC that continues to be sold in other states so long as they have at least 7,500 miles on them at the time of registration.

### **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. Staff does not anticipate the proposal to result in any additional reporting requirements and manufacturers already must report for current certification requirements. Any new ZEM reporting requirements will likely displace some current ICE ONMC reporting requirements as production shifts.

### **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. These impacts are described more fully in the accompanying Economic and Fiscal Impact Statement, Form 399, for the proposed regulations.

ONMC manufacturers are the typical large businesses that will be affected by the proposal because they are entities directly regulated and required to comply. The proposal allows for a gradual ramp up of costs due to incremental compliance requirements on ZEM along with early adoption multipliers on ZEM credits and ZEM credit banking.

The proposal will impose a wide range of costs on ONMC manufacturers depending upon many factors, but most prominently on whether they are focused on building ZEMs or ICE ONMCs and whether they take advantage of building Tier II and III ZEMs in the early years of

the regulation where the ZEM credit multipliers are the highest, as shown in the “Background, Specific Proposal Requirements” section. Further, it should also be noted that manufacturers who only make ZEMs have no compliance obligation and only must certify with CARB for the purpose of earning tradeable credits if they choose.

It is estimated that there are 13 manufacturers that would be subject to ZEM credit obligations and increased ICE ONMC production costs associated with meeting more stringent exhaust and evaporative emissions standards. None of these 13 subject manufacturers are California businesses. Initially in 2028, manufacturers will experience cost of less than \$0.4 million due to only needing to comply with the initial phase in of ICE ONMC requirements. In 2028, when manufacturers will have compliance requirements for both ZEM and ICE ONMCs, individual manufacturers will incur an average cost of \$1.5 million annually from 2028 to 2045. Upon full ZEM sales compliance requirements of 50 percent in 2035, the peak compliance cost a manufacturer will face is estimated at \$2.4 million. No manufacturers with a compliance requirement are located in California. It is assumed the direct costs imposed on these manufacturers by the Proposed Regulatory Action would be passed on through higher vehicle prices to end-users in California, although much of this will be offset by fueling and maintenance savings.

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

The Executive Officer has determined under California Code of Regulations, title 1, section 4, that the Proposed Regulatory Action would not affect small businesses. It is assumed that some small businesses employing motorcycles and individuals will experience both indirect costs and savings due to the regulation, however, the direct impact to these entities is zero. Some small businesses employing ZEMs for delivery and transport would experience increased vehicle prices in the early years of the regulation along with offsetting decreased maintenance and fuel savings over the life of the vehicle.

### **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.

### **State Implementation Plan Revision**

If adopted by CARB, CARB plans to submit the Proposed Regulatory Action to U.S. EPA for approval as a revision to the California State Implementation Plan (SIP) required by the



federal Clean Air Act (CAA). The adopted regulatory action would be submitted as a SIP revision because it adopts regulations intended to reduce emissions of air pollutants in order to attain and maintain the National Ambient Air Quality Standards promulgated by U.S. EPA pursuant to the CAA.

## **Environmental Analysis**

The Proposed Regulatory Action implements a measure previously included within CARB's 2022 State Strategy for the State Implementation Plan (2022 State SIP Strategy), in the "On-Road Motorcycle New Emissions Standards" section. When the 2022 State SIP Strategy was proposed in 2022, CARB prepared an environmental analysis (EA) under its certified regulatory program (Cal. Code of Regs., tit. 17, §§ 60000-60008) to comply with the requirements of the California Environmental Quality Act (CEQA; Public Resources Code § 21080.5). The EA, entitled *Final Environmental Analysis for the Proposed 2022 State Strategy for the State Implementation Plan*, (CARB 2022d), determined that the proposal would not result in any significant adverse impacts on the environment. Staff has determined that no additional environmental review is required for the current Proposed Regulatory Action because there are no changes that involve new significant environmental effects. The basis for reaching this conclusion is provided in Section VIII. of the Staff Report.

## **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](mailto:cotb@arb.ca.gov) or (916) 322-5594 as soon as possible, but no later than ten business days before the scheduled Board hearing. TTY/TDD/Speech to Speech users may dial 711 for the California Relay Service.

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

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

Para solicitar estas comodidades especiales o necesidades de otro idioma, por favor llame a la oficina del Consejo al [cotb@arb.ca.gov](mailto:cotb@arb.ca.gov) o (916) 322-5594 lo m?s pronto posible, pero no menos de 10 d'as de trabajo antes del d'ã 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, Jason McPhee, P.E., Air Resource Engineer, Engineering and Regulation Development Section, at (279) 208-7023 or (designated back-up contact) Scott Bacon, Air Resource Supervisor, Engineering and Regulation Development Section, at (279) 842-9122.

## **Availability of Documents**

CARB staff has prepared a Staff Report: Initial Statement of Reasons (ISOR) for the Proposed Regulatory Action, which includes a summary of the economic and environmental impacts of the proposal. The report is entitled: "Public Hearing to Consider the Proposed Amendments to On-Road Motorcycle Emissions Standards and Test Procedures and Adoption of New On-Board Diagnostics and Zero-Emission Motorcycle Requirements."

Copies of the ISOR and the full text of the proposed regulatory language, may be accessed on CARB's website listed below, on November 28, 2023. Please contact Bradley Bechtold, Regulations Coordinator, at [bradley.bechtold@arb.ca.gov](mailto:bradley.bechtold@arb.ca.gov) or (279) 208-7266 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 Bradley Bechtold, Regulations Coordinator, (279) 208-7266. 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/2024/on-roadmotorcyclesregulation>

California Air Resources Board



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Steven S. Cliff, Ph.D.  
Executive Officer

Date: November 14, 2023

*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](http://www.arb.ca.gov)).*