



**DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT**

**Air Quality Control Commission**

**REGULATION NUMBER 20 COLORADO LOW EMISSION AUTOMOBILE REGULATION**

**5 CCR 1001-24**

*[Editor's Notes follow the text of the rules at the end of this CCR Document.]*

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Outline of Regulation

- PART A General Provisions, Definitions, and Severability**
- PART B Low Emission Vehicles (LEV)**
- PART C Zero Emission Vehicles (ZEV)**
- PART D Incorporations by Reference**
- PART E Statements of Basis, Specific Authority and Purpose**

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**PART A GENERAL PROVISIONS, DEFINITIONS, AND SEVERABILITY**

- I. General Provisions
  - I.A. All provisions of this regulation apply throughout the State of Colorado.
  - I.B. Part B of this regulation applies to all 2022 and subsequent model year motor vehicles that are Passenger Cars and Light-Duty Trucks, motor vehicle engines; to all 2022 and subsequent model year motor vehicles which are Medium-Duty Passenger Vehicles, Medium-Duty Vehicles, or motor vehicle engines offered for sale or lease, or sold, or leased for registration in Colorado, and to all sales or installation of Aftermarket Catalytic Converters for any model year vehicle.
  - I.C. The provisions of Part B of this regulation also apply to all 2022 and subsequent model year motor vehicles sold or leased to the United States government or an agency thereof, or to the State of Colorado or any agency or political subdivision thereof that would be registered or required to be registered in the State.
  - I.D. Part C of this regulation applies to 2023 and subsequent model year motor vehicles. Beginning with the 2023 model year, a percentage of each manufacturer's passenger cars and light-duty trucks offered for sale in the State of Colorado shall be Zero Emission Vehicles.
  - I.E. The provisions of Part C of this regulation also apply to 2023 and subsequent model year motor vehicles sold or leased to the United States government or an agency thereof, or to the State of Colorado or any agency or political subdivision thereof that would be registered or required to be registered in the State.

I.F. This regulation is a state-only regulation and is not contained in any State Implementation Plan.

II. Definitions

II.A. *Aftermarket Catalytic Converter* means a catalytic converter not designed and built to perform exactly as the original equipment manufacturer catalytic converter.

II.B. *Authorized Emergency Vehicle or Emergency Vehicle* means such vehicles of the fire department, police vehicles, ambulances, and other special-purpose vehicles as are publicly owned and operated by or for a governmental agency to protect and preserve life and property in accordance with state laws regulating Emergency Vehicles; said term also means the following if equipped and operated as Emergency Vehicles in the manner prescribed by state law:

II.B.1. Privately owned vehicles as are designated by the state motor vehicle licensing agency necessary to the preservation of life and property; and

II.B.2. Privately owned tow trucks approved by the public utilities commission to respond to vehicle emergencies.

II.C. *Auxiliary power unit or APU* means any device that provides electrical or mechanical energy, meeting the requirements of California Code of Regulations, Title 13, Section 1962.2(c)(2), to a BEVx, after the zero emission range has been fully depleted. A fuel fired heater does not qualify under this definition for an APU.

II.D. *CARB* means the California Air Resources Board as defined in California's Health and Safety Code, Section 39003.

II.E. *California credit ratio* means the ratio of the average number of passenger cars and light-duty trucks that a manufacturer produced and delivered for sale in Colorado to the average number of passenger cars or light-duty trucks the manufacturer produced and delivered for sale in California during the time period selected by the manufacturer for calculation of their ZEV sales requirement for model year 2023, as set forth in California Code of Regulations Title 13, Section 1962.

II.F. *Department* means the Colorado Department of Public Health and Environment (CDPHE).

II.G. *Emissions Control System* means equipment designed for installation on a motor vehicle or motor vehicle engine for the purpose of reducing the air contaminants emitted from the motor vehicle or motor vehicle engine, or a system or engine modification on a motor vehicle or motor vehicle engine which causes a reduction of air contaminants emitted from the motor vehicle or motor vehicle engine, including but not limited to exhaust control systems, fuel evaporation control systems and crankcase ventilating systems.

II.H. *Executive Officer* means the Executive Director of the Colorado Department of Public Health and Environment, unless the context requires otherwise.

II.I. *Greenhouse Gas or GHG* means the following gases: carbon dioxide, methane, nitrous oxide, and hydrofluorocarbons.

- II.J. *Light-Duty Truck* means any motor vehicle certified to the standards in California Code of Regulations, Title 13, Section 1961(a)(1) or 1961.2 rated at 8,500 pounds gross vehicle weight or less, and any other motor vehicle, rated at 6,000 pounds gross vehicle weight or less, which is designed primarily for purposes of transportation of property or is a derivative of such a vehicle, or is available with special features enabling off-street or off-highway operation and use.
- II.K. *Medium-Duty Passenger Vehicle* means any medium-duty vehicle with a gross vehicle weight rating of less than 10,000 pounds that is designed primarily for the transportation of persons. The Medium-Duty Passenger Vehicle definition does not include any vehicle which: (1) is an "incomplete truck" i.e., is a truck that does not have the primary load carrying device or container attached; or (2) has a seating capacity of more than 12 persons; or (3) is designed for more than 9 persons in seating rearward of the driver's seat; or (4) is equipped with an open cargo area of 72.0 inches in interior length or more. A covered box not readily accessible from the passenger compartment will be considered an open cargo area, for purposes of this definition.
- II.L. *Medium-Duty Vehicle* means any heavy-duty low-emission, ultra-low-emission, super-ultra-low-emission or zero-emission vehicle certified to the standards in California Code of Regulations, Title 13, Section 1961.2 or 1956.8(h) having a manufacturer's gross vehicle weight rating between 8,501 and 14,000 pounds.
- II.M. *Military Tactical Vehicles and Equipment* means all land combat and transportation vehicles, excluding rail-based, which are designed for and are in use by any of the United States armed forces, or in use as an Authorized Emergency Vehicle by or for a governmental agency.
- II.N. *Neighborhood Electric Vehicle or NEV* means a motor vehicle that meets the definition of Low-Speed Vehicle either in the California Vehicle Code Division 1 VEH Section 385.5, or in 49 CFR 571.500 (as it existed on July 1, 2000), and is certified to Zero Emission Vehicle standards.
- II.O. *New Motor Vehicle* for purposes of this regulation means a 2022 model year or later motor vehicle that has accumulated less than 7500 miles of use as of the date of sale or lease.
- II.P. *Passenger Car* means any motor vehicle designed primarily for transportation of persons and having a design capacity of twelve persons or less.
- II.Q. *Range Extended Battery Electric Vehicle or BEVx* means a vehicle powered predominantly by a zero emission energy storage device, able to drive the vehicle for more than 75 all-electric miles, and also equipped with a backup Auxiliary Power Unit (APU), which does not operate until the energy storage device is fully depleted, and meeting requirements in California Code of Regulations, Title 13, Section 1962.2(d)(5)(G).
- II.R. *Transitional zero emission vehicle or "TZEV"* means a vehicle that meets all the criteria of California Code of Regulations, Title 13, Section 1962.2(c)(2) and qualifies for an allowance in California Code of Regulations, Title 13, Section 1962.2(c)(3)(A) or (E).
- II.S. *Used Motor Vehicle* means a 2022 model year or later motor vehicle that has accumulated 7500 miles or more of use as of the date of sale or lease.

- II.T. *Zero emission vehicle or "ZEV"* means a vehicle that produces zero or near-zero exhaust emissions of any criteria pollutant (or precursor pollutant) or greenhouse gas under any possible operational modes or conditions.

III. Severability

Each provision of this regulation shall be deemed severable, and in the event that any provision of this regulation is held to be invalid, the remainder of this regulation shall continue in full force and effect.

**PART B LOW EMISSION VEHICLES (LEV)**

I. Applicability

- I.A. Low Emissions Vehicle Sales - It is unlawful for any person to sell or register, offer for sale or lease, import, deliver, purchase, lease, acquire or receive a 2022 or subsequent model year new Passenger Car, or a Light-Duty Truck, Medium-Duty Passenger Vehicle, or a Medium-Duty Vehicle; new light- or medium-duty motor vehicle engine or motor vehicle with a New Motor Vehicle engine in the State of Colorado which is not certified to California Code of Regulations, Title 13, Sections 1961.2 ("LEV III Criteria emissions") and 1961.3 ("GHG emissions") and meets all other applicable requirements of California Code of Regulations, Title 13, Sections 1900, 1956.8(h), 1965, 1968.2, 1976, 1978, 2035, 2037 through 2041, 2046, 2062, 2109, 2111 through 2121, 2122 through 2135, 2139, 2141 through 2149, and 2222(h) and (i), unless the vehicle is sold to another dealer, sold for the purpose of being wrecked or dismantled, sold exclusively for off-highway use or sold for registration out of state. Vehicles that have been certified to standards promulgated pursuant to the authority contained in 42 U.S.C. Section 7521 (November 15, 1990) and that are in the possession of a rental agency in Colorado that are next rented with a final destination outside of Colorado will not be deemed as being in violation of this prohibition.

I.B. Exceptions - This regulation does not apply to:

- I.B.1. A vehicle acquired by a resident of this State for the purpose of replacing a vehicle registered to such resident which was damaged or became inoperative beyond reasonable repair or was stolen while out of this State; provided that such replacement vehicle is acquired out of state at the time the previously owned vehicle was either damaged or became inoperative or was stolen; or
- I.B.2. A vehicle transferred by inheritance; or
- I.B.3. A vehicle transferred by court decree; or
- I.B.4. Any vehicle sold after the effective date of this regulation if the vehicle was registered in this State before such effective date; or
- I.B.5. Any motor vehicle having a certificate of conformity issued pursuant to the Clean Air Act (42 U.S.C. Section 7401 et seq.) and originally registered in another state by a resident of that state who subsequently establishes residence in this State and who upon registration of the vehicle in this State provides satisfactory evidence to the Department of Revenue or its assigned designee of the previous residence and registration; or
- I.B.6. A Used Motor Vehicle (7500 or more miles accumulated); or
- I.B.7. Authorized Emergency Vehicles; or

- I.B.8. Military Tactical Vehicles and Equipment.
  - I.C. Transfer to ultimate purchaser - For purposes of this regulation, it is conclusively presumed that the equitable or legal title to any motor vehicle with an odometer reading of 7,500 miles or more has been transferred to an ultimate purchaser and that the equitable or legal title to any motor vehicle with an odometer reading of less than 7,500 miles has not been transferred to an ultimate purchaser.
  - I.D. No Conversion - In accordance with 42 U.S.C. Section 7507 under no circumstances will a Colorado action require the conversion of a vehicle to a standard different from that to which it is certified for sale in California.
  - I.E. Aftermarket Catalytic Converters - applies after January 1, 2021 to all Aftermarket Catalytic Converters that are sold, offered for sale, or advertised for sale or use in Colorado on any model year vehicle.
- II. Certification Testing
- II.A. Assembly-line quality audit emission testing and reporting shall be performed for 2022 and subsequent model years.
    - III.A.1. All manufacturers of new motor vehicles subject to this regulation produced and delivered for sale in Colorado shall conduct inspection testing in accordance with California Code of Regulations, Title 13, Section 2062.
    - III.A.2. The Department shall accept the results of quality audit testing and inspection testing determinations and findings made by CARB.
  - II.B. Remedial action plans for model year 2022 and subsequent model years are required. If the State of California requires a remedial action plan based upon full calendar or partial calendar quarter testing, under the California Code of Regulations, Title 13, Section 2109, such plan will apply to all vehicles certified to the California standards intended for sale in Colorado. Such plan will not apply to vehicles that have previously been sold to ultimate purchasers in Colorado.
- III. Fleet Average Emissions
- III.A. For each model year, manufacturers of Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles produced and delivered for sale in Colorado shall not exceed the fleet average non-methane organic gas plus oxides of nitrogen emission values as set forth in California Code of Regulations, Title 13, Section 1961.2. Credits and debits may be accrued and utilized based upon each manufacturer's sales of vehicles subject to this regulation in Colorado, pursuant to the provisions set forth in California Code of Regulations, Title 13, Section 1961.2(c).
  - III.B. For each model year, manufacturers of Passenger Cars, Light-Duty Trucks and Medium-Duty Passenger Vehicles produced and delivered for sale in Colorado shall not exceed the fleet average greenhouse gas exhaust emission levels set forth in California Code of Regulations, Title 13, Section 1961.3. For each model year, manufacturers of Medium-Duty Vehicles produced and delivered for sale or lease in Colorado shall not exceed the CO2 emission standards set forth in California Code of Regulations, Title 13, Section 1956.8 (h)(6). Credits and debits may be accrued and utilized based upon each manufacturer's sales of vehicles subject to this Rule in Colorado, pursuant to the provisions set forth in California Code of Regulations, Title 13, Section 1961.3.

IV. Reporting Requirements

IV.A. Certification Reporting

For the purposes of determining compliance with this regulation, the Department may require any vehicle manufacturer subject to this regulation to submit any documentation the Department deems necessary to the effective administration and enforcement of this regulation including, but not limited to all certification materials submitted to CARB.

IV.B. Fleet average reporting

Commencing with the 2022 model-year, each manufacturer must report to the Department using the same format used to report this information to CARB, the fleet average non-methane organic gas plus oxides of nitrogen pollutant and greenhouse gas emissions of its fleet delivered for sale in Colorado. If the "Pooling Provision" option number two in the California Code of Regulations, Title 13, Section 1961.2 is chosen, or the "Calculation of Fleet Average Carbon Dioxide Value" option number two in California Code of Regulations, Title 13, Section 1961.3 (5)(D) is chosen, manufacturers must report the data for the entire pool as well as the Colorado specific portion. Non-methane organic gas plus oxides of nitrogen reports must be submitted to the Department by no later than March 1 of the calendar year succeeding the end of the model year. Carbon dioxide reports must be submitted to the Department by no later than May 1 of the calendar year succeeding the end of the model year.

IV.C. Assembly line testing reporting

Upon request by the Department, commencing with the 2022 model year, vehicle manufacturers are required to provide reports on all assembly-line emission testing and functional test results collected as a result of compliance with this regulation and California Code of Regulations, Title 13, Section 2062. Reports must be provided to the Department or to the Department's designee.

IV.D. Warranty Reporting

Upon request by the Department, commencing with the 2022 model year, each manufacturer shall submit warranty claim reports submitted to CARB to the Department as required by California Code of Regulations, Title 13, Sections 2141 through 2149.

IV.E. Recall Reporting

Upon request by the Department, commencing with the 2022 model year, each manufacturer shall submit recall plans and progress reports submitted to CARB to the Department, using the same format and information as required by California Code of Regulations, Title 13, Sections 2119 and 2133.

V-. Surveillance and Enforcement

V.A. Surveillance of motor vehicle dealers.

V.A.1. For the purpose of enforcing or administering any Federal or State law, order, regulation, or rule relating to vehicular sources of emissions, the Department or an authorized representative of the Department of Revenue, has the right of entry for the purpose of inspecting any 2022 and subsequent model year vehicles to any premises owned, operated, used, leased, or rented by any new or used car dealer.

V.A.2. Nothing in Section V. or elsewhere in this regulation is intended to limit the Department's authority to enter and inspect pursuant to 25-7-111, C.R.S, effective June 3, 2009.

V.B. Enforcement

V.B.1. For the purpose of developing the provisions of this regulation, any person subject to the provisions of this regulation must, upon oral or written request of any authorized officer or employee or designee of the Department, when properly identified and duly designated, furnish or permit such officer or employee or designee at all reasonable times to have access to, and to copy all records relating to those vehicles which are subject to this regulation.

V.B.2. Unless otherwise specified, any person subject to the provisions of this regulation must retain all relevant records for at least three years from the creation of those records. Such records will be provided to the Department upon its request.

V.C. Fleet average enforcement

V.C.1. If the report issued by a manufacturer under Section IV.B. of this regulation demonstrates noncompliance with the fleet average contained in this regulation during a model year, the manufacturer must within 60 days file a fleet average enforcement report with the Department documenting such noncompliance. Fleet average enforcement reports must identify all vehicle models delivered for sale or lease in Colorado and their corresponding certification standards and the percentage of each model delivered for sale in Colorado and California in relation to total fleet sales in the respective state.

VI. Emission Control System Warranty and Recall Requirements

VI.A. Emissions control system warranty requirements - For all 2022 and subsequent model year Passenger Cars, Light-Duty Trucks, Medium-Duty Vehicles, and motor vehicle engines subject to this regulation, each manufacturer shall provide defect warranty coverage. For vehicles registered or principally operated in the Front Range AIR Program area, performance warranty coverage that complies with California Code of Regulations, Title 13, Sections 2035, 2037 through 2041, and 2046 shall apply.

VI.B. Recalls - For all 2022 and subsequent model year Passenger Cars, Light-Duty Trucks, Medium-Duty Vehicles, and motor vehicle engines subject to recall in California, each manufacturer shall undertake recall campaigns in Colorado pursuant to California Code of Regulations, Title 13, Sections 2111 through 2121 and 2122 through 2135, unless the manufacturer demonstrates to the Department that such recall is not applicable to vehicles registered in Colorado.

VII. Environmental Performance Labels

VII.A. It is unlawful for any person to sell or register, offer for sale or lease, import, deliver, purchase, rent, lease, acquire, or receive a 2022 and subsequent model year new Passenger Car, Light-Duty Truck, Medium-Duty Passenger Vehicle, or Medium-Duty Vehicle in Colorado to which emissions control labels and environmental performance labels have not been affixed pursuant to the requirements of California Code of Regulations, Title 13, Section 1965.

VIII. Aftermarket Catalytic Converters

VIII.A. Applicability - This regulation applies to all Aftermarket Catalytic Converters that are sold, offered for sale, or advertised for sale or use in Colorado on any model year vehicle.

VIII.B. Prohibition

VIII.B.1. It is unlawful for any person to install, sell, offer for sale, or advertise any Aftermarket Catalytic Converter intended for use on any motor vehicle originally equipped with catalytic converter(s) in Colorado unless it has been exempted pursuant to the requirements of California Code of Regulations, Title 13, Section 2222 (h) (i.e. a "California Aftermarket Catalytic Converter").

VIII.B.2. It is unlawful for any person to install, sell, offer for sale, or advertise any used, recycled, or salvaged catalytic converter in Colorado pursuant to the requirements of California Code of Regulations, Title 13, Section 2222 (h), (i), and (k).

VIII.B.3. This Aftermarket Catalytic Converter Rule is effective beginning January 1, 2021.

**PART C ZERO EMISSION VEHICLES (ZEV)**

I. Applicability

Beginning with the 2023 model year, each manufacturer's sales fleet of passenger cars and light-duty trucks in the State of Colorado shall be subjected to the ZEV credit percentage requirements in California Code of Regulations, Title 13, Section 1962.2 which is incorporated by reference.

II. Emission Standard

Certification for ZEV Emission Standards of new 2023 and subsequent model year passenger cars, light-duty trucks and medium-duty vehicles shall be made pursuant to California Code of Regulations, Title 13, Section 1962.2. Medium-duty vehicles shall not be required to meet the ZEV requirement, but if a manufacturer opts to produce medium-duty ZEV's, that manufacturer may earn and expend ZEV credit for those vehicles.

III. Percentage Requirements

Beginning with the 2023 model year, each manufacturer's sales fleet of passenger cars and light-duty trucks produced and delivered for sale in Colorado shall contain at least the same percentage of ZEVs subject to the same requirements set forth in the California Code of Regulations, Title 13, Section 1962.2 using Colorado specific vehicle production volume calculated per California Code of Regulations, Title 13, Section 1962.2.

IV. Credits and Debits

IV.A. ZEV credits can be earned per vehicle delivered for sale in Colorado pursuant to California Code of Regulations, Title 13, Section 1962.2(d) and (g).

IV.B. *Credits from ZEVs.* The amount of credits earned by a manufacturer in a given model year from ZEVs shall be expressed in units of credits, and shall be equal to the number of credits from ZEVs produced and delivered for sale in Colorado (with the exception of hydrogen fuel cell vehicles pursuant to California Code of Regulations, Title 13, Section 1962.2(d)(5)(E)) that the manufacturer applied towards meeting its ZEV requirement pursuant to California Code of Regulations, Title 13, Section 1962.2(b).

- IV.C. *Credits from TZEVs.* The amount of credits earned by a manufacturer in a given model year from TZEVs shall be expressed in units of credits, and shall be equal to the number of credits from TZEVs produced and delivered for sale in Colorado that the manufacturer applied towards meeting its ZEV requirement pursuant to California Code of Regulations, Title 13, Section 1962.2(b).
  - IV.D. *Separate Credit Accounts.* Credits and debits from a manufacturer's ZEVs, BEVxs, TZEVs, and NEVs shall each be maintained in separate accounts.
  - IV.E. *Rounding Credits.* ZEV credits and debits shall be rounded to the nearest 1/100th only on the final credit and debit totals using the conventional rounding method.
  - IV.F. *ZEV Credits for MDVs.* Credits from ZEVs and TZEVs classified as MDVs, may be counted toward the ZEV requirement for PCs and LDTs, and included in the calculation of ZEV credits as specified in this California Code of Regulations, Title 13, Section 1962.2(g) if the manufacturer so specifies.
- V. ZEV Credit Bank and Reporting Requirements
- V.A. Beginning no later than model year 2023, each manufacturer of ZEVs and TZEVs may open an account in the California ZEV Credit System for banking credits in Colorado.
  - V.B. *Proportional Starting ZEV Credit Balance.* A manufacturer may deposit into its account in the ZEV Credit Bank a number of credits equal to its starting 2023 model year California credit balance multiplied by the California credit ratio. The deposit may be made only after all credit obligations for model years 2022 and earlier have been satisfied in California. While manufacturers may trade or sell these credits to any other manufacturer, use of these credits is restricted through 2025 model year in accordance with Part C, Section V.C.
  - V.C. Each manufacturer must choose one of the following two options for the 2023 through 2025 model years. A manufacturer that chooses Option 2 must notify the Executive Officer no later than January 1, 2021, or must comply with Option 1.
    - V.C.1. Option 1: A manufacturer may meet no more than 36 percent of its combined 2023-2025 model year ZEV credit obligation using credits per Part C, Section V.B.
    - V.C.2. Option 2:
      - V.C.2.a. A manufacturer may meet no more than 23 percent of its combined 2023-2025 model year ZEV credit obligation using credits per Part C, Section V.B.
      - V.C.2.b. *Early ZEV Credits.* A manufacturer may earn credits for 2021 and 2022 model year TZEVs and ZEVs, including BEVxs, produced and delivered for sale in Colorado.
  - V.D. *ZEV Reporting Requirements.* In order to verify the status of each manufacturer's compliance with the ZEV requirements for a given model year, each manufacturer shall submit a report to the Executive Officer at least annually, by August 31 of the calendar year following the close of the model year, that identifies the necessary delivery and placement data of all vehicles generating ZEV credits or allowances, and all transfers and acquisitions of ZEV credits. Pursuant to California Code of Regulations, Title 13, Section 1962.2.

V.E. The report to the Executive Officer by each manufacturer shall be in the same format as the report submitted to CARB.

VI. Requirement to Make Up a ZEV Deficit

A manufacturer that produces and delivers for sale in Colorado fewer ZEVs or TZEVs than required to meet its ZEV credit obligation in a given model year must make up the deficit by the next model year by submitting a commensurate amount of ZEV credits to the Executive Officer pursuant to California Code of Regulations, Title 13, Section 1962.2(g)(7). Any manufacturer that fails to submit an appropriate amount of credits and does not make up ZEV deficits within the time specified in California Code of Regulations, Title 13, Section 1962.2(g)(7)(A) is subject to civil penalties pursuant to §25-7-122, C.R.S., effective August 6, 2003. For the purposes of the civil penalties pursuant to §25-7-122, C.R.S., the number of vehicles not meeting the ZEV credit obligation shall be equal to the manufacturer's credit deficit, rounded to the nearest 1/100th, calculated according to the equation in California Code of Regulations, Title 13, Section 1962.2(g)(8), provided that the percentage of a manufacturer's ZEV requirement for a given model year that may be satisfied with TZEVs or credit from such vehicles may not exceed the percentages permitted under California Code of Regulations, Title 13, Section 1962.2(b)(2).

**PART D INCORPORATIONS BY REFERENCE**

This Regulation Number 20 incorporates by Reference the following California Code of Regulations, Title 13, Sections 1961.2, 1961.3, 1962.2, 1962.3, 1900, 1956.8(h), 1965, 1968.2, 1976, 1978, 2035, 2037 through 2041, 2046, 2062, 2109, 2111 through 2121, 2122 through 2135, 2139, 2141 through 2149, and 2222(h) and (i), identified in the following table. All references to the California Code of Regulations in this Regulation Number 20 mean the versions specified in the table.

For the purposes of applying the incorporated sections of the California Code of Regulations, unless the context requires otherwise, "California" means "Colorado". Depending on context, "CARB" or "AIR Resources Board" means Colorado Department of Public Health and Environment, and "Executive Officer" means the Executive Director of the Colorado Department of Public Health and Environment.

Code of California Regulations, Title 13. Motor Vehicle, Division 3. Air Resource Board

Section	Title	Section Amended Date
<b>Chapter 1 Motor Vehicle Pollution Control Devices</b>		
Article 1. General Provisions		
1900	Definitions	July 25, 2016
Article 2. Approval of Motor Vehicle Pollution Control Devices (New Vehicles)		
1956.8	Exhaust Emissions Standards and Test Procedures -1985 and Subsequent Model Heavy-Duty Engines and Vehicles – (Medium Duty Vehicle GHG standards only)	October 16, 2017
1961.2	Exhaust Emission Standards and Test Procedures – 2015 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles.	April 1, 2019
1961.3	Greenhouse Gas Exhaust Emission Standards and Test Procedures – 2017 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles.	December 12, 2018

1962.2	Zero-Emission Vehicle Standards for 2018 and Subsequent Model Year Passenger cars, Light-Duty Trucks, and Medium-Duty Vehicles	<i>January 1, 2016</i>
1962.3	Electric Vehicle Charging Requirements	<i>August 7, 2012</i>
1965	Emission Control and Smog Index Labels – 1979 and Subsequent Model Year Vehicles	<i>October 8, 2015</i>
1968.2	Malfunction and Diagnostic System Requirements – 2004 and Subsequent Model Year Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles	<i>July 25, 2016</i>
1976	Standards and Test Procedures for Motor Vehicle Fuel Evaporative Emissions	<i>October 8, 2015</i>
1978	Standards and Test Procedures for Vehicle Refueling Emissions	<i>October 8, 2015</i>
<b>Article 6. Emission Control System Warranty</b>		
2035	Purpose, Applicability and Definitions	<i>November 9, 2007</i>
2037	Defects Warranty Requirements for 1990 and Subsequent Model Year Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles and Motor Vehicle Engines Used in Such Vehicles	<i>December 5, 2014</i>
2038	Performance Warranty Requirements for 1990 and Subsequent Model Year Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles and Motor Vehicle Engines Used in Such Vehicles	<i>August 7, 2012</i>
2039	Emission Control System Warranty Statement	<i>December 26, 1990</i>
2040	Vehicle Owner Obligations	<i>December 26, 1990</i>
2041	Mediation; Finding of Warrantable Condition	<i>December 26, 1990</i>
2046	Defective Catalyst	<i>February 15, 1979</i>
<b>Chapter 2 Enforcement of Vehicle Emission Standards and Enforcement Testing</b>		
<b>Article 1. Assembly-Line Testing</b>		
2062	Assembly-line Test Procedures 1998 and Subsequent Model years	<i>August 7, 2012</i>
<b>Article 2. Enforcement of New and In-use Vehicle Standards</b>		
2109	New Vehicle Recall Provisions	<i>December 30, 1983</i>
<b>Article 2.1. Procedures for In-Use Vehicle Voluntary and Influenced Recalls</b>		

2111	Applicability	<i>December 8, 2010</i>
2112	Definitions	<i>December 5, 2014</i>
2113	Initiation and Approval of Voluntary and Influenced Emission-Related Recalls	<i>January 26, 1995</i>
2114	Voluntary and Influenced Recall Plans	<i>November 27, 1999</i>
2115	Eligibility for Repair	<i>January 26, 1995</i>
2116	Repair Label	<i>January 26, 1995</i>
2117	Proof of Correction Certificate	<i>January 26, 1995</i>
2118	Notification	<i>January 26, 1995</i>
2119	Recordkeeping and Reporting Requirements	<i>November 27, 1999</i>
2120	Other Requirements Not Waived	<i>January 26, 1995</i>
2121	Penalties	<i>January 26, 1995</i>
Article 2.2. Procedures for In-Use Vehicle Ordered Recalls		
2122	General Provisions	<i>December 8, 2010</i>
2123	Initiation and Notification of Ordered Emission-Related Recalls	<i>January 26, 1995</i>
2124	Availability of Public Hearing	<i>January 26, 1995</i>
2125	Ordered Recall Plan	<i>January 26, 1995</i>
2126	Approval and Implementation of Recall Plan	<i>January 26, 1995</i>
2127	Notification of Owners	<i>January 26, 1995</i>
2128	Repair Label	<i>January 26, 1995</i>
2129	Proof of Correction Certificate	<i>January 26, 1995</i>
2130	Capture Rates and Alternative Measures	<i>November 27, 1999</i>
2131	Preliminary Tests	<i>January 26, 1995</i>
2132	Communication with Repair Personnel	<i>January 26, 1995</i>
2133	Recordkeeping and Reporting Requirements	<i>January 26, 1995</i>
2134	Penalties	<i>January 26, 1995</i>
2135	Extension of Time	<i>January 26, 1995</i>

Article 2.3. In-Use Vehicle Enforcement Test Procedures		
2139	Testing	<i>December 5, 2014</i>
Article 2.4. Procedures for Reporting Failure of Emission-Related Components		
2141	General Provisions	<i>December 8, 2010</i>
2142	Alternative Procedures	<i>February 23, 1990</i>
2143	Failure Levels Triggering Recall	<i>November 27, 1999</i>
2144	Emission Warranty Information Report	<i>November 27, 1999</i>
2145	Field Information Report	<i>August 7, 2012</i>
2146	Emissions Information Report	<i>November 27, 1999</i>
2147	Demonstration of Compliance with Emission Standards	<i>December 5, 2014</i>
2148	Evaluation of Need for Recall	<i>November 27, 1999</i>
2149	Notification of Subsequent Action	<i>February 23, 1990</i>
<b>Chapter 4. Criteria for the Evaluation of Motor Vehicle Pollution Control Devices and Fuel Additives</b>		
Article 2. Aftermarket Parts		
2222 (h) and (i)	Add-On Parts and Modified Parts	<i>April 17, 2017</i>

Regulation Number 20 does not include any later amendments or editions of the regulations incorporated by reference. The incorporated regulations are available for inspection at the Division during normal business hours at:

Colorado Department of Public Health and Environment  
Air Pollution Control Division, Mobile Sources Section  
4300 Cherry Creek Drive South, Denver, CO, 80220

Or online at:

<https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=I88D700E0D46911DE8879F88E8B0DAAAE&originationContext=documenttoc&transitionType=Default&contextData=%28sc.Default%29>

Copies of the above incorporated regulations are also available for a reasonable charge from the Department and from:

Barclays Official California Code of Regulations  
50 California Street Second Floor  
San Francisco, CA 94111

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**PART E STATEMENTS OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE**

I.A. ADOPTED: November 15, 2018 (Adoption of all Sections)

This Statement of Basis, Specific Statutory Authority, and Purpose complies with the requirements of the Colorado Administrative Procedure Act, Section 24-4-103(4), C.R.S., the Colorado Air Pollution Prevention and Control Act, Sections 25-7-110 and 25-7-110.5, C.R.S. and the Air Quality Control Commission's ("Commission") Procedural Rules.

Basis

On June 18, 2018, Governor John Hickenlooper, by Executive Order B 2018 006, directed the Colorado Department of Public Health and Environment to develop and propose a regulation for the implementation of a Colorado low emission vehicle ("LEV") program, incorporating the requirements of the California LEV program. The Executive Order declared the need for adopting the LEV program as a response to the federal governments announced intention to roll back vehicle greenhouse gas ("GHG") standards for model years 2022 and beyond. Currently, the federal and California vehicle standards establish essentially the same emission limits. Colorado's adoption of the California vehicle standards for light- and medium-duty vehicles is intended to maintain the standards already in place for these vehicle in Colorado.

However, the Commission notes that it spent considerable time gathering input from the auto industry, environmental groups, local governments, and the Division regarding the potential implications of this rule prior to the issuance of the Executive Order. The Commission's decision to embark upon this rulemaking hearing was deliberate and well considered, and all interested parties and members of the public had significant opportunity to provide input to the Commission in its consideration of whether to adopt this regulation.

The Commission determines adoption of Regulation Number 20, Colorado Low Emission Automobile Regulation Number ("CLEAR") will reduce vehicle GHG emissions in Colorado by retaining vehicle standards demonstrated through comprehensive analyses as being economically reasonable, technologically feasible and to provide the co-benefit of reducing costs for Colorado drivers.

Statutory Authority

Section 177 of the federal Clean Air Act ("CAA"), 42 U.S.C. Section 7507, provides states the option of requiring compliance with either federal or approved California standards for vehicles sold within their borders. The Colorado Air Pollution Prevention and Control Act, Sections 25-7-101, C.R.S., et seq., ("Act") at Section 25-7-105(1), directs the Commission to promulgate emission control regulations consistent with the legislative declaration set forth in Section 25-7-102 and in conformity with Section 25-7-109. The legislative declaration identifies, among other objectives, the need to "achieve the maximum practical degree of air purity in every portion of the State ...." Section 25-7-102, C.R.S. Sections 25-7-109(1)(a) and (2) of the Act authorize the Commission to promulgate regulations requiring effective and practical air pollution controls for significant sources and categories of sources, and emission control regulations pertaining to carbon oxides. Section 25-7-106 further provides the Commission maximum flexibility in developing an effective air quality program and promulgating such combination of regulations as may be necessary or desirable to carry out that program. Section 25-7-106 also authorizes the Commission to promulgate emission control regulations applicable to the entire state, specified areas or zones, or a specified class of pollution.

While there were arguments made as part of the proceeding that vehicle emission control studies and a resulting recommendation from the Commission are prerequisites to the adoption of Regulation Number 20 pursuant to Section 25-7-130, the Commission disagrees, based on both the plain language and the legislative history of the statute. Section 25-7-130 pertains to inspection and maintenance programs for in-use vehicles, and this regulation is solely applicable to new vehicles. In addition, while Section 25-7-130 requires the Division to conduct studies and pilot programs and the Commission to create recommendations based upon the results of those efforts, nothing in the statute directly requires those studies, programs, and recommendations to be performed and developed before the Commission can propose and adopt a rule.

### Purpose

The following section sets forth the Commission's purpose in adopting Regulation Number 20, and includes the technological and scientific rationale for the adoption of the regulation. The Commission determines adoption of Regulation Number 20 CLEAR will reduce vehicle emissions in Colorado. The Commission is utilizing the option that CAA Section 177 provides states to choose between the federal and approved California vehicle standards. Nothing in CLEAR is intended to differ in any substantive way from the provisions adopted by California as of the effective date of these revisions adopted by the Commission. The Commission determines adopting the California standards will retain the vehicle standards currently in place in Colorado and avoid the disbenefits of the anticipated roll back of federal standards.

In accordance with C.R.S. Sections 25-7-105.1 and 25-7-133(3) the Commission states the rules in Regulation Number 20 adopted in this rulemaking are state-only requirements and are not intended as additions or revisions to Colorado's State Implementation Plan (SIP).

As part of adopting the revisions to Regulation Number 20, the Commission has taken into consideration each of the factors set forth in C.R.S. Section 25-7-109(1)(b). The Commission considered information in the record regarding the state policy regarding air pollution ("...to achieve the maximum practical degree of air purity in every portion of the state, to attain and maintain the national ambient air quality standards..."), federal recommendations and requirements, the degree to which altitude, topography, climate, or meteorology requires different more or less stringent regulations in different parts of the state, the degree to which these types of emissions are subject to treatment and the availability and feasibility of treatment, the significance of the emissions to be controlled, the continuous nature of the emissions to be controlled, the economic, environmental, and energy costs of complying with the rule, and whether the rule should be statewide or apply only to portion of the state.

The Division provided an economic impact analysis for this rule, as well as a cost-benefit analysis pursuant to Section 24-4-103(2.5), C.R.S. and a regulatory analysis pursuant to Section 24-4-103(4.5), C.R.S. The Division made a good faith effort to provide the most complete and accurate analyses based on the information reasonably available to it. Expert testimony presented to the commission raises serious questions about cost estimates from the August 2018 SAFE Rule proposal (83 FR 48578). The commission did not rely on these estimates. Nevertheless, the division's cost benefit analysis, revised final economic impact analysis, and regulatory analysis and other evidence in the record amply support the conclusion that Regulation Number 20 is a practical measure that will cost effectively reduce GHG emissions.

To the extent that C.R.S. Section 25-7-110.5(5)(b) requirements apply to this rulemaking, and after considering all the information in the record, the Commission hereby makes the determination that:

- (I) *Any federal requirements that are applicable to this situation with a commentary on those requirements;*

Section 177 of the Federal Clean Air Act permits states the option of adopting California car standards. Twelve other states and the District of Columbia made this adoption of California standards in the past 14 years.

Auto manufacturers typically build two models of a particular car – one for sale in California, and another to sell elsewhere. California cars have been historically slightly lower-emitting than their federally certified counterparts. However, the standards for both were harmonized in 2017. The U.S. Environmental Protection Agency (“US EPA”) is taking action to roll back a standards change proposed for the 2021 model year. California cars would retain the standards-change that further reduces GHG emissions. California’s rules previously allowed for manufacturers to comply with California’s program by complying with the equivalent federal standards; however, California recently revised its rules to disallow compliance with federal standards to satisfy compliance with California standards in the event of a roll back.

- (II) *Whether the applicable federal requirements are performance-based or technology-based and whether there is any flexibility in those requirements, and if not, why not;*

The federal Clean Air Act grants authority to US EPA to establish new vehicle emissions standards. California mandated its own emissions standards, predating the federal Act. Car manufacturers have been engineering to federal or California emissions standards for 50 years, with tremendous technological innovation during that time. These are performance-based emissions standards – vehicles may not emit more than x grams per mile of the various criteria and GHG emissions for either certification.

- (III) *Whether the applicable federal requirements specifically address the issues that are of concern to Colorado and whether data or information that would reasonably reflect Colorado’s concern and situation was considered in the federal process that established the federal requirements;*

The Executive Order requires the Commission to consider adopting California Low Emission Vehicle standards. Because the ozone-forming criteria emissions standards are essentially the same between California and federal cars, there is little ozone benefit for Colorado in this rule. The emission reduction benefit to be derived from this regulation is primarily for GHG reductions. GHG are contributing to climate change, which is a concern to many Coloradoans. The extent to which Colorado’s concerns and issues will be specifically addressed in the federal proposal is unclear.

- (IV) *Whether the proposed requirement will improve the ability of the regulated community to comply in a more cost effective way by clarifying confusing or potentially conflicting requirements (within or cross-media), increasing certainty, or preventing or reducing the need for costly retrofit to meet more stringent requirements later;*

The regulatory burden of the proposed rule falls on auto manufacturers and dealers. The proposed rule does not significantly improve nor inhibit manufacturer’s and Dealers’ ability to comply, since these cars are being built for consumers in 13 states and the District of Columbia already.

- (V) *Whether there is a timing issue which might justify changing the time frame for implementation of federal requirement;*

The federal administration formally proposed rollback options for the 2021 GHG standards on August 2, 2018. This proposed federal rule also considers revoking California’s waiver to set their own standards. The federal Clean Air Act, Section 177 allows a state to adopt California new car emissions standards in lieu of federal standards. There is a mandated two-model-year lead time when a state makes the Section 177 adoption to California standards. Those standards are due to lapse after the 2025 model year. So In order for Colorado to maximize the benefits from this new rule, it should be adopted before January 1, 2019.

- (VI) *Whether the proposed requirement will assist in establishing and maintaining a reasonable margin for accommodation of uncertainty and future growth;*

The proposed rule will reduce GHG emissions in support of Colorado's Climate Action Plan and Executive Order D 2017-015. As the Colorado vehicle fleet turns over and newer, lower-emitting vehicles are brought into use, overall emissions are reduced.

- (VII) *Whether the proposed requirement establishes or maintains reasonable equity in the requirements for various sources;*

The proposed rule affects a single source category, mobile sources. Therefore there are no equity issues between these sources. However, if the federal vehicle standards are rolled back and this proposed rule is not adopted, additional GHG emissions reductions will be required from other emission source categories to make up for the loss of approximately 30 million tons of benefit in GHG reduction projected to be achieved through this rule, in order to meet the Governor's Executive Order D2017-015.

- (VIII) *Whether others would face increased costs if a more stringent rule is not enacted;*

As a contributor to climate change, GHG emissions present a cost to Coloradoans and Colorado businesses. In order to meet the goals of the Climate Action Plan, GHG emissions reductions not gained from the Mobile source sector may need to be taken from other industries.

- (IX) *Whether the proposed requirement includes procedural, reporting, or monitoring requirements that are different from applicable federal requirements and, if so, why and what the "compelling reason" is for different procedural, reporting, or monitoring requirements;*

Although California-certified Low Emission Vehicles will be built to different standards than their federally-certified counterparts, the processes and procedures are very similar. There will be some additional monitoring, averaging, and reporting requirements, although vehicle manufacturers and dealers are already meeting those requirements in 13 other states and the District of Columbia.

There will be additional workload on state and county staff, performing surveillance and enforcement, new vehicle titling and registration requirements, and monitoring vehicles sales.

- (X) *Whether demonstrated technology is available to comply with the proposed requirement;*

Both US EPA and the California Air Resources Board have found that the standards in the proposed rule are appropriate based on existing and maturing technologies. EPA has reversed themselves stating in April 2018 that the 2021 GHG standards change is inappropriate.

- (XI) *Whether the proposed requirement will contribute to the prevention of pollution or address a potential problem and represent a more cost-effective environmental gain; and*

The proposed rule is estimated to reduce GHG emissions by approximately 30 million tons over the lifetime of vehicles built for model years 2022 through 2031. A co-benefit to reducing GHG emissions is a savings to Colorado motorists, resulting in a savings over the life of a LEV vehicle that more than offsets the increase in purchase price of the vehicle.

(XII) *Whether an alternative rule, including a no-action alternative, would address the required standard.*

Other than retaining the federal standards, there is no regulatory alternative to adopting California LEV standards for Colorado. Assuming the proposed rollback of the federal standards occurs, no action would result in a significant increase in vehicle GHG emissions in Colorado.

To the extent that C.R.S. Section 25-7-110.8 requirements apply to this rulemaking, and after considering all the information in the record, the Commission hereby makes the determination that:

- (I) These rules are based upon reasonably available, validated, reviewed, and sound scientific methodologies, and the Commission has considered all information submitted by interested parties.
- (II) Evidence in the record supports the finding that the rules result in a demonstrable reduction of emissions.
- (III) Evidence in the record supports the finding that the rules bring about reductions in risks to human health and the environment that justify the costs to implement and comply with the rules.
- (IV) The rules are the most cost-effective to achieve the necessary and desired results, provide the regulated community flexibility, and achieve the necessary reduction in air pollution.
- (V) The selected regulatory alternative will maximize the air quality benefits of regulation in the most cost-effective manner.

I.B. ADOPTED: August 16, 2019 (Adoption of ZEV Section as part of CLEAR)

This Statement of Basis, Specific Statutory Authority, and Purpose complies with the requirements of the Colorado Administrative Procedure Act, Section 24-4-103(4), C.R.S., the Colorado Air Pollution Prevention and Control Act ("Act"), Sections 25-7-110 and 25-7-110.5, C.R.S. and the Air Quality Control Commission's ("Commission") Procedural Rules, 5 CCR 1001-1.

#### Basis

On January 17, 2019, Governor Jared Polis, by Executive Order B 2019 002, directed the Colorado Department of Public Health and Environment to develop and propose a regulation for the implementation of a Colorado Zero Emission Vehicle ("ZEV") program pursuant to Section 177 of the federal Clean Air Act, 42 U.S.C. § 7507. The Executive Order declared the need for adopting the ZEV program based upon the transportation sector's major contribution to air pollution. The Executive Order noted that transportation is one of two primary sources of ozone precursors and a leading source of greenhouse gas emissions. The Executive Order further clarified its intent as including the promotion of choice and lower costs for Coloradoans, while not imposing requirements upon sectors such as agriculture and related farming equipment such as tractors.

Prior to the Governor's Executive Order, at its November 15-16, 2018 hearing the Commission had asked the Air Pollution Control Division to develop for its consideration a proposed ZEV program for inclusion in the Colorado Low Emission Automobile Regulation.

Statutory Authority

Section 177 of the federal Clean Air Act (“CAA”), 42 U.S.C. § 7507, provides states the option of requiring compliance with approved California standards for vehicles sold within their borders. The Act at Section 25-7-105(1), directs the Commission to promulgate emission control regulations consistent with the legislative declaration set forth in Section 25-7-102 and in conformity with Section 25-7-109. Sections 25-7-109(1)(a) and (2) of the Act authorize the Commission to promulgate regulations requiring effective and practical air pollution controls for significant sources and categories of sources, and emission control regulations pertaining to carbon oxides. Section 25-7-103 provides that such emission control regulations include, *inter alia*, design, equipment, or operational standards. Section 25-7-106 further provides the Commission maximum flexibility in developing an effective air quality program and promulgating such combination of regulations as may be necessary or desirable to carry out that program. Section 25-7-106 also authorizes the Commission to promulgate emission control regulations applicable to the entire state, specified areas or zones, or a specified class of pollution.

The Colorado Legislature further bolstered the Commission’s authority to adopt regulations to reduce greenhouse gas emissions in the 2019 legislative session. The Duties of the Commission, set forth in Section 25-7-105 of the Act, now directs that the Commission, “shall consider the relative contribution of each source or source category to statewide greenhouse gas pollution” and specifies that in addressing greenhouse gas pollution the Commission may utilize “strategies that have been deployed in another jurisdiction [and] that facilitate adoption of technologies that have very low or zero emissions...among other regulatory strategies.”

Purpose

The ZEV Program in Regulation Number 20, the Colorado Low Emission Automobile Regulation (CLEAR), incorporates the requirements of the California ZEV program. Pursuant to the requirements of the program, vehicle manufacturers selling vehicles in Colorado must also offer for sale zero emitting vehicles in order to generate compliance credits under the program. The requirements of the program apply only to light-duty vehicles (8500 lbs. or less) and begin with model-year 2023 vehicles.

Advancements in technology, availability and pricing of ZEVs has made increased utilization of such vehicles an effective strategy to reduce air pollution. Therefore, the Commission determines adoption of the ZEV Program as part of CLEAR will reduce vehicle emissions in Colorado in a manner that is demonstrated to be economically reasonable and technologically feasible. The Division has been evaluating the technological rationale and finds that by the 2023 model year, a ZEV standard for Colorado will be both economically reasonable and technologically feasible.

Statement regarding Federal Requirements

In accordance with C.R.S. §§ 25-7-105.1 and 25-7-133(3) the Commission states the rules in CLEAR adopted in this rulemaking are state-only requirements and are not intended as additions or revisions to Colorado’s State Implementation Plan (SIP). The Federal Clean Air Act, pursuant to §177 LEV states the option of adopting a ZEV standard for additional emissions benefit and fuel cost savings. There is no federal ZEV standard.

As part of adopting the revisions to CLEAR, the Commission has taken into consideration each of the factors set forth in C.R.S. § 25-7-109(1)(b). These factors are discussed in detail in the attendant Request for Hearing and Hearing documents.

To the extent that C.R.S. § 25-7-110.5(5)(b) requirements apply to this rulemaking, and after considering all the information in the record, the Commission hereby makes the determination that:

- (l) Any federal requirements that are applicable to this situation with a commentary on those requirements;

A Zero Emission Vehicle (ZEV) standard would ensure that a portion of each manufacturer's vehicles sold in Colorado are Zero Emission Vehicles as defined in the California ZEV standard. Battery electric vehicles (BEV) and fuel cell electric vehicles (FCEVs) have no criteria and greenhouse gas (GHG) tailpipe emissions.

- (II) Whether the applicable federal requirements are performance-based or technology-based and whether there is any flexibility in those requirements, and if not, why not;

The Clean Air Act grants authority to U.S. EPA to establish new vehicle emissions standards. California mandated its own emissions standards, predating the federal Act. Car manufacturers have been engineering to federal or California emissions for 50 years, with tremendous technological innovation during that time. CLEAR, which incorporated California's Low Emission Vehicle Standard (LEV III) is the current state of that technological development.

A Zero Emission Vehicle rule is technology-based and taps into rapidly-developing electric storage battery technology, which diverges from the conventional internal combustion engine vehicle technological development path. Coupled with improved high efficiency motors and controllers and parochial chassis development, ZEVs for model year 2023 will be efficient transportation for a segment of the general population. Market demand for ZEVs is growing globally, so the auto industry will step up to meet market demand as technology becomes available and cost-effective.

There is no flexibility in adoption of a ZEV standard. As with the LEV Rule, the incorporation by reference must strictly adopt Code of California Regulations, Title 13 Sections 1962.2 {and .3}. However, there is flexibility in the ability to grant early action credits for sales that take place prior to the effective date of the rule and to grant a one-time bank of proportional credits. All states adopting the California standard in the past fifteen years have issued one-time proportional ZEV credits to ensure that the impact of the standards is equal to their impact within the state of California. The market has evolved, and the impact of granting a one-time proportional credit bank today is much larger than it was at the time that other states adopted the ZEV standard. Colorado has the flexibility to adjust its enforcement program for the proposed ZEV standard—for example, by including early action credits and a modified bank of proportional credits—to ensure that there is no undue burden for automakers, while at the same time maintaining the efficacy of the standard, as well as consistency with the objective of prior Section 177 state practice.

- (III) Whether the applicable federal requirements specifically address the issues that are of concern to Colorado and whether data or information that would reasonably reflect Colorado's concern and situation was considered in the federal process that established the federal requirements;

There is no federal ZEV Rule. The Executive Order "Supporting a Transition to Zero Emission Vehicles", required the Colorado Department of Public Health and Environment to develop and propose a ZEV standard to the Commission by May 2019. Prior to this, the Commission voted 8-0 to direct CDPHE staff to propose a ZEV standard.

Colorado will implement the ZEV standard more than 20 years after California implemented the ZEV standard, and 10 to 20 years after other states that have implemented the ZEV standard. These states have established ZEV credit banks for each automaker, providing a one-time credit proportional to the credit bank in California. Issuing one-time proportional ZEV credits in Colorado ensures that the Colorado ZEV standard starts with the same regulatory conditions as California and reduces undue burden on the automakers, who must meet program requirements midway through their implementation. However, restricting the use during model years 2023-2025 of ZEV credits from the one-time transfer will ensure that the regulations will require additional ZEVs to be deployed in Colorado. Early action credits get ZEVs into Colorado even in advance of the standard taking effect.

The testimony at the hearing confirmed the filings before this Commission that the members of the Alliance of Automobile Manufacturers and Association of Global Automakers (which they state collectively represent more than 99 percent of light-duty vehicle sales in the United State) have agreed to support Colorado's Regulation 20 ZEV program, as reflected in the alternative adopted by the Commission, which was jointly proposed by the Colorado Energy Office (CEO), Colorado Department of Transportation (CDOT), the Alliance and Global Automakers. The Commission directs the Division, CDOT and CEO to monitor these efforts of support along with the generation and use of credits provided for in Regulation Number 20, and to report back to the Commission as necessary.

The rule is intended to result in improved air quality in Colorado. Electric vehicles have no direct emissions, so they do not directly contribute to local air quality concerns in urbanized or other sensitive areas in Colorado. The emissions from electrical power generating plants are generally well controlled and mostly dispersed outside of Colorado's ozone nonattainment area. In addition, electrical power generation is becoming increasingly cleaner over time, as the state shifts to the use of renewable sources of energy. The passage of HB 19-1261 and SB 19-236 reinforce this move toward cleaner electrical generation, and are expected to lead to the state's largest utility reducing GHG emissions by 80% below 2005 levels by 2030.

Electric vehicles, unlike gasoline-powered vehicles, do not have emissions controls that deteriorate over time. Their indirect emissions become cleaner as their power sources become cleaner. The use of electric vehicles will result in direct emission reductions of particulate, carbon monoxide, volatile organic compounds, and other emissions compared to new model conventional motor vehicles. Vehicle lifetime emissions of nitrogen oxides will also be reduced, which along with reduced VOC emissions, will result in lower ozone concentrations. The ZEV Rule is projected to significantly reduce greenhouse gas emissions which are contributing to climate change, a concern of many Coloradans.

Additional adoption of electric vehicles and other ZEVs will lead to reductions in GHG emissions, particularly during the period after Model Year 2025, as the number of ZEVs increases.

- (IV) Whether the proposed requirement will improve the ability of the regulated community to comply in a more cost effective way by clarifying confusing or potentially conflicting requirements (within or cross-media), increasing certainty, or preventing or reducing the need for costly retrofit to meet more stringent requirements later;

The regulatory compliance requirement of the proposed rule falls on auto manufacturers. Colorado's ZEV standard will require a small percentage increase in overall ZEV production across the industry. Significantly, being part of the ZEV program enables manufacturers to accrue credits in the market for ZEVs sold in Colorado, which is itself a strong positive incentive to make ZEVs available in the Colorado market. Experience has demonstrated that without the program structure in place, manufacturers may be incentivized to prioritize their ZEV allocations to other states where program credits are available for sales.

A grant of proportional credits will make it easier to phase in compliance with the ZEV standard and increases certainty for manufacturers by providing them with a set of starting credits (beginning with a percentage use cap in model year 2023) proportional to what they presently have earned in California. In addition, the early action credits option will spread the compliance requirement.

- (V) Whether there is a timing issue which might justify changing the time frame for implementation of federal requirement;

The federal administration formally proposed alternatives for the 2021 GHG standards on August 2, 2018 that significantly reduce the stringency of the existing GHG standards for model years 2021-2025, and also considers revoking California's waiver to set their own GHG and ZEV standards.

However, while ZEV and LEV were both addressed as part of a single 2013 EPA waiver for California's Advanced Clean Cars Program, it is important to note that discrete elements considered within the 2013 waiver incorporated past waivers that were based on both a variety of justifications and different waiver types, such as GHG emissions and criteria pollutants.

The federal Clean Air Act, Section 177, allows a state to adopt California new car emissions standards. Section 177 mandates a two-model-year minimum lead time prior to requiring the California standards. For Colorado to maximize the benefits from this new rule, it should be adopted before January 1, 2020 in order to be effective for the 2023 Model Year, which will begin to be introduced in 2022. Manufacturers choosing the early action compliance option can begin earning, banking, and trading ZEV credits starting with sales of model year 2021 vehicles, which began as early as January 2, 2020. This early action compliance option is expected to yield earlier benefit to Coloradans as well as flexibility for manufacturers.

- (VI) Whether the proposed requirement will assist in establishing and maintaining a reasonable margin for accommodation of uncertainty and future growth;

As the Colorado vehicle fleet turns over and zero emission vehicles are brought into use to replace older internal combustion-engine vehicles, overall emissions are reduced, which will align with meeting federal ozone standards as the Front Range grows.

The proposed rule will reduce GHG emissions in support of Colorado's Climate Action Plan and legislatively adopted goals. As Colorado moves toward implementation of HB 19-1261, deep reductions in GHG emissions from transportation will be required in order to reach economy-wide goals of 50% reduction below 2005 levels by 2030 and 90% by 2050. Adoption of a ZEV standard that accelerates adoption of ZEVs will reduce the stringency of future efforts that will be required to meet these goals.

The provision of proportional and early credits will also ensure that there is a reasonable accommodation for automakers for uncertainty and future growth. ZEV standards for model years beyond 2025 have not yet been set by California, and have the potential to completely change the nature of the ZEV standard program at the time they are instituted. The grant of proportional and/or early credits allows automakers to produce and deliver the same portion of ZEVs in Colorado as in California, and provides them a better margin to handle future uncertainty and changes.

- (VII) Whether the proposed requirement establishes or maintains reasonable equity in the requirements for various sources;

The proposed rule affects a single source category, Mobile Sources. Therefore there are no equity issues between various sources. Other source categories including electricity generation and oil and gas production have been the subject of multiple state regulatory and legislative actions to reduce both GHG emissions and ozone precursors, and multiple regulatory proceedings are expected over the next two years at the Commission and the Public Utilities Commission affecting these sources.

- (VIII) Whether others would face increased costs if a more stringent rule is not enacted;

As a contributor to ozone non-attainment and climate change, mobile source emissions represent a cost to Coloradoans and Colorado businesses. In order to meet the goals of ozone attainment and legislatively mandated goals for reduction of GHG emissions, emissions reductions not gained from the proposed ZEV standard may need to be taken from other industries.

- (IX) Whether the proposed requirement includes procedural, reporting, or monitoring requirements that are different from applicable federal requirements and, if so, why and what the “compelling reason” is for different procedural, reporting, or monitoring requirements;

There will be some additional monitoring, credit accounting, and reporting requirements, although vehicle manufacturers are already meeting those accountability requirements in nine other states and California.

There will be additional workload on state staff, performing surveillance and enforcement, and monitoring vehicle sales and registrations.

- (X) Whether demonstrated technology is available to comply with the proposed requirement;

The Division has reviewed the body of current scientific literature demonstrating the availability of ZEV technology to comply with the ZEV Rule based on existing and maturing technologies. Information supporting this conclusion has been provided into the record for the rulemaking.

- (XI) Whether the proposed requirement will contribute to the prevention of pollution or address a potential problem and represent a more cost-effective environmental gain;

The proposed requirement will contribute to the prevention of pollution as light-duty vehicles shift from liquid fuels (gasoline and diesel) to electricity. Colorado motorists will be the beneficiaries of reduced ‘fuel’ and maintenance costs, resulting in a cost savings over the life of a ZEV car. As technology and production capacities shift, cost should continue to drop.

As electric energy from the grid continues to trend cleaner going forward, ZEV emissions benefit effectively increases with time.

- (XII) Whether an alternative rule, including a no-action alternative, would address the required standard.

Other than maintaining the status quo, there is no regulatory alternative to adopting the California ZEV standards for Colorado. No action would maintain the status quo, and since there is no federal ZEV program, the rate of ZEV adoption will be slower in 2023 and beyond. This would result in the loss of program benefits in terms of greenhouse gas emission reductions, and higher sustained ozone levels in the non-attainment area. Colorado ZEV standards that include a grant of proportional credits, with restrictions on their use during model years 2023-2025, and early action credits ensure that automakers can efficiently transition to meeting the standard while expanding the growth of ZEVs in Colorado.

To the extent that C.R.S. § 25-7-110.8 requirements apply to this rulemaking, and after considering all the information in the record, the Commission hereby makes the determination that:

- (I) These rules are based upon reasonably available, validated, reviewed, and sound scientific methodologies, and the Commission has considered all information submitted by interested parties.

- (II) Evidence in the record supports the finding that the rules result in a demonstrable reduction of emissions.
- (III) Evidence in the record supports the finding that the rules bring about reductions in risks to human health and the environment that justify the costs to implement and comply with the rules. The evidence and testimony presented claiming that air emissions, gasoline prices, and electrical rates will rise as a result of this regulation was not convincing.
- (IV) The rules are the most cost-effective to achieve the necessary and desired results, provide the regulated community flexibility, and achieve the necessary reduction in air pollution.
- (V) The selected regulatory alternative will maximize the air quality benefits of regulation in the most cost-effective manner.

Since the matter was set for hearing on May 10, 2019, the Commission has received thousands of public comments on the proposal, including a petition with more than 8800 signatures urging consideration of a ZEV standard; a mass email campaign from more than 2500 individuals who supported adopting the rule; separate emails or letters from more than 170 other individuals; and a number of letters from business and trade organizations and from environmental or public interest groups that were not parties to the rulemaking. The Commission also heard oral public comment on the proposal on August 13, 2019, with approximately 60 people speaking. A strong majority of the written comments from individuals supported adoption of a ZEV program. Comments from individuals and groups supporting adoption generally cited the need to reduce emissions of criteria pollutants and/or greenhouse gases, and the desire for more electric vehicle models to be offered in the State. Comments from individuals and groups in opposition to the ZEV program generally expressed preference for technology-neutral approaches and/or concern about potentially increased vehicle and energy costs that they believed might extend beyond ZEV purchasers. A strong majority of the oral public comments were in support of adoption of the ZEV standard for similar reasons as those expressed in the written comments. Very few oral commenters were in opposition to the ZEV standard and cited a preference for a technology-neutral approach.

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**Editor's Notes**

**History**

New rule eff. 12/30/2018.

Entire rule eff. 09/30/2019.