TITLES 13 and 17. CALIFORNIA AIR RESOURCES BOARD

NOTICE OF PUBLIC HEARING TO CONSIDER PROPOSED GREENHOUSE GAS (GHG) REGULATIONS FOR MEDIUM- AND HEAVY-DUTY ENGINES AND VEHICLES, OPTIONAL REDUCED EMISSION STANDARDS FOR HEAVY-DUTY ENGINES, AND AMENDMENTS TO THE TRACTOR-TRAILER GHG REGULATION, DIESEL-FUELED COMMERCIAL MOTOR VEHICLE IDLING RULE, AND THE HEAVY-DUTY HYBRID-ELECTRIC VEHICLES CERTIFICATION PROCEDURES

The Air Resources Board (ARB or Board) will conduct a public hearing at the time and place noted below to consider the following heavy-duty vehicle related proposals:

- Adoption of new regulations to establish greenhouse gas emission (GHG) standards for medium and heavy-duty engines and vehicles to harmonize with the existing federal GHG emission standards (Phase 1 GHG Emissions Standards) for medium and heavy-duty engines and vehicles, consisting of proposed amendments to title 13, California Code of Regulations (CCR) sections 1900, 1956.8, 2036, 2037, 2112, and 2139, and proposed adoption of new sections title 17, CCR 95660 to 95664;
- Amendments to ARB's existing Heavy-Duty Vehicle GHG Emission Reduction Regulation (Tractor-Trailer GHG regulation) to align with the U. S. EPA Phase 1 GHG Regulations and to clarify the requirements for tractors retrofitted with sleeper-cab compartments, title 17, CCR, sections 95300, 95301, 95302, 95303, and 95305;
- Adoption of new, optional oxides of nitrogen (NOx) standards for heavy-duty vehicle engines, title 13, CCR, sections 1956.8;
- Amendments to the Airborne Toxic Control Measure (ATCM) to Limit Diesel-fueled Commercial Motor Vehicle Idling to expand compliance responsibility, title 13, CCR, section 2485; and
- Amendments to the California Interim Certification Procedures for 2004 and Subsequent Model Hybrid-Electric and Other Hybrid Vehicles in the Urban Bus and Heavy-Duty Vehicle Classes, title 13, CCR, section 1956.8.

DATE: December 12, 2013

TIME: 9:00 a.m.

PLACE: California Environmental Protection Agency
Air Resources Board
Byron Sher Auditorium
1001 I Street
Sacramento, California 95814

This item may be considered at a two-day meeting of the Board, which will commence at 9:00 a.m., December 12, 2013, and may continue at 8:30 a.m., on December 13, 2013. This item may not be considered until December 13, 2013. Please consult the agenda for the hearing, which will be available at least 10 days before December 12, 2013 to determine the day on which this item will be considered.

INFORMATIVE DIGEST OF PROPOSED ACTION AND POLICY STATEMENT OVERVIEW PURSUANT TO GOVERNMENT CODE 11346.5(a)(3)

This notice concerns staff's proposal for five separate, but related regulatory actions related to on-road medium- and heavy-duty vehicles and engines. The sections of the CCR that are affected and documents incorporated by reference are described below for each of the five regulatory actions.

Sections Affected:

Phase 1 GHG Regulations

Proposed amendments to title 13, CCR, sections 1900, 1956.8, 2036, 2037, 2112, 2139, 2140, and 2147, and proposed adoption of new title 17, CCR, sections 95660, 95661, 95662, 95663, and 95664, including the following test procedures that are incorporated by reference herein: Proposed new test procedure entitled "California Greenhouse Gas Exhaust Emission Standards and Test Procedures for 2014 and Subsequent Model Heavy-Duty Vehicles," which would be incorporated by reference in title 17, CCR, 95663(c); proposed amended test procedure "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles," last amended April 18, 2013, incorporated by reference in title13, CCR, 1956.8(b); proposed amended test procedure "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Otto-Cycle Engines," last amended April 18, 2013, incorporated by reference in title13, CCR, 1956.8(d).

Tractor-Trailer GHG Regulation

Proposed amendments to title 17, CCR, sections 95300, 95301, 95302, 95303, and 95305.

Optional Low NOx Standards

Proposed amendments to title 13, CCR, sections 1956.8, and proposed amendments to "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles," last amended April 18, 2013, incorporated by reference in title 13, CCR, section 1956.8(b), and proposed amendments to "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Otto-Cycle Engines," last amended April 18, 2013, incorporated by reference in title 13, CCR, section 1956.8(d).

Heavy-Duty Diesel Idling ATCM

Proposed amendments to title 13, CCR, section 2485.

Hybrid-Electric Vehicle Certification Procedures

Proposed amendments to title 13, CCR, section 1956.8, and proposed amendments to "California Interim Certification Procedures for 2004 and Subsequent Model Hybrid-Electric Vehicles, in the Urban Bus and Heavy-Duty Vehicle Classes," incorporated by reference in title 13 CCR sections 1956.8(b) and 1956.8(d).

<u>Documents Incorporated by Reference:</u>
Phase 1 GHG Regulations

The following documents are incorporated by reference in the proposed amendments to title 13, CCR, section 1956.8:

- "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel-Engines and Vehicles," adopted December 12, 2002, as last amended April 18, 2013.
- "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Otto-Cycle Engines," adopted December 27, 2000, as last amended April 18, 2013.
- "California Non-Methane Organic Gas Test Procedures," adopted July 12, 1991, as last amended December 6, 2012.

The following document is incorporated by reference in the proposed new title 17, CCR, section 95663:

- New "California Greenhouse Gas Exhaust Emission Standards and Test Procedures for 2014 and Subsequent Model Heavy-Duty Vehicles,"

The following documents are incorporated by reference in 40 CFR 1037.521(d):

- SAE J1252 Wind Tunnel Test Procedure for Trucks and Buses, Revised July 1981.
- SAE J1594 Vehicle Aerodynamics Terminology, Revised July 2010.
- SAE J2071 Aerodynamic Testing of Road Vehicles – Open Throat Wind Tunnel Adjustment, Revised June 1994.

The following documents are incorporated by reference in 40 CFR 1037.610(c):

- SAE J1321 Joint TMC/SAE Fuel Consumption Test Procedures Type II Reaffirmed 1986-10.
- SAE J1526 Joint TMC/SAE Fuel Consumption In-Service Test Procedure Type III Issued 1987-06.

The following documents are incorporated by reference in 40 CFR 1066.20:

- National Institute of Standards and Technology (NIST) Special Publication 811, 2008 Edition, Guide for the Use of the International System of Units (SI), March 2008.

The following documents are incorporated by reference in 40 CFR 1066.310(b):

- SAE J1263 Road Load Measurement and Dynamometer Simulation Using Coastdown Techniques, Revised March 2010.
- SAE J2263 Road Load Measurement Using Onboard Anemometry and Coastdown Techniques, Revised December 2008.

The following document is incorporated by reference in 40 CFR 1066.501:

- SAE J2711 Recommended Practice for Measuring Fuel Economy and Emissions of Hybrid-Electric and Conventional Heavy-Duty Vehicles, Issued September 2002.

The following documents are incorporated by reference in "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel-Engines and Vehicles," adopted December 12, 2002, as last amended April 18, 2013, and California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Otto-Cycle Engines," adopted December 27, 2000, as last amended April 18, 2013:

- "California 2001 through 2014 Model Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2009 through 2016 Model Greenhouse Gas Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles," as amended December 6, 2012.
- "California 2015 and Subsequent Model Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2017 and Subsequent Model Greenhouse Gas Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles," as amended December 6, 2012.
- American Society for Testing and Materials (ASTM) D240-09 Standard Test Method for Head of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter, approved July 1, 2009.
- ASTM D4809-09a Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter (Precision Method), approved September 1, 2009.
- ASTM D5291-10 Standard Test Methods for Instrumental Determination of Carbon, Hydrogen, and Nitrogen in Petroleum Products and Lubricants, approved May 1, 2010.

Tractor-Trailer GHG Regulation

None.

Optional Low NOx Standards

- "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel-Engines and Vehicles," adopted December 12, 2002, as last amended April 18, 2013.
- "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Otto-Cycle Engines," adopted December 27, 2000, as last amended April 18, 2013.

Heavy-Duty Diesel Idling ATCM

- "California Exhaust Emission Standards and Test Procedures for 2004 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles," as last amended on April 18, 2013.
- "California Exhaust Emission Standards and Test Procedures for 2001 through 2014 Model Criteria Pollutant Exhaust Emission Standards and Test Procedures and 2009 through 2016 Model Greenhouse Gas Exhaust Emission Standards and Test Procedures for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles," as incorporated by reference in title 13 CCR 1961(d).

Hybrid-Electric Vehicle Certification Procedures

- "California Interim Certification Procedures for 2004 and Subsequent Model Hybrid-Electric Vehicles, in the Urban Bus and Heavy-Duty Vehicle Classes," adopted October 24, 2002.

Background and Effect of the Proposed Rulemaking:

Phase I GHG Regulation

On November 14, 2011, U.S. EPA and the National Highway Traffic Safety Administration (NHTSA), on behalf of the U.S. Department of Transportation, jointly adopted GHG emission standards and fuel economy standards for 2014 through 2018 model year medium- and heavy-duty engines and vehicles, informally known as the "U.S. Phase 1" GHG regulations or federal Phase 1 program. The U.S. Phase I GHG regulations establish the first federal GHG emission standards for medium- and heavy-duty engines and vehicles.

In this rulemaking action, ARB staff is proposing new regulations to establish GHG emission standards applicable to new vehicles and to amend existing regulations to establish GHG standards applicable to new California medium and heavy-duty vehicle engines. The proposed new regulation and related amendments would align California's GHG emissions standards and test procedures with those of the U.S. Phase I GHG regulation, provide nationwide consistency for engine and vehicle manufacturers, and allow ARB to both certify new motor vehicles and new motor vehicle engines to GHG standards and to enforce those requirements in California.

Tractor-Trailer GHG Regulation

The Board initially approved the Tractor-Trailer GHG regulation (title 17 CCR 95300-95312) on December 11, 2008, and subsequently adopted amendments to the regulation on October 26, 2011. The regulation reduces GHG emissions by requiring long-haul tractors and trailers to be equipped with specified aerodynamic technologies and low-rolling resistance tires that act to reduce the aerodynamic drag and rolling resistance forces acting on such tractors and trailers. The regulation incorporates elements of the U.S. EPA's voluntary SmartWay program, which develops test protocols and establishes performance criteria to verify the GHG emissions reduction benefits of heavy-duty tractors and equipment associated with heavy-duty tractors and trailers. The Tractor-Trailer GHG regulation currently requires 2011 and subsequent model year sleeper-cab tractors pulling 53-foot or longer box-type trailers on California highways to be SmartWay designated tractor models, and 2011 or subsequent day-cab tractors pulling 53-foot or longer box-type trailers on California highways to be equipped with SmartWay verified low rolling resistance (LRR) tires. The Tractor-Trailer GHG regulation also requires both 2011 and newer and 2010 and older 53-foot or longer box-type trailers to either be SmartWay designated trailers or to be retrofitted with SmartWay verified aerodynamic technologies and SmartWay verified LRR tires.

To harmonize the tractor-based requirements of the federal and California regulations, staff is proposing to sunset the tractor-based requirements for 2014 and subsequent model year tractors, but will maintain all elements of the trailer-based requirements of the existing Tractor-Trailer GHG regulation. Staff is also proposing to modify the Tractor-Trailer GHG regulation to clarify the applicability of the tractor-based requirements for tractors that are subsequently retrofitted with sleeper cab compartments and to allow 2014 and newer model year heavy-duty tractors to be eligible for the existing short-haul and local-haul tractor exemptions. The trailers hauled by such short-haul and local-haul tractors would be exempted as well.

Optional Low-NOx Standards

California is the only state that is authorized to adopt and enforce emission standards for new motor vehicles and engines that differ from federal emission standards. Because of the large number of California heavy-duty trucks that travel interstate, ARB has generally aligned California's heavy-duty engine standards with federal heavy-duty engine standards. Since 1990, both California and EPA have established increasingly more stringent emission standards for heavy-duty diesel engines. Specifically, the California and federal emission standards for NOx have been reduced from 6 grams per brake-horsepower hour (g/bhp-hr) in 1990 to the current standard of 0.2 g/bhp-hr.

In addition to the primary NOx standards, California has also established several optional, lower NOx standards over the past 15 years. From 1998 to 2003, optional NOx standards ranged from 2.5 g/bhp-hr to 0.5 g/bhp-hr, at 0.5 g/bhp-hr increments, which were much lower than the mandatory 4.0 g/bhp-hr limit. Starting in 2004, engine manufacturers could choose to certify to optional NOx + non-methane hydrocarbon (NMHC) standards ranging from 1.8 g/bhp-hr to 0.3 g/bhp-hr, at 0.3 g/bhp-hr increments, which was significantly less than the mandatory 2.4 g/bhp-hr NOx+NMHC standard. These optional standards allowed local air districts and ARB to preferentially provide incentive funding to purchasers of cleaner trucks, which encouraged the development of cleaner engines.

ARB presently does not have a mechanism in place to allow heavy-duty engine manufacturers to optionally certify engines to standards more stringent than the 2010 MY standard. To encourage development of lower NOx engines and reduce emissions, ARB staff is proposing to establish the next generation of optional NOx standards for heavy-duty engines, that would specify three optional NOx emission standards of 0.1 g/bhp-hr, 0.05 g/bhp-hr, and 0.02 g/bhp-hr, which would correspond to emission levels that are 50 percent, 75 percent, and 90 percent lower than the current mandatory standard, respectively. Several existing programs such as the Carl Moyer Program and Proposition 1B Program and ARB's Truck and Bus regulation currently provide some incentive for optionally certified engines and could be modified to provide additional incentives for engine manufacturers to certify to the proposed optional standards. To the extent that engine manufacturers elect to certify heavy-duty engines to the optional NOx standards, those optional NOx standards will provide emission benefits and pave the way for future cleaner engines.

Heavy-Duty Diesel Idling ATCM

On July 22, 2004, ARB initially adopted an Air Toxic Control Measure (ATCM) to limit diesel-fueled commercial motor vehicle idling. ARB subsequently adopted amendments to this ATCM on September 1, 2006 and October 19, 2009. This ATCM is set forth at title 13, CCR section 2485, and requires, among other things, that drivers of diesel-fueled commercial motor vehicles with gross vehicle weight ratings greater than 10,000 pounds not idle the vehicle's primary diesel engine longer than five minutes at any location.

ARB staff is proposing to expand the applicability of the idling ATCM to include the vehicle owner and the motor carrier that dispatched the vehicle. Staff is also proposing to include schools, hotels, and motels in the definition of "restricted area." "Restricted area is currently defined as "any real property zoned for individual or multifamily housing units, that has one or more of such units on it," and the existing ATCM prohibits idling of a main engine beyond five minutes or operation of a diesel-fueled auxiliary power unit longer than five minutes when located within 100 feet of a restricted area. The proposed amendments will ensure that emission benefits from the existing ATCM are realized by increasing the regulation's compliance rate and would provide those members of the public who attend schools, or work or reside at hotels and motels, additional protection from exposure to diesel particulate matter and other toxic air contaminants, and the associated potential cancer risks and other adverse health effects associated with diesel emissions.

Hybrid-Electric Vehicle Certification Procedures

On October 24, 2002, ARB approved the adoption of "California Interim Certification Procedures for 2004 and Subsequent Model Hybrid-Electric Vehicles, in the Urban Bus and Heavy-Duty Vehicle Classes." These interim certification procedures allow manufacturers to voluntarily certify heavy-duty hybrid-electric vehicles using a vehicle-based (as opposed to engine-based) certification. ARB staff is proposing to update the interim certification procedures to clarify and enhance certification requirements due to expanding commercialization and advancement of hybrid technology into more sectors of the heavy-duty market and the need to better quantify emission reductions from existing and future heavy-duty hybrid vehicles. Specifically, the amendments would expand the existing applicability of the certification procedures to allow more vocational vehicles to certify, and would clarify and enhance certification requirements. The amended test procedures would remain as voluntary, interim procedures.

Objectives and Benefits:

ARB has established a comprehensive regulatory program to reduce emissions from on-road medium- and heavy-duty vehicles in California, as part of ARB's program to improve air quality and reduce the emissions that contribute to climate change. This hearing notice encompasses staff's proposals for five proposed regulatory actions that all relate to on-road medium- and heavy-duty vehicles and engines. The objectives and expected benefits of each proposal include:

Phase 1 GHG Regulations: This proposed regulations would establish new GHG emissions standards for 2014 and subsequent model year medium- and heavy-duty engines and vehicles sold in California that are identical to the national GHG emission standards established by U.S. EPA in 2011. This proposed regulations would provide California with the ability to certify new medium-and heavy-duty engines and vehicles to the new standards, and to enforce those standards in California. The proposed Phase 1 GHG regulations would not require additional compliance actions beyond those currently required by the U.S. Phase 1 GHG regulations, hence resulting in no new direct emission benefits.

In 2004, the U.S. Supreme Court clarified that a standard, as it applies to emissions from motor vehicles and motor vehicle engines under Title II of the federal Clean Air Act, relates to the emission characteristics of vehicles or engines and requires motor vehicles or motor vehicle engines to emit no more than a certain amount of a given pollutant, be equipped with a certain type of pollution-control device, or have some other design feature related to the control of emissions. *Engine Manufacturers Association v. South Coast Air Quality Management District* (2004) 541 U.S. 246, 253, 124 S.Ct. 1756, 1762 (*EMA)*. Staff is proposing that the Phase 1 GHG regulation add a definition of "emission standard" to be consistent with the definition set forth in *EMA* for purposes of clarity, consistency, and conformity and to clarify that the definition of emission standard as used in the Phase 1 GHG regulation conforms to the federal definition. For purposes of clarification and consistency, ARB staff is also adding the terms "exhaust emission standard" and "evaporative emission standard" in the definitions section to provide more specificity, where needed, to preexisting textual references to emission standards.

Staff is also proposing to add these definitions to title 13, CCR section 1900(b) to clarify that the requirements applicable to on-road motor vehicles and motor vehicle engines set forth in Article 2, Chapter 1, Division 3 of title 13, California Code of Regulations and the associated remedies provided in the Health and Safety Code for noncompliance constitute "emission standards," "evaporative emission standards," or "exhaust emission standards," and to title 13, CCR section 1956.8 to clarify that the proposed amendments to establish optional NOx emission standards for heavy-duty engines (described below) also constitute "emission standards," "evaporative emission standards," or "exhaust emission standards."

Amendments to Tractor-Trailer GHG Regulation: The proposed amendments to ARB's Tractor-Trailer GHG regulation would sunset the requirements applicable to new 2014 and subsequent model year sleeper cab tractors, and would clarify that 2013 MY tractors that are optionally certified to the U.S. Phase 1 GHG regulations are exempted from the Tractor-Trailer GHG regulation. The proposed Phase 1 GHG regulations described above would establish the GHG emission standards for new 2014 and subsequent model year heavy-duty tractors that are currently subject to existing Tractor-Trailer GHG regulation. Overall, the U.S. Phase 1 GHG program in California, including the proposed amendments to sunset the elements of the Tractor-Trailer GHG regulation applicable to 2014 and newer model year heavy-duty tractors, is expected to reduce 3.1 million metric tons carbon dioxide equivalent (MMTCO2e) in 2020 and 7.0 MMTCO2e in

2035, which corresponds to a 7.2 percent reduction in 2020 and 12.5 percent reduction in 2035.

Staff is also proposing to add a definition of "emission standard" to be consistent with the definition set forth in *Engine Manufacturers Association v. South Coast Air Quality Management District* (2004) 541 U.S. 246, 253, 124 S.Ct. 1756, 1762 (*EMA)* for purposes of clarity, consistency, and conformity. Under the federal definition, requirements to equip tractors and trailers with specified aerodynamic equipment and low rolling resistance tires relate to a requirement that a vehicle be equipped with a certain type of pollution-control device or a design feature related to the control of emissions, and are emission standards. The proposed amendments are intended to make clear that the definition of emission standard as used in the Tractor Trailer GHG regulation conforms to the federal definition.

Optional Low NOx Emission Standards: The proposed regulation would establish new, optional NOx standards for heavy-duty vehicle engines that are more stringent than the currently applicable NOx standard of 0.2 g/bhp-hr to encourage the development of new, cleaner engines. Since the proposed regulation would be entirely optional, the associated emission benefits would be dependent upon the level of participation by engine manufacturers. Estimated NOx emission benefits could be as high as 1.2 tons per day (tpd) NOx statewide in 2020, and 6.9 tpd NOx in 2035 if there is a high level of manufacturer participation.

Amendments to Diesel Idling ATCM: Currently, the compliance rate with the idling ATCM is less than desired because only the driver is responsible for an idling ATCM violation and sometimes it is impractical to issue the citation directly to the driver. The proposed amendments to ARB's existing idling ATCM are intended to improve compliance with the existing idling ATCM by (1) expanding the current responsibility for compliance to vehicle owners and motor carriers, and (2) clarifying that restricted areas, which the existing idling ATCM defines as "any real property zoned for individual or multifamily housing units that has one or more of such units on it" also include schools, hotels and motels. The existing idling ATCM prohibits idling of a main engine longer than five minutes or the operation of a diesel-fueled auxiliary power unit longer than five minutes when located within 100 feet of a restricted area. The proposed amendments would provide those members of the public who attend schools, or work or reside at hotels and motels, additional protection from exposure to diesel particulate matter and other toxic air contaminants. The amendments do not modify the requirements of the existing ATCM by establishing additional or more stringent emission standards applicable to truck or off-road engines, but would serve to ensure that the emission benefits of the existing ATCM are realized.

Staff is also proposing to add a definition of "emission standard" to be consistent with the definition set forth in *Engine Manufacturers Association v. South Coast Air Quality Management District* (2004) 541 U.S. 246, 253, 124 S.Ct. 1756, 1762 (*EMA)* for purposes of clarity, consistency, and conformity. Under the federal definition, requirements for heavy-duty commercial motor vehicles to incorporate engine designs

to limit extended idling of the main engine constitute requirements to emit no more than a certain amount of a given pollutant, to be equipped with a certain type of pollution-control device, or have a design feature related to the control of emissions, and are emission standards. The proposed amendments are intended to make clear that the definition of emission standard as used in the ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling conforms to the federal definition.

Amendments to ARB's Heavy-Duty Hybrid Electric Vehicle Certification Procedures: The proposed amendments are intended make the certification procedures more broadly applicable to additional vocational vehicles and to heavy-duty plug-in hybrid electric vehicles that have entered the market since the regulation was originally adopted. The proposed amendments would provide a more comprehensive certification process but would not generate additional emissions reductions in the short-term. In the long-term, however, the expanded procedures could enable more hybrid-electric vehicles to be certified and produced, which could provide emission benefits.

DETERMINATION OF INCONSISTENCY AND INCOMPATIBILITY WITH EXISTING STATE REGULATIONS

During the process of developing the proposed regulatory action, ARB conducted a search of similar regulations and has concluded that the proposed regulatory actions are neither inconsistent nor incompatible with existing state regulations.

COMPARABLE FEDERAL REGULATIONS

ARB staff is proposing a new regulation that would establish GHG standards for new 2014 and subsequent model year California medium- and heavy-duty engines and vehicles that are identical to U.S. EPA's Phase 1 GHG regulation (Final Rule Greenhouse Gas Emission Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles, 76 Federal Register 57106-57513, (September 15, 2011), as subsequently amended on August 16, 2013 (78 Federal Register 36, 370-36,406 (June 17, 2013). U.S. EPA's Phase 1 GHG standards establish requirements for three distinct regulatory vehicle classes: combination tractors, vocational vehicles, and heavy-duty pick-up trucks and vans, and generally begin with model year 2014 engines and vehicles and increase in stringency through 2018 model year engines and vehicles.[1]

California's existing Tractor-Trailer GHG regulation currently applies to a subset of the 2014 and newer combination tractors regulated by the U.S. Phase 1 GHG standards. The proposed amendments to the Tractor-Trailer GHG regulation would delete the requirements for 2014 and subsequent model year tractors to be SmartWay designated models and to use SmartWay verified low-rolling resistance tires, and would clarify that 2013 MY tractors that are optionally certified to the U.S. Phase 1 GHG regulations are

[1] The U.S. EPA Phase 1 GHG regulations contain a provision allowing manufacturers the option to certify 2013 model year engines and vehicles in order to obtain emissions credits. 40 CFR 1036.150(e) and 40 CFR 1037.150(a), respectively.

exempted from the Tractor-Trailer GHG regulation. As described above, the proposed Phase 1 GHG regulations would establish GHG standards for new 2014 and subsequent model year California heavy-duty tractors that are essentially harmonized with the U.S. Phase 1 GHG regulations. However, the proposed amendments to the Tractor-Trailer GHG regulation would not affect elements of the Tractor-Trailer GHG regulation that apply to categories of tractors that are not subject to the U.S. EPA's Phase I GHG regulation (2011 through 2013 model year new sleeper cab and new day cab tractors, and 2010 and older model year sleeper cab and day cab tractors) or to new and used 53-foot and longer box-type trailers hauled on California highways.

California has an existing regulation (title 13 CCR section 1956.8(a)(6)) that requires new California-certified 2008 and subsequent model-year on-road diesel engines in heavy-duty diesel vehicles to be equipped with a system that automatically shuts down the engine after five minutes of continuous idling. Manufacturers may also elect to optionally certify such engines to a NOx idling emission standard of 30 grams per hour.

The U.S. Phase 1 GHG regulation contains provisions that provide credits to vehicle manufacturers that elect to utilize automatic engine shutdown systems (40 Code of Federal Regulation, Part 1037, Subpart G, section 1037.660), but does not require new vehicles to incorporate idle shutdown systems. Moreover, the federal idle shutdown system requirements are less stringent and differ from California's requirements. Specifically, the federal regulation allows an engine manufacturer to remove the automatic engine shutdown system once the vehicle has accrued 1.29 million miles whereas California's idle shutdown requirements for new engines do not allow the removal of the automatic engine shutdown system for the life of the vehicle. Therefore, California's new engine idle shutdown requirements are more stringent than the provisions of the U.S. Phase 1 GHG regulations that provide carbon dioxide emission credits to engine manufacturers certifying with automatic engine shutdown systems. The U.S. Phase 1 GHG regulations contain no provision allowing engine manufacturers to optionally certify an engine to a NOx idling emission standard.

California's Heavy-Duty Diesel Idling ATCM prohibits heavy-duty diesel-fueled commercial motor vehicles from idling longer than five minutes, and from operating diesel-fueled auxiliary power systems (APSs) longer than five minutes when located within 100 feet of a restricted area, defined as real property zoned for individual or multifamily housing units that has one or more of such units on it. There are no comparable federal provisions prohibiting the extended idling of diesel-fueled commercial motor vehicles or the extended operation of diesel-fueled APSs within designated areas.

U.S. EPA does not have any optional NOx emission standards for heavy-duty engines comparable to the proposed amendments establishing optional NOx engine emission standards. Similarly, there are no comparable federal provisions comparable to the proposed amendments to California's Interim Hybrid Test Procedures.

In 2004, the United States Supreme Court clarified the definition of standard as it applies to emissions from motor vehicles and motor vehicle engines under Title II of the federal Clean Air Act relates to the emission characteristics of a vehicle or engine and require motor vehicles or motor vehicle engines to emit no more than a certain amount of a given pollutant, be equipped with a certain type of pollution-control device, or have some other design feature related to the control of emissions. (*EMA* 541 U.S. at 253.) The proposed amendments are intended to make clear that the definition of emission standard as used in the Phase 1 GHG regulations, in the Tractor Trailer GHG regulation, in the proposed amendments to establish optional NOx emission standards for heavy-duty engines, and in the requirements applicable to on-road motor vehicles and motor vehicle engines set forth in Article 2, Chapter 1, Division 3 of title 13, California Code of Regulations conform to the federal definition as interpreted.

STATE IMPLEMENTATION PLAN REVISION

If adopted by ARB, ARB plans to submit the proposed regulatory actions to the 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 actions would be submitted as a SIP revision because they adopt or amend 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.

AVAILABILITY OF DOCUMENTS AND AGENCY CONTACT PERSONS

ARB staff has prepared a Staff Report: Initial Statement of Reasons (ISOR) for the proposed regulatory actions, which includes a summary of the economic and environmental impacts of the proposal. The report is entitled: *Proposed Greenhouse Gas (GHG) Regulation for Medium-and Heavy-Duty Engines and Vehicles, Optional Reduced Emission Standards for Heavy-Duty Engines, and Amendments to the Tractor-Trailer GHG Regulation, the Diesel-Fueled Commercial Motor Vehicle Idling Rule, and the Heavy-Duty Hybrid-Electric Vehicles Certification Procedures.*

Copies of the ISOR and the full text of the proposed regulatory language, in underline and strikeout format to allow for comparison with the existing regulations, may be accessed on ARB's website listed below, or may be obtained from the Public Information Office, Air Resources Board, 1001 I Street, Visitors and Environmental Services Center, First Floor, Sacramento, California, 95814, (916) 322-2990, on October 23, 2013.

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 ARB's website listed below.

Agency Contact Persons

Inquiries concerning the substance of the proposed regulations may be directed to the designated agency contact persons, (Phase 1 GHG and Optional Low NOx Standards) Ms. Kim Heroy-Rogalski at (916) 327-2200, (Tractor-Trailer GHG and Idling Airborne Toxic Control Measure), Mr. Stephan Lemieux at (626) 450-6162, or (Hybrid Certification Procedures), Mr. John Kato at (916) 322-2891.

The agency representative for nonsubstantive inquiries concerning the proposed administrative action may be directed is Ms. Trini Balcazar, Regulations Coordinator, at (916) 445-9564. 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.

Internet Access

This notice, the ISOR and all subsequent regulatory documents, including the FSOR, when completed, are available on ARB's website for this rulemaking at http://www.arb.ca.gov/regact/2013/hdghg2013/hdghg2013.htm.

DISCLOSURES REGARDING THE PROPOSED REGULATION

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

Fiscal Impact / Local Mandate

Pursuant to Government Code sections 11346.5(a)(5) and 11346.5(a)(6), the Executive Officer has determined that the proposed regulatory actions relating to the amendments to the Tractor-Trailer GHG Regulation, the proposed adoption of new Optional Low NOx Standards, the amendments to the ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling, and the amendments to the Heavy-Duty Hybrid Electric Vehicle Certification Procedures would not create costs or savings to any State agency or in federal funding to the State, costs or mandate to any local agency or school district, whether or not reimbursable by the State pursuant to Government Code, title 2, division 4, part 7 (commencing with section 17500), or other nondiscretionary cost or savings to State or local agencies.

Pursuant to Government Code section 11346.5(a)(5) and 11346.5(a)(6), the Executive Officer has further determined that the proposed regulatory action to adopt the Phase 1 GHG regulations would create costs or savings to any State agency or in federal funding to the State. The proposed regulatory action to adopt the Phase 1 GHG regulations would create costs to a state agency (ARB), but would not impose a mandate to any state agency, and would not create costs or mandates on local agency or school district, whether or not reimbursable by the State pursuant to

Government Code, title 2, division 4, part 7 (commencing with section 17500), or other nondiscretionary cost or savings to State or local agencies.

Significant Statewide Adverse Economic Impact Directly Affecting Business, Including Ability to Compete

The Executive Officer has made an initial determination that the proposed regulatory actions would not have a significant statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states, or on representative private persons.

The proposed regulations and regulatory amendments would impose minimal costs on affected parties and have minimal or no economic impacts on businesses due to the voluntary nature of the proposed adoption of the Optional Low NOx Standards and the proposed amendments to the Heavy-Duty Hybrid Electric Vehicle Certification Procedures, and due to the fact that the proposed amendments to the Tractor-Trailer GHG Regulation and to the ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling are only directed towards clarifying existing requirements or enhancing the enforceability of existing requirements, rather than imposing new requirements. The proposed adoption of the Phase 1 GHG regulations would impose minimal costs on affected parties because such parties would be subject to nearly identical requirements under the federal Phase 1 GHG regulations.

While the proposed Optional Low NOx standards are completely optional and impose no additional costs on manufacturers that elect not to certify engines to such optional standards, these proposed standards are the only element of the proposal that could have significant new costs ($36 to 279 million over 20 years, depending on the level of participation by engine manufacturers and the NOx emission characteristics of those manufacturers' existing engine families.).

Cost Impacts on Representative Private Persons or Businesses

In developing this regulatory proposal, ARB staff evaluated the potential economic impacts on representative private persons or businesses. The conclusions are summarized below and discussed further in the ISOR:

1. Phase 1 GHG Regulations

Complying with the federal Phase 1 GHG standards will impose costs on engine and vehicle manufacturers; however, California's proposed harmonization with the federal Phase 1 standards will only impose minimal additional costs on manufacturers; primarily, costs to provide ARB a copy of materials that manufacturers have submitted to U.S. EPA and some California-specific reporting data to California. Staff expects this to cost no more than $1,000 per manufacturer, with no impact on new vehicle prices.

2. Tractor-Trailer GHG Regulation
Representative private persons or businesses would not incur any additional costs as result of these amendments.

3. Optional Low NOx Standards
An engine manufacturer that elects to certify engines to the optional NOx standards will incur average certification testing costs of about $20,000 for the model year of initial opt-in, which could be the 2015 model year or a later model year. An engine manufacturer will also incur costs to modify an engine so that its NOx emissions are sufficiently low. The degree of modifications and associated costs are dependent on the emissions characteristics of the base engine, and are estimated to range $0-$6,000 per engine.

Staff estimated cumulative costs for the optional NOx standards using two scenarios. The low adoption rate scenario assumed that 12.7 percent of the applicable fleet will opt to comply with the three-tier standards by full implementation in 2035, and the high adoption rate scenario assumed an adoption rate of 25.7 percent of the applicable fleet in 2035. For each scenario, staff estimated costs using two options (engines would be powered by different percentages of conventional and alternate fuels). Based on the assumed annual participation rates discussed in the Staff Report, staff has estimated that manufacturers would incur hardware costs ranging from $0 to 6,000 per engine to modify engines to meet the low optional NOx standard, plus certification costs of approximately $20,000 per engine family, with the anticipated cumulative cost for the fleet over the 20 year life of the regulation estimated at $36 to $279 million. A detailed description of the cost calculation is provided in the Staff Report.

4. Heavy-Duty Diesel Idling ATCM
The proposed amendments to the Heavy-Duty Diesel Idling ATCM will impose minimal or no additional compliance costs because they are consistent with the existing Heavy-Duty Diesel Idling ATCM's requirement not to idle the main engine of the vehicle or to operate non-compliant alternative idle reduction devices longer than five minutes, and because vehicle owners and motor carriers should already be providing drivers information regarding the idling ATCM.

5. Hybrid-Electric Vehicle Certification Procedures
The proposed amendments to the Heavy-Duty Hybrid-Electric Vehicle Certification Procedures will impose minimal or no additional compliance costs because they are voluntary and consistent with the existing interim certification procedures.

Results of The Economic Impact Analysis/Assessment Prepared Pursuant to Government Code Sec. 11346.3(B)

Effect on Jobs/Businesses:
The Executive Officer has determined that the proposed regulatory actions would not affect the creation or elimination of jobs within the State of California, the creation of new businesses or elimination of existing businesses within the State of California, or

the expansion of businesses currently doing business within the State of California. A detailed assessment of the economic impacts of the proposed regulatory actions can be found in the ISOR, Chapter V.

Benefits of the Proposed Regulation:
The objective of the proposed amendments and new regulations is to harmonize California requirements with federal requirements, and ease enforcement and implementation of existing regulations aimed at improving air quality and reducing the emissions that contribute to climate change.

A summary of the benefits of the proposed amendments and new regulations is provided, please refer to "Objectives and Benefits" above, under the Informative Digest of Proposed Action and Policy Statement Overview Pursuant to Government Code 11346.5(a)(3) discussion earlier in this notice.

Effect on Small Business

The Executive Officer has also determined, pursuant to CCR, title 1, section 4, that the proposed regulatory actions would not affect small businesses because the proposed regulations and regulatory amendments will impose minimal costs on affected parties and have minimal or no economic impacts on small businesses due to the voluntary nature of several of the proposed regulations and regulatory amendments and the fact that the majority of the amendments are aimed at expanding or improving enforcement of existing requirements rather than imposing new requirements. Each regulatory action is discussed further below:

1. Phase 1 GHG Regulation
The Phase 1 GHG requirements would not affect small businesses as small business engine and truck manufacturers are exempted from the proposed Phase 1 GHG Regulations.

2. Tractor-Trailer GHG Regulation
There are no estimated private sector costs for businesses, large or small, for the proposed amendments to the Tractor-Trailer GHG Regulation.

3. Optional Low NOx Standards
There are no estimated costs for small businesses because the businesses affected, engine manufacturers, are large businesses.

4. Heavy-Duty Diesel Idling ATCM
The Heavy-Duty Diesel Idling ATCM affects primarily small businesses; however, the amendments impose minimal or no additional compliance costs.

5. Hybrid-Electric Vehicle Certification Procedures
The proposed amendments to the Heavy-Duty Hybrid-Electric Vehicles Certification Procedures will impose minimal or no additional compliance costs because they are voluntary and consistent with the existing interim certification procedures.

Housing Costs

The Executive Officer has also made the initial determination that the proposed regulatory actions will not have a significant effect on housing costs.

Business Reports

In accordance with Government Code sections 11346.3(c) and 11346.5(a)(11), the Executive Officer has found that the reporting requirements of the proposed Phase 1 GHG regulations, the amendments to the Tractor-Trailer GHG regulation, the proposed new, Optional Low NOx emission standard, the amendments to the Heavy-Duty Diesel Idling ATCM and the amendments to the Heavy-Duty Hybrid Electric Vehicle Certification Procedures that apply to businesses are necessary for the health, safety, and welfare of the people of the State of California.

Alternatives

Before taking final action on the proposed regulatory actions, 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, or would be as effective and less burdensome to affected private persons than the proposed action, or would be more cost-effective to affected private persons and equally effective in implementing the statutory policy or other provisions of law. Alternatives to the proposed rulemaking are described in ISOR.

Environmental Analysis

In accordance with ARB's certified regulatory program, CCR, title 17, sections 60006 through 60007, and the California Environmental Quality Act, Public Resources Code section 21080.5, ARB staff has conducted an analysis of the potential for significant adverse and beneficial environmental impacts associated with the proposed regulatory actions. The environmental analysis of the proposed regulatory actions can be found in Chapter VI of the ISOR.

WRITTEN COMMENT PERIOD AND SUBMITTAL OF COMMENTS

Interested members of the public may present comments orally or in writing at the meeting and may provide comments by postal mail or by electronic submittal before the meeting. The public comment period for these regulatory actions will begin on October 28, 2013. To be considered by the Board, written comments not physically

submitted at the meeting, must be submitted on or after October 28, 2013 and received no later than 12:00 noon on December 12, 2013 and must be addressed to the following:

Postal mail: Clerk of the Board, Air Resources Board
1001 I Street, Sacramento, California 95814

Electronic submittal: http://www.arb.ca.gov/lispub/comm/bclist.php

You can sign up online in advance to speak at the Board meeting when you submit an electronic board item comment. For more information go to: http://www.arb.ca.gov/board/online-signup.htm.

Please note that under the California Public Records Act (Gov. Code, § 6250 et seq.), your written and oral comments, attachments, and associated contact information (e.g., your address, phone, email, etc.) become part of the public record and can be released to the public upon request.

ARB requests that written and email statements on this item be filed at least 10 days prior to the hearing so that ARB staff and Board members have additional time to consider each comment. The Board 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.

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

1. Phase 1 GHG Regulations

This regulatory action is proposed under that authority granted in Health and Safety Code, sections 38501, 38505, 38510, 38560, 39010, 39500, 39600, 39601, 43013, 43018, 43100, 43101, 43102, 43104, 43105, 43106, 43107 and 43806 and Section 28114, Vehicle Code.

This action is proposed to implement, interpret, and make specific sections 38501, 38505, 38510, 38560, 38580, 39002, 39003, 39010, 39500, 39600, 39601, 39667, 43000, 43000.5, 43009.5, 43013, 43017, 43018, 43100, 43101, 43101.5, 43102, 43104, 43105, 43106, 43107, 43202, 43204, 43205, 43205.5, 43206, 43210, 43211, 43212, 43213, and 43806, 44004, 44010, 44011, 44012, 44015, and 44017 Health and Safety Code; and Section 28114, Vehicle Code.

2. Tractor-Trailer GHG Regulation

This regulatory action is proposed under that authority granted in Health and Safety Code, sections 38510, 38560, 38560.5, 39010, 39600, and 39601. This action is proposed to implement, interpret or make specific sections 38510, 38560, 38560.5, 39010, 39600, and 39601, Health and Safety Code.

3. Optional Low NOx Standards

This regulatory action is proposed under that authority granted in Health and Safety Code, sections 39010, 39500, 39600, 39601, 43013, 43018, 43100, 43101, 43102, 43104, 43105, 43106, 43107 and 43806, Health and Safety Code; and Section 28114, Vehicle Code. This action is proposed to implement, interpret, and make specific sections 39002, 39003, 39010, 39017, 39033, 39500, 39650, 39657, 39667, 39701, 40000, 43000, 43009, 43009.5, 43013, 43017, 43018, 43100, 43101, 43101.5, 43102, 43104, 43105, 43106, 43107, 43202, 43204, 43205, 43205.5, 43206, 43210, 43211, 43212, 43213 and 43806, Health and Safety Code; and Section 28114, Vehicle Code.

4. Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling

This regulatory action is proposed under that authority granted in Health and Safety Code, sections 39600, 39601, 39614(b)(6)(A), 39658, 39667, 43000.5(d), 43013(b), 43013(h), 43018(b), and 43018(c), Health and Safety Code; and *Western Oil & Gas Assn. v. Orange County Air Pollution Control Dist.* (1975) 14 Cal.3d.411. This action is proposed to implement, interpret, and make specific sections 39002, 39003, 39027, 39500, 39600, 39650, 39655, 39656, 39657, 39658, 39659, 39662, 39665, 39674, 39675, 42400, 42400.1, 42400.2, 42400.3, 42402, 42402.1, 42402.2, 42402.3, 42403.5, 42410, 43013, 43018, and 43704_Health and Safety Code; Sections 305, 336, 350, 440, 445, 545, 546, 642, 680, 21400, 22452, 22515, 27153, 40001, 40001(b)(5), California Vehicle Code; and Sections 1201,1900, 1962, 2480, Title13, California Code of Regulations.

5. Hybrid-Electric Vehicle Certification Procedures

This regulatory action is proposed under that authority granted in Health and Safety Code, sections 39500, 39600, 39601, 43013, 43018, 43100, 43101, 43102, 43104, 43105, 43106, 43107 and 43806, Health and Safety Code; and Section 28114, Vehicle Code. This action is proposed to implement, interpret, and make specific sections 39002, 39003, 39500, 39667, 43000, 43009.5, 43013, 43017, 43018, 43100, 43101, 43101.5, 43102, 43104, 43105, 43106, 43107, 43202, 43204, 43205, 43205.5, 43206, 43210, 43211, 43212, 43213 and 43806, Health and Safety Code; and Section 28114, Vehicle Code.

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 adopt the regulatory language as originally proposed, or with non-substantial or grammatical modifications. The Board may also adopt 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; in such event, the full regulatory text, with the modifications clearly indicated, will be made available to the public, for written comment, at least 15 days before it is adopted.

The public may request a copy of the modified regulatory text from ARB's Public Information Office, Air Resources Board, 1001 I Street, Visitors and Environmental Services Center, First Floor, Sacramento, California, 95814, (916) 322-2990.

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; or
- A disability-related reasonable accommodation.

To request these special accommodations or language needs, please contact the Clerk of the Board at (916) 322-5594 or by facsimile at (916) 322-3928 as soon as possible, but no later than 10 business days before the scheduled Board hearing. TTY/TDD/Speech to Speech users may dial 711 for the California Relay Service.

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

- Un intérprete que esté disponible en la audiencia;
- Documentos disponibles en un formato alterno u otro idioma; o
- 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 (916) 322-5594 o envié un fax a (916) 322-3928 lo más pronto posible, pero no menos de 10 días de trabajo antes del día programado para la audiencia del Consejo. TTY/TDD/Personas que necesiten este servicio pueden marcar el 711 para el Servicio de Retransmisión de Mensajes de California.

CALIFORNIA AIR RESOURCES BOARD

Richard W. Corey
Executive Officer

Date: October 15, 2013

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 our website at www.arb.ca.gov.