

State of California  
AIR RESOURCES BOARD

Resolution 04-28

September 23, 2004

Agenda Item No.: 04-8-2

WHEREAS, the State of California has become increasingly concerned about humankind's contribution to climate change and the potential and likely impacts of that change on the Earth in general and on California in particular;

WHEREAS, the State of California has a long history of actions undertaken in response to the threat posed by climate change; beginning with 1988 legislation that directed the California Energy Commission in consultation with the Board and other agencies to study the implications of global warming on California's environment, economy, and water supply, and continuing through Governor Schwarzenegger's April 2004 Executive Order outlining his vision for the California Hydrogen Highway Network, California state government has consistently recognized the necessity for state action on climate change to protect California's interests;

WHEREAS, California's passenger vehicles and light-duty trucks are the single largest contributor of greenhouse gas emissions in the state, producing approximately 40 percent of all such emissions;

WHEREAS, California's concern over climate change is further reflected in the enactment of Assembly Bill (AB) 1493 (Stats. 2002, Ch. 200; Pavley), and has been supported by growing scientific consensus over the causes, current indications of, and potential and likely impacts of, climate change;

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

WHEREAS, section 39516 of the Health and Safety Code establishes a conclusive presumption that all powers that the Board may lawfully delegate to the Executive Officer have been so delegated absent a Board vote to the contrary;

WHEREAS, in section 43000 of the Health and Safety Code, the Legislature has declared that the emission of air pollutants from motor vehicles is the primary cause of air pollution in many parts of the state, and sections 39002 and 39003 of the Health and Safety Code charge the Board with the responsibility of air pollution control from motor vehicles;

WHEREAS, sections 43013, 43101, and 43104 of the Health and Safety Code authorize the Board to adopt emission standards and test procedures to control air pollution caused by motor vehicles;

WHEREAS, section 43018(a) of the Health and Safety Code directs the Board to endeavor to achieve the maximum degree of emission reduction possible from vehicular and other mobile sources in order to accomplish the attainment of state ambient air quality standards at the earliest practicable date;

WHEREAS, Health and Safety Code section 57004 requires the Board to submit scientific portions of proposed rules to an external peer review entity for evaluation;

WHEREAS, the California State Implementation Plan for ozone, adopted by the Board in November 1994, establishes the state strategy for attaining the ambient air quality standard for ozone in all areas of California by 2010 as required by federal law; this plan includes, as part of the mobile source element developed by the ARB, the California Low-Emission Vehicle (LEV) program, which was approved by the Board in 1990 to provide significant reductions of ozone precursor pollutant emissions from passenger cars, light-duty trucks and medium-duty passenger vehicles;

WHEREAS, the California Low-Emission Vehicle II (LEVII) program, approved by the Board in 1998, applies LEV II standards to 2004 and later model year passenger vehicles, light-duty trucks and medium-duty passenger vehicles;

WHEREAS, since climate change pollutants exacerbate ozone formation, the LEV II program is the appropriate venue for the control of climate change pollutants from passenger cars, light-duty trucks and medium-duty passenger vehicles;

WHEREAS, because the LEV II program requires, in part, that the vehicles to which it applies meet a fleet average emission requirement for exhaust emissions of one category of air pollutants or contaminants -- non-methane organic gas emissions -- greenhouse gas emissions should also be controlled using a fleet average approach similar to that used in the LEV II program;

WHEREAS, because the LEV II regulations incorporate emission test procedures to measure vehicle emissions and manufacturer certification requirements for passenger cars, light-duty trucks and medium-duty passenger vehicles, these procedures and requirements should apply to greenhouse gas emissions;

WHEREAS, paragraph 43018.5(a) of the Health and Safety Code requires the Board, no later than January 1, 2005, to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of greenhouse gas emissions – another type of pollutant or contaminant – from motor vehicles;

WHEREAS, paragraph 43018.5(b) of the Health and Safety Code provides that the regulations adopted pursuant to subdivision (a) may not take effect prior to January 1, 2006, in order to give the Legislature time to review the regulations and determine whether further legislation should be enacted prior to the effective date of the regulations, and shall apply only to a motor vehicle manufactured in the 2009 model year, or any model year thereafter;

WHEREAS, paragraph 43018.5(c)(1) of the Health and Safety Code states that in developing the regulations described in subdivision (a), the Board shall consider the technological feasibility of the regulations;

WHEREAS, paragraph 43018.5(c)(2) of the Health and Safety Code requires the Board to apply considerations nearly identical to those under state rulemaking law, plus consideration of the ability of the State to maintain and attract businesses in communities with the most significant exposure to air contaminants including communities with minority populations or low-income populations, or both, and the impact on automobile workers and affiliated businesses in the state;

WHEREAS, paragraph 43018.5(c)(3) of the Health and Safety Code requires the Board to provide flexibility, to the maximum extent feasible consistent with section 43018.5, in the means by which a person subject to the regulations may comply with the regulations, with some limitations;

WHEREAS, paragraph 43018.5(c)(4) of the Health and Safety Code requires the Board to conduct public workshops in the state, including, but not limited to, public workshops in three of the communities in the state with the most significant exposure to air contaminants or localized air contaminants, or both, including, but not limited to, communities with minority populations or low-income populations, or both;

WHEREAS, paragraph 43018.5(c)(5) of the Health and Safety Code requires the Board to grant emission reduction credits for any reductions in greenhouse gas emissions from motor vehicles that were achieved prior to the operative date of the regulations adopted pursuant to subdivision (a), to the extent permitted by state and federal law governing emissions reductions credits, and that for this purpose the Board shall utilize the 2000 model year as the baseline for calculating emission reduction credits;

WHEREAS, paragraph 43018.5(c)(6) of the Health and Safety Code requires the Board to coordinate with the State Energy Resources Conservation and Development Commission, the California Climate Action Registry, and the interagency task force,

convened pursuant to subdivision (e) of section 25730 of the Public Resources Code, in implementing this section;

WHEREAS, paragraph 43018.5 (d)(1) of the Health and Safety Code states that the regulations adopted by the Board pursuant to subdivision (a) shall not require the imposition of additional fees and taxes on any motor vehicle, fuel, or vehicle miles traveled, pursuant to this section or any other provision of law;

WHEREAS, paragraph 43018.5 (d)(2) of the Health and Safety Code states that the regulations adopted by the Board pursuant to subdivision (a) shall not require a ban on the sale of any vehicle category in the state, specifically including, but not limited to, sport utility vehicles and light-duty trucks;

WHEREAS, paragraph 43018.5 (d)(3) of the Health and Safety Code states that the regulations adopted by the Board pursuant to subdivision (a) shall not require a reduction in vehicle weight;

WHEREAS, paragraph 43018.5 (d)(4) of the Health and Safety Code states that the regulations adopted by the Board pursuant to subdivision (a) shall not require a limitation on, or reduction of, the speed limit on any street or highway in the state;

WHEREAS, paragraph 43018.5 (d)(5) of the Health and Safety Code states that the regulations adopted by the Board pursuant to subdivision (a) shall not require a limitation on, or reduction of, vehicle miles traveled;

WHEREAS, paragraph 43018.5 (e) of the Health and Safety Code states that the regulations adopted by the Board pursuant to subdivision (a) shall provide an exemption for those vehicles subject to the optional low-emission vehicle standard for oxides of nitrogen (NOx) for exhaust emission standards described in paragraph (9) of subdivision (a) of Section 1961 of Title 13 of the California Code of Regulations;

WHEREAS, paragraph 43018.5(g) of the Health and Safety Code states that by January 1, 2005, the Board shall report to the Legislature and the Governor on the content of the regulations developed and adopted pursuant to this section;

WHEREAS, paragraph 43018.5(h) of the Health and Safety Code states that if the federal government adopts a standard regulating a greenhouse gas (GHG) from new motor vehicles that the Board determines is in a substantially similar timeframe, and of equivalent or greater effectiveness as the regulations that would be adopted pursuant to this section, the Board may elect not to adopt a standard on any greenhouse gas included in the federal standard;

WHEREAS, paragraph 43018.1(g) of the Health and Safety Code defines greenhouse gases as carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons, and sulfur hexafluoride; the first four of these identified greenhouse gases are clearly associated with motor vehicle use in California; black carbon and criteria pollutant emissions from motor vehicles are also known to have climate change impacts;

WHEREAS, the staff provided information on the implementation of AB 1493 at the September 26, 2002 Board Meeting and updated the Board regarding the development of climate change regulations at the November 20, 2003, Board Meeting, and the Board heard additional information from Dr. Daniel Cayan from the University of California, San Diego, Dr. Kristie Ebi from Exponent Consulting in Virginia and Dr. Benjamin D. Santer from Lawrence Livermore Laboratory at its July 22, 2004, hearing and on September 23, 2004 (immediately preceding this Board item) regarding potential climate change impacts on California;

WHEREAS, the staff held public workshops on December 3, 2002, regarding the emissions inventory, on September 18, 2003, regarding standards and economics, on October 14, 2003 regarding alternative compliance strategies, on April 20, 2004, regarding the Technology Assessment, and on July 7, 2004, regarding the draft staff proposal;

WHEREAS, the staff hosted an International Vehicle Technology Forum on March 11-13, 2003;

WHEREAS, the Board has made the achievement of environmental justice an integral part of its activities and approved Environmental Justice Policies and Actions on December 13, 2001;

WHEREAS, to carry out the Board's environmental justice policies and to comply with the language in AB 1493, staff held four workshops in communities with the worst air quality in the state including low-income and minority communities; these workshops took place on February 18, 2004, in Huntington Park, July 6, 2004, in Oakland, July 8, 2004, in Fresno and July 13, 2004, in Pacoima;

WHEREAS, in conjunction with a public hearing notice dated August 6, 2004, the staff has proposed the adoption of climate change regulations; the initially proposed regulations are set forth in Attachment A hereto (the Proposed Regulation Order) and Attachment B hereto (California and Exhaust Emission Standards and Test Procedures for 2001 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium Duty-Vehicles) and include the following primary elements:

The incorporation of the CO<sub>2</sub>-equivalent emission standards into the current LEV II program along with the other passenger vehicle, light-duty truck and

medium-duty passenger vehicle emission standards; creating a CO<sub>2</sub>-equivalent fleet average emission standard for the passenger car/light-duty truck 1 (PC/LDT1) category and another for the light-duty truck 2 (LDT2) category and medium-duty passenger vehicles, just as there are fleet average emission requirements for non-methane organic gas for these vehicle categories in the LEV II program;

The incorporation of the LEV II emission test procedures to measure vehicle greenhouse gas emissions and the manufacturer certification requirements for passenger cars, light-duty trucks and medium-duty passenger vehicles meeting the greenhouse gas emission standards;

The establishment of near-term greenhouse gas emission standards, phased in from 2009 through 2012, and mid-term greenhouse gas emission standards, phased in from 2013 through 2016;

The incorporation of upstream emissions into the emission standards using conventional fuel vehicles as a yardstick against which to compare the relative upstream emissions of alternative-fuel vehicles. Therefore, the emissions standards do not directly reflect upstream emissions. Rather, when certifying gasoline or diesel-fuel vehicles manufacturers would report only the "direct," or "on vehicle" emissions. For alternative-fuel vehicles, exhaust CO<sub>2</sub>-equivalent emission values will be adjusted in order to compensate for the differences in upstream emissions;

The ability for manufacturers to earn emission reduction credits for reductions in greenhouse gas emissions achieved prior to the operative date of the regulations. These credits are available for model year 2000 through 2008 vehicles, using the fully phased-in near-term standards (the model year 2012 standards) as the baseline to measure reductions against;

The establishment of methods of alternative compliance to provide manufacturers with flexibility in meeting the greenhouse gas standards that do not undercut the primary purpose of the regulation, which is to achieve GHG reductions from motor vehicles;

WHEREAS, the Initial Statement of Reasons (Staff Report) as supplemented by its addendum, found that:

The use of alternative-fuel vehicles can significantly reduce greenhouse gas emissions. Several different alternative-fuel vehicle technologies were analyzed and found to reduce greenhouse gas emissions by 20 percent to over 60 percent;

Two alternative-fuel vehicle types are projected to be cost effective, liquid petroleum gas vehicles and grid-connected hybrid electric vehicles;

The establishment of greenhouse gas emission standards will result in a reduction in upstream emissions (emissions due to the production and transportation of the fuel used by the vehicle) of greenhouse gas, criteria and toxic pollutants due to reduced fuel usage;

WHEREAS, the staff has recommended modifying the original proposal to conform to Health and Safety Code, paragraph 43018.5(b);

WHEREAS, at the September 23, 2004, hearing on the proposal, staff recommended approval of the climate change regulations;

WHEREAS, at the September 23, 2004, hearing on the proposal, the Board heard testimony and information regarding the direct emissions allowance for "low-leak" air conditioning systems and air conditioning systems that use a refrigerant with a low global warming potential, the upstream adjustment factor for hydrogen vehicles and electric vehicles in relation to the energy sources used to generate hydrogen or electricity, and the amount of credit to be provided for plug-in hybrid electric vehicles in the first year of production;

WHEREAS, the California Environmental Quality Act and Board regulations approved by the Resources Secretary as a certified regulatory program require that no project which may have significant adverse environmental impacts be adopted as originally proposed if feasible alternatives or mitigation measures are available to reduce or eliminate such impacts, and that the decision-maker shall make a written response to significant environmental issues;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with the provisions of chapter 3.5 (commencing with section 11340), part 1, division 3, title 2 of the Government Code;

WHEREAS, the Board has considered the effect of the proposed amendments on the economy of the State, in accordance with the provisions immediately above and with Health and Safety Code section 43018.5(c)(2);

WHEREAS, the Board makes the following findings based on its review of all information in the record for this rulemaking;

WHEREAS, the Board finds that:

Over the past century the temperatures in the northern hemisphere have changed at a rate faster than at any other time over the last millennium, and that

change is because human activities are altering the chemical composition of the atmosphere through the buildup of greenhouse gases and other pollutants. These recent changes in greenhouse gases far exceed the extremes of the ice ages, and the global mean temperature is warming at a rate that cannot be explained by natural causes alone. Human activities are directly altering the chemical composition of the atmosphere through the buildup of greenhouse gases, primarily CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, and HFCs;

There is no scientific uncertainty about the fact that human activities have increased the atmospheric abundance of greenhouse gases. Since the start of the industrial revolution, the rate of increase has accelerated markedly. Since 1860, the concentration of CO<sub>2</sub> has increased by around 30 percent. The rate of CO<sub>2</sub> accumulation has continued to increase, and it currently stands at around 150 parts per million per century – over 200 times faster than the background rate for the past 15,000 years;

The Third Assessment Report of the International Panel on Climate Change (IPCC) and the National Research Council of the National Academies conclude that the global climate is changing at a rate unmatched in the past one thousand years. The IPCC Assessment cites new and stronger evidence that most of the global warming observed over the last fifty years is attributable to human activities and that anthropogenic climate change will persist for many centuries;

Over the last hundred years, average temperatures in California have increased 0.7° F, sea levels have risen by three to eight inches, and spring run-off has decreased 12 percent. These observed and future changes are likely to have significant adverse effects on California's water resources, many ecological systems, as well as on human health and the economy. The signs of a global warming trend continue to become more evident and much of the scientific debate is now focused on expected rates at which future changes will occur;

WHEREAS, the Board further finds that:

The proposed regulation requires the maximum feasible and cost-effective technologies based on an assessment of technologies and fuels that can contribute to a reduction of greenhouse gas emissions in passenger vehicles, light-duty trucks and medium-duty passenger vehicles from the 2009 model-year and beyond, and that these requirements, as further described below, are necessary and appropriate to meet the Board's mandate in Health and Safety Code section 43018.5;

The technologies explored in the technology assessment are currently available on vehicles in various forms, or have been demonstrated by auto companies and/or vehicle component suppliers in at least prototype form;



There is a near-term, or off-the-shelf, technology package in each of the vehicle classes evaluated (small and large car, minivan, small and large truck, including sport-utility vehicles) that results in a reduction of greenhouse gas emissions of at least 15 to 20 percent from baseline 2009 values. In addition, there is generally a near-term technology package in each of the vehicle classes that result in about a 25 percent climate change emission reduction;

Consistent with the fleet average emission requirement for non-methane organic gas emissions in the LEV II program, the proposed regulations require a fleet average emission reduction in greenhouse gas air pollutants indicated in the proposed regulation;

It is appropriate to incorporate the greenhouse gas regulations into the test procedures used for the LEV II program, since the emission testing and certification requirements for the LEV II program are also applicable to measuring greenhouse gases and certifying vehicles to these new standards;

Technically feasible, cost-effective technology packages that manufacturers can use to meet the greenhouse gas emission reductions required by the proposed program have been identified;

Technically feasible, cost-effective alternative-fuel vehicle options that manufacturers can use to meet the greenhouse gas emission reductions required by the proposed program have been identified;

The proposed regulations provide that technically feasible and cost-effective improvements to air conditioning systems including the use of alternative refrigerants with a lower global warming potential are or will be available to manufacturers and can provide an average of about 11 percent of the total emission reductions needed to meet the fully phased-in near-term emission standard in 2012 for passenger cars and light duty trucks;

The proposed standards will be performance based; therefore the regulation will specify the level of reduction to be achieved, but will not specify how it is to be achieved;

The technology assessment shows various pathways by which vehicles produce greenhouse gases. These pathways include the operation of the engine and transmission that produces tailpipe emissions of CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O. The vehicle air conditioner produces direct emissions of HFCs, which are potent greenhouse gases, and also results in indirect emissions of CO<sub>2</sub> due to the effect of the air conditioner on engine operation. All of these pathways can be addressed by vehicle technology improvements;

For each category of vehicles, PC/LDT1 and LDT2, the proposed requirements will add together all on-vehicle greenhouse gas emissions and sources for each manufacturer's fleet (therefore manufacturers will be free to choose which greenhouse gas pollutants and sources to address), will take into account differences in "upstream" greenhouse gas emissions resulting from the sale of alternative-fuel vehicles by that manufacturer, and will determine compliance with the proposed fleet average standard on a CO<sub>2</sub>-equivalent basis;

A proper external peer review committee has reviewed the scientific portions of the proposed regulations, has provided comments to which staff has responded, and has not found that ARB has failed to demonstrate that any scientific portions of the proposed regulations are based upon sound scientific knowledge, methods, and practices;

The climate change regulations are economical to the consumer over the life-cycle of the vehicle; the technology packages that provide the basis for the standard result in operating cost savings that exceed the initial capital cost, resulting in a net savings to the consumer over the lifecycle of the vehicle;

The climate change regulations are not expected to cause any significant adverse impact on the State's economy. It is very likely that savings from reduced vehicle operating costs would end up as expenditures for other goods and services. These expenditures would flow through the economy, causing expansion or creation of new businesses in several sectors; staff's economic analysis shows that as the expenditures occur, jobs and personal income increase, such that the net effect of the regulation is expected to be small but positive;

The ability of California business to compete with businesses in other states will not be impacted because automobile manufacturing is a small portion of the California economy and because other businesses that could be impacted tend to operate in local markets. State and local agencies will not be adversely impacted and are likely to realize a net reduction in their cost of fleet operations due to their purchase and use of vehicles subject to the regulations;

Supplemental analysis of the potential response of consumers (consumer response) to the regulations was performed as part of the staff evaluation. The evaluation of consumer response indicates that the impact of vehicle price increases on fleet turnover (changes to the average age of the motor vehicle fleet) as well as the impacts of lower operating costs on vehicle miles traveled (rebound effect) by consumers have minor impacts (less than one percent of the passenger vehicle emissions inventory) on criteria pollutant emissions;

The proposed regulation should not have a significant impact on low-income purchasers of used vehicles. Communities with low income and minority households are expected to have increased jobs as a result of the regulation. Future employment growth in some sectors may be reduced, but an increase in overall economic activity because of increased purchasing power due to lowered operating costs of vehicles would be expected to create a sufficient number of jobs to more than offset any losses;

The proposed regulation allows manufacturers to average emissions across their vehicle models, aggregate the different climate change pollutants, bank excess credits for later use, and trade credits in order to meet the climate change emission standards thereby providing flexibility, to the maximum extent feasible consistent with Health and Safety Code Section 43018.5, in the means by which a person subject to the regulations may comply with the regulations;

These provisions are intended to provide additional flexibility for manufacturers without diluting the technology-forcing nature of the regulations;

The alternative compliance provisions included in the proposed regulations would achieve equivalent, or greater, reductions in emissions of greenhouse gases as the emission standards contained in the regulations through the use of criteria used by other credit programs;

By granting credit for model year vehicles 2000 through 2008 that meet the requirements of the fully phased-in near-term standards, the proposed regulation grants emission reduction credits for any reductions in greenhouse gas emissions from motor vehicles that were achieved prior to the operative date of the regulations;

It is apparent on the face of the proposed regulation that it will not require the imposition of additional fees and taxes on any motor vehicle, fuel, or vehicle miles traveled, will not require a limitation on, or reduction of, the speed limit on any street or highway in the state, and will not require a limitation on, or reduction of, vehicle miles traveled;

The proposed regulation will not require a ban on the sale of any vehicle category in the state, specifically including, but not limited to, sport utility vehicles and light-duty trucks or a reduction in vehicle weight. These prohibitions are avoided by incorporating the CO<sub>2</sub>-equivalent emission standards into the current LEV II program along with the other light- and medium-duty automotive emission standards; and by creating a CO<sub>2</sub>-equivalent fleet average emission standard for the passenger car/light-duty truck 1 (PC/LDT1) category and another for the light-duty truck 2 (LDT2) category, just as there are fleet average emission requirements for non-methane organic gas for both categories of vehicles in the

LEV II program;

The proposed regulation will not require a reduction in vehicle weight since technical feasibility was demonstrated without reducing vehicle weight. For the small car class, technical feasibility was demonstrated even considering the trend for weight increase for this class of vehicles;

The proposed regulation provides an exemption for those vehicles subject to the optional low-emission vehicle standard for oxides of nitrogen (NOx) for exhaust emission standards described in paragraph (9) of subdivision (a) of Section 1961 of Title 13 of the California Code of Regulations;

The staff of the Board has conducted public workshops in the state, including, but not limited to, public workshops in three of the communities in the state with the most significant exposure to air contaminants or localized air contaminants, or both, including, but not limited to, communities with minority populations or low-income populations, or both;

There are no comparable federal regulations that specifically require the control of greenhouse gas emissions from motor vehicles;

ARB staff coordinated with the California Climate Action Registry pursuant to subdivision (j) of Section 42823 in developing the early credits program per section 43018.5(c)(5).

ARB staff coordinated with the State Energy Resources Conservation and Development Commission, the California Climate Action Registry, and the interagency task force, convened pursuant to subdivision (e) of Section 25730 of the Public Resources Code, in implementing the regulations and will continue to do so.

As modified in Attachment C, the proposed regulation will not take effect before January 1, 2006, in order to provide the time required for Legislative review;

It is appropriate to reexamine the estimated number of lifetime vehicle miles traveled, used by staff in their analyses, to ascertain whether this number should be revised in response to testimony presented at the hearing;

It is appropriate to modify the upstream adjustment factor for hydrogen vehicles and electric vehicles in relation to the energy sources used to generate hydrogen or electricity because through the hydrogen highway effort and its renewable portfolio standard California is moving toward cleaner fuel supplies;

It is appropriate to allow manufacturers to earn credits for grid-connected hybrid

electric vehicles in the first year of production because the grams per mile greenhouse gas emissions created due to a vehicle operating on electricity are significantly lower than those from conventional vehicles.

WHEREAS the Board further finds that:

Taking into account the penetration of 2009 and later vehicles meeting the new standard, the proposed regulation will reduce greenhouse gas emissions by an estimated 87,700 CO<sub>2</sub>-equivalent tons per day statewide in 2020 and by 155,200 CO<sub>2</sub>-equivalent tons per day in 2030. This translates into an 18 percent overall reduction in greenhouse gas emissions from the light duty fleet in 2020 and a 27 percent overall reduction in 2030;

Taking into account the penetration of 2009 and later vehicles meeting the new standard, the proposed regulation will reduce upstream emissions of non-methane organic gases (NMOG) by 4.6 tons per day statewide in 2020 and 7.9 tons per day statewide in 2030, and will reduce upstream emissions of NO<sub>x</sub> by 1.4 tons per day statewide in 2020 and 2.3 tons per day statewide in 2030. The regulation will provide a criteria pollutant benefit even taking into account possible pollutant increases due to consumer response;

NOW, THEREFORE, BE IT RESOLVED that, subject to further environmental analysis, the Board is initiating steps towards final adoption of (1) the amendments to title 13, California Code of Regulations, sections 1900, 1961 and adoption of new section 1961.1 set forth in Attachment A hereto, and (2) the amendments to the "California and Exhaust Emission Standards and Test Procedures for 2001 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium Duty-Vehicles" set forth in Attachment B hereto, both with the modifications set forth in Attachment C.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to compile the adoption and amendments described above, in accordance with the Board's direction, with such additional conforming modifications as may be appropriate, in a form showing all modifications to the original proposal, and make that regulatory text available for a supplemental comment period of at least 15 days on the modifications as required by Government Code section 11346.8.

BE IT FURTHER RESOLVED that the Executive Officer shall consider all relevant comments submitted during the supplemental comment period, and incorporate into the adoption and amendments any additional modifications she determines appropriate, making the modifications available for additional public comment if required by the California Administrative Procedure Act.

BE IT FURTHER RESOLVED that the Executive Officer shall then take appropriate final action with the adoption and amendments in this rulemaking, after preparing a written

response to all comments received that have raised significant environmental issues, and assuring that all feasible mitigation measures or feasible alternatives available that would substantially reduce any significant adverse environmental impacts have been incorporated into the final action.

BE IT FURTHER RESOLVED that within 10 days of taking appropriate final action with the adoption and amendments in this rulemaking, the Executive Officer shall transmit the Final Regulation Order to the appropriate policy and fiscal committees of the Legislature for review.

BE IT FURTHER RESOLVED that the Board hereby determines that the regulations approved herein will not cause California motor vehicle emission standards, in the aggregate, to be less protective of public health and welfare than applicable federal standards.

BE IT FURTHER RESOLVED that the Board hereby finds that separate California emission standards and test procedures are necessary to meet compelling and extraordinary conditions.

BE IT FURTHER RESOLVED that the Board finds that the California emission standards and test procedures as approved herein will not cause the California requirements to be inconsistent with section 202(a) of the Clean Air Act and raise no new issues affecting previous waiver determinations of the Administrator of the Environmental Protection Agency pursuant to section 209(b) of the Clean Air Act.

BE IT FURTHER RESOLVED that the Executive Officer shall, after adoption, forward the amended regulations to the U.S. Environmental Protection Agency with a request either for a waiver of federal preemption pursuant to section 209(b) of the Clean Air Act, or a confirmation that the amendments are within the scope of previous waivers.

I hereby certify that the above is a true and correct copy of Resolution 04-28, as adopted by the Air Resources Board.

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Lori Andreoni, Clerk of the Board

Resolution 04-28

September 23, 2004

**Identification of Attachments to the Resolution**

- Attachment A: Proposed Regulation Order, as set forth in Appendix A-1 of the Staff Report: Initial Statement of Reasons, as published and posted August 6, 2004.
- Attachment B: Proposed amendments to “California Exhaust Emission Standards and Test Procedures for 2001 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium Duty-Vehicles,” as published and posted August 6, 2004.
- Attachment C: Staff’s Proposed Modifications to the Proposed Regulation Order, presented at the Board’s September 23-24, 2004 hearing, and Board’s further additional directed modifications.

## Attachment C

### **PUBLIC HEARING TO CONSIDER ADOPTION OF REGULATIONS TO CONTROL GREENHOUSE GAS EMISSIONS FROM MOTOR VEHICLES**

#### **Staff's Proposed Modifications to the Proposed Regulation Order, presented at the Board's September 23-24, 2004 hearing**

ARB staff is proposing the following change to the Proposed Regulation Order, identified as Attachment A to Resolution 04-28, and if necessary to Attachment B to Resolution 04-28.

*Background.* Health and Safety Code section 43018.5(b)(1) provides that the regulations in the Proposed Regulation Order may not take effect before January 1, 2006, to provide time for Legislative review. The Proposed Regulation Order does not contain text indicating an effective date, which is typically either upon approval by the Office of Administrative Law and submittal to the Secretary of State or 30 days after that approval and submittal. To ensure that the effective date does not occur before January 1, 2006, the following modification is proposed.

*Proposed Modification.* Establish a new subdivision within new section 1961.1, title 13, California Code of Regulations, stating that the effective date of section 1961.1 is January 1, 2006, and make other conforming modifications within that section (e.g., for numbering and lettering) and elsewhere within the Proposed Regulation Order and Attachment B if needed.

#### **Additional Modifications Directed by the Board at its September 23-24, 2004 Hearing**

*Directed Modification One:* modify the upstream adjustment factor for hydrogen vehicles and electric vehicles in relation to the energy sources used to generate hydrogen or electricity.

*Directed Modification Two:* allow manufacturers to earn credits for grid-connected hybrid electric vehicles in the first year of production.