State of California
AIR RESOURCES BOARD

Resolution 09-66

December 9, 2009

Agenda Item No.: 09-10-4

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize Air Resources Board (ARB or Board) to adopt standards, rules and regulations and to do so 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, 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, section 43018(c) of the Health and Safety Code provides that in carrying out section 43018, the Board shall adopt standards and regulations that will result in the most cost-effective combination of control measures on all classes of motor vehicles and motor vehicle fuel, including but not limited to, reductions in motor vehicle exhaust and evaporative emissions, and reductions in in-use vehicular emissions through durability and performance improvements;

WHEREAS, section 39667 of the Health and Safety Code directs the Board to consider revisions to ARB's emissions standards for vehicular sources to achieve the maximum possible reduction in public exposure to substances that the Board has identified as toxic air contaminants pursuant to section 39662 of the Health and Safety Code; such regulations affecting new motor vehicles are to be based on the most advanced technology feasible for the model-year and may include, but are not limited to, the required installation of vehicular control measures on new motor vehicles;

WHEREAS, the Board's California State Implementation Plan (SIP) for ozone establishes the state strategy for attaining the ambient air quality standard for ozone in

all areas of the state as required by federal law; as part of the mobile source element developed by ARB, the SIP relies on the California Low-Emission Vehicle (LEV) program to provide significant reductions of ozone precursor pollutant emissions from passenger cars and light-duty trucks;

WHEREAS, the California LEV program includes a Zero Emission Vehicle (ZEV) element under which at least 11 percent of the passenger cars and lightest light-duty trucks produced by large or intermediate-volume manufacturers and delivered for sale in California in 2009 must nominally be ZEVs;

WHEREAS, since its 1990 adoption, the ZEV regulation has been modified six times to better align the regulatory timeline and requirements with the status of ZEV technology and ZEV commercialization feasibility;

WHEREAS, the Legislature has enacted the California Global Warming Solutions Act of 2009 (AB 32; Health and Safety Code § 38500 et seq.) which declares that global warming poses a serious threat to the economic well being, public health, natural resources, and the environment of California, and requires a comprehensive multi-year program to reduce California's greenhouse gas (GHG) emission to 1990 levels by 2020;

WHEREAS, in recognition of the devastating impacts of climate change emissions on California, Governor Arnold Schwarzenegger, in June 2005, enacted Executive Order S-3-05 which established the following greenhouse gas emission targets:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emission 80% below 1990 levels.

WHEREAS, the ZEV regulation has historically sought to reduce criteria pollutant emissions from the light-duty vehicle (LDV) subsector;

WHEREAS, at the March 2008 hearing, the Board directed staff to review the ZEV, LEV, and Pavley programs from the perspective of being able to reduce smog-forming pollution, to address the problem of the state's contribution to global warming, and to reduce California's dependence on petroleum;

WHEREAS, at the March 2008 hearing, the Board directed staff to redesign the 2015 and beyond requirements for the ZEV program, strengthening the requirement more than the current program and focusing exclusively on the gold requirement, that is battery, fuel-cell, and enhanced Advanced Technology Partial Zero Emissions Vehicle (AT PZEV) technologies, ensuring California as the central location for moving advanced, low GHG technology vehicles from the laboratory and demonstration phase to commercialization, where they are critical to achieving the Governor's GHG emission reduction goals, looking more specifically at blended plug-in hybrid credit being based on different parameters such as battery energy capacity rather and range, and to return to the Board as soon as possible, with a goal to return by the end of 2009;

WHEREAS, at the March 2008 hearing, the Board directed staff to develop a program to further availability of alternative fuels and infrastructure, and return to the Board with regulations, as appropriate;

WHEREAS, following the Board's direction at the March 2008, staff undertook an assessment of the current state of ZEV technology, an analysis of pathways to meeting California's long term 2050 GHG reduction goals in the LDV subsector, and a review of current and possible future complimentary policies that will be needed to aid in infrastructure and market pull policies for ZEVs;

WHEREAS, staff's assessment found that ZEVs are essential to meeting California's long term GHG emission reduction goals and ZEVs will need to be 100 percent of new vehicle sales no later than model year 2050, and that any future modifications to the ZEV regulation should help keep the light duty vehicle subsector on track to reach an 80 percent reduction in GHG emissions by 2050; and

WHEREAS, in meeting with stakeholders, staff found that the ZEV regulation is not a stand-alone regulation and that the success of the ZEV program hinges on concurrent development of market pull and infrastructure development policies.

NOW, THEREFORE, BE IT RESOLVED that the Board finds the following necessary to better align the ZEV regulation with California's long term climate change and air quality improvement goals:

1. The focus of the ZEV regulation will shift from only criteria pollutants emission reductions to GHG emission reductions as well as criteria pollutants;

2. An important new goal for the ZEV program should be to help assure the transformation to very low carbon-emitting vehicles occurs in the timeframe necessary to meet the Governor's 2050 target of an 80 percent reduction in GHGs compared to 1990 levels;

3. The ZEV regulation will help assure the successful launch of commercial ZEVs and enhanced AT PZEVs in the next decade, which appears needed to meet the 2050 GHG target;

4. PZEVs, now a part of the ZEV regulation, are commercial, and can be removed from the ZEV regulation (effective in 2014). Their emission benefits are appropriately considered in the next revision to the LEV criteria emission standards;

5. AT PZEVs, now a part of the ZEV regulation, are commercial, and can be removed from the ZEV regulation (effective in 2017). Their emission benefits are appropriately considered in the next revision to the LEV GHG emission standards; and

6. The proposed structure, credit values, and stringency of the revised ZEV program will depend in part on the Board's decision in the summer of 2010 regarding the establishment of more stringent GHG standards for the overall fleet, and how well that decision places California on the path to meeting an 80 percent reduction in GHG standards for the overall fleet, and how well that decision places California on the path to meeting an 80 percent reduction in GHG emissions by 2050.

BE IT FURTHER RESOLVED that the Board should support policies that complement and support the goals of the ZEV regulation.

BE IT FURTHER RESOLVED that because ZEV infrastructure is critical to successful commercialization of ZEVs in California, staff is to prepare a ZEV electric infrastructure plan for California, by assessing current and long term electric infrastructure needs, potential current and long term problems, and to recommend appropriate electric infrastructure implementation, and to report to the Board by the end of 2010.

BE IT FURTHER RESOLVED that the Board directs staff to pursue the following three tiered approach to hydrogen infrastructure implementation:

1. Investigate financial incentives to meet current fuel cell vehicle needs;

2. Offer regulatory incentives through existing regulations; and

3. Mandate hydrogen through modifications to existing regulations or through a new regulation.

BE IT FURTHER RESOLVED, that the Board directs staff to prepare amendments to California Code of Regulations, title 13, section 1962.1 and the incorporated "California Exhaust Emission Standards and Test Procedures for 2005 and Subsequent Model Zero-Emission Vehicles, and 2001 and Subsequent Model Hybrid Electric Vehicles, in the Passenger Car, Light-Duty Truck, and Medium-Duty Vehicle Classes;" and the adoption of a new title 13, California Code of Regulations, section 1962.1 and the incorporated "California Exhaust Emission Standards and Test Procedures for 2009 and Subsequent Model Zero-Emission Vehicles" along with any other necessary modifications to other sections.

I hereby certify that the above is a true and correct copy of Resolution 09-66, as adopted by the Air Resources Board.

Lori Andreoni

Lori Andreoni, Clerk of the Board