STATEMENT
OF THE
MANUFACTURERS OF EMISSION CONTROLS ASSOCIATION
ON THE AIR RESOURCES BOARD'S
PROPOSED RULEMAKING FOR CONTROLLING
CLIMATE CHANGE EMISSIONS FROM
LIGHT-DUTY MOTOR VEHICLES

September 23, 2004

The Manufacturers of Emission Controls Association (MECA) is pleased to provide comments on the Air Resources Board's proposed rulemaking to achieve the maximum feasible and cost-effective reduction of greenhouse gas emissions from motor vehicles. Over the past three decades, the Board has shown leadership in its continuing efforts to develop and implement effective control programs for major sources of air pollution, and has extended this leadership into the climate change arena through the development of these proposed regulations required by the California legislature's law AB 1493.

MECA is a non-profit association of the world's leading manufacturers of emission control technology for mobile sources. Our members have over 30 years of experience and a proven track record in developing and manufacturing emission control technology for a wide variety of on-road and off-road vehicles and equipment, including extensive experience in developing emission controls for gasoline and diesel light-duty vehicles in all world markets. Our members have invested billions of dollars in developing emission control technology for light-duty passenger cars and trucks, with extensive manufacturing capabilities in major markets around the world including here in California and other locations in North America. Our members have played an important role in the emissions success story associated with light-duty vehicles here in California, as well as the rest of the United States.

Our comments today are not directed at the core proposals associated with reducing carbon dioxide emissions from light-duty vehicles since these technology options are largely outside the expertise of MECA. However, we would like to offer our comments related to the relationship between reducing greenhouse gas emissions from light-duty vehicles and achieving the other emission goals required by California in the future 2009-2014 timeframe associated with the proposed implementation of greenhouse gas reductions from passenger cars and light-duty trucks.

As detailed in the draft staff report issued in June 2004 and again in the August 2004 staff report, a large set of technology combinations have been evaluated for their ability to reduce carbon dioxide emissions from passenger cars and light-duty trucks. These include state-of-the-art and future advanced gasoline and diesel powertrains. Implicit in this analysis is the ability of these powertrain options to meet California's applicable conventional emission standards for pollutants such as CO, NOx, and non-methane

organic gases (NMOG). Our industry firmly believes that all of these light-duty powertrain options combined with the appropriately designed and optimized emission control technologies can meet all applicable California emission requirements during the proposed implementation years associated with the climate change regulations being discussed here today.

There are already numerous examples of light-duty, stoichiometric gasoline engine-equipped vehicles using advanced three-way catalyst systems and advanced engine controls that meet California's LEV 2 program emission requirements, including a significant number of models (including gasoline hybrids) for sale today certified to meet California's toughest light-duty emission levels: SULEV and PZEV certified vehicles. Based on the growing experience with developing and introducing low emission gasoline vehicles there should be no need to compromise conventional emission performance to meet any proposed reductions in carbon dioxide emissions. Technology exists today for any of the gasoline, stoichiometric engine options discussed in the staff report to comply with California's LEV 2 program emission requirements.

The staff report also cites examples of high speed, direct injection diesel engines and partial lean-burn, direct injection gasoline engines as options for reducing carbon dioxide emissions from light-duty cars and trucks. Our industry has been developing emission control technologies for these types of engines for more than ten years. Particulate filters for controlling diesel particulate matter to very low levels are now being used in a variety of European diesel passenger cars with close to a million filter-equipped vehicles sold in Europe since 2000. EPA has evaluated a number of prototype light-duty diesel vehicles at its laboratories in Ann Arbor over the past several years. These vehicles have been equipped with particulate filters and NOx adsorber catalyst systems and have shown emission performance levels near California's LEV 2 LEV levels (EPA's Tier 2, Bin 5 emission levels). NOx adsorber catalysts systems have been introduced recently on a light-duty diesel passenger car in Europe and a light-duty diesel truck in Japan. NOx adsorber catalyst systems are also being used on lean-burn gasoline passenger cars in Japan and Europe to control NOx emissions from these vehicles. Manufacturers are also evaluating the potential of selective catalytic reduction (SCR) technology for controlling NOx emissions from light-duty diesel vehicles. All this experience along with continued significant development efforts by our industry and our customers in the automotive industry focused on emission control technologies for lean combustion engines (diesel and gasoline), gives MECA confidence that lean gasoline and diesel powertrain options can also be developed for introduction in the 2009-2014 timeframe, when the greenhouse gas emission standards are scheduled to take effect, to help meet the applicable California conventional emission requirements.

MECA would also like to state our agreement with the staff report concerning the control of methane and nitrous oxide emissions, two other important greenhouse gases, from light-duty vehicles. On light-duty gasoline vehicles, modern three-way catalyst-based emission control technology is effective at controlling both methane and nitrous oxide emissions. Tightening of hydrocarbon and NOx emission standards over time with the parallel introduction of more effective emission control systems has resulted in lower

emissions of methane and nitrous oxide from today's vehicles compared to vehicle certified to less stringent standards. These advanced emission control technologies have also been shown to be effective at reducing methane emissions from CNG-powered light-duty vehicles.

In conclusion, MECA believes that all of the options discussed by staff for reducing carbon dioxide emissions from light-duty vehicles with appropriately optimized emission control systems can also comply with all applicable California conventional emission requirements.

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