NESCAUM
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The Clean Air Association of the Northeast States
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Arthur N. Marin, Executive Director

March 26, 2008

Mary D. Nichols, Chairman
California Air Resources Board
1001 I Street
Sacramento, California 95814

Re: California Environmental Protection Agency Air Resources Board Staff Report: Initial Statement of Reasons 2008 Proposed Amendments to the California Zero Emission Vehicle Program Regulations

Dear Chairman Nichols,

The Northeast States for Coordinated Air Use Management (NESCAUM) appreciates the opportunity to offer comments on the above referenced amendments to the Zero Emission Vehicle (ZEV) program. NESCAUM is an association of air pollution control programs in Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont. In our comments today on the proposed changes to the ZEV program we represent six of our seven member LEV states. New York is submitting comments separately on this proposal. As sec. 177 states, the NESCAUM members have closely followed the Board's efforts to maintain the ZEV program and its effectiveness through periodic review and revision. In general, we support the program revisions outlined in the Initial Statement of Reasons for the Proposed Amendments. However, we strongly urge the Board to reconsider two proposed changes: 1) the inclusion of battery electric vehicles in the travel provision; and 2) the extension of the travel provision to 2017 for fuel cell vehicles.

We request that battery electric vehicles not be included in the travel provision. The travel provision removes automobile manufacturers' obligation to place city electric and full function battery electric vehicles in the Northeast states until 2014. The provision could also result in significantly reduced plug-in hybrid vehicle placement in our region. Our rationale for this request is as follows:

(1) Sec. 177 states have established a ramp up period to the full percentage requirements of the ZEV program in the Northeast. In some states, manufacturers have been banking credits for seven years which has provided them with a significant additional time in complying with the full percentage requirements of the ZEV program. In other states, manufacturers have been provided with a bank of credits - based on what they have banked in California - also to

provide a gradual ramp up to the full California percentage requirements. We do not believe that any additional phase-in period is needed.

(2) Although there are now 10 sec. 177 states with the ZEV program, these programs will become effective in stages through 2011. Some state ZEV programs are effective now, in other states implementation will occur in 2011. This gradual growth in the number of sec. 177 states also provides manufacturers with a ramp up phase for the ZEV program requirements.

(3) The different end dates proposed in the travel provision (2014 for electric vehicles and 2017 for fuel cell vehicles) could mean that battery electric and plug-in hybrid vehicle placement could be significantly impacted between 2014 and 2017 in the Northeast. The proposal to extend the travel provision to 2017 for fuel cell vehicles could create an incentive for manufacturers to fill their "pure" ZEV requirement with fuel cell vehicles rather than electric vehicles. This is because a significantly lower number of fuel cell vehicles would need to be placed in California and in sec. 177 states combined (relative to electric vehicles) between 2014 and 2017 under the current proposal. In this case, the Northeast would not likely receive any pure ZEVs until 2017. In addition, plug-in hybrid placement could be impacted between 2014 and 2017 (see point 4 below).

(4) Manufacturers are allowed to fulfill a substantial fraction of their pure ZEV requirement by selling plug-in hybrids (90% of the pure ZEV requirement can be fulfilled with plug-in hybrids between 2012 and 2014 and 50% between 2015 and 2017). If manufacturers comply with the ZEV requirement by providing pure ZEVs in California during these years, those credits will "travel" to the Northeast. The end result would be that the Northeast would not receive either pure ZEVs or plug-in hybrid vehicles. Were manufacturers to comply with the ZEV requirements by placing fuel cell vehicles between 2014 and 2017, the Northeast states would not receive pure ZEVs or plug-in hybrids for a decade.

(5) Since the publication of the Expert Panel report in 2007[1] a number of developments have occurred which could ease technical and cost issues associated with the introduction of battery electrics into sec. 177 states. Last year, the Expert Panel concluded that a number of battery technologies were either in use or could be used for battery electric vehicles but that costs remain too high for full commercialization. In one section the Panel stated "high energy Li Ion technology has sufficient promise for small FPBEVs, and good potential to meet all performance requirements of midsize and larger FPBEVs with batteries of modest weight…It is the conclusion of the Panel, however, that battery cost remains high even in mass production."

[1] Kalhammer, et. al. "Status and Propects for Zero Emissions Vehicle Technology Report of the ARB Independent Expert Panel," April, 2007.

High battery costs noted by the Panel as a barrier to introduction of BEVs is less of an issue now than it was a year ago - given the potential lower operating costs of BEVs. Said another way, lower monthly BEV operating costs (reduced costs associated with fueling of the vehicle) could offset the higher initial purchase price of BEVs. ARB staff defined what the cost of gasoline would need to be to make the incremental cost of the battery for a BEV cost comparable for the owner. According to ARB's report, for present status batteries, the cost of gasoline needed to make BEVs comparable with gasoline cars is shown to be approximately $3.50 to $4.40 per gallon.[2] With the average nationwide cost of a gallon of reformulated regular gasoline at $3.23 in March of 2008,[3] and higher in some areas of the country, BEVs are becoming cost competitive with gasoline cars.

(6) In addition to changes in the cost effectiveness of BEVs since 2007, technical developments over the past year could lead to commercialization of BEVs. Daimler Chrysler and other manufacturers have announced breakthroughs in battery technology that will facilitate introduction of plug-in hybrids and battery electrics into the market. As just one example, Daimler notes on its website that a recent breakthrough in lithium ion battery technology will provide improved power density, long service life, maximum performance, and great reliability.[4] New BEVs and PHEVs are also becoming available. Nissan announced the introduction of an electric car with 100 mile range and 75 mph speed in 2010. In addition, several established and emerging automobile manufactures are also developing low to intermediate range and lower-cost BEVs that are planned for introduction by 2010-2012. These vehicles include: TH!NK's City EV with 110mi range, Phoenix MotorCars' SUT/SUV models, Subaru's R1e in 2012, Mitsubishi's i-MiEV, Renault-Nissan's EV, and Daimler's Smart EV and Miles Automotive's XS500.

For these reasons, we ask the Board to remove the travel provision for battery electric vehicles.

We request the Board to retain the original 2011 sunset date for the fuel cell vehicle travel provision. Our rationale is as follows:

(1) As noted above, the significant credit banking opportunities provided to manufacturers by the Northeast states provides a ramp up period for full implementation of the ZEV program requirements. If ARB extends the travel provision from 2011 to 2017 for fuel cell vehicles, this will mean that Northeast states will not receive fuel cell vehicles for another 10 years.

(2) In the Northeast, some effort has been made to establish a Northeast hydrogen highway. Two states in our region now have hydrogen fueling stations. If the travel provision is

[2] See Figure 6.2 in the report entitled "Status Report on the California Air Resources Board's Zero Emission Vehicle Program," CARB April, 2007.
[3] Energy Information Administration, 2008
[4] http://media.daimler.com/dcmedia/0-921-614216-1-1051169-1-0-0-0-0-1-11700-0-0-1-0-0-0-0-0.html?TS=1205870171785&REF=921%2Fen%2FNewsroom%20%28Home%29%2F.Newsroom%20%28Home%29%2F%23XCID%3D614228%20%7C%20XPID%3D0%20%7C%20XCTY%3D3897%20%7C%20XAID%3D

extended until 2017 for fuel cell vehicles, the development of a hydrogen infrastructure in the Northeast will be delayed indefinitely.

(3) If manufacturers comply with the ZEV program requirements by placing fuel cell vehicles rather than battery electric vehicles, the Northeast states would not receive any pure ZEV vehicles until 2017. Furthermore, we might not receive other vehicles that could be used to partially comply with the pure ZEV requirement, namely plug-in hybrid vehicles until 2017.

(4) Extending the travel provision for fuel cell vehicles beyond 2011 creates an incentive for manufacturers to comply with the ZEV requirements by placing fuel cell vehicles rather than electric vehicles. This mechanism undermines the intent of leveling the playing field for electric vehicles.

For these reasons, we ask that the travel provision planned phase-out for fuel cells remain for 2011, rather than extending it as ARB staff propose to 2017.

Thank you for considering our comments.

Very truly yours,

Arthur N. Marin
Executive Director

cc: NESCAUM Directors