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Commentary on the California Air Resources Board's Report, "Staff Report: Initial Statement of Reasons for Proposed Rulemaking, Public Hearing to Consider Adoption of Regulations to Control Greenhouse Gas Emissions from Motor Vehicles", August 6, 2004

Summary of Commentary

The proposed regulatory terms in Section 1961.1 pertaining to the noncompliance penalty should be modified as follows:

(1) The penalty should be based on an emissions price per g/mi debit, rather than \$5,000 per noncompliant vehicle. (The proposed terms actually are based on an emissions price, but this is obfuscated by regulatory language that implicitly redefines "number of noncompliant vehicles" to mean an emissions-related quantity that is unrelated to the actual number of noncompliant vehicles.)

(2) The emissions price should be the same for all vehicles. (Under the proposed terms, the emissions price would be \$24.39 per g/mi for PC/LDT1 and \$15.06 per g/mi for LDT2.)

(3) The emissions price should be sufficient to adequately deter noncompliance. (The noncompliance cost under the proposed terms would be fairly low and would not be inflation-indexed, so it may have little or no deterrent value, especially for LDT2.)

(4) The proceeds from penalty charges levied on noncompliant manufacturers should be used to purchase excess emission credits from other manufacturers in order to offset the excess debits represented by the noncompliance. (Under the proposed terms, the penalty charges would all go into the General Fund, and associated emission debits would be liquidated.)

Detailed Commentary

The regulatory language proposed in the ISOR states, in Section 1961.1, paragraph (b)(3)(A) (on page A-16): "If emission debits are not equalized within the specified time period, the manufacturer shall be subject to the Health and Safety Code section 43211 civil penalty ... For the purposes of Health and Safety Code section 43211 the number of passenger cars and LDT1s not meeting the state board's emission standards shall be determined by dividing the total amount of g/mi Greenhouse Gas

emission debits for the model year by the fleet average requirement for PCs and LDTs ...”. (Similar language applies to LDT2s and MDPVs.)

Section 43211 of the Health and Safety Code states “...any manufacturer who sells, attempts to sell, or causes to be offered for sale a new motor vehicle that fails to meet the applicable emission standards shall be subject to a civil penalty of five thousand dollars (\$5,000) for each such action”. It further stipulates that “Any penalty recovered pursuant to this section shall be deposited into the General Fund.”

The 1961.1 regulatory language is intended to make the noncompliance penalty proportionate to the amount of excess greenhouse gas emissions represented by the noncompliance, and not proportional to the number of non-compliant vehicles. This is a good policy objective, but in trying to force-fit the policy into the framework of section 43211, the proposal uses confusing and misleading regulatory language that obfuscates the policy intent and changes the evident and clearly intended meaning of 43211.

If a manufacturer’s vehicles all fail to meet the emission standard, then 43211 would seem to clearly state that the manufacturer would be levied a \$5,000 penalty per vehicle; but under the proposed 1961.1 terms it would not. For example, if the vehicle emissions were all 10% over the mandated standard, then the penalty would be \$500 per vehicle. The only condition under which a manufacturer would pay \$5,000 per vehicle would be if its vehicle fleet emissions were, on average, double the standard. For example, with the mid-term (2016) standard, the penalty would reach \$5,000 per vehicle if PC/LDT1 emissions were 410 g/mi and LDT2 emissions were 664 g/mi, which is far in excess of current, unregulated emissions.

The actual effect of the penalty is simply to impose a fixed charge for each g/mi debit. The charge is based on an emissions price equal to \$5,000 divided by the emission standard, which has the following values for the mid-term standard:

Noncompliance cost per emission debit	
PC/LDT1:	$\$5,000 / (205 \text{ g/mi}) = \24.39 per g/mi
LDT2:	$\$5,000 / (332 \text{ g/mi}) = \15.06 per g/mi

As a point of reference, the g/mi emission quantities can alternatively be expressed in terms of estimated lifecycle vehicle emissions, measured in CO₂-equivalent metric tons (tCO₂e). Assuming 200,000 lifetime miles per vehicle, the above values are equivalent to

Noncompliance cost per excess lifecycle emissions	
PC/LDT1:	$(\$24.39 \text{ per g/mi}) (1,000,000 \text{ g/tonne}) / (200,000 \text{ mi}) = \$122 / \text{tCO}_2\text{e}$
LDT2:	$(\$15.06 \text{ per g/mi}) (1,000,000 \text{ g/tonne}) / (200,000 \text{ mi}) = \$75 / \text{tCO}_2\text{e}$

There is no clear policy rationale for levying a smaller penalty on LDT2 vehicles. The environmental costs of greenhouse gas emissions are the same whether the emissions come from small or large vehicles, so the emissions price should be the same for all vehicles.

Since the section 43211 penalty is not inflation-indexed, the present value of the above prices could be greatly diminished by inflation. For example, assuming a 5% inflation rate, the above emission prices in 2016 would correspond to the following discounted values in 2004 dollars:

Discounted noncompliance cost

$$\text{PC/LDT1: } (\$24.39 \text{ per g/mi}) / (1.05^{12}) = \$13.58 \text{ per g/mi}$$

$$\text{LDT2: } (\$15.06 \text{ per g/mi}) / (1.05^{12}) = \$8.39 \text{ per g/mi}$$

In order to adequately deter noncompliance, the noncompliance cost should be significantly higher than the compliance cost, not including operating-cost savings associated with compliance. (The savings are not included because they accrue to consumers, not to manufacturers, and the industry has not demonstrated sufficient incentive to deploy low-emission technologies based on their operating-cost benefits.) The compliance costs can be estimated from the data in Tables 6.2-1 and 6.2-7 in the ISOR. PC/LDT1 emissions are expected to diminish from 307 g/mi in 2009 to 205 g/mi in 2016, at an estimated cost of \$1204; and LDT2 emissions are expected to diminish from 433 g/mi in 2009 to 332 g/mi in 2016, at an estimated cost of \$1326. Thus, the estimated compliance costs would be as follows,

Compliance cost:

$$\text{PC/LDT1: } \$1204 / ((307-205)\text{g/mi}) = \$11.80 \text{ per g/mi}$$

$$\text{LDT2: } \$1326 / ((433-332)\text{g/mi}) = \$13.13 \text{ per g/mi}$$

Even without inflationary discounting, the LDT2 noncompliance cost is only marginally higher than the compliance cost, and with inflationary discounting it could be much less. Clearly, the proposed penalty is insufficient to deter noncompliance, and should be revised accordingly. (It would ideally be indexed to vehicle and/or fuel prices to accommodate inflation.)

Section 43211 stipulates that “Any penalty recovered pursuant to this section shall be deposited into the General Fund.” Given that the purpose of the penalty charge is to mitigate greenhouse gas emissions, this represents an inappropriate misallocation of funds. The Executive Officer should not liquidate emission debits from noncompliant manufacturers, but should rather assume the debits and should apply the penalty charges to the purchase of excess emission credits from other manufacturers to offset the debits. (In the event that sufficient excess credits are not available, the charges should be banked for future credit purchases.) If a low-bid purchase of emission credits yields more credits than are required to balance the debits, then the excess credits may be liquidated – this would be consistent with the AB 1493 policy objective of maximizing reduction of greenhouse gas emissions. But a liquidation of debits would be inconsistent with this objective. (Presumably, market trading would avoid the need for penalty charges, but if manufacturers are unable to purchase credits from their competitors, the penalty charges would provide an alternative mechanism for mediating the trade.)