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From: Julie Becker [JBECKER@autoalliance.org]
Sent: Monday, October 02, 2006 10:49 AM
To: IRRC
Cc: Arleen Shulman
Subject: Regulation #7-398 (#2523)

To: Mr. Alvin C. Bush, Chairman, IRRC

Dear Mr. Bush:

The Alliance of Automobile Manufacturers is a trade association of nine car and light truck manufacturers including BMW Group, DaimlerChrysler, Ford Motor Company, General Motors, Mazda, Mitsubishi Motors, Porsche, Toyota and Volkswagen. The Alliance is hereby submitting for IRRC review our main comment document on the proposed regulations to adopt the California LEV II and motor vehicle greenhouse gas regulations. I will also send you by Federal Express a CD with this document plus the appendices (which are too voluminous to send via email). All of these materials were submitted to the Pennsylvania Department of Environmental Protection in April of 2006.

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<<Alliance Main Comments.pdf>>

PENNSYLVANIA

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Comments of the Alliance of Automobile Manufacturers On Rulemaking to Amend Chapter 126, Subchapter D to Adopt California's Motor Vehicle Regulations

April 12, 2006

Executive Summary

The Alliance of Automobile Manufacturers is providing comments on the proposal by the Department of Environmental Protection to amend Chapter 126, Subchapter D to adopt the California motor vehicle regulations in Pennsylvania. Some of the principal points about this proposal that the Alliance considers it important for the Department to consider are as follows:

1. There is no evidence that adoption of the California greenhouse gas rule in Pennsylvania would have any effect on the climate of Pennsylvania. Any claim that the California rule would change the climate of Pennsylvania or have any related public-health benefit is unsupportable on a scientific basis. If the goal of the regulation is to address climate change in Pennsylvania, the only purpose served by adopting the California rule would be symbolic.

2. The California regulation would have unintended negative environmental effects. By increasing the retail prices of new vehicles, and by encouraging more driving, the California rule in Pennsylvania would increase smog-forming emissions and hinder the State's efforts to improve air quality. The State cannot afford to take symbolic action on the issue of climate change at such a cost to its efforts to reduce smog-forming emissions from motor vehicles.

3. The California greenhouse gas rule would needlessly inject the government into consumers' choices about the types of vehicles that best suit their needs. Some supporters of the California rule claim that the rule is beneficial because it will mandate higher fuel economy. That claim assumes, contrary to common sense and experience, that a regulatory agency in California can better define the private economic interests of Pennsylvania consumers than the consumers themselves. Consumers in Pennsylvania or any other State who want to buy high-mileage vehicles can do so today without the need for specific regulations that require them to do so.

4. Pennsylvania's adoption of California's vehicle program is not compelled by Pennsylvania's 1998 choice to adopt a now-superseded version of the California program. As U.S. EPA has confirmed, Pennsylvania is under no legal compulsion to adopt the California vehicle program. The references to the superseded California program in Pennsylvania's State Implementation Plan under the federal Clean Air Act should be removed consistent with current legal realities.

5. The greenhouse gas regulation under consideration by the Department would conflict with state and federal law. The Department has no authority from the Legislature to adopt regulations that will hinder rather than help reduce air pollution levels in Pennsylvania, and for that reason, adoption of the California rule would be inconsistent with state law. Such an action would also conflict with federal law, which reserves to the national government the sole power to regulate motor vehicle fuel economy, as well as other provisions of federal law.

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Comments of the Alliance of Automobile Manufacturers
On the Proposed Rulemaking to Adopt California Motor Vehicle Regulations

The Alliance of Automobile Manufacturers[1] respectfully submits these comments on the proposal by the Department of Environmental Protection ("DEP" or "the Department") to adopt the California motor vehicle regulations, and in particular the greenhouse gas program commonly known as California's AB 1493. Part I of these comments discuss the Clean Air Act issues that arise from the proposed NMOG fleet average requirement. Part II provides an overview of the California greenhouse gas regulation. Parts III and IV examine the environmental effects of the proposed regulation in Pennsylvania and the impact of the rule on Pennsylvania consumers. Part V of these comments evaluates the legal issues presented by the proposal. These comments are accompanied by several attachments and exhibits and also refer to comments being filed today by other parties on the Department's proposal.

I. Pennsylvania's Proposed Fleet Average NMOG Requirement Violates Section 177 of the Clean Air Act

Section 177 of the Clean Air Act, 42 U.S.C. § 7507, allows for states to adopt some emissions standards that would otherwise be preempted by section 209 of the Act. For a state to promulgate a standard under Section 177, it:

(1) must "adopt such standards at least two years before commencement of such model year"; and

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[1] The members of the Alliance of Automobile Manufacturers ("the Alliance") are BMW Group of North America, Inc., DaimlerChrysler Corporation, Ford Motor Company, General Motors Corporation, Mazda North American Operations, Mitsubishi Motor Sales of America, Inc., Porsche Cars North America, Inc., Toyota Motor North America, Inc., and Volkswagen of America, Inc.

(2) must adopt standards that "are identical to the California standards for which a waiver has been granted for such model year."

The identicality requirement means that no State may modify the California regulations. Section 177 goes on to specify that no State may "prohibit or limit, directly or indirectly, the manufacture or sale of a new motor vehicle or motor vehicle engine that is certified in California as meeting California standards." *Id.* Furthermore, no State may "take any action of any kind to create, or have the effect of creating, a motor vehicle or motor vehicle engine different than a motor vehicle or engine certified in California under California standards (a 'third vehicle')." *Id.*

Both California and the Federal Government control motor vehicle emissions using a sales-weighted average that each manufacturer is required to meet for their new vehicle fleet. By virtue of this fleet average scheme, a manufacturer can sell some vehicles with emissions that are higher than the required average provided that it is offset by the sale of vehicles with emissions that are lower than the required average. The regulations as currently proposed adopt California's fleet NMOG average. 25 Pa. Code § 12.412(b). However, by adopting and attempting to enforce the California fleet NMOG average Pennsylvania will violate the Clean Air Act in two different ways.

First, on an ongoing basis a manufacturer's fleet NMOG average in Pennsylvania will depend on its particular sales mix in Pennsylvania, which is, of course, is determined by Pennsylvania consumers. By virtue of the differences between the Pennsylvania and California markets, it is highly unlikely that a manufacturer will sell exactly the same products in exactly the same proportions in Pennsylvania as it will in California. If Pennsylvania consumers determine that a particular manufacturer's sales mix in Pennsylvania results in a higher fleet NMOG average, the manufacturer may be required to artificially limit sales of certain California

certified cars in order to comply with Pennsylvania's fleet average requirement. Such a limitation on the sale of California certified cars would, at a minimum, be an indirect limit on the sale of a motor vehicle that is certified to California standards and thus would violate Section 177.

Second, issues also arise from Pennsylvania's transition to California's fleet average requirement in mid-stream, even under the assumption that the California and Pennsylvania sales mixes are the same. California's fleet average scheme includes the opportunity for manufacturers to earn credits in one year by having a lower fleet NMOG average than required and spend credits in a later year by having a fleet NMOG average higher than otherwise required. California limits the use of the credits to three years and reduces their value by 50 percent if used the second year after they are earned and by 75 percent if they are used the third year after they are earned. Thus, as illustrated in the table below, if the Pennsylvania regulations take effect in 2008, a manufacturer could have earned a substantial amount of credits in California during 2005 through 2007. The manufacturer would then use those credits in California in 2008 through 2010 to offset a higher than otherwise required fleet NMOG. In 2011, the manufacturer would be "even" in California, but, because Pennsylvania's regulation did not take effect until 2008, the manufacturer would not have earned any credits in Pennsylvania in 2005 through 2007 and would have therefore accumulated significant debits in Pennsylvania in 2008 through 2010 by selling the very same mix of vehicles as it sold in California those years. This would lead to a lack of identicality in 2011 as there would be two different standards as a result of the differences in credit counting. Such lack of identicality would violate Section 177 on its own; it would further violate Section 177 by requiring manufacturers to limit the sales of California certified vehicles or to create a "third vehicle."

Example: NMOG Credits and Debits in CA vs. PA

MY	CA Yearly Status	Cumulative CA Status	PA Yearly Status*	Cumulative PA Status
2005	1000	1000	NA	NA
2006	1000	2000	NA	NA
2007	1000	2500	NA	NA
2008	-250	1500	-75	-75
2009	-250	500	-75	-150
2010	-250	0	-75	-225
2011	0		0	-225
2012	0		0	-225
2013	0		0	-225

*Assumes PA sales are 30% of CA sales and same model mix.

Similar Section 177 problems do not arise if a State only requires manufacturers to report fleet NMOG averages. In addition, some of the problems arising under Section 177 can be deferred, but not completely eliminated, by postponing compliance beyond a defined transitional period. Although Pennsylvania tried to address this transitional issue in their proposal by allowing credits in 2008, 2009, and 2010 to be used for compliance in any of the model years 2008 through 2010 (proposed 25 Pa. Code § 126.412(d)), as illustrated by the example above, this transition mechanism is not adequate. Other States -- for example, Massachusetts, Vermont, and New York -- included a transition mechanism that allowed credits/debits to be earned during

the transition period, which is the period required for any credits that were earned in California to completely expire (3 years). This is a better transition mechanism because it avoids the problem illustrated above. One example of such an approach, similar to the approach taken by Vermont (*compare* Vt. Code R. 12-031-001, § 5-1106(a)(1)), is the following:

> Effective for 2011 and subsequent model-years, each manufacturer shall comply with the fleet average emission requirements and, for 2008 and subsequent model-years, may earn and bank NMOG credits, both in accordance with Title 13, California Code of Regulations Section 1961, except NMOG credits earned prior to model-year 2011 shall be treated as though they were earned in model-year 2011.

By undertaking the amendment proposed above, Pennsylvania would defer some of the immediate Section 177 problems it faces.

II. The California Greenhouse Gas Regulation

The motor vehicle greenhouse gas regulation under consideration by DEP was adopted by the California Air Resources Board ("CARB") in 2004. This section of the Alliance's comments begins by providing some necessary background on the requirements of the California rule, drawn from the CARB rulemaking record. It then presents some specific technical issues that DEP should address in evaluating the proposal to adopt the California rule in Pennsylvania.

A. Regulatory Background

Emissions from a wide variety of sources, including power plants, manufacturing facilities and automobiles, contribute to air quality concerns. In the case of motor vehicles, the principal emissions of concern are unburned hydrocarbons ("HC") and oxides of nitrogen ("NOx"). HC and NOx undergo photochemical reactions in the atmosphere in the presence of sunlight to produce ozone, a respiratory system irritant and the principal ingredient of "smog." Carbon monoxide ("CO") is another pollutant caused by incomplete combustion. Although CO

slightly contributes to ozone formation, it is primarily regulated because of its direct effect on human health, which includes increased stress on the cardiovascular system.

In order to protect public health, the U.S. Environmental Protection Agency ("EPA") has established primary National Ambient Air Quality Standards ("NAAQS") for ozone, CO, and other pollutants.[2] These standards define the level of these pollutants that EPA has determined to be consistent with the protection of human health with a margin of safety.

Another byproduct of the combustion of carbon-based fuels, such as wood, coal and gasoline, is carbon dioxide ("CO2"). Carbon dioxide is a naturally occurring gas in the air, is exhaled by all animals, and is essential to life as we know it. Exposure to carbon dioxide is not harmful to human health at concentrations found in the ambient air, and EPA has established no NAAQS for carbon dioxide. The level of carbon dioxide in the atmosphere is an environmental issue because it is considered a greenhouse gas. Carbon dioxide and other greenhouse gases in the atmosphere reduce the dispersal of solar heat that reaches the surface of the earth. This effect is suspected of causing or contributing to global warming.

In the case of motor vehicles, carbon dioxide emissions are directly related to fuel consumption. The only method for significantly reducing carbon dioxide emissions from a gasoline-powered motor vehicle is to reduce fuel consumption. The official test procedure used to determine compliance with the federal corporate average fuel economy ("CAFE") standards depends on the measurement of carbon dioxide emissions, which is the primary greenhouse gas

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[2] NOx emissions from motor vehicles also form nitrogen dioxide ("NO_2"), a pollutant that causes a brownish atmospheric coloration and is associated with an increased risk of respiratory infection. Emissions of HC and NOx also may be converted to particulate matter ("PM") in the atmosphere.

emitted from motor vehicles. The combustion of gasoline is the only source of carbon dioxide emissions from motor vehicles, and carbon dioxide emissions constitute the vast majority of greenhouse gas emissions from motor vehicles. The table below shows the various categories of greenhouse gas emissions from a typical passenger car, adjusted to account for the "global warming potential" of each category.[3] The adjusted value is expressed in the last column of the table in "CO2 equivalent emissions," as specified in the CARB regulation.

Baseline Greenhouse Gas Emissions from a Typical Passenger Car

Source	Emissions	CO2 equivalent emissions
Exhaust CO2	322.48 g/mi	322.48 g/mi
Exhaust Methane	0.005 g/mi	0.12 g/mi
Exhaust Nitrous Oxide	0.006 g/mi	1.78 g/mi
Direct HFC-134a Emissions	0.007 g/mi	9.00 g/mi
"Indirect" A/C Emissions (CO_2)	15.40 g/mi	15.40 g/mi
TOTAL	337.90	348.78 g/mi
CO2 as a Percent of Total	99.99%	96.87%

As indicated on the table, when the estimated greenhouse gas emissions of a typical passenger car are weighted for global warming potential, carbon dioxide emissions account for nearly 97 percent of the greenhouse gas emissions from passenger cars and light-duty trucks on a

[3] "Global warming potential" (or "GWP") is a measure of the heat-trapping potential of a particular compound relative to the heat trapping potential of the same mass of carbon dioxide. For example, if one pound of the air conditioning refrigerant HFC-134a traps 1300 times more heat than one pound of carbon dioxide, then HFC-134a has a GWP of 1300.

CO2-equivalent basis. Based on the table, the maximum reduction in CO2-equivalent greenhouse gas emissions that can be accomplished without improving fuel economy is just over 3 percent (100% - 96.87% = 3.13%). The CARB standards require a reduction in CO2-equivalent greenhouse gas emissions from passenger cars of more than 30 percent.[4] For typical gasoline-powered vehicles, it will therefore be impossible to meet the CARB regulation without reliance on higher fuel economy.

The *de facto* fuel economy standards being set by CARB are much more stringent than the average fuel economy levels required by the federal fuel economy standards. For example, CARB has set a "mid-term" CO2-equivalent ("CO2e") standard for passenger cars and some light-duty trucks of 205 grams per mile ("g/mi") CO2e. Converted to fuel economy as measured by the federal regulations, that is equivalent to 43.7 miles per gallon ("mpg") for a vehicle that uses a conventional air conditioning system and that is not designed to reduce nitrous oxide (N_2O) or methane tailpipe emissions. CARB's rule mandates 59 percent higher fuel economy than required under the Corporate Average Fuel Economy ("CAFE") standards for passenger cars, which is 27.5 mpg. CARB's regulatory analysis assumes that, but for its new greenhouse gas standards, there would be no change in the fuel economy of passenger cars or light-duty trucks in the absence of the regulation, through at least 2030.

B. Issues of Controversy

The foregoing summary of the California rule covers the main features of the regulation that cannot be considered controversial. Much of the underlying analysis used to support the

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[4] The CARB staff estimated in 2004 that the average CO_2-equivalent emissions for passenger cars produced by the largest six manufacturers were 312 g/mi for model year 2002. The 205 g/mi standard applicable in 2016 is 34 percent lower.

regulation in California, however, involves issues that are in dispute. DEP needs to take a definitive and fully-explained position on those issues as they relate to Pennsylvania. Three issues of particular importance to the proposal under consideration by DEP are identified below.

1. Nationwide Deployment of the California Greenhouse Gas Technologies

CARB has assumed that once its greenhouse gas rule is implemented, the automobile industry will choose to deploy the technologies needed to meet the California standards on at least a nationwide (if not global) basis. That assumption is critical to CARB's estimates of the costs for compliance with the California regulation in California and in other States that enforce the California rule. If CARB's assumption is incorrect, then the costs of the California rule for consumers in California and other States that enforce the California rule will be much higher than estimated by CARB. Because the costs of new regulation is important in Pennsylvania, DEP needs to make an independent assessment of CARB's assumption that the industry will respond to the regulation by producing vehicles that use all the necessary greenhouse gas technologies nationwide.

CARB's assumption that the industry would deploy greenhouse gas control technologies nationwide, to an extent approaching full penetration of those technologies across the country, is certainly not entitled to deference by DEP. As CARB has recognized, the greenhouse gas rule will raise new-vehicle costs and prices, and so will reduce demand for new vehicles. In one regulatory analysis that CARB published prior to its decision to approve the greenhouse gas rule in September 2004, the CARB staff estimated that once the greenhouse gas standards were fully implemented, new-vehicle sales in California would decline by four to five percent. Other estimates predicted larger reductions in sales.

It would be illogical and contrary to their customers' interests for automobile manufacturers to produce vehicles for which there is less demand, in the absence of a regulatory requirement to do so. For that reason, it is unlikely that the industry will try to comply with the California greenhouse gas rule by producing all or even most of the necessary technologies at nationwide volumes. This means that the cost of the regulation for Pennsylvania consumers will be substantially higher than estimated by CARB.

DEP needs to examine this issue in more detail. Because the industry will not pursue nationwide deployment of the greenhouse gas technologies, DEP should develop more accurate estimates of the costs of compliance with the regulation for residents of Pennsylvania.

2. Reliance on the NESCCAF and CARB Technological Assessments

The Department also needs to confront serious errors in some analyses of the California rule arising from the technological assessment prepared by the Northeast States Center for a Clean Air Future ("NESCCAF"), on which CARB has relied in part. Significant misunderstandings have arisen in the debate about the California rule and its costs. These are among the points that the Department needs to consider:

- To date, neither NESCCAF nor the CARB staff have specifically assessed (1) the performance of any specific vehicle actually expected to be in the market when the new rule would take effect, or (2) the full range of vehicle types expected in the market. The NESCCAF/CARB analysis was limited to vehicle types that the CARB staff or NESCCAF considered "representative." This point was acknowledged in the CARB staff's Final Statement of Reasons, published in August 2005, which stated that "the agency could not reasonably model all vehicles with all of the potential climate change emission reduction technologies" identified

by CARB staff or NESCCAF. The predicted costs and fuel economy impacts of the regulation estimated by the CARB staff and NESCCAF are thus no better than the selection of vehicle types that the CARB staff or NESCCAF considered "representative."

• The vehicles that the CARB staff and NESCCAF decided to include in their analysis were hardly "representative" of the U.S. motor vehicle fleet, either today or in the future. All or nearly all the vehicles included in the analysis had significantly downsized, turbocharged engines, which sacrifice reserve power, launch feel and some acceleration performance features, and which were based on tests of engines operated on European-specification premium gasoline. The hypothetical vehicles were also equipped with automatic manual transmissions. Such vehicles are hardly typical of the U.S. fleet today or in the future. In particular, it is unrealistic to suppose that in the future, most Americans will buy vehicles designed for optimal performance on gasoline grades higher than regular unleaded.

• The principal contractor for the vehicle performance analysis prepared for NESCCAF and then used by CARB, a firm called AVL Powertrain Engineering, has confirmed that it was not asked to undertake, nor did it undertake, any detailed consideration of launch feel, drive quality or the transient response of the engine, transmission and turbocharger, in connection with the work for NESCCAF and CARB. The only reported metric for performance was 0-60 mph acceleration, and it appears the CARB staff ignored available information from AVL involving

other acceleration metrics. The DEP can confirm the limitations placed on AVL's work by contacting AVL.[5]

• Some confusion may arise from the fact that the CARB staff has not always fully presented the impact of the regulation on the vehicle powertrain or vehicle performance. For example, the CARB staff's Final Statement of Reasons asserts that in the CARB staff's regulatory analysis, "technology packages that included engine downsizing were not generally considered for the truck classes," and "engine downsizing [was] used primarily for the small car, large car, and minivan vehicle classes where vehicle performance can be maintained under all driving conditions." To the contrary, CARB's regulatory scenario assumed the use of downsized engines for the truck engines included in the CARB analysis. For one set of standards, the large truck engines were assumed to be downsized by nine to eleven percent. For another set of standards, large truck engines were assumed to be downsized by eleven to fifteen percent. Small truck engines were assumed to be downsized by as much as nineteen percent. But common sense indicates that truck purchasers are generally not willing to accept downsized engines at the same price as full-size engine. If it wants to rely on the analyses prepared in California, the Department needs to examine this issue further because it cannot rely on the summary statements from the CARB staff.

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[5] The only apparent issue in controversy with AVL is whether the test data on which its modeling is based is representative of vehicles operated on U.S. regular unleaded gasoline as well as higher-specification European gasoline. While AVL claims that the modeling is representative of operation on U.S. regular unleaded, neither NESCCAF, AVL nor the CARB staff has provided data to demonstrate this. The Department should request any such data if it plans to rely on the NESCCAF or CARB work.

• Along the same lines, the CARB staff's Final Statement of Reasons claims that "[i]n assessing smoothness and refinement ... staff assumed in the analysis that 6 cylinder engines would be replaced by 5 cylinder turbocharged models rather than 4 cylinder versions in order to preserve 6 cylinder-like characteristics." That is incorrect. For the "Large Car" analysis performed for NESCCAF, a three-liter, six-cylinder was replaced by a four-cylinder engine with a much smaller displacement of 1.77 liters. For the "Minivan" case, a 3.3 liter, six-cylinder was replaced by another much smaller 1.85 liter four-cylinder engine. For the "Small Truck" case in the NESCCAF study, a 3.4 liter six-cylinder engine was replaced by a smaller 1.64 liter four-cylinder. In addition to "smoothness and refinement," engines need sufficient reserve power for responsive acceleration, full cargo loads, towing, and acceptable "launch" at the start of driving. Neither NESCCAF, its contractors, nor the CARB staff, can credibly claim that such radical downsizing would have no impact on consumer demand for the redesigned engines.

Elsewhere in the Final Statement of Reasons, however, the CARB staff admits that some of the technologies that were evaluated would degrade vehicle performance. This is an important admission that any proponent of the California rule or any regulatory agency considering the California rule needs to address. The assumptions that were actually made in the development of the California regulatory analysis are critical because consumer demand will be affected by losses in various performance features that are important in the market. The consumer demand model used by California in its analysis assumed no loss in any performance attribute, which is clearly an invalid assumption for the reasons summarized above. The Department therefore cannot appropriately rely on the consumer impacts projected by the CARB staff in the California rulemaking -- who, it should be noted, predicted a reduction in consumer

demand and in sales.[6] Because the CARB consumer demand model would have predicted even larger reductions in demand and in sales if the degradations in performance had been considered, the Department should begin its analysis of the issue by treating the existing CARB estimates as the floor, not the ceiling, for cost impacts.[7]

3. Voluntary Agreements to Help Implement the Kyoto Program in Canada

Another issue in controversy involves a recent agreement between some members of the automobile industry and the Canadian government, intended to facilitate Canada's implementation of the Kyoto program for climate change mitigation. Contrary to claims by supporters of the California carbon dioxide rule, the voluntary agreement between vehicle manufacturers and the Canadian government to attempt to achieve reductions in carbon dioxide levels in Canada demonstrates nothing about the feasibility of compliance with the California regulation in Pennsylvania (or in California), or the environmental and economic impacts of the California program. Such claims omit critical differences between the Canadian agreement and the type of standards that the Department is considering. Unlike the California rule, the

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[6] Regarding the consumer demand model used by CARB, *see* pp. 23-25 below.

[7] Some proponents of the California rule rely on simplistic assumptions that all or nearly all consumers will apply an estimated long-term cost reduction analysis to a new-car purchase decision. The appropriateness of the discount rate assumed in such an analysis needs careful review, as explained on pages 27-28 of these comments. Equally important, however, CARB commissioned studies for its own rulemaking that demonstrated that such a simplistic analysis is not realistic for the new-vehicle market. There is no uniform or average "pay-back" period that can be assumed in assessing how this regulation will affect the new-vehicle market -- hence the need for the consumer demand models like CARBITS and the models developed for the Alliance. If, on the other hand, the Department believes that simple "pay-back" analyses are valid or useful, it should supply any available empirical evidence supporting the use of such analyses.

Canadian agreement does not specify limits on any one manufacturer's allowed emissions of carbon dioxide. Rather, the Canadian automotive industry has agreed to aggregate reductions in greenhouse gases, and those reductions need not be obtained exclusively through reducing the emissions of new vehicles (which are only about eight percent of the total vehicle fleet in Canada). If the Department has a different understanding of the content of the agreement in Canada, or its practical impact, it needs to explain that different understanding to the extent it considers the Canadian agreement relevant here.

In that regard, it is also important to note that the Canadian agreement has sufficient flexibility for most manufacturers to incorporate measures in Canada as part of a broad North American strategy. Individual state standards -- particularly standards as stringent as California's -- permit no such flexibility. The California rule creates mandates based on assumptions about how specific technologies would affect fuel economy and that cannot change based on consumer preference. The Canadian agreement, by contrast, recognizes that the success of any technology depends on consumer acceptance, and (unlike the California rule) does not make unreasonable demands on the level and pace at which the industry can introduce new technologies. The Department needs to take a definitive position on the significance of the Canadian agreement for the types of mandatory program under consideration in Pennsylvania.

4. Credits and Alternative Compliance Mechanisms

Another issue in controversy involves the portions of the CARB rule that describe the provisions that supposedly add flexibility for the industry in developing compliance strategies. The implication is that the industry can use those features of the California regulation to reduce the costs of compliance with the regulation and ease the burden for Pennsylvania consumers.

While the Alliance does not have access to confidential compliance plans of its members or other manufacturers, it questions the assumption that the inter-manufacturer credit provisions and alternative compliance features of the California rule will play a significant role in compliance with the regulation, either in California or in Pennsylvania. Indeed, the alternative compliance features of the California greenhouse gas rule exist in name only -- they are so stringent that they appear designed to discourage efforts to comply using any means other than the types of fuel economy technologies envisioned in CARB's main regulatory analysis, and they probably could not be used by any major full-line manufacturer. If DEP believes that alternative compliance plans will be part of the compliance strategy for manufacturers in Pennsylvania, it should provide examples of the types of plans that are both economically practicable and approvable under the regulation.

With regard to inter-company trading, the notion that companies that can accumulate credits will sell those credits to other companies is illogical. Such companies will use any such credits to reduce their own future compliance costs. Because the regulation will be ultimately constraining for all large-volume manufacturers, each such credit-generating company will certainly need to use those credits for that purpose in order to minimize its costs of compliance.

It is also critical to note that vehicle manufacturers must plan their fuel economy and emissions compliance strategies for a given model year many years in advance. While that planning is under way, a manufacturer has no access to the fuel economy strategy or planning activities of other unaffiliated manufacturers. Given the competitive nature of the industry, the uncertainty that any specific company would have a specific number of credits available to sell, and the lead-times required to develop and produce new technologies, it is implausible to suppose that any company will be able to include a plan to acquire credits from another company

in its CO2 compliance strategy. If DEP believes that the industry will be able to reduce its compliance burdens significantly with inter-company trading, it should explain why.[8]

5. Grid-Connected Hybrid Vehicles

A third and more technically complex issue of controversy involves the use of a particular type of technology to meet the CARB standards. The relevant technology is called grid-connected hybrid vehicle technology, or "GHEV" technology. The CARB regulation defines a grid-connected hybrid electric vehicle as "a hybrid electric vehicle that has the capacity

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[8] This issue has been addressed in comments being filed with other states considering the adoption of the California greenhouse gas regulations by Sierra Research, Inc. ("Sierra"). Responding to a claim advanced in another rulemaking that manufacturers will be able to significantly reduce costs by credit trading, Sierra explained as follows:

> While [credit generation and trading is] theoretically possible, there is no evidence that such trading will actually occur and there are reasons why no prudent manufacturer would rely on credits being made available by another manufacturer. Substantial lead time is required to implement the changes required for compliance with GHG regulations. As a result, any manufacturer that bases its compliance plan on the availability of emission reduction credits is betting that another manufacturer will generate and sell them at a reasonable price and will be unable to comply with the GHG regulations should the other manufacturer fail to generate credits or sell them at a reasonable price. It is highly unlikely that any vehicle manufacturer would place its ability to comply with the GHG regulations in the hands of one of its competitors. Further, to date, no vehicle manufacturer has indicated that it will either generate or sell credits and it is unlikely that any manufacturer will do so. . . . [S]imilar credit trading mechanisms for non-methane organic gas (NMOG) emissions have existed in the California LEV regulations since their adoption in 1990 and have not been used to trade credits between manufacturers to any significant degree. This historical fact suggests that manufacturers are equally unlikely to trade GHG emission reduction credits to any significant degree, if at all.

If DEP does not agree with any of the specific points Sierra's analysis, quoted above, it should explain in detail why. In addition, it should be noted that even if one assumes that trading will occur, the California rule will still have adverse environmental effects in Pennsylvania. *See* p. 20-21 below.

for the battery to be recharged from an off-board source of electricity and has some all-electric range." Such vehicles can be driven without the use of gasoline to the extent that their batteries are recharged from the electrical grid and the distance they are driven between recharging is equal to or less than their "all electric range" (i.e., the driving range available from the battery alone). Beyond the all electric range, the combustion engine is used.

Under the CARB rule, the formula for calculating the CO2-equivalent emissions of GHEVs is [A*E*B*C] + [(1 – A*E*B)*D], where A is the percentage of the vehicles that are operated on electricity from the grid; E is 0.9; B is the percent of miles travelled using electricity from the grid; C is the CO_2-equivalent value when the vehicle is operating on electricity from the grid; and D is the CO_2-equivalent value when the vehicle is operating on gasoline. Although the CARB regulation is not clear, it appears that grid-connected HEVs are able to use a value of 130 g/mi CO_2-equivalent when running on battery power (which is the value specified in the regulation for "electric vehicles"). Nothing in the regulation provides guidance on the value of "B." The average value of B will be less than 100% because motorists will not be willing to pay for a combustion engine if it were never used. Nevertheless, a value of 100% can be used to establish a "best case" estimate of the economic feasibility of grid-connected HEVs. One can estimate the battery size required for a grid-connected HEV assuming a relatively short 20-mile all electric range, at 0.34 kWh per mile as the energy requirement for a compact size vehicle. That would require a battery capacity of 7 kWh.

One recent public estimate for the cost of NiMH batteries, provided by the Martec Group, supports an estimate for retail price increase needed to cover the cost of such a battery in a GHEV to be about $7,400. Combined with a 100 kW motor/generator, inverter, brake-by-wire, electric power steering, electric accessory drive, high-voltage wiring system, and weight

reduction measures, the total retail price increase to cover the cost for a GHEV would be approximately $16,000.[9] This is far greater than the cost of other technologies that CARB has identified as capable of meeting the California standards.

The available evidence thus indicates that grid-connected hybrid vehicles will be commercially infeasible for anything other than niche markets that receive substantial public subsidies.[10] If DEP believes that GHEVs will be a significant factor in manufacturers' compliance plans, it needs to explain why; if not, it should so indicate. To the extent that DEP believes that GHEVs will play a significant role, DEP should explain why the cost estimates presented above are inaccurate or unpersuasive, or why it believes that there will be sufficient public subsidies to support the use of GHEVs.

III. Environmental Assessment of the Greenhouse Gas Rule in Pennsylvania

It is also important for DEP to address some basic issues about the environmental impacts of the California greenhouse gas rule in Pennsylvania. At the outset, it is important for the Department to recognize that it cannot attribute any significant reduction in global warming, or any other discrete impact on climate, to the implementation of the California greenhouse gas rule

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[9] In addition to the Martec-based battery cost estimate, this estimate uses variable costs of $1,225 for a 288v motor/generator, $1,750 for a inverter, $500 for a regenerative braking system, $40 for electric power steering, $70 for electric accessory drive, $300 for high-voltage wiring, and $265 for weight reduction measures. These costs are multiplied by 2.05 to estimate retail price equivalent.

[10] Others have claimed that GHEVs would provide economic benefits to motorists because they can be used to store electrical energy and sell it back to the utilities during periods of peak demand. However, analyses of this concept have failed to account for the cost of reducing battery life by exposing it to additional charge/discharge cycles. Those analyses also ignore the effect of charging/discharging efficiency, which would further increase the cost. In addition, the fact that periods of peak electricity demand coincide with peak commute periods means that vehicles will be unavailable to sell power back to the grid.

in Pennsylvania. Even under very optimistic assumptions about the impact of the proposed greenhouse gas rule in Pennsylvania, there would be no significant impact on the global or Pennsylvania climate. Any theoretical change in temperatures that a rule of this nature could produce would, in turn, have no measurable effect on ozone levels in Pennsylvania -- even if the proposed greenhouse gas rule were implemented nationwide, if only because the rule will not have any measurable effect on temperatures.[11] If DEP believes that there is any evidence of a positive impact on climate or ozone levels, it needs to identify that evidence.

A. Increases in Air Pollutants

In addition to having no identifiable impact on global warming, the California rule will have adverse impacts on Pennsylvania's efforts to reduce criteria and precursor pollutants. Two important factors will cause the proposed rule to have the unintended effect of increasing pollution. The first factor is called the "rebound effect." When vehicle fuel economy increases, the cost of driving declines and vehicle operation increases. That increase in vehicle operation increases fleet-wide emissions of criteria and precursor pollutants. The other important factor that must be considered is the "fleet turnover effect." When vehicle prices are increased as a result of additional regulation, older vehicles with less effective pollution controls than new vehicles remain in operation for longer periods of time than if there were no additional regulation.

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[11] This issue has already been examined in the California rulemaking, where no credible scientific basis for claiming a reduction in smog has been offered. The only study of this specific issue, prepared for the Alliance by Sierra Research, Inc. ("Sierra Research"), demonstrated that even if the California rule were implemented across the nation there would be no significant effect on temperatures, or therefore on ozone levels. The Sierra Research analysis is attached as Appendix C to these comments; refer to Attachment B5 in Appendix C.

A separate analysis being filed today by Sierra Research and NERA Economic Consulting fills the gaps left in DEP's analysis and shows that implementation of the motor vehicle greenhouse gas rule will increase ozone-forming emissions.[12] Specifically, using more realistic cost estimates, smog-forming emissions will increase by at least 7.9 *tons per day* in calendar year 2020 -- which would be the equivalent of adding at least 319,893 additional vehicles to the highways and streets of Pennsylvania. Additionally, Pennsylvania's implementation of the California rule will increase particulate matter 2.5 ("$PM_{2.5}$") criteria pollutant emissions by 2.3% in the year 2020. And emissions of criteria pollutant carbon monoxide ("CO") would increase by at least 140 tons per day in the year 2020. Such emissions increases should be unacceptable as a matter of policy, particularly when there is no scientific or other evidence that the California greenhouse gas program will have any measurable positive effect on the climate of Pennsylvania or any other predictable public-health benefit.[13]

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12 *See* Sierra Research, Inc., "Evaluation of Pennsylvania's Adoption of California's Greenhouse Gas Regulations on Criteria Pollutants and Precursor Emissions," Table ES-1. The analysis being filed by Sierra Research and its research partner, NERA Economic Consulting, includes an assessment of competitive effects of the California rule and specific manufacture compliance strategies. The Alliance does not take positions on competitive issues in the automobile industry and therefore does not take a position on the portions of the Sierra Research analysis that involve competitive effects.

13 Some proponents of the California rule claim that vehicles whose carbon dioxide emissions are regulated will have lower levels of smog-forming and other harmful pollutants. That claim is incorrect, as the Department must recognize. Motor vehicle emissions are regulated on a gram per mile basis, so the mass emitted by a vehicle is a function of the standards to which it is certified and the number of miles driven, not the amount of gasoline the vehicle consumes. This point was recognized long ago in the judicial proceedings. *See Public Citizen v. NHTSA*, 848 F.2d 256, 267 (D.C. Cir. 1988) ("mobile source standards for oxides of nitrogen, carbon monoxide, and hydrocarbons are expressed in grams [per] vehicle-mile traveled, not in terms of vehicle miles per gallon, and are therefore not affected by any decrease in fuel economy. Passenger car emissions will not increase due to this rule unless cars are driven more miles.") (quoting administrative record) (internal quotation marks and citation omitted).

To the Alliance's knowledge, these important issues have not been addressed in the Department's rulemaking to date. After Sierra Research submitted a similar analysis in connection with a Vermont rulemaking to adopt the California greenhouse gas program, Vermont responded by placing in its record an analysis by Meszler Engineering Services ("MES"). Sierra Research responded to MES's initial analysis in the records of rulemakings in Maine, Massachusetts, and Rhode Island. More recently, the organization known as the Northeast States for Coordinated Air Use Management ("NESCAUM") also retained MES to reply to Sierra's Research's response to MES's initial work. MES's follow-up analysis and claim that the Sierra Research analysis is not reliable fails for two major reasons:

- *First*, MES claims that Sierra Research's analysis of the rebound effect is inaccurate because Sierra Research failed to account for the impact of higher new vehicle prices on the driving decisions made by consumers, and thus overweighted gas-pump prices as a variable affecting driving decisions. This criticism indicates that MES fails to understand a basic principle of microeconomics -- sunk costs are sunk. Higher new vehicle prices obviously affect decisions about which new vehicle to purchase or whether to retain an existing vehicle. But once a vehicle is purchased, the central determinant of how many miles new vehicles will be driven is the cost per mile of operating such vehicles, which in turn is principally determined by fuel prices.

- *Second*, MES claims that Sierra Research's analysis of the fleet turnover effect is inaccurate because Sierra Research assumes that despite the diminished size of the vehicle fleet associated with adopting the California rules, vehicle miles traveled ("VMT") will not be reduced. Here, MES ignores that when the California rules cause an increase in new vehicle prices, vehicle owners will be incentivized to spend more on the maintenance and repair of their

existing vehicles, precisely so that they can use those vehicles to continue to meet a stable level of demand for VMT. In other words, there is no reason to assume that households will reduce their VMT in response to increased new vehicle prices, since many households have substitute options to continue to meet their VMT needs.[14]

In another recent State rulemaking (Maine), different issues related to fleetwide emissions effects arose, which may also be relevant here. In the Maine rulemaking, proponents of the California rule relied on a consumer demand model called "CARBITS" in order to try to predict that the California rule will have little or no significant impact on the rate of fleet turnover. At the outset, it should be noted that the CARBITS model itself predicts a reduction in the rate of fleet turnover, even when unrealistically low cost assumptions for compliance with the California regulation are applied. In addition, there are serious problems with the predictive accuracy of CARBITS, and for the reasons explained below, the Department should not rely upon it in any way in this rulemaking.

First, the CARBITS model is based on relatively old and outdated data. CARBITS was based on surveys conducted in 1993-1997 and on data collected for the 1995 National Personal Transportation Survey. The CARB staff's assumptions about the development of consumer preferences are therefore likely to be significantly less accurate than assumptions based on more recent, available data, such as the data used in the NERA model. The modeling conducted for CARB assumed that trucks in the category called "light duty trucks 2" or "LDT2" will make up just 17 percent of new vehicle sales in 2002; elsewhere, however, the CARB has staff

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[14] These issues raised by MES are addressed in Sierra's report for DEP. To the extent that DEP does not accept Sierra's responses, it should explain in detail why it does not.

acknowledged that actual sales of LDT2s by the six largest manufacturers in California was around 47 percent -- or nearly three times higher than what is assumed in modeling based on CARBITS. Because LDT2 vehicles typically achieve a lower fuel economy on average than passenger cars and some other light-duty trucks, the imposition of very low consumer demand assumptions for those vehicles will lead to inaccuracies in predicting how the greenhouse gas rule will affect fleet-wide emissions of NOx and other pollutants.

Second, during the development of CARBITS critical variables related to consumers' willingness to pay for changes in fuel economy were dropped and the model was modified based on decisions that have never been explained. Those variables are directly related to the analysis of the effects of the greenhouse gas rule on fleet-wide emissions. The model was not fully evaluated by CARB staff, or apparently anyone else, to determine the effect of these modifications. The reasons why such evaluation was not conducted have never been explained despite comments in the record indicating why such an evaluation was necessary.

Third, the CARBITS model uses and produces implausible assumptions about the rate at which older vehicles are retired from the motor vehicle fleet -- called the "scrappage rate." The scrappage rate is central to the analysis of the effects of the greenhouse gas rule on emissions from the motor vehicle fleet as a whole: because older vehicles tend to have higher emissions an extension of their service lives will lead to higher fleet-wide emissions. The limited review of CARBITS that could be performed during the greenhouse gas rulemaking showed that CARBITS generated scrappage patterns inconsistent with actual historical patterns of scrappage. For example, CARBITS suggests that a vehicle of a particular model year is more likely to be scrapped at an early age than when it is older contrary to what is typically observed in the real

world and common sense. Similarly, CARBITS suggests that vehicles of newer model years are scrapped at the same rate as those of older model years, again contrary to what is observed in the real world.

Finally, the claim that the CARBITS model has been peer-reviewed is also incorrect. In point of fact, the authors of CARBITS have denied public access to the source code for the CARBITS model, and the CARB staff has stated that they themselves have never reviewed the source code for the model. By contrast, the source code for the model used by the Alliance to evaluate the market impacts of the California regulation, prepared by National Economic Research Associates, Inc., has been made available. Professional journals in the field of economics typically require data and computer programs to be made available to the public. For example, the American Economic Review has the following general policy:

> It is the policy of the *American Economic Review* to publish papers only if the data used in the analysis are clearly and precisely documented and are readily available to any researcher for purposes of replication. Authors of accepted papers that contain empirical work, simulations, or experimental work must provide to the Review, prior to publication, the data, programs, and other details of the computations sufficient to permit replication. These will be posted on the AER Web site.

Proponents of the California rule are therefore wrong in representing that the CARBITS model has been peer-reviewed or has met the standards for peer review in the economics profession.

B. Safety Issues

The motor vehicle greenhouse gas rule would also compromise traffic safety if one accepts CARB's premise that the California rule would result in nationwide deployment of vehicles designed to comply with the California standards. On that assumption, the least-costly compliance strategies for the California rule will include significant reductions in the weight of

new vehicles.[15] Reductions in vehicle weight have in the past been shown to reduce vehicle crashworthiness. The National Research Council has reported as follows:

> [P]ast downweighting and downsizing of the light-duty fleet, while resulting in significant fuel savings, has also resulted in a safety penalty. In 1993, it would appear that the safety penalty included between 1,300 and 2,600 motor vehicle crash deaths that would not have occurred had vehicles been as large and heavy as in 1976.

National Research Council, *Effectiveness and Impact of Corporate Average Fuel Economy (CAFE) Standards* 28 (2002). To evaluate the related possible effect of the proposed CO2 rule on California traffic safety in 2004, a researcher with expertise in the use of current National Highway Traffic Safety Administration and other predictive models performed a preliminary analysis that assumed some down-weighting of the California fleet to meet the California rule.[16] The results suggested that the proposed rule may cause hundreds of additional deaths once the California fleet is fully populated by vehicles meeting the CO2 requirements. The same risks will exist in Pennsylvania, reduced only by the difference in the number of vehicles and the number of miles traveled in Pennsylvania compared with California.

In this regard, the Alliance also wishes to address the suggestion that because the CARB staff determined that compliance with the California rule would be possible without weight reductions -- which is a disputed proposition -- there would, in fact, be no weight reductions in order to comply with the California rule. The overwhelming evidence in the California

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[15] An analysis demonstrating why weight reductions would be part of a compliance strategy assuming nationwide deployment was prepared by Sierra Research and filed with CARB in 2004. It is included as an Appendix to these comments. *See* Appendix D, Attachment C1 17-20.

[16] *See* Appendix E. Even if one does not assume that the California rule will result in down-weighting, the rule will still have significant adverse affects on traffic safety and congestion. The "rebound effect" will result in increased driving, and with increased driving will come additional congestion and vehicle accidents.

rulemaking was that weight reductions are likely even if they are not in the CARB staff's view necessary, and the Alliance agrees with that evidence. In addition, it has been suggested that there are no safety issues involved in the California rule because vehicles must meet general motor vehicle safety standards. Those standards, however, would be in effect with or without the California rule, and the issue is one of incremental risk. Likewise, studies that relate vehicle safety risks to size or vehicle "footprint" are interesting and relevant, but none of the studies in the California rulemaking or (to the Alliance's knowledge) in this rulemaking undercut the large body of evidence demonstrating the relevance of vehicle mass to safety risk. If the Department is aware of any such conflicting evidence, and chooses to rely upon it here, the Alliance requests an opportunity to review the evidence and to comment before the Department reaches any final conclusions.

IV. Economic Issues Raised by the Proposed Regulation

DEP appears to assume that the major cost of compliance with the California rule will be confined to the increase in the retail price of a new vehicle, and that future savings from reduced gasoline consumption will exceed the up-front costs for the purchaser of a new vehicle. Also implicit in DEP's current approach is an assumption that the only costs incurred by consumers will be reflected in higher retail prices.

A. Consumer Valuation of Future Operating Cost Reductions

Proponents of the greenhouse gas rule sometimes claim that increases in initial purchase prices for new automobiles subject to the regulation might be offset by the reduced operating cost, such as fuel savings, and thus could result in a net savings to the purchaser. Such an assumption is not consistent with mainstream economic analysis of how consumers value energy cost savings, which recognizes that most consumers apply steep discount rates to the value of

future energy cost reductions. One of the most detailed empirical studies indicates that "only 35 percent of the present-value cost savings provided by improved energy efficiency is capitalized in the purchase price of vehicles."[17] The discount rate used in some of the fuel economy benefit calculations in the National Research Council study published in 2002 was 12 percent.[18] None of these studies has been specifically addressed by DEP or (to the Alliance's knowledge) by the proponents of the proposed regulation in Pennsylvania. If DEP believes that a lower discount than one in the 12-percent range is appropriate, it should explain why, and should address each of the studies cited here in detail.

Assuming that a new-vehicle purchaser is behaving rationally, the new-vehicle purchaser will not assume that when she is ready to sell the vehicle into the used-vehicle market, the prospective purchasers will be able to obtain credit at the same loan rate that she can obtain in the new-vehicle market. Particularly in the used-vehicle market, "many automobile purchasers are liquidity constrained, and therefore face implicit discount rates higher than the market level."[19] She will therefore discount the future value of her vehicle in the used-vehicle market using a rate higher than the prevailing rates in the new-vehicle market.

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[17] Howarth, "Fuel Economy Standards," in *Journal of Economic Perspectives,* vol. 18 at 272 (2004), describing Dreyfus *et al.*, "Rates of Time Preference and Consumer Valuations of Automobile Safety and Fuel Efficiency," *Journal of Law & Economics*, vol. 38, at 79-105 (1995). According to Professor Howarth, Dreyfus and Viscusi calculate implicit discount rates for safety and fuel economy attributes that range from 11 to 17 percent.

[18] National Research Council, "Effectiveness and Impact of Corporate Average Fuel Economy (CAFE) Standards," Washington D.C. National Academy Press (2002) at 66. The NRC notes that its calculations and their results "are *not* recommended fuel economy goals." *Id.* (emphasis in original).

[19] Kleit *et al.*, "Increasing CAFE Standards; Still a Very Bad Idea" at 4 (Brookings, June 2004).

B. Opportunity Costs and Loss in Vehicle Utility

The proponents of the greenhouse gas rule also ignore opportunity costs, which are important in any mainstream economic analysis of measures like the California rule. The total costs of such a rule include, for example, the value of the foregone opportunity to purchase a vehicle which may be less fuel-efficient but has other features that a consumer desires more than enhanced fuel efficiency. Such features obviously include vehicle performance, safety, capacity, comfort and aesthetics. The mainstream economic studies that consider these costs are identified in an Appendix to these comments.[20] Those studies are the work of leading analysts in the field of environmental regulation. They establish the importance of estimating consumer welfare losses when assessing the costs of regulations related to fuel consumption. DEP cannot properly ignore such costs that will be borne by Pennsylvania residents. Consumers who buy a vehicle, but who are forced to purchase technology or other features added or subtracted from the vehicle to meet standards that they would not otherwise prefer, incur costs that are real and quantifiable. DEP needs to account for those costs in its regulatory assessment.

C. Availability of Light-Duty Diesel Vehicles in Pennsylvania

Currently, there are several light-duty diesel models offered in the United States, including the Volkswagen Jetta, Golf and Beetle, the Jeep Liberty, and the Mercedes Benz E320. But due to the inflexible nature of the California emission standards, none of these products are available in California. Hence, if the Proposed Rule is adopted, they will not be available in the Commonwealth.

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[20] *See* Appendix A.

While the number of light-duty diesels currently offered in the U.S. is limited, the prospects for future growth are promising. Diesels offer significantly better fuel economy, a factor that has become more important to consumers as gas prices have increased. In fact, in Western Europe, where gasoline prices are considerably higher, diesel sales as a percentage of total new car sales have been as high as 50% recently. It should also be noted that diesels achieve superior fuel economy.

While diesels face challenges at meeting the future Federal Tier 2 emission standards, EPA has structured the Tier 2 program in a way that provides flexibility to accommodate diesels without sacrificing any air quality benefits. Specifically, the Federal program offers eight standard categories or "bins" ranging from zero up to 0.2 grams per mile NOx. Manufacturers can choose from any of the eight bins, as long as the sales-weighted fleet average requirement of 0.07 grams per mile NOx is met, thus ensuring the air quality benefits of the Federal program.

In contrast, when California adopted it LEV II standards, the CARB Board made it clear that it wanted to preclude light-duty diesels from the California market. Going into the Board hearing, the CARB Staff had proposed a TLEV category that was meant to accommodate light-duty diesels. The Staff did not want to preclude light-duty diesels from the California market and given the fleet average NMOG standards, additional categories would not impact emissions. When the motion was made at the Board hearing to eliminate the TLEV category, Deputy Executive Officer Tom Cackette responded as follows:

> The TLEV I, the current standard, can be used to a limited extent to the year 2006, then the program goes away in 2007. It's not available. If you make this motion, it's not available to anybody. I don't think it creates an impossible situation anywhere, but it clearly takes away flexibility and it does in our mind prevent any diesel vehicle we are aware of or can see in the future from complying with the LEV standards.

Nonetheless, the Board approved the motion by a 7-3 vote, with one member abstaining. As a result, the LEV II program contains only four standard categories, ranging up to 0.07 grams per mile NOx, with no standard category to accommodate diesels. *See* 13 C.C.R. § 1961(a)(1).

California has also adopted other emission requirements that serve as barriers to the introduction of light-duty diesels. One such requirement is the NMHC+NOx standard that must be met during the high-speed/high-load "US06" drive cycle. *See* 13 C.C.R. § 1960.1(r). It is worth noting that EPA has recently modified the Federal Tier 2 US06 requirements to better accommodate diesels by adding flexibility without sacrificing emissions. And California has adopted several on-board diagnostic requirements that have not been proven to be feasible, including the catalyst monitoring requirements and the catalyst trap monitoring requirements. *See* 13 C.C.R. § 1968.2(1.5) and 1968.2(15), respectively.

The Board and the Department should explain why eliminating light-duty diesels from the Pennsylvania market is necessary. *See* 71 Pa. Cons. Stat. Ann. § 745.5b(b)(3)(iii).

V. Legal Issues Presented by Adoption of the California Vehicle Regulations

The California rule also raises important legal issues that need to be addressed by the Board and Department as it decides what action to take. As explained below, adoption of the California rule in Pennsylvania would not be consistent with state or federal law. The state and federal law issues are separated to the greatest possible extent, focusing on state law in Section V.A. and on federal law in Section V.B.

A. Requirements of State Law

1. The Proposed Regulations Are Unlawful Because They Will Increase Emissions.

The Department of Environmental Quality and the Environmental Quality Board lack the authority to adopt the proposed regulations, including the greenhouse gas program, because they will increase air pollution in Pennsylvania. The Board's specific grant of authority to regulate motor vehicle emissions, 35 Pa. Cons. Stat. Ann. § 4005(a)(1), provides that regulations issued must be "for the prevention, control, reduction and abatement of air pollution." The necessary showing -- that the proposed regulations will prevent, control, reduce, or abate air pollution -- cannot be made here. And as to the greenhouse gas rules, note even the Department claims they will improve air quality. Quite to the contrary, as discussed in Section III.A. above, the best available evidence shows that adopting the proposed regulations as a whole would increase ozone-forming emissions. Accordingly, the Board and the Department lack the authority to adopt the proposed regulations.[21] *See Machipongo Land and Coal Co., v. Department of Envt'l Resources*, 544 Pa. 271, 277-278 (1996) (applying 42 Pa. Cons. Stat. Ann. § 761 to hold that the

[21] *See also* 35 Pa. Cons. Stat. Ann. § 4004.2(a) ("In implementing the requirements of section 109 of the Clean Air Act, the board may adopt, by regulation, only those control measures or other requirements which are reasonably required, in accordance with the Clean Air Act deadlines, to achieve and maintain the ambient air quality standards or to satisfy related Clean Air Act requirements, unless otherwise specifically authorized or required by this act or specifically required by the Clean Air Act."). The Department and the Board concede that the existing regulations and the proposed regulations were "adopted to assist the Commonwealth in attaining and maintaining health-based National Ambient Air Quality Standards for ground-level ozone." *See also* Proposed Rule (Executive Summary), at 1. Proposed Rule, Preamble ("D. Purpose and Background"), 7, *published in* 36 Pa. Bull. 715 (Feb. 11, 2006) ("This proposed rulemaking is necessary to achieve and maintain the 8-hour ozone NAAQS and to satisfy related CAA requirements."). Clearly then, the Board and the Department lack the authority to adopt rules under Section 4004.2 where federal Clean Air Act ambient air quality standard achievement and maintenance would be frustrated rather than advanced, as is true here.

Commonwealth Court has original jurisdiction over actions for preenforcement review against Commonwealth government agencies and officers, and wields the power to grant relief against such governmental action).

2. The Proposed Regulations Violate the Stringency Limitation.

The proposed regulations are simultaneously less effective at reducing air pollution than the federal Tier 2 program and more stringent than that federal program because of the additional costs imposed on manufacturers. Indeed, even if one fully credits the Board's and the Department's counterfactual view that adoption of the California LEV II program as a whole will bring Pennsylvania additional air quality benefits, the regulations would still be unlawful under state law. That is because the proposed regulations fail to satisfy the "stringency" limitation in 35 Pa. Cons. Stat. Ann. § 4004.2(b) ("Control measures or other requirements adopted under subsection (a) of this section [which governs regulations, like those here, that are designed to satisfy the State's Clean Air Act requirements] *shall be no more stringent* than those required by the Clean Air Act unless authorized or required by this act or specifically required by the Clean Air Act.") (emphasis added). Section 4004.2(b) goes on to list certain exceptions to this stringency limitation. But none are applicable here.

For this reason, the Board and the Department appear to be arguing that the regulations are no more stringent than the existing regulations. *See* Proposed Rule, Preamble ("F. Benefits, Costs and Compliance"),11, *published in* 36 Pa. Bull. 715 (Feb. 11, 2006) ("No new costs will be incurred as a result of the proposed rulemaking compared to the costs that would be experienced without the proposed rulemaking."); Proposed Rule (Executive Summary), at 1 ("The proposed rulemaking continues the existing adoption of the California program and is no more stringent than what is currently required in the existing Pennsylvania regulations and in other states that

have adopted California standards."). That attempted reformulation of the controlling legal standard differs from the stringency limitation imposed by the Legislature in Section 4004.2(b). The stringency analysis Section 4004.2(b) requires is a comparison of proposed Pennsylvania regulations to federal Clean Air Act requirements, not a comparison of proposed Pennsylvania requirements to California's standards, which no State is required to adopt. Moreover, as explained in greater detail below, the California LEV I program currently incorporated into existing Pennsylvania regulations is a legal nullity that can no longer be enforced under the Clean Air Act. Hence, any comparisons to the level of stringency of those regulations is also legally irrelevant.

Finally, it is difficult to see how the Department can even attempt to assert that the California LEV II program that the proposed regulations would adopt is not more stringent than the California LEV I program referenced in the existing regulations. The whole purpose and effect of California's shift from LEV I to LEV II was to impose stronger emissions controls on vehicles with the stated goal of obtaining further emissions reductions. Thus, the assertion of equivalent stringency for the proposed regulations here to the existing Pennsylvania regulations is not accurate even by its own terms.

3. The Greenhouse Gas Program Is Unlawful Because It Does Not Regulate "Air Contaminants."

Additionally, to be lawful the proposed regulations must be targeted at "air pollution" referred to in Section 4005(a)(1) as the general presence of "air contaminants." CO2 is not "air

pollution" because it is not an "air contaminant."[22] CO2 is an odorless, non-toxic, inert gas exhaled by humans and beneficially used by plants to accumulate biomass that causes no direct harm to public health. *See Department of Envt'l Resources v. Pennsylvania Power Co.*, 490 Pa. 399, 414 (1980) (upholding application of a regulation restricting sulfur dioxide emissions (a true "air contaminant") because doing so "serves the legitimate state interest of maintaining the health of the citizenry of this Commonwealth"). Thus, the Board and the Department lack the authority to adopt the California greenhouse gas program.

Even more clearly, the Board and the Department here are proposing to adopt rules that they deem necessary to "implement the provisions of the [federal] Clean Air Act," and as such, those "rules and regulations . . . shall be consistent with the requirements of the Clean Air Act

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[22] "Air contaminant" is defined for purposes of this controlling statute as "[s]moke, dust, fume, gas, odor, mist, radioactive substance, vapor, pollen or any combination thereof." 35 PA. Cons. Stat. Ann. § 4003. Especially by operation of the canon of construction known as *noscitur a sociis* (a word is known by the company it keeps), *see Mountain Village v. Board of Supervisors of Longswamp Township*, 582 Pa. 605, 618 (2005) (applying the canon to invalidate a township fee assessment), the more general terms "gas" and "mist" must be read to refer to gas or mist that causes harm to or has the potential to cause harm to public health, like the other terms on the listing -- "smoke, dust, fume . . . odor . . . radioactive substance, vapor, [or] pollen." *See also id.* § 4003 (defining "air pollution" as the "presence in the outdoor atmosphere of any form of contaminant . . . in such place, manner, or concentration or which may be inimical to the public health, safety or welfare or which is or may be injurious to human, plant or animal life or to property or which unreasonably interferes with the comfortable enjoyment of life or property."). Plainly, what is contemplated is the regulation of substances equivalent to poisons or irritants that can cause injury at their source or when concentrated locally. The *indirect* effects of CO2 emissions as suspected contributors to *global* warming do not qualify. *See also* 68 Fed. Reg. at 52,925 (EPA has "concluded that the CAA does not authorize EPA to regulate for global climate change purposes, and accordingly that CO2 and other GHGs cannot be considered 'air pollutants' subject to the CAA's regulatory provisions for any contribution they may make to global climate change."). If the National government lacks the authority to regulate CO2, in part because it is an international issue, *see id.* at 52,925 n.2, 52,926, then there is even more reason for an individual State within the United States to read its own pollution laws to be similarly constrained, especially when such a reading of state law is itself the most natural reading.

and the regulations adopted thereunder." 35 Pa. Cons. Stat. Ann. § 4005(a)(8). *See also* 35 Pa. Cons. Stat. Ann. § § 4006.5, 4006.6, 4007.4 (closely tying Pennsylvania regulatory authority to federal Clean Air Act programs for acid deposition, hazardous air pollutants, and interstate transport). As described more fully above and in Appendix B of these comments, the proposed rules are demonstrably inconsistent with the federal Clean Air Act. Adoption of the California greenhouse gas rules is preempted by Section 209(a) of the Clean Air Act and by a lack of conformity with the requirements of Section 177 of that same statute. Additionally, EPA has determined that regulation of CO2 emissions under the Clean Air Act is inconsistent with that statute because another federal law, the Energy Policy and Conservation Act ("EPCA"), commits such regulation exclusively to another federal agency -- the Department of Transportation's National Highway Traffic Safety Administration ("NHTSA"). *See* Notice of Denial of Petition for Rulemaking, 68 Fed. Reg. 52,922 (Sept. 8, 2003), *upheld in Massachusetts v. EPA*, 415 F.3d 50 (D.C. Cir. 2005). Recently, in a final rulemaking that set corporate average fuel economy standards for light trucks, NHTSA has agreed with EPA and stated that state attempts to regulate CO2 emissions from vehicles are preempted by EPCA. *See* 71 Fed. Reg. 17,566, 17,654-17,670 (Apr. 6, 2006). There are no federal greenhouse gas rules as such because such because such rules are tantamount to regulating fuel economy, which NHTSA already controls directly under its EPCA authority. The upshot of these two agency decisions and the D.C. Circuit ruling is that the regulation of CO2 from motor vehicles is not authorized by, and therefore not consistent with the Clean Air Act.

4. The Board and Department Must Clarify Whether They Believe the California LEV II Program Is Already Operative Under Pennsylvania Law.

The Board and the Department have been ambiguous about whether they believe that the California LEV II program is already the law of the Commonwealth.[23] Thus, the Board and the Department must clarify their views on the subject, dispelling this ambiguity one way or the other. "As we have often held, the requirement that agency action not be arbitrary or capricious includes a requirement that the agency adequately explain its result." *D&F Alfonso Realty Trust v. Garvey*, 216 F.3d 1191, 1195 (D.C. Cir. 2000), *citing Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983). Next, if the Board and Department express the unambiguous view that the LEV II program is already Pennsylvania law, then they need to explain how such a position is consistent with state and federal law for reasons we summarize below. Failing to do so would make the proposed rulemaking unlawful for a variety of reasons.

The Board should recognize that it would be highly unusual, to say the least, for it to claim that the authority to adopt regulations that automatically incorporate, without further legislative or regulatory action and on an ongoing rolling basis, any amendments that may

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[23] The Board and Department can be read to suggest in the Preamble to the Proposed Rule that regulatory amendments occurring to the California program after 1998 became Pennsylvania law. *See* Proposed Rule, Preamble ("D. Purpose and Background"), 2, *published in* 36 Pa. Bull. 715 (Feb. 11, 2006) ("The purpose of this proposed rulemaking is also to clarify the Program to reflect post-1998 amendments of the California provisions incorporated by reference and to reflect the end of the NLEV compliance option."). Indeed, the statement just quoted is not sufficiently clear to allow the public to determine whether the new proposed rules are designed to accomplish the incorporation of LEV II by reference in the first instance or whether the Board and Department are asserting that amendments to the California program after 1998 are *already* incorporated by reference, and that the new proposed rules merely intend to clarify a preexisting incorporation by reference. The Board and Department thus have an obligation to explain what they mean by this and similar statements and, if they are asserting that an incorporation by reference has already occurred, to explain the legal basis for such a conclusion.

happen to be made to the California program (like the change from LEV I to LEV II). This is true regardless of whether the Board and the Department are claiming that such far-reaching authority was asserted in 1998, or whether such authority is being asserted for the first time in this proposed rulemaking.

There are several reasons why the authority claimed by the Board is legally suspect. *First*, as a state constitutional matter, such a claim would appear to delegate the statutory implementation authority that the Legislature has conferred upon the Board and the Department, *see* 71 Pa. Cons. Stat. Ann. § 745.2(a), to another State's regulatory authorities in violation of Article II, Section 1 of the Constitution of the Commonwealth of Pennsylvania. *See Human Relations Comm'n v. Chester Sch. Dist.*, 427 Pa. 157, 178 (1967), *citing Locke's Appeal*, 72 Pa. 491, 498 (1873) ("That a power conferred upon an agent because of his fitness and the confidence reposed in him cannot be delegated by him to another, is a general and admitted rule.").

Second, it strains credulity to imagine that the Pennsylvania Legislature would establish a carefully crafted and highly detailed legal regime establishing various levels of state review of DEP's proposed regulations by the Commonwealth's Attorney General, by the Independent Regulatory Review Commission, and ultimately by Pennsylvania's courts, and yet allow DEP to authorize by rule a process in which any discretionary amendments *made by CARB* to *California regulations* over which the Pennsylvania government has no control, *automatically* become state law. One would expect a much clearer statement that the Legislature intended to delegate such extraordinary autopilot-like authority to DEP. *See Holtzman v. Zimmerman*, 47 Pa. D. & C. 3d 608, 627 (invoking the clear-statement rule under far less serious circumstances when declining to create an evidentiary privilege); *cf. Gregory v. Ashcroft*, 501 U.S. 452, 462 (1991) (alteration

to the usual constitutional balance between the federal and state government must be made in clear and unmistakable terms).

Third, such an extraordinary assertion of authority seems at odds with federal law. Specifically, any conclusion that the California LEV II program as it is presently constituted already forms part of Pennsylvania law already would be dramatically inconsistent with the notion that a new waiver of preemption was required for the changeover from LEV I to LEV II (indeed, yet another California waiver request regarding the addition to LEV II of the greenhouse gas program is pending at EPA). Otherwise, even in cases where such a preemption waiver were denied, Pennsylvania would be pre-committed, by such a view, to violating the U.S. Constitution's Supremacy Clause.

Finally, such asserted authority is also inconsistent with the Board and Department's concession that in 1998, the Department recognized that further regulatory action would be required before the NLEV program expired at the beginning of model year 2006. See Proposed Rule, Preamble ("D. Purpose and Background"), 5, *published in* 36 Pa. Bull. 715 (Feb. 11, 2006). Requiring further action would be unnecessary if the California program in all its future incarnations had already been adopted into Pennsylvania with the passage of one set of regulations in 1998. Finally, the assertion of such authority stands out in bold contrast to the careful approach of the federal Clean Air Act and NLEV program, neither of which lightly presume or presumed that state authority exists unless negated. Instead, those federal sources of law require, respectively, State Implementation Plans to provide the "necessary assurances" of the existence of state law authority, *see* Clean Air Act Section 110(a)(2)(E), 42 U.S.C. § 7410(a)(2), or State opt ins to the NLEV program to have similarly demonstrated the existence of proper state legal authority, *see* 40 C.F.R. § 86.1705-99(e).

5. The Proposed Regulations' Requirement That California Enforcement Actions Become Automatically Applicable in Pennsylvania Is Unlawful.

The strongest evidence that the Board and the Department in fact contemplate that the California vehicle program, even as administered by California, and even as amended by California, will become Pennsylvania law without additional state action are proposed Sections 126.431(d) (enforcement actions taken by the CARB will apply equally in Pennsylvania) and 126.451 (the Department will monitor and comment on amendments to CARB's program) -- both of which are clearly new innovations to the existing Pennsylvania Clean Vehicles Program.[24] The Alliance questions the legality of the delegation to CARB that Section 126.431(d) represents, and notes that it unlawfully strips manufacturers of their ability in a Pennsylvania court to contest the validity at law of any CARB enforcement action as to Pennsylvania vehicles. *See* 2 Pa. Cons. Stat. Ann. § 703(a) (guaranteeing the ability to question in judicial review the legal basis for Commonwealth agency adjudicatory action).[25]

Section 126.451 is susceptible of being interpreted consistently with the law, but the commentary about the purpose of this provision in the Preamble to the Proposed Rule suggests that its drafters think that the Pennsylvania Department's only role will be to monitor and suggest revisions to CARB-initiated amendments to that state's vehicle program, which, if

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[24] The need to add innovations of this magnitude to the existing program also undermines any argument that the content of those innovations equates to the intent of the original 1998 Pennsylvania Clean Vehicle program, and thus belies a claim that the current proposed rulemaking is simply a clarification of existing Pennsylvania law.

[25] One way that the Department could reduce the practical concerns associated with this issue would be to adopt language similar to Rhode Island's approach by adding the following clause to proposed Sections 126.431(c) and (d): "except where the manufacturer demonstrates to the Department's satisfaction that said action is not applicable to said vehicle."

rejected by CARB, would be binding in Pennsylvania. *See* Proposed Rule, Preamble ("E. Summary of Regulatory Requirements"), 2, *published in* 36 Pa. Bull. 715 (Feb. 11, 2006) ("This amendment is designed to ensure that the Board and other residents of the Commonwealth are informed about changes that might occur in the California program and [be] able fully to appreciate the impact of a CARB rulemaking on residents of this Commonwealth."). As noted, the Alliance believes that allowing CARB rulemakings to, in essence, directly regulate Commonwealth residents, without separate confirmatory legal action in Pennsylvania, is, among other things, an unconstitutional violation of the nondelegation doctrine in Pennsylvania. Finally, it would appear to be an unwise policy to so mechanically tie the law of the Commonwealth to legal changes by a mere administrative agency in a State located on the other side of the country.

6. The Proposed Rulemaking Requires Legislative Review.

In light of the serious issues about the legal authority discussed above under state (and interrelated federal law), and in light of the fact that the position of the Board and the Department is so at odds with that of the federal regulators empowered by the United States Congress, the Board and the Department are under an obligation to explain to the Independent Regulatory Review Commission why the proposed regulations do not actually "represent[] a policy decision of such a substantial nature that [they] require[] legislative review." 71 Pa. Cons. Stat. Ann. § 745.5b(b)(4).

B. Clean Air Act State Implementation Plan ("SIP")-Related Issues and the Status Quo of State Law Concerning the California Vehicle Program

As the Environmental Protection Agency has confirmed, Pennsylvania is under no legal compulsion to adopt the California vehicle program. *See* Letter from Donald S. Welsh, Regional

Administrator to Representative Richard A. Geist, Chairman, House Transportation Committee of Dec. 2, 2005, at 1. Thus, as explained further below, the references to the superseded California program in Pennsylvania's Implementation Plan under the federal Clean Air Act State should be removed consistent with current legal realities. Additionally, the Department should clarify its view of whether the California LEV II program is already part of Pennsylvania law in light of the legal analysis set forth below that taking such a position would violate Section 177 of the Clean Air Act.

In connection with the deliberations concerning pending legislation in the Pennsylvania General Assembly's Senate and House (*see* S.B. 1025 and H.B. 2141) that would repeal the Pennsylvania Clean Vehicles Program or alternatively make Tier 2 a valid compliance alternative, the Departments of Environmental Protection and Transportation initially took the position that Pennsylvania would suffer a loss of its highway funding if were not to adopt the California vehicle program.[26] Soon thereafter, EPA wrote to Pennsylvania Representative Geist, disagreeing with any such claim and stating that "adoption of the CA LEV standards in Pennsylvania is a choice for Pennsylvania to make."[27] Finally, in testimony on December 13, 2005 to a joint session of the Senate Committees of Transportation and Environmental Resources

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[26] *See* Letter from Kathleen A. McGinty, Secretary, Pennsylvania Department of Environmental Protection, to Representatives of October 28, 2005 ("Pennsylvania's Clean Vehicles Program is a federally enforceable part of our State Implementation Plan to meet federal Clean Air Act requirements. Repeal of the program therefore puts us in violation of federal law. The consequences of this violation of federal law for the commonwealth include the loss of 1.6 billion in federal highway funds.").

[27] *See* Letter from Donald S. Welsh, Regional Administrator to Representative Richard A. Geist, Chairman, House Transportation Committee of Dec. 2, 2005, 1 ("Regarding whether passage of HB 2141 would result in application of Federal sanctions against the Commonwealth, I believe it would not.").

& Energy, the Secretaries of the Pennsylvania Departments of Environmental Protection and Transportation made clear their agreement that Pennsylvania *could* choose not to adopt the California program, and in terms of compliance with federal law would simply need to apply for a State Implementation Plan ("SIP") amendment in due course.[28] *See* Letter from Senators Roger Madigan and Mary Jo White to John R. McGinley, Jr., Chairman, Independent Regulatory Review Commission of March 27, 2006 ("Subsequently, DEP changed its argument, conceding the Pennsylvania can in fact maintain the federal Tier II standards . . . ."). In light of this, the Board and the Department should confirm collectively the obvious point that Pennsylvania is under no federal legal compulsion to adopt the California vehicle program, which includes the greenhouse gas program.

Next, the Board and the Department should acknowledge that SIP modeling demonstrations the Department has filed with EPA, pre- and post- the onset of model year 2006, have relied on the federal Tier II program being applicable in Pennsylvania. *See, e.g.*, Final Pittsburgh-Beaver Valley Area Ozone Maintenance Plan and Request for Redesignation as Attainment for Ozone, Executive Summary, vii (May 15, 2001) ("The following are state and federal emission reduction strategies adopted since 1990 that are included in this plan: * * * * EPA's Tier 2/low sulfur gasoline program for light-duty vehicles."). The undeniable reality is that since the Tier 2 program became effective for model year 2004 this is the program the

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[28] *See* Transcript of Hearing (Dec. 13, 2005), at 18:16-22, 27:11-14 ("Senator Mary Jo White: "What we are talking about here is whether we go with a California design standard or whether we adopt the federal Tier II car regulations, which most of the states in the country have done. I assume you agree with that statement? Secretary McGinty: Yes. . . . . So the process, Senator, that would unfold, if the legislature directed that the Pennsylvania Clean Vehicles Program be repealed, then we would have to embark upon the process laid down in federal law [for SIP amendment].").

Department has been functionally applying to vehicle sales in the Commonwealth. *See* Letter from Senators Roger Madigan and Mary Jo White to John R. McGinley, Jr., Chairman, Independent Regulatory Review Commission of March 27, 2006 ("Our belief is that DEP has failed to revisit the current regulation in a timely fashion to incorporate federal Tier II standards, and that proposed regulation #7-398 is actually a conscious decision to codify the California standard in Pennsylvania's regulations.").

Together those two concessions would establish that correcting the formal SIP on file with EPA would be a ministerial matter. No new modeling demonstrations would need to be made. No emissions substitutes would need to be identified. In short, the Department should acknowledge that it was error, after the Department made the viable decision to select and apply the Tier 2 program beginning in model year 2004, for it not to take steps to correct the SIP on file with EPA, which indicated only that Pennsylvania's participation in the National Low Emissions Vehicle ("NLEV") program would expire at the end of model year 2005.

The Board and the Department may incline to the view that such a clarification is unnecessary in light of the proposed rulemaking, which would adopt the California LEV II program and alter the status quo in a way that would make SIP amendment unnecessary. The reason why making such a clarification and filing conforming SIP corrections with EPA *is necessary* is that Board and the Department cannot predict exactly when or whether the proposed regulations will become final. In the meantime, there is no reason for the Department not to correct an inaccurate SIP on file with EPA that misstates the vehicle program currently operative in Pennsylvania. Indeed, in light of the lawsuit filed against the Department seeking improperly to enforce such an inaccurate SIP provision, *see Clean Air Council v. McGinty*, Civ. Action No. 06-741-RK (E.D. Pa.), the Board and Department should have every reason to want to

expeditiously file corrective SIP papers with EPA, especially to eliminate any possibility the suit might limit the Commonwealth's discretion to choose either the federal Tier 2 program or the California LEV II program for Pennsylvania -- discretion both EPA and the Secretary of the Department of Environmental Protection have acknowledged exists.[29] Here, the Secretary and the Board must separate its expressed policy preference for the California LEV II program, in the form of the Proposed Rule, from its legal duties to defend the interests and prerogatives of the Commonwealth -- particularly its duties to preserve the discretion of the elected representatives of the citizens of Pennsylvania. It is clearly up to the Legislature to make a democratic choice for the Commonwealth if it sees fit, even if that choice is contrary to what the Department might prefer.

One reason the Board and the Secretary may not have taken the steps to file corrective SIP paperwork with EPA is that both agencies fully understand that the existing Pennsylvania Clean Vehicles Program, incorporating as it does, the California LEV I program, can no longer be enforced or in any way be applied in Pennsylvania as a matter of federal law. The reason for this is that regulatory amendments to the California program made by California must be

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[29] *See also* Letter from Senators Roger Madigan and Mary Jo White to John R. McGinley, Jr., Chairman, Independent Regulatory Review Commission of March 27, 2006 ("Through a disjointed argument, DEP now claims that the California vehicle emission standard is in fact effective in Pennsylvania for Model Year 2006. However, with regard to regulation #7-398, DEP has proposed to delay the implementation of the California standard for two years, until Model Year 2008. If DEP's current interpretation is to be believed, then the department has offered no reason to substantiate why it is proposing to postpone implementing the California standard, when, per its own argument, the automobile industry and consumers have had advance notice of its effective date for nearly eight years. We note that while most environmental and health organizations have refused to challenge DEP's effort to 'postpone' the effective date of the California vehicle emission standard, two groups . . . have filed suit in federal court seeking immediate implementation of the California vehicle emission standard. Ironically, both filed suit after praising DEP's intention to promulgate regulation #7-398.").

specifically adhered to by States attempting to use Section 177 to adopt that program into their own law, under the "identicality" requirement of that provision in the Clean Air Act. *See Association of Int'l Auto. Mfrs., Inc. v. Commissioner, Mass. Dep't of Envt'l Protection*, 208 F.3d 1 (1st Cir. 2000); *American Auto. Mfrs. Ass'n v. Cahill*, 152 F.3d 196 (2d Cir. 1998). Those cases invalidated as preempted under the Supremacy Clause Massachusetts' and New York's attempts, respectively, to borrow under Section 177 a California emissions program that had since been repealed. The logic of their holdings applies equally to a situation in which California supersedes its then-operative vehicle program and replaces it with another such program, as occurred in the changeover from LEV I to LEV II.[30] Thus, the proposed rulemaking here attempting to adopt LEV II must be acknowledged as a regulatory change necessary to achieve that objective, and not as a voluntary "clarification" that LEV II is already state law, which the Preamble to the proposed rule occasionally suggests. If the Board and the Department agree that the LEV I program cannot be enforced or attempted to be enforced in Pennsylvania, and that is the reason why they have not sought a SIP amendment, then they have an obligation to declare as much explicitly. Furthermore, even if that legally accurate position is properly announced by the Board and the Department in the process of responding to significant regulatory comments, they should nevertheless make Pennsylvania's formal, and currently inaccurate SIP on file with EPA conform to that position, or explain why they are choosing not to do so.

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[30] The Board and Department concede as much by accurately reciting the procedural history of the California program, and in particular the fact that even prior to the addition of the California greenhouse gas program to LEV II, the California program required two *separate* waivers of preemption from EPA -- one for LEV I and one for LEV II. Proposed Rule, Preamble ("D. Purpose and Background"), 5, *published in* 36 Pa. Bull. 715 (Feb. 11, 2006). For the very same reason, adoption of the LEV II program in Pennsylvania requires separate legislative or regulatory action in the Commonwealth.

C. Federal Legal Issues

The issues presented by the proposed adoption of the California greenhouse gas rule in Pennsylvania under federal law are addressed in detail in Appendix B of these comments. As indicated in Appendix B, Pennsylvania and other States cannot lawfully adopt and enforce the California greenhouse gas rule. The main issues arising under federal law are briefly summarized below.

1. The Energy Policy and Conservation Act.

The federal fuel economy statute, the Energy Policy and Conservation Act ("EPCA"), provides that "no State ... shall have authority to adopt or enforce any law or regulation related to fuel economy standards" once the federal regulations are in place. 49 U.S.C. § 32919(a). The Supreme Court has authoritatively construed such use of the term "standards" to mean "that which 'is established by authority, custom, or general consent, as a model or example; criterion; test.'" *Engine Mfrs. Ass'n v. S. Coast Air Quality Mgmt. Dist.*, 541 U.S. 246, 252-53 (*quoting* Webster's Second New International Dictionary 2455 (1945)). Thus, any regulation "related to" a fuel economy "model," "criterion" or "test" is expressly preempted by EPCA. The California greenhouse gas standard is such a regulation. (*See* Appendix B at 8-21.)

The attempts by some proponents to respond to EPCA's preemption provisions generally emphasize the claim that the intent of the California rule is not to regulate fuel economy directly, but instead to achieve other objectives. Those arguments ignore the practical, real-world impacts of the regulations on the industry and on consumers. In this connection, the Department needs to take a position on several fundamental issues, and explain its position in full.

First, the Department needs to state whether it does or does not expect the California rule to require any change in the fuel economy of vehicles that will be sold in Pennsylvania -- either

on an individual model basis, or fleet-wide. The Alliance assumes from the work performed to date that the Department expects such changes because the Department is predicting reductions in greenhouse gases. In addition, the Department needs to explain whether it expects such reductions in the future from both passenger car and truck models or fleets. Again, it appears that the Department expects such changes from both cars and trucks.

Second, the Department needs to take a position on the scope of preemption under the federal fuel economy statute. In particular, the Department needs to explain whether it believes that the federal law permits a State to establish requirements that have the effect of creating more stringent fuel economy requirements within a State than those that would obtain in the absence of the State requirements. In addition, the Department would need to explain under what circumstances, if any, the federal fuel economy could impliedly, rather than expressly, preempt a state regulation that had the effect of requiring fuel economy levels different from those that would obtain under federal law

The issues presented above are important because some proponents of the California rule have suggested that California's authority under the Clean Air Act, and section 177 of the Clean Air Act, permit adoption of a rule denominated as an "emission standard" so long as the rule does not refer expressly to fuel economy standards, and/or if the rule only sets requirements more stringent than those under the federal fuel economy law. Those proponents of the California rule -- or the Department, if it decides to proceed with the regulation -- need to indicate whether federal preemption under the fuel economy statute can be avoided simply by the terminology used in the rule or by a determination by the relevant state agency that the rule is no less stringent than federal standards.

2. The Clean Air Act

The California greenhouse gas standards also raise a number of issues under the federal Clean Air Act. Section 209(a) of the Clean Air Act broadly preempts "any standard relating to the control of emissions from new motor vehicles or new motor vehicle engines." *See* Clean Air Act § 209(a), 42 U.S.C. § 7507(a). While California can seek a waiver of federal preemption for some types of standards, its standards must be consistent with federal standards. EPA has, however, determined that the Clean Air Act does not permit federal regulation of motor vehicle greenhouse gases. *A fortiori*, California lacks the power to adopt and enforce its own greenhouse gas regulation, and thus no other State can opt into such standards. For its part, Pennsylvania is certainly not compelled by the Clean Air Act to participate in the California regulation, and Pennsylvania could not in any event enforce the fleet average CO2-equivalent standards contained in the new regulation.

3. Other Provisions of Federal Law

Because greenhouse gas emissions pose a global problem, the United States has recognized the need for a global solution. Over the past two decades, the United States, through statutes, treaties, and executive action, has determined that international commitments represent the only effective way to reduce the global production of CO2 emissions and to share that burden fairly throughout the world. Unilateral efforts by individual States to reduce motor vehicle CO2 emissions will frustrate established foreign policy. The foreign affairs power and the Supremacy Clause of the U.S. Constitution therefore preempt the proposed regulation. In addition, the California motor vehicle greenhouse regulation is invalid under the Dormant Commerce Clause of the U.S. Constitution because it excessively burdens interstate commerce in "relation to [its] putative local benefits." *Pike v. Bruce Church, Inc.* 397 U.S. 137, 142 (1970). In *Pike*, the

Supreme Court held that when a state regulation -- even a facially neutral regulation -- effects interstate commerce, the detriments to interstate commerce cannot "clearly outweigh the benefits to legitimate local public interests." *Id.* The question becomes one of degree: "the extent of the burden that will be tolerated will of course depend on the nature of the local interest involved." *Id.* The California greenhouse gas standards would not pass the test in *Pike*. (*See* Appendix B at 27.)

VI. Miscellaneous General State Law Issues

A. Exemption for Out-of-State Dealers

Pennsylvania's proposed rule includes an exemption for light-duty vehicles purchased or leased from an out-of-State dealer by a resident of this Commonwealth for the personal use of the resident and not for immediate resale. *See* Proposed Rule Section 126.413(a)(14). This exemption is not necessary, will result in a competitive disadvantage for Pennsylvania dealers, reduce the already minimal benefits of the program, and will make it difficult to enforce Pennsylvania's Clean Vehicles Program.

In 2002, EPA updated their guidance document on their "Policy on Cross-Border Sales of California Certified Vehicles for 2004 and Later Model Years" (CCD-02-11). This is the policy by which all other States that have adopted California standards abide. The Alliance recommends that Pennsylvania's implementation be consistent with this policy. EPA's guidance document allows a Pennsylvania dealer to sell a California vehicle to any customer. Likewise, it allows a dealer from a contiguous state to sell a California vehicle to any customer. Therefore, a dealer in a state contiguous to Pennsylvania may order California vehicles to sell to Pennsylvania residents.

By contrast, the proposed exemption will encourage Pennsylvania residents to drive across the border to purchase federal Tier 2 vehicles, especially as the cost of meeting the California standards continue to increase. This will put Pennsylvania dealers at a competitive disadvantage compared to the dealers across the state line. Also, as residents buy non-California vehicles for registration in the Commonwealth, there would be reduced emissions benefits (as the Department has purported to calculate them), which could reduce the amount of SIP credit EPA provides. Finally, it would make it very difficult for the vehicle registration office to determine what vehicle is allowed depending on where the vehicle was purchased.

For all of these reasons, the Alliance recommends that if this rulemaking goes forward, this exemption should be removed and Pennsylvania should implement the program consistent with EPA's Cross-Border Sales Policy and with the programs of other States that have adopted California standards.

B. Emission Warranty Reports

Pennsylvania's proposed rule (*see* Proposed Section 126.413(b)) requires manufacturers to submit failure of emissions-related components reports, accepting copies of the California reports for the purpose of compliance. However, we do not believe that Pennsylvania will find much value in these reports because, regardless of whether Pennsylvania receives this report or not, the Department proposes that emissions-related actions (e.g. recalls) taken in California will also be taken in Pennsylvania. Thus, if the policy of making California recalls applicable in Pennsylvania is adopted, the Alliance recommends that to save Pennsylvania and manufacturer resources, failure of emissions-related component reports should only be submitted upon specific request. This is consistent with the approach taken in other States that have adopted California standards.

C. Registration Enforcement

In order to get full State Implementation Plan ("SIP") credit, the Alliance recommends that, if this rulemaking goes forward, Pennsylvania establish a registration enforcement process. Manufacturers print a statement on the Certificate of Origin that a vehicle is certified for sale to California standards. This certificate is delivered with each new vehicle. This is the document which is shown during registration to prove that the vehicle is certified to California emissions standards.d This registration enforcement process has been successfully implemented in New York, Massachusetts, and Vermont. Maine has not implemented a registration enforcement process. As a result, Maine did not receive full SIP credit.

VII. Conclusion

The proposed amendment to Pennsylvania's motor vehicle emissions regulation will not have any significant effect on the condition of concern -- global climate change -- and would interfere with national management of the country's efforts to coordinate greenhouse gas policies at the international level. In addition, implementation of the rule will substantially increase emissions of criteria pollutants from motor vehicles in Pennsylvania, and would conflict with state and federal law. For the foregoing reasons, the Alliance recommends that DEP withdraw the proposed regulation, and rely instead on the federal motor vehicle control program.

Respectfully submitted,

ALLIANCE OF AUTOMOBILE MANUFACTURERS