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## GEORGE MASON UNIVERSITY

### REGULATORY STUDIES PROGRAM

### **Public Interest Comment on the Environmental Protection Agency's Request for Comment on a Petition: Control of Emissions From New and In-use Highway Vehicles and Engines<sup>1</sup>**

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The Regulatory Studies Program (RSP) of the Mercatus Center at George Mason University is dedicated to advancing knowledge of the impact of regulation on society. As part of its mission, RSP conducts careful and independent analyses employing contemporary economic scholarship to assess rulemaking proposals from the perspective of the public interest. Thus, this comment on a petition requesting that the Environmental Protection Agency control emissions from new and in-use highway vehicles and engines does not represent the views of any particular affected party or special interest group, but is designed to evaluate the effect of possible responses to this petition on overall consumer welfare.

On January 23, 2001, (66 FR 7486) the Environmental Protection Agency (EPA) published in the *Federal Register* a request for comment on a petition submitted by the International Center for Technology Assessment (CTA) and a number of other groups.<sup>2</sup> The petition requests that EPA regulate certain greenhouse gas emissions: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), and hydrofluorocarbons (HFCs) from new motor vehicles and engines under section 202(a)(1) of the Clean Air Act (CAA).

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<sup>1</sup> Prepared by Kameran L. Bailey, Associate Director, Mercatus Center. This comment is one in a series of Public Interest Comments from Mercatus Center's Regulatory Studies Program and does not represent an official position of George Mason University.

<sup>2</sup> The eighteen other groups are: Alliance for Sustainable Communities, Applied Power Technologies, Bio Fuels America, California Solar Energy Industries, Clements Environmental Corporation, Environmental Advocates, Environmental and Energy Study Institutes, Friends of the Earth, Full Circle Energy Project, Inc., Green Party Rhode Island, Greenpeace U.S.A., Network for Environmental and Economic Responsibility of the United Church of Christ, New Jersey Environmental Watch, New Mexico Solar Energy Association, Oregon Environmental Council, Public Citizen, Solar Energy Industries Association, and the SUN DAY Campaign.

## **I. Introduction**

On October 20, 1999, CTA headed a coalition of 19 organizations to petition EPA to act on its “mandatory duty” to regulate certain greenhouse gas emissions from new motor vehicles and engines under Section 202(a)(1) of the CAA.<sup>3</sup> The petition asserts that 1) greenhouse gas emissions qualify as “air pollutants” as defined in the CAA and 2) these emissions contribute to air pollution that is “reasonably anticipated to endanger public health or welfare.” Under Section 202 (a)(1) of the CAA, “[t]he Administrator shall by regulation prescribe (and from time to time revise) in accordance with the provisions of this section, standards applicable to the emission of any air pollutant from any class or classes of new motor vehicles or new motor vehicle engines, which in his judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare.”<sup>4</sup>

The petition raises three key questions:

1. Are the four greenhouse gases “air pollutants” as defined by the CAA?
2. Have emissions of these gases been determined to accelerate global warming?
3. Do these emissions “cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health and welfare,” and does this statutory language contemplate a “precautionary” approach, as petitioners suggest?

We briefly summarize the debate regarding each of these questions below. Based on this review, we offer recommendations for responding to the petition that are consistent with protecting the interest of American citizens.

## **II. Are greenhouse gases “air pollutants” as defined by CAA Section 302(g)?**

In an April 10, 1998, memorandum to EPA Administrator, Carol Browner, EPA General Counsel, Jonathan Z. Cannon, observed that the broad definition of “air pollutant” in Section 302(g) “includes any physical, chemical, biological, or radioactive substance or matter that is emitted into or otherwise enters ambient air.” He also opined that CO<sub>2</sub>, when emitted from electric power generating units, falls within the definition of “air pollutant” under section 302(g) of the CAA.

Some disagree with this opinion, pointing out that CO<sub>2</sub> occurs naturally in ambient air and in fact is exhaled by humans. Moreover, Congress has debated the need to regulate

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<sup>3</sup> International Center for Technology Assessment, et al., Petition for Rulemaking and Collateral Relief Seeking the Regulation of Greenhouse Gas Emissions from New Motor Vehicles Under Section 202 of the Clean Air Act, October 20, 1999, available at [www.icta.org/legal/ghgsum.htm](http://www.icta.org/legal/ghgsum.htm).

<sup>4</sup> Clean Air Act § 202(a)(1), 42 U.S.C. § 7521(a)(1).

greenhouse gas emissions, particularly CO<sub>2</sub>, under the CAA and made a positive determination against a regulatory approach.<sup>5</sup>

We defer to legal scholars in the debate over the definition of “air pollutant” in the CAA, but we note that whether these four pollutants meet the definition appears not to be resolved. While the definition in section 302(g) is broad, other statutory language raises questions about whether they should be regulated as such. This is discussed further below.

### **III. Have emissions of these gases been determined to accelerate global warming?**

Greenhouse gas emissions are directly linked to the hotly debated issue of global warming. A premise behind the petition is the notion that increasing levels of these gases in the atmosphere warm the earth by making the atmosphere less transparent to outgoing (infrared) radiation while remaining fully transparent to incoming (visible) solar radiation. Controversy surrounds the science of global warming, however, resulting in differing opinions on almost every facet of the issue. Questions still left unanswered include the role of water vapor in the earth’s temperature, the reliability of temperature data and climate modeling, and the potential impacts, positive or negative, of a modest warming should this occur.

But by far the most contentious issue centers around the human release of greenhouse gas emissions and their impact on the earth’s atmosphere. The CTA petition requesting rulemaking regarding greenhouse gas emission from new motor vehicles implies a sense of certainty linking the human release of greenhouse gases to global warming. Many scientists have challenged this assertion.

The Oregon Institute of Science and Medicine issued a statement signed by 17,000 scientists saying in part, "there is no convincing scientific evidence that human release of carbon dioxide, methane, or other greenhouse gases is causing or will, in the foreseeable future, cause catastrophic heating of the Earth's atmosphere and disruption of the Earth's climate."<sup>6</sup>

Another study conducted in 1997 surveyed 36 climatologists who were retained by state governments to research climate issues and found 58 percent disagreed with the statement, “global warming is for real” while 36 percent, agreed. Even more telling was that 89 percent agreed that, "current science is unable to isolate and measure variations in global temperatures caused only by man-made factors."<sup>7</sup>

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<sup>5</sup> For a more detailed discussion see, Westernfuels’ Response to the Working Group, <http://www.westernfuels.org/news/120199%20Response.htm>.

<sup>6</sup> For details on the Oregon Institute of Science and Medicine petition project please see <http://www.oism.org/pproject/s33p41.htm>.

<sup>7</sup> American Viewpoint, "Survey of State and Regional Climatologists, September-October 1997, Annotated Questionnaire," October 1997.

In 1998, Jim Hansen, the climatologist most associated with the predictions of global warming, stated that “anthropogenic greenhouse gases (GHGs), which are well measured, cause a strong positive (warming) forcing, but other, poorly measured anthropogenic forcings, especially changes of atmospheric aerosols, and land-use patterns, cause a negative forcing that tends to offset greenhouse warming.”<sup>8</sup>

And, recently in a sworn affidavit submitted in federal litigation a senior EPA official acknowledged that global warming is a theory, rather than fact and EPA has yet to make a formal determination on CO<sub>2</sub> based global warming.<sup>9</sup> Researchers and modelers continue to investigate this theory and its implications.<sup>10</sup> However, they have not yet reached consensus on (1) the link between anthropogenic emissions and global temperatures, (2) the degree of warming that can be expected in future years, or (3) the impact of warming on public health and welfare.

#### **IV. Do these emissions “cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health and welfare?”**

The CTA petitioners do not argue that the greenhouse gas emissions themselves endanger public health and welfare, nor that air pollution from these emissions does. Rather, they and other advocates of action to curb global warming rely on the more indirect argument that emissions will enhance the greenhouse effect, leading to a warming planet that will create ideal conditions for the spread of infectious disease—such as malaria, dengue fever, and encephalitis—putting millions at risk.<sup>11</sup> They also warn against the expected extreme weather patterns that will result in flooding, droughts, and long periods of deadly temperatures resulting in added human health risks.<sup>12</sup> Thus, to support the claim that these emissions must be regulated under the CAA because they are reasonably anticipated to endanger public health and welfare, one must accept a series of uncertain and tenuous linkages:

First, that emissions will alter global temperatures;

Second, that these temperature changes will result in undesirable weather conditions; and

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<sup>8</sup> James E. Hansen, et al., “Climate Forcings in the Industrial Era.” *Proceedings of the National Academy of Sciences*, vol. 95, issue 22 (October 1998), p. 12753.

<sup>9</sup> William White aff. for Horner v. EPA, D.C. D Ct. CA 00-00535 ¶3. Affidavit on file with author.

<sup>10</sup> For additional detail on the scientific uncertainty see, Robert Bradley, *Julian Simon and the Triumph of Energy Sustainability*, American Legislative Exchange Council, 2001. \*\*\*add some more studies

<sup>11</sup> International Center for Technology Assessment, et al., Petition for Rulemaking and Collateral Relief Seeking the Regulation of Greenhouse Gas Emissions from New Motor Vehicles Under Section 202 of the Clean Air Act, October 20, 1999, available at [www.icta.org/legal/ghgsum.htm](http://www.icta.org/legal/ghgsum.htm). Also, see <http://www.sierraclub.org/globalwarming/health/disease.asp>.

<sup>12</sup>Ibid.

Third, that these temperature changes and weather conditions will increase disease and other health threats that will endanger public health and welfare.

A new book from the American Legislative Exchange Council provides a comprehensive examination of the evidence regarding global warming, and offers several interesting observations. First, it notes that the evidence regarding global warming is mixed, and that, as forecasts of anthropogenic warming get more refined, they predict less extreme warming.<sup>13</sup> The empirical evidence reviewed in this book also offers no scientific basis for dire predictions of rampant tropical diseases etc. On the contrary, data suggest that any warming that does occur will likely be at night, in the winter and near the poles. If a slight warming does occur, historical evidence suggests it is likely to be beneficial, stimulating plant growth and making humans better off.

Do these emissions “cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health and welfare?”

The CTA petition appears to recognize that the linkages required to make the argument that the emissions endanger public health and welfare are uncertain. It argues that when determining what constitutes endangering public health or welfare, the “may reasonably be anticipated” language of the CAA allows the Administrator to take a “precautionary” approach. It concludes that, “the precautionary purpose of the CAA supports” regulating these gases even in the face of scientific uncertainty regarding their effects.

The precautionary principle or the “better safe than sorry” approach is being used increasingly to address risks, especially those in the environment, health, and safety arena. Applied to the issue of global warming the argument is: if increasing greenhouse gas concentrations potentially increase the risk to human health and the environment; then regulatory measures need to be taken to prevent or reduce greenhouse concentrations, even if the risks have not been demonstrated scientifically. What this approach focuses on is the risks associated with inaction (failure to regulate greenhouse gases), but it ignores the risks associated with action (regulation of greenhouse gases). The assumption is that there are no risks associated with regulating greenhouse gases.

Proponents of applying the precautionary approach to greenhouse gas emissions argue that action to reduce these gases offers an insurance policy against future global warming risk. However, insurance comes at a price, and as with any insurance policy, the cost of the premium should not exceed the expected benefits from the protection.<sup>14</sup> Regulating greenhouse gas emissions from new motor vehicles would impose significant costs on American consumers, and not just in the form of higher vehicle prices. For example, to the extent that regulations would encourage consumers to buy smaller cars, they may result in an increased severity of traffic accident injuries.

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<sup>13</sup> Robert Bradley, *op. cit.*

<sup>14</sup> For estimates of direct and indirect costs associated with restricting CO2 see, Mark P. Mills, “A Stunning Regulatory Burden: The EPA Designating CO2 As a Pollutant.” Mills, McCarthy & Associates Inc. <http://www.fossilfuels.org/pdf/MMAFINAL2.pdf>.

It is also important to recognize that regulatory costs themselves affect public health. Regulation to reduce these emissions will cause disposable family income to decline. Whenever government actions reduce real family income levels, noted Supreme Court Justice Stephen Breyer, “that deprivation of real income itself has adverse health effects, in the form of poorer diet, more heart attacks...”<sup>15</sup> Studies linking income and mortality find that every \$15 million decline in income induces one statistical death.<sup>16</sup>

Nothing in the statutory language directs EPA to take action without considering the consequences of that action on public health and welfare. EPA should carefully examine the potential effects on public health and welfare of taking action to control these emissions from vehicles, as well as the potential health and welfare effects of not taking action. Without a better understanding of these risks, the link between emissions of these greenhouse gases and public health and welfare effects is too tenuous to warrant action under the CAA. The costs of taking a precautionary approach are all too real.

## V. Conclusion and Recommendation

The CTA coalition argues that EPA has a “mandatory duty” to regulate certain greenhouse gas emissions from new motor vehicles and engines under Section 202(a)(1) of the CAA.<sup>17</sup> In a petition to the agency, it asserts that 1) greenhouse gas emissions qualify as “air pollutants” as defined in the CAA and 2) these emissions contribute to air pollution that is “reasonably anticipated to endanger public health or welfare.”

EPA should deny the petition for several reasons.

1. Legal controversy exists over whether greenhouse gases are air pollutants as defined by Section 202(1) of the CAA. Although the EPA General Counsel opined that CO<sub>2</sub> fits the definition of an air pollutant in a 1998 memorandum, efforts to regulate CO<sub>2</sub> and greenhouse gases explicitly defy the wishes of Congress.
2. The evidence regarding global warming and human contribution to it is mixed, and as forecasts of anthropogenic warming get more refined, they predict less extreme warming.

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<sup>15</sup> Stephen Breyer, *Breaking the Vicious Circle--Toward Effective Risk Regulation* (Cambridge, Mass: Harvard University Press, 1993), p. 23.

<sup>16</sup> Randall Lutter, John F. Morrall, III, and W. Kip Viscusi, "The Cost-Per-Life-Saved Cutoff for Safety-Enhancing Regulations", *Economic Inquiry*, 37, (4): 599-608, (October 1999). See also, Lutter & Morrall, *Journal of Risk and Uncertainty*, 8:43-66 (1994) and Keeney, "Mortality Risks Induced by Economic Expenditures," *Risk Analysis* 10(1), 147-159 (1990).

<sup>17</sup> International Center for Technology Assessment, et al., Petition for Rulemaking and Collateral Relief Seeking the Regulation of Greenhouse Gas Emissions from New Motor Vehicles Under Section 202 of the Clean Air Act, October 20, 1999, available at [www.icta.org/legal/ghgsum.htm](http://www.icta.org/legal/ghgsum.htm).

3. Petitioners do not argue that greenhouse gas emissions directly endanger public health and welfare, but rather that, by increasing global temperatures they will indirectly have negative effects. There is little, if any, scientific support for dire predictions that warming temperatures will result in rampant tropical diseases etc. On the contrary, if a slight warming does occur, historical evidence suggests it is likely to be beneficial, occurring at night, in the winter, and at the poles. Taking “precautionary action” to protect human health based on a series of tenuous linkages would likely create a new set of risks.
4. Congress has debated the need to regulate greenhouse gas emissions, particularly CO<sub>2</sub>, under the CAA, and made a positive determination against a regulatory approach. Discussions to limit greenhouse gas emissions originated in the late 1970’s and since then, Congressional committees have held numerous hearings and Congress has enacted several major legislative items dealing with potential global climate change both. Despite this lengthy and intensive consideration, Congress has consistently rejected measures to restrict greenhouse gas emissions.<sup>18</sup>

Neither the science nor sound public policy requires EPA to accept petitioners’ arguments. The science surrounding the issues raised by petitioners are not resolved, as noted above. Furthermore, it is not in the public interest to undermine the expressed will of our elected officials, who have repeatedly examined the question of whether to regulate these gases as air pollutants and chosen not to.

The best “precautionary” approach to uncertain global warming is to free up barriers to innovation and adopt policies that encourage human ingenuity and technology that will permit us to mitigate any harmful climatic trends that may emerge, from whatever cause, and in whatever direction.<sup>19</sup>

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<sup>18</sup> For a more detailed discussion see, Westernfuels’ Response to the Working Group, <http://www.westernfuels.org/news/120199%20Response.htm>.

<sup>19</sup> For specific policy recommendations see, Jonathan Adler et. al. Greenhouse Policy Without Regrets A Free Market Approach to the Uncertain Risks of Climate Change, Competitive Enterprise Institute, July 2000. <http://www.cei.org/MonoReader.asp?ID=1081>.