

# Institute for Policy Integrity

## New York University School of Law

June 22, 2009

VIA ELECTRONIC SUBMISSION

Hon. Lisa P. Jackson, Administrator  
United States Environmental Protection Agency  
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Subject: Comments on Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 18886 (Apr. 24, 2009), Docket ID No. EPA-HQ-OAR-2009-0171

Dear Administrator Jackson:

We strongly support EPA's proposed findings that motor vehicle emissions of greenhouse gases contribute to dangerous air pollution. The following comments both express our support and highlight some important issues for EPA to consider as the agency moves forward.

The Institute for Policy Integrity (IPI) at New York University School of Law is a non-partisan advocacy organization and think-tank dedicated to improving the quality of government decision-making in the areas of environmental, public health, and safety regulation. IPI advocates using rational economic analysis as a tool to advance socially-beneficial regulation. Recently, IPI published an in-depth analysis of the Clean Air Act entitled *The Road Ahead: EPA's Options and Obligations for Regulating Greenhouse Gases*.<sup>1</sup> Some of the key conclusions from that report are summarized in these comments, and the full report has also been attached.

We generally concur with the legal conclusions drawn by EPA in its proposed findings. For example, we agree that defining greenhouse gases collectively as a single "air pollutant" is consistent with both statutory requirements and sound policy. On the other hand, we do not believe EPA has a strict legal obligation to find that greenhouse gases specifically endanger public health in addition to public welfare, and we hope EPA will fully consider the potential consequences before finalizing that determination. Additionally, these comments call EPA's attention to some legal obligations that will not be satisfied by the proposed endangerment findings alone.

### **Consequences of Defining "Public Health" to Include Indirect Effects**

Like several sections of the Clean Air Act, Section 202(a) mandates that EPA regulate "air pollution which may reasonably be anticipated to endanger public health *or* welfare."<sup>2</sup> Section 202(a)—which focuses on the regulation of new motor vehicles—does not significantly distinguish between pollutants that threaten health and those that threaten welfare: the same statutory procedures apply to the regulation of all dangerous motor vehicle pollutants.

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<sup>1</sup> NIMAI M. CHETTIAR & JASON A SCHWARTZ, *THE ROAD AHEAD: EPA'S OPTIONS AND OBLIGATIONS FOR REGULATING GREENHOUSE GASES* (2009), available at <http://policyintegrity.org/publications/documents/TheRoadAhead.pdf> [hereinafter *The Road Ahead*].

<sup>2</sup> Clean Air Act § 202(a), 42 U.S.C. § 7521 (2007) (emphasis added) [hereinafter CAA].

However, not all sections of the Clean Air Act mimic Section 202(a) in that respect. Some sections of the Act do apply different standards depending on if a pollutant threatens health or welfare. In particular, if a pollutant is regulated under Title I of the Act as a “criteria pollutant,” then Section 109 requires EPA to set two different national ambient air quality standards (NAAQS): primary NAAQS at the levels necessary to protect public health, and secondary NAAQS at the levels necessary to protect public welfare. The penalties for not attaining primary standards are more severe than those for not attaining secondary standards, especially with respect to deadlines for compliance.<sup>3</sup>

Whether EPA must regulate greenhouse gases as “criteria pollutants” is a fiercely debated issue, and no clear consensus has emerged.<sup>4</sup> In IPI’s report, *The Road Ahead*, we argue that while legal precedent would suggest EPA must regulate all greenhouse gases as criteria pollutants, the relevant court ruling predates significant structural amendments to the Clean Air Act, and EPA can advance a persuasive argument for the discretion not to list greenhouse gases as criteria pollutants.<sup>5</sup> Still, the case for discretion is far from clear-cut, and any attempt not to list greenhouse gases as criteria pollutants could be subject to legal challenge. If EPA must regulate greenhouse gases as criteria pollutants, the resulting regulatory regime may become fundamentally unworkable.<sup>6</sup>

One possible and partial solution to this problem of workability would be to forego primary NAAQS for greenhouse gases (to protect “public health”) and set only secondary NAAQS (to protect “public welfare”).<sup>7</sup> Direct exposure to current concentrations of greenhouse gases has no known adverse effects on human health.<sup>8</sup> Instead, most of the potential human health effects due to climate change are the result of environmental effects: for example, increased temperature and changing weather patterns may expand the range of tropical diseases and epidemics, contribute to more cases of heat stroke and cardiovascular disease, and even raise the incidence of kidney stones and respiratory illnesses.<sup>9</sup> If the secondary, welfare-focused NAAQS solve the temperature and weather problems, then primary, health-focused NAAQS may be at best redundant. By avoiding the demands of the primary air quality standards for greenhouse gases, EPA could make imposition of the NAAQS system more workable.

Statutory evidence strongly suggests EPA may forego setting either the primary or secondary NAAQS for a criteria pollutant if such standards are truly not “requisite” to protect the public health or welfare.<sup>10</sup> The question is: do the indirect health consequences of climate change count as effects on public health or on public welfare?

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<sup>3</sup> See CAA § 172(a)(2) (requiring compliance within five years for primary NAAQS, but only “as expeditiously as practicable” for secondary NAAQS).

<sup>4</sup> For details of the debate, see *The Road Ahead*, *supra* note 1, at n.282 and accompanying text.

<sup>5</sup> See *id.* at 34-39.

<sup>6</sup> Congress designed NAAQS to combat traditional pollutants, which have short life-spans and localized effects; the longevity and pervasiveness of greenhouse gases make NAAQS an imperfect tool for addressing their emissions. See *id.* at 82-83 (discussing problems of workability).

<sup>7</sup> See *id.* at 83-86 (discussing possible solutions to workability challenge).

<sup>8</sup> Carbon dioxide would have direct health effect if concentrations reached 2%, but currently concentrations are only 0.038%, and the highest projections for concentrations in the year 2100 are only for 0.098%. Similarly, nitrous oxide has health effects at 25 parts per million, but currently concentrations only reach 0.32ppm. EPA, TECHNICAL SUPPORT DOCUMENT FOR ENDANGERMENT ANALYSIS FOR GHG EMISSIONS UNDER THE CAA 16 (6th draft, June 21, 2008).

<sup>9</sup> See *id.*

<sup>10</sup> Section 109(a)(2) of the Act does say “the Administrator shall publish . . . proposed national primary and secondary ambient air quality standards for any such pollutant.” In a related context, the phrase “shall publish” was interpreted by the Second Circuit Court of Appeals to create a non-optional required action. See *The Road Ahead*, *supra* note 1, at 34-39 (discussing that case and possible reinterpretation). But that seemingly mandatory language is tempered by other sections of the statute. First, criteria pollutants are those which “endanger [either] public health or welfare.” CAA §

Congress never defines “public health” in the Clean Air Act. In fact, Congress thought the term was fairly self-explanatory.<sup>11</sup> But some statutory evidence and legislative history does support the idea that Congress intended “public health” to mean only health effects from direct exposure to pollutants:

- In 1977, the House Committee Report explained: “By use of the words ‘cause or contribute to air pollution,’ the committee intends to require the Administrator to consider all sources of the contaminant which contributes to air pollution and to consider all sources of *exposure* to the contaminant—food, water, air, etc.—in determining health risks.”<sup>12</sup> Similarly, EPA’s proposed endangerment findings notes that the phrase “cause or contribute” signifies that EPA must “consider all sources of *exposure* to a pollutant (for example, food, water, and air) when determining risk.”<sup>13</sup>
- In 1970, the Senate Committee Report wrote that: “Knowledge of the relationship between the *exposure* to many air pollution agents and acute and chronic health effects is sufficient to develop air quality criteria related to such effects.”<sup>14</sup>
- Section 103(d) of the Act creates a research program to explore the “short and long-term effects of air pollutants on human health” resulting from “both routine and accidental *exposures*.”
- Section 711(a)(1) of the Act demonstrates that, specifically for carbon dioxide emissions, Congress felt the main impacts would be “economic, physical, climatic, and social”—i.e., not “public health.”

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108(a)(1)(A) (emphasis added). Congress anticipated that not all criteria pollutants would necessarily endanger both public health *and* welfare; it is unlikely that Congress intended to require EPA to issue standards protecting something that was never endangered. Second, Section 109(c) requires EPA to “promulgate a national primary ambient air quality standard for NO<sub>2</sub> concentrations over a period of not more than 3 hours *unless*, based on the criteria issued under section 108(c), he finds that *there is no significant evidence that such a standard for such a period is requisite to protect public health*.” In other words, Congress foresaw that NAAQS may be unnecessary for certain pollutants at certain exposure levels. *See also Am. Farm Bureau Fed. v. EPA*, No. 06-1410, 2009 U.S. App. LEXIS 3562 at \*76 (D.C. Cir. Feb. 24, 2009) (“The petitioners here have failed to distinguish this case from *South Coast*. As we explained there, it would frustrate the purpose of the CAA to read the 1990 amendments as limiting EPA’s ability to revise the NAAQS based on advances in scientific understanding. . . . In *South Coast*, we held that the amendments’ incorporation of the existing one-hour ozone standard did not prevent EPA from revoking that standard and replacing it with one based on an eight-hour averaging time. Likewise, in this case, the reference in the 1990 amendments to an annual mean standard for PM<sub>10</sub> does not require EPA to maintain an annual standard in the face of scientific evidence counseling revocation.”). Finally, when setting primary or secondary NAAQS, the Act instructs EPA to use its “judgment” of what is “requisite.” CAA §§ 109(b)(1) & (2).

EPA did exactly that in 1985 when it revoked the secondary NAAQS for carbon monoxide. Finding no anticipated welfare effects at or near the current ambient concentrations of the criteria pollutant, EPA determined that “no standards appear to be requisite to protect the public welfare.” 50 Fed. Reg. 37494 (Sept. 13, 1985). This revocation provides precedent for EPA to issue only one category of NAAQS for other criteria pollutants if the science justifies such action. Note that, despite the common definition of the terms, nothing in the statute indicates that “primary” NAAQS are a prerequisite for “secondary” NAAQS or that “primary” NAAQS must be more stringent than “secondary” NAAQS.

<sup>11</sup> *See* S. REP. NO. 91-1196, at 34 (1970) (“Since the nature of the general welfare is less well-defined than the public health. . .”).

<sup>12</sup> H.R. REP. NO. 95-294, at 49-50 (1977) (emphasis added).

<sup>13</sup> 74 Fed. Reg. at 18892 (emphasis added).

<sup>14</sup> S. REP. NO. 91-1196, at 7 (1970) (emphasis added); *see also id.* (“The protection of the public health and welfare requires definitive knowledge of the causal relationship between exposure to air pollution agents—single or in combination—and health or welfare under varying environmental conditions.”; *id.* at 10 (“Ambient air quality is sufficient to protect the health of such persons whenever there is an absence of adverse effect on the health of a statistically related sample of persons in sensitive groups from exposure to the ambient air.”).

Health effects not related to exposure (where exposure includes ambient air concentrations, deposition, and bioaccumulation) are, therefore, not necessarily part of the standard definition of “public health.”

While the statutory definition of “public welfare” does not explicitly include indirect health effects, the term is deliberately broad.<sup>15</sup> In the past, EPA has listed indirect health effects as welfare effects. For example, EPA listed ozone’s effects on UVB-induced human diseases and climate change as welfare effects, even while acknowledging significant health effects.<sup>16</sup> Similarly, sulfur oxides cause algal blooms, which can in turn release toxins dangerous to human health; that indirect health risk was discussed as part of EPA’s ecological criteria document for sulfur oxides, not in the agency’s public health discussion.<sup>17</sup>

Indeed, in many cases, only a blurry line separates health effects from welfare effects. In its proposed endangerment finding, EPA explains why it has chosen to draw that line so indirect health effects are included in the definition of “public health.” This analysis does not suggest that EPA’s decision is wrong; rather, this analysis merely suggests that limiting “public health” to the direct effects of exposure is also a reasonable and permissible interpretation of the statute—and one that might afford the agency with some much-needed regulatory flexibility down the road. EPA has discretion to interpret these ambiguous terms, but it should consider all the policy consequences before doing so. Once EPA has declared under Section 202(a) that greenhouse gases endanger public welfare *and* health, later on, if greenhouse gases are subsequently regulated as criteria pollutants, it will become difficult to choose not to set primary NAAQS.

### **EPA’s Remaining Legal Obligations**

We are pleased that EPA is moving toward a complete response to the orders issued by the Supreme Court in *Massachusetts v. EPA*, by proposing an endangerment finding under Section 202(a). We also support EPA in taking the next logical step in the regulatory process and announcing its intention to regulate greenhouse gas emissions from new passenger cars and light-duty trucks. We look forward to commenting separately on that proposal, which we trust will soon be accompanied by proposed regulation for the other motor vehicles covered in the endangerment finding (namely, motorcycles, buses, and heavy-duty trucks).

But we would like to remind EPA that several rulemaking petitions still pending before the agency request regulation of greenhouse gas emissions from sources other than new motor vehicles.<sup>18</sup>

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<sup>15</sup> See CAA § 302(h).

<sup>16</sup> See NAT’L CTR. FOR ENVTL. ASSESSMENT, EPA, No. 600/R-05/004aF, AIR QUALITY CRITERIA FOR OZONE AND RELATED PHOTOCHEMICAL OXIDANTS, VOL. I (2006).

<sup>17</sup> See NAT’L CTR. FOR ENVTL. ASSESSMENT, EPA, No. 600/R-08/082F, INTEGRATED SCIENCE ASSESSMENT FOR OXIDES OF NITROGEN AND SULFUR—ECOLOGICAL CRITERIA (2008).

<sup>18</sup> See, e.g., *California v. Johnson*, Petition for Rule Making Seeking the Regulation of Greenhouse Gas Emissions from Ocean-Going Vessels (EPA Oct. 3, 2007), available at [http://ag.ca.gov/cms\\_pdfs/press/N1474\\_Petition.pdf](http://ag.ca.gov/cms_pdfs/press/N1474_Petition.pdf); Petition for Rulemaking under the Clean Air Act to Reduce the Emission of Air Pollutants from Marine Shipping Vessels that Contribute to Global Climate Change (EPA Oct. 3, 2007) (filed by Earthjustice, Center for Biological Diversity, Earth Justice, Friends of the Earth, and Oceana), available at [http://www.oceana.org/fileadmin/oceana/uploads/Climate\\_Change/Marine\\_GHG\\_Petition\\_FINAL.pdf](http://www.oceana.org/fileadmin/oceana/uploads/Climate_Change/Marine_GHG_Petition_FINAL.pdf); *California v. Johnson*, Petition for Rulemaking Seeking the Regulation of Greenhouse Gas Emissions from Aircraft (EPA Dec. 4, 2007), available at [http://ag.ca.gov/globalwarming/pdf/aircraft\\_petition.pdf](http://ag.ca.gov/globalwarming/pdf/aircraft_petition.pdf); Petition for Rulemaking Under the Clean Air Act to Reduce the Emission of Air Pollutants from Aircraft that Contribute to Global Climate Change Earthjustice (Dec. 5, 2007), available at [http://www.earthjustice.org/library/legal\\_docs/petition-to-epa-on-aircraft-global-warming-emissions.pdf](http://www.earthjustice.org/library/legal_docs/petition-to-epa-on-aircraft-global-warming-emissions.pdf); Petition for Rulemaking Seeking the Regulation of Greenhouse Gas Emissions from Nonroad Vehicles and Engines (Jan. 29, 2008), available at [http://ag.ca.gov/cms\\_attachments/press/pdfs/n1522\\_finaldraftnonroadpetition3.pdf](http://ag.ca.gov/cms_attachments/press/pdfs/n1522_finaldraftnonroadpetition3.pdf); *ICTA v. Johnson*, Petition for Rulemaking Seeking the Regulation of Greenhouse Gas Emissions from Nonroad Vehicles and Engines (Jan. 29, 2008), available at <http://www.westernlaw.org/files-1/Petition%20Nonroad%20Final%2020080129.pdf>.

Given the clear legal principles set by the Court in *Massachusetts v. EPA*, EPA must respond to these petitions in a reasonable time and manner.<sup>19</sup> We anticipate that EPA will in the near future propose endangerment findings and cause/contribute findings for greenhouse gas emissions from aircraft, nonroad vehicles, and vehicle fuels (at the very least marine fuel).<sup>20</sup> Similarly, we expect EPA will begin moving through its backlog of mandatory reviews of stationary source performance standards under Section 111 and will appropriately consider the greenhouse gas emissions from such sources.<sup>21</sup>

Finally, while we understand EPA's reasons for not including black carbon or tropospheric ozone in this proposed endangerment finding, we note that those two heat-trapping pollutants are already regulated as criteria pollutants. Moreover, recent court challenges implicate the adequacy of the air quality standards set by EPA for those two pollutants.<sup>22</sup> We remind EPA that, even though it has chosen not to include black carbon or tropospheric ozone in this endangerment finding on climate change, the agency must still consider the effects of climate change when revising the current standards for those pollutants.<sup>23</sup>

For more detail on EPA's full range of legal obligations (including consideration of the New Source Review program, which EPA asked commenters not to address at this time), please see the attached report, *The Road Ahead*.

Sincerely,

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Attachment: *The Road Ahead: EPA's Options and Obligations for Regulating Greenhouse Gases*

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<sup>19</sup> See *The Road Ahead*, *supra* note 1, at 123-124.

<sup>20</sup> See *id.* at 26-32.

<sup>21</sup> See *id.* at 53.

<sup>22</sup> See *Am. Farm Bureau Fed. v. EPA*, No. 06-1410, 2009 U.S. App. LEXIS 3562 (D.C. Cir. Feb. 24, 2009); Unopposed Motion to Vacate the Briefing Schedule, *Mississippi v. EPA*, No. 08-1200 (D.C. Cir. filed Mar. 10, 2009).

<sup>23</sup> See *The Road Ahead*, *supra* note 1, at 39-41.