Comment on *Developing a Comprehensive Approach to Climate Change Mitigation Policy in the United States: Integrating Levels of Government and Economic Sectors*

by Robert D. Brenner and Anna Marie Wood

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In the article *Developing a Comprehensive Approach to Climate Change Mitigation Policy in the United States: Integrating Levels of Government and Economic Sectors*,[1] Peterson, McKinstry, and Dernbach[2] demonstrate the importance of a comprehensive approach to climate change policy in the United States. The article notes that climate change legislation proposed thus far fails to integrate state and local climate change programs with national and international efforts. The authors also assert that the proposals do not ensure integration across all economic sectors of the full range of measures and programs needed to achieve significant greenhouse gas (GHG) reductions. The authors suggest that, either through federal legislation or rulemaking, a comprehensive approach should be established to address governance issues and signal an effective commitment by the United States to address climate change.

The authors propose an approach to address this shortcoming using a combination of elements under the Clean Air Act (CAA),[3] the most significant of which include: (1) the establishment of a national ambient air quality standard (NAAQS) for greenhouse gasses with short, intermediate and long term reduction goals implemented through state implementation plans (SIPs); (2) national and regional performance or technology based standards and cap-and-trade programs for some sectors; and (3) SIPs that include measures necessary to achieve additional GHG reductions.

Between the time the authors wrote their article and the publication of this comment, much has changed in a relatively short time period. In July, EPA issued an advanced notice of proposed rulemaking concerning the regulation of greenhouse gas emissions under the CAA (ANPR).[4] The ANPR examined and solicited public comment on the CAA provisions that could be used to reduce emissions of GHGs, and the interconnection among these authorities. Then, in

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The views and opinions expressed in this Comment are those of the commenters and do not reflect or represent the views or policy of EPA.

1. Thomas D. Peterson et al., *Developing a Comprehensive Approach to Climate Change Mitigation Policy in the United States: Integrating Levels of Government and Economic Sectors*, 39 ELR (Envtl L. & Pol'y Ann. Rev.) 10711 (Aug. 2009) (a longer version of this Article was originally published at 26 Va. Envtl. L.J. 227 (2008)).
2. Peterson, McKinstry & Dernbach are collectively referred to as "the authors" in this Comment.
3. 42 U.S.C. §§7401-7671q, ELR Stat. CAA §§101-618.
4. Regulating Greenhouse Gas Emissions Under the Clean Air Act, 73 Fed. Reg. 44354 (July 30, 2008).

November, the presidential election led to a change in political leadership in the United States.

President Obama pledged to make addressing climate change a priority of his Administration. EPA Administrator Lisa Jackson recently stated that in addition to working closely with Congress on climate change legislation, EPA will move forward to comply with the Court's decision in *Massachusetts v. EPA*[5] "recognizing EPA's obligation to address climate change under the Clean Air Act." [6] The new Administration is actively engaged in assessing mechanisms to address GHGs under the CAA. The science is compelling that swift action is necessary and a full and diverse portfolio of approaches and enabling technologies are needed to achieve significant GHG reductions.

The authors are correct concerning the importance of a coordinated and comprehensive approach to address climate change in the United States. However, to address this shortcoming through the establishment of a NAAQS for GHGs presents a number of technical, practical and legal difficulties. Conversely, several of the elements noted in the article present meaningful opportunities for EPA to begin addressing GHGs in the near term.

In considering the use of the CAA to address GHGs, we identify important factors to guide our thinking. We then briefly discuss the characteristics of GHGs, their impact on climate change and whether a NAAQS for GHGs is practical. We conclude by discussing the potential of other elements noted in the article to mitigate GHGs and important additional issues that should also be addressed.

I. Considerations for Using the Clean Air Act to Address Greenhouse Gases

In using the CAA to address GHGs, we believe it is useful to consider certain factors. First and foremost, reductions achieved using the CAA should be cost-effective and complement opportunities for greater reductions in the future, either through regulation or legislation. Because swift action is imperative, meaningful GHG reductions should be pursued as soon as possible and provide flexibility to meet requirements through market based approaches, to the extent possible from a practical and legal perspective. The use of available technology and incentives for the development of new and emerging game changing technologies to mitigate GHGs should also be encouraged.

The implications of controlling GHGs under the CAA for the New Source Review (NSR) and Title V permitting programs must be addressed. To facilitate capital planning and maximize operational and economic efficiencies, the interface between controlling GHGs and anticipated measures to address other traditional pollutants should also be considered.

Climate change legislation should also harmonize actions taken under the CAA with approaches contained in the legislation to minimize delay and uncertainty, build upon mitigation measures and programs in place and provide a tool to address governance and the integration of national, state, tribal and local climate change programs. For example, ensuring a common methodology and metric for GHG trading undertaken through international, national, state and regional GHG programs is important. Additionally, a planning mechanism similar to the SIP process that facilitates the coordination of GHG mitigation measures and measures progress towards achieving GHG reductions is also needed. Careful attention and consideration of public acceptance and participation and the states' roles in implementing the range of measures needed to achieve significant reductions in GHGs are critical to the execution of a successful mitigation strategy.

The authors note a number of these factors in their article. With the foregoing factors in mind, below we examine the authors' proposal to develop a comprehensive approach to climate policy in the United States.

II. The Characteristics of Greenhouse Gases and Climate Change: Potential Challenges in Establishing and Implementing a NAAQS for GHGs

The authors discuss the role the establishment of a NAAQS and SIPs could play as an initial step to develop a coordinated federal approach under the CAA. A concentration-based NAAQS is suggested (e.g., 450 ppmv for CO_2 or 500 ppmv for all GHGs based on CO_2 equivalents) coupled with the use of SIPs to establish short, intermediate and long-term emission reduction goals and implement additional measures. The authors acknowledge that significant scientific uncertainties present challenges for the establishment of a NAAQS but note that inherent in the NAAQS process are opportunities to resolve such uncertainties as science evolves during future NAAQS review cycles. The use of a NAAQS, however, presents a number of challenges that, even with more scientific certainty, may not be easily remedied in the absence of legislation.

EPA discussed the scientific, legal and program design challenges associated with establishing and implementing a GHG NAAQS in the ANPR.[7] As compared to the criteria pollutants for which NAAQS already exist, GHGs are global, rather than local or regional in nature and have a much longer residence time. Moreover, the effects of climate change may be unequally distributed around the world. Significant GHG contributions from outside the United States would affect the ability of states to meet or maintain a NAAQS. Thus, if worldwide emissions continued to increase, global concentrations would also increase despite

5. Massachusetts v. EPA, 549 U.S. 497, 37 ELR 20075 (2007).
6. Memorandum from Lisa Jackson, Adm'r, Envtl. Prot. Agency, to Environmental Protection Agency Employees (Jan. 23, 2009), *available at* http://www.epa.gov/administrator/memotoemployees.html.
7. *See* Regulating Greenhouse Gas Emissions Under the Clean Air Act, 73 Fed. Reg. at 44477-86 (discussing the many challenges inherent in the establishment and implementation of a GHG NAAQS).

the best efforts of the United States.[8] As a result, meeting or maintaining over the long term a NAAQS for GHGs might not be possible in the absence of worldwide action to stabilize GHG concentrations.

Given the nature of GHGs and the effects of climate change, a number of issues must be addressed. For example, would a NAAQS be established for CO_2 or all GHGs? Under the NAAQS, should EPA set a primary, public health-based or secondary, public welfare-based standard for GHGs, or both? Should the form of the NAAQS be concentration-based and if so, should the level be above current GHG concentrations in the atmosphere, or at or below current levels, in view of the statutory setting language? Would states be required to adopt measures to achieve or maintain GHG levels meeting the NAAQS regardless of foreign emissions, or could an alternative approach be defined for determining the states' emission reduction requirements? What would be the costs of implementation? How would states be protected from unintended consequences (e.g., triggering the general requirements for nonattainment area plans) if they are considered nonattainment for the NAAQS because of contributions of GHGs from outside the United States?

States use SIPs as the primary tool to attain, maintain and enforce NAAQSs.[9] A SIP contains the regulations, control requirements and other measures used by a state to meet its NAAQS obligations.[10] SIPs are not typically designed to implement a national control program or strategy for global pollutants.[11] Instead, SIPs are used to address criteria pollutants that are local or regional in nature. The actions taken by each state should enable the state to achieve or maintain the NAAQS for the local or regional pollutant. Conversely, the ability of a state to meet or maintain a concentration-based NAAQS for GHGs is inextricably linked to contributions of GHGs from sources in other states and outside the United States for which the state has limited, if any, ability to control.

The authors' proposal, however, of a SIP-like planning tool to coordinate and integrate the full range of measures at the federal, local, state and tribal levels is a good one. As noted by the authors, the tool should be applied to achieve vertical integration and harmonization of state, local and tribal climate change programs with national and international efforts and ensure horizontal integration of measures and programs undertaken across all economic sectors. Even in the absence of an agreed- upon national emissions reduction target for GHGs, all levels of government should be collaborating and coordinating on strategies, plans and measures to achieve significant GHG reductions.

III. The Role of National and Regional Performance or Technology–Based Standards and Cap-and-Trade

The authors acknowledge the importance of taking near term actions to mitigate GHGs without delay and point to performance or technology-based standards and the use of cap-and-trade where appropriate, as the primary tools for emission reductions in certain sectors. We agree.

In the wake of the Supreme Court's decision in *Massachusetts v. EPA*[12] and the change in political leadership, EPA is poised to address a number of issues that could result in a framework to begin addressing GHGs. If undertaken, the actions could provide the initial building blocks of a national strategy using the CAA and ultimately serve as a bridge to more comprehensive federal GHG legislation in the future. The authors correctly note that the new Administration has directed EPA to reconsider the California waiver. Moreover, in response to the FY 2008 Consolidation Appropriations Act, EPA proposed a rule that requires mandatory reporting of GHG emissions from large sources in the United States.[13] EPA also proposed endangerment and cause-or-contribute findings for greenhouse gases under the CAA to address the endangerment issues raised in *Massachusetts v. EPA*.[14]

In addition, proposals to reduce GHGs from light duty vehicles[15] and for New Source Performance Standards in certain key sectors could initiate the process of reducing GHGs. Section 111 provides flexibility to tailor emission standards to address GHG emissions.[16] For example, as the ANPR notes, EPA has the authority to select the source categories for which to establish standards and could focus on GHG standards for source categories that emit the largest amount of GHGs, e.g., electric generating units, refineries and cement plants. It also states that the flexibility to include emissions trading and phased in declining performance standards based on current technology and /or two-phased or multi-phased performance standards for the future may also exist. The ability to implement a cap-and-trade approach for any given sector will require a careful reading of the specific text and context set forth in §111 and Title II of the CAA, and relevant case law. To the extent possible, cap-and-trade programs should be used to achieve greater emissions reductions, maximize flexibility and reduce costs for sources required to make GHG reductions. The actions EPA could take, coupled with those already underway by state, local and tribal governments, could result in significant GHG reductions.

8. *Id.* at 44485.
9. *See* 42 U.S.C.A. §7410, ELR Stat. CAA §110 (providing the process by which states are required to adopt and implement a plan for meeting NAAQS set by the EPA); Regulating Greenhouse Gas Emissions Under the Clean Air Act, 73 Fed. Reg. at 44480 (describing states' responsibilities under the Clean Air Act in relation to NAAQS).
10. Regulating Greenhouse Gas Emissions Under the Clean Air Act, 73 Fed. Reg. at 44480.
11. *Id.*
12. Massachusetts v. EPA, 549 U.S. 497, 37 ELR 20075 (2007).
13. *See* Mandatory Reporting of Greenhouse Gases, 74 Fed. Reg. 16448 (Apr. 10, 2009).
14. *See* 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); Massachusetts v. EPA, 549 U.S. 497, 533-35.
15. *See generally* Regulating Greenhouse Gas Emissions Under the Clean Air Act, 73 Fed. Reg. at 44440-47 (discussing various alternatives for reducing the GHG emissions of light-duty vehicles).
16. *See id.* at 44354, 44486–93 (describing current and possible uses of §111 for addressing GHG emissions).

IV. Additional Issues to Consider

The authors note that any amendments to the CAA should address the New Source Review (NSR) program[17] requirements and the integration of GHG emissions reductions with reductions required for other pollutants. The authors do not address, however, what could be done to the NSR and Title V Programs in the interim, particularly if GHGs become pollutants subject to regulation under the CAA prior to GHG legislation. Under these circumstances, the construction or modification of a major source with the potential to emit 100 or 250 tons per year of CO_2 or GHGs could become subject to the Prevention of Significant Deterioration Program and Title V requirements immediately.[18]

As noted in the ANPR, the mass CO_2 emissions from many source types are orders of magnitude greater than other criteria pollutants.[19] The existing thresholds for traditional pollutants capture a relatively limited number of new and modified sources each year. Applying the same size thresholds to CO_2 and possibly all GHGs would pull in a very large number of sources.[20] State, local and tribal permitting authorities may not have the capacity or resources to issue the increased number of permits. Similarly, the burden would also increase for the Title V program.[21] For these reasons, the ANPR solicits comment on phasing in NSR and Title V requirements to address large sources in the near term and for additional sources over time. This mechanism could be used (and given available resources, may be administratively necessary) to manage the transition during the interim period. If Congress passes climate change legislation, it may want to consider other options to address NSR and Title V for GHGs.

V. Conclusion

We applaud and support the authors' call to action and their goal of establishing a comprehensive approach to climate change policy in the United States. Their article provides valuable insights and proposals concerning the integration of existing state climate mitigation plans with a new national strategy. We agree that close coordination, collaboration and integration of the full range of mitigation measures is needed; a comprehensive plan could be developed by all levels of government voluntarily. Alternatively, Congress could decide to provide greater certainty through a set of planning requirements.

Using a concentration-based GHG NAAQS to serve as the basis for a comprehensive strategy, however, is fraught with scientific, technical and practical challenges. Instead, other policy tools noted by the authors (e.g., performance and technology-based standards, and cap-and-trade) appear to provide a more direct and near-term path to begin to mitigate GHGs under the CAA and could serve as a bridge to more comprehensive legislation to achieve the deep reductions in GHGs that will be necessary.

17. The term "New Source Review" refers to both the attainment and nonattainment provisions of the NSR Program.
18. Regulating Greenhouse Gas Emissions Under the Clean Air Act, 73 Fed. Reg. at 44500.
19. *Id.*
20. *Id.*
21. *Id.* at 44511.