



Legal Memorandum

**Potential Regulation of Greenhouse Gas Emissions under Title I of
the Clean Air Act: An Evaluation of EPA's Legal Analysis in
*Regulating Greenhouse Gas Emissions under the Clean Air Act,
Advance Notice of Proposed Rulemaking***

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INTRODUCTION

In *Regulating Greenhouse Gas Emissions under the Clean Air Act, Advance Notice of Proposed Rulemaking*, 73 Fed. Reg. 44,354 (July 30, 2008) (hereinafter “ANPR”), the United States Environmental Protection Agency (“EPA” or the “Agency”) sets forth various potential mechanisms for regulating greenhouse gas (“GHG”) emissions under the Clean Air Act (“CAA” or “Act”), 42 U.S.C. §§ 7401, *et seq.* The ANPR’s discussion of these potential mechanisms is supported by a considerable amount of legal analysis of EPA’s authority under a number of CAA statutory provisions. In this memorandum, we evaluate EPA’s legal analysis of its authority under Title I of the CAA for consistency with the statute, EPA’s regulations, judicial and administrative precedent and past Agency practice. We also touch on the implications of EPA regulation of GHGs for the Title V program, since that program is interrelated with Title I.

In general, we believe that the ANPR significantly understates the difficulties and enormous cost of CAA regulation of GHG emissions. We believe that, if EPA proceeds with regulation under the CAA, the Agency will encounter potentially impassable legal obstacles in attempting to implement the types of flexible and market-based regulation that the ANPR appears to prefer. At the same time, EPA may find itself legally compelled to proceed with regulation under a number of inflexible and unworkable CAA programs that the ANPR, with good reason, appears to wish to avoid because they will likely impose a regulatory straightjacket on the American economy. In particular, we believe that the ANPR’s discussion of the New Source Review and National Ambient Air Quality Standards programs seriously overstates EPA ability to avoid or minimize the extraordinarily grave consequences that will result under those programs if EPA proceeds with GHG regulation under the CAA. We are also greatly concerned about potential GHG regulation under the Hazardous Air Pollutants and Title V programs, and further believe that the ANPR takes an unrealistic view of what can be accomplished under the News Source Performance Standards program.

The central problem of GHG regulation under the CAA is that the statute’s principal regulatory programs were enacted decades ago in the 1970 and 1977 CAA Amendments for the purpose of controlling local and regional air pollution. These programs were not designed to address, and cannot readily be adapted for the purpose of controlling, a phenomenon like global climate change in an efficient and effective manner. Although *Massachusetts v. EPA*, 127 S. Ct. 1438 (2007), compels EPA to regulate GHGs if it makes what is commonly referred to as an Endangerment Finding,¹ the Supreme Court decision did not discuss the type of regulation that

¹ The petition to regulate GHGs that was the subject of *Massachusetts v. EPA* sought regulation under Section 202(a) of the CAA. Section 202(a) requires EPA to regulate “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.” As the ANPR notes, 73 Fed. Reg. at 44,418, a similar Endangerment Finding regulatory trigger is set forth in numerous CAA statutory provisions, including almost all of the Title I programs we explore here. In order to trigger individual regulatory programs, EPA likely has to make a separate Endangerment Finding for each; in other words, to trigger Section 202(a) regulation, EPA must make a finding that GHG emissions from a class or classes of new motor vehicles or new motor vehicle engines endanger public health or welfare, and to trigger regulation of GHG emissions from other sources under

would be mandated under the CAA if such a finding is made nor whether such regulation makes sense. Indeed, the decision was made in the context of Title II of the CAA and did not discuss Title I. A detailed review of Title I regulatory programs shows that they are completely unsuited for the task of regulating GHG emissions.

The ANPR attempts to get around the fact that the Title I statutory programs do not provide a rational means for addressing global climate change by exploring a number of legal theories in which the CAA might be creatively interpreted to allow EPA to implement various policy alternatives that the Agency believes might reduce GHG emissions in an equitable and cost-effective manner. In a number of recent decisions of the U.S. Court of Appeals for the District of Columbia (hereafter “D.C. Circuit”) discussed below, however, the Court frowned on EPA’s attempts to read more flexibility into CAA statutory language than the language can accommodate and barred EPA from applying its own notions of efficient and equitable air quality policy (and those of stakeholders) in derogation of plain statutory terms. Given these and other judicial decisions, to the extent EPA proceeds with GHG regulation under the CAA, it will likely find that it has much less policy discretion than is reflected in the ANPR and that the consequences of regulating GHG emissions under the CAA are much more negative than the Agency believes.

DISCUSSION

I. Timing

As an initial matter, although the issue is not discussed in the ANPR, it is worth noting that EPA is under no obligation to act in the immediate future on GHG regulation under the CAA. Although EPA has been criticized for not acting more quickly in response to *Massachusetts v. EPA*, in fact only a little more than a year has passed since the Agency received the remand from the D.C. Circuit. *Massachusetts v. EPA*, 249 F. App’x 829 (D.C. Cir. 2007) (*per curiam*) (remanding case to EPA). On a matter of this complexity, EPA is fully justified in taking the time it needs to weigh the regulatory options and their various consequences. The Agency is well-aware that it has taken considerably more than a year to respond to judicial remands on issues of considerably less complexity than GHG regulation. Moreover, the *Massachusetts* court did not establish any deadline for EPA action on remand and, to the contrary, held that “EPA no doubt has significant latitude as to the manner, timing, content, and coordination of its regulations with those of other agencies.” *Massachusetts v. EPA*, 127 S. Ct. at 1462.

other programs, EPA would have to make an Endangerment Finding as to those sources. As the ANPR also notes, the statutory language of the Endangerment Finding regulatory triggers for different CAA programs are not identical, and the significance of these language differences would need to be explored program-by-program. *Id.* at 44,419. For purposes of this memorandum, we assume that if EPA makes an Endangerment Finding for one CAA program, for instance Section 202(a) on remand of *Massachusetts v. EPA*, it would likely make or be forced to make Endangerment Findings for the other CAA programs discussed here. We also use the phrase “endanger public health or welfare” as shorthand for the statutory Endangerment Finding regulatory trigger language.

Indeed, the D.C. Circuit has already rejected an attempt to mandamus immediate EPA action. *Massachusetts v. EPA*, No. 03-1361, slip op. at 1 (D.C. Cir. June 26, 2008) (*per curiam*). As stated in the separate statement of Judge Tatel, concurring in part and dissenting in part, “[n]othing in Section 202(a), the Supreme Court’s decision in *Massachusetts v. EPA*, or our remand order imposes a specific deadline by which EPA must determine whether a particular air pollutant poses a threat to public health or welfare.” Slip op. at 2. When the case was remanded from the Supreme Court to the D.C. Circuit, the appellate court directed parties to submit briefs governing further proceedings. *Massachusetts v. EPA*, 2007 U.S. Dist. LEXIS 11282, at *6-7 (D.C. Cir. May 9, 2008) (*per curiam*). No party asked the court to set a deadline for action on remand; hence, no party should be heard to complain if the Agency fully considers its actions before proceeding to rulemaking. *See also S.F. Chapter of A. Philip Randolph Inst. v. EPA*, 2008 U.S. Dist. LEXIS 27794, at *10-11 (N.D. Cal. Mar. 28, 2008) (also rejecting attempt to compel EPA action to regulate GHGs).

The Agency is thus under no legal obligation to act quickly. Given the very difficult legal and policy issues raised by the ANPR – as indicated by the massive length of that document and supporting technical documents – , as well as the extremely high stakes involved, EPA should take the time necessary to understand the regulatory consequences of its actions.

II. General Cap-and-Trade Authority

The ANPR expresses a clear preference for a market-based cap-and-trade program as the most efficient method of cost-effectively reducing GHG emissions and posits EPA authority to adopt such a program under Sections 110 and 111 of the CAA. 73 Fed. Reg. at 44,514-15. EPA legal authority to adopt a cap-and-trade program under either provision, however, is questionable.

A. *Section 110*

An initial roadblock to a Section 110 cap-and-trade program is that Section 110 is part of the National Ambient Air Quality Standards (“NAAQS”) system, and therefore such a program would be authorized only if EPA adopted one or more GHG NAAQS. Establishing GHG NAAQS would trigger a variety of highly negative consequences discussed in Part IV of this memorandum below and appears to be a regulatory course the ANPR does not favor.

Assuming EPA establishes a GHG NAAQS, the Agency would rely on Section 110(a)(2)(D)(i) to establish a cap-and-trade program for the applicable GHG. Under that section, EPA has authority to require a state to eliminate any significant contribution it makes to another state’s inability to attain, or maintain attainment of, a NAAQS. As stated in the ANPR, EPA utilized Section 110(a)(2)(D)(i) to formulate both the NO_x SIP Call² and Clean Air Interstate Rule (“CAIR”),³ both of which established regional cap-and-trade programs to eliminate states’ contributions to downwind states’ NAAQS nonattainment. The ANPR hypothesized that EPA

² 63 Fed. Reg. 57,356 (Oct. 27, 1998).

³ 70 Fed. Reg. 25,162 (May 12, 2005).

could use the same authority to establish a cap-and-trade program to control GHG emissions nationally in the United States. 73 Fed. Reg. at 44,412.

The ANPR, however, was written before the D.C. Circuit decision vacating CAIR in *North Carolina v. EPA*, 531 F.3d 896 (D.C. Cir. 2008). The three-judge panel in that case unanimously ruled that EPA does not have authority under Section 110(a)(2)(D)(i) to adopt an interstate cap-and-trade program. According to the Court, that section requires that each state significantly contributing to another state's nonattainment or failure to maintain attainment must actually eliminate that contribution, as opposed to purchasing allowances from other states. That ruling effectively eliminates EPA's ability to utilize an interstate cap-and-trade program under Section 110 for the purpose of controlling GHGs.

EPA filed a petition for rehearing in the CAIR case asking the Court to reconsider its decision, *see North Carolina v. EPA*, Environmental Protection Agency, Petition for Rehearing or Rehearing En Banc, No. 05-1244 (Sept. 24, 2008), and thus the CAIR decision mandate has not yet issued. The decision, however, is effectively final in the D.C. Circuit because the D.C. Circuit asked for responses to EPA's rehearing petition only on the question of remedy and not merits. *See North Carolina v. EPA*, No. 05-1244, slip op. at 1 (Oct. 21, 2008).

In theory, EPA or other parties might ask the Supreme Court to accept, and the Court might grant, certiorari and overrule the D.C. Circuit's decision on cap-and-trade authority under Section 110(a)(2)(D)(i). Although we view that result to be unlikely, even if the Supreme Court were to find that EPA has authority under Section 110(a)(2)(D)(i) to adopt an interstate cap-and-trade program for the purpose of NAAQS attainment or maintenance, we do not believe that EPA will ever be able to legally justify use of a cap-and-trade program under Section 110(a)(2)(D)(i) for GHGs. In CAIR and the NO_x SIP Call, EPA was able through air quality modeling to identify each individual state's contribution to downwind nonattainment and to quantify regional and state emissions budgets based on a cost-effectiveness test. *See, e.g.*, 70 Fed. Reg. 25,179 and 25,229-33. EPA was also able to determine that the CAIR and the NO_x SIP Call cap-and-trade programs would eliminate, at least on a regional basis, the significant contribution made by affected upwind sources to downwind nonattainment, and, as a result, it was able to determine that downwind nonattainment areas would either come into attainment or make significant progress towards that goal. *See, e.g.*, 70 Fed. Reg. 25,251-55.

For reasons set forth in more detail below in our discussion of EPA's NAAQS analysis, however, that kind of analysis has no applicability to GHGs. Because GHGs circulate globally and are well-mixed in the atmosphere, sources in any one state make only a minuscule contribution to atmospheric GHG concentrations in another state. Thus, in a GHG cap-and-trade program, no meaningful progress will be made towards attainment no matter what emission reduction requirements EPA imposes. The CAIR and NO_x SIP Call precedents, therefore, will be of no use to EPA in attempting to justify a GHG cap-and-trade program.

B. Section 111

As stated in the ANPR, EPA previously adopted a cap-and-trade program under Section 111 as a part of the Clean Air Mercury Rule (CAMR). 73 Fed. Reg. at 44,368, 44,515. Section 111 provides for the promulgation of New Source Performance Standards ("NSPS") for source

categories that emit air pollutants that endanger public health or welfare. See further discussion in Part V below of the NSPS program. In EPA's view, a cap-and-trade program may be considered to be an NSPS under Section 111. 73 Fed. Reg. 44,411, 44,515.

As the ANPR recognizes, the D.C. Circuit overturned CAMR without ruling on the question of EPA authority under Section 111 to undertake cap-and-trade. *New Jersey v. EPA*, 517 F.3d 574 (D.C. Cir. 2008). Thus, the CAMR cap-and-trade precedent on which the ANPR relies has not been affirmed in court and therefore does not demonstrate that EPA could, in fact, consistent with statutory requirements, adopt a cap-and-trade program under Section 111 as an NSPS for GHGs. Moreover, the ANPR neglects to mention that environmental parties in the CAMR case, including the Natural Resources Defense Council, the Sierra Club, Environmental Defense, and the National Wildlife Federation, vociferously challenged EPA's cap-and-trade authority under Section 111 on the ground that cap-and-trade does not meet the definition of an NSPS. See *New Jersey v. EPA*, Final Opening Brief of Environmental Petitioners, No. 05-1097 (and consolidated cases) at 25-29 (July 23, 2007) (terming EPA's attempts to justify a Section 111 cap-and-trade program an attempt to "flout[]" statutory mandates and as being "convoluted").

According to the environmental groups in the CAMR litigation, a cap-and-trade program cannot be an NSPS under the statutory definitions of "standard of performance" in Sections 111(a) and 302. As the environmental groups noted, these sections define standard of performance as "a requirement of continuous emission reduction" and provide that such a requirement is applicable to "any source." According to the environmental groups, a cap-and-trade program cannot be a "standard of performance" under this language because it would allow some sources to avoid continuously reducing their emissions by purchasing allowances from other sources. The environmental parties further argued that a source under a cap-and-trade program could actually increase its emissions by purchasing the necessary allowances. *Id.*

EPA and an intervenor have petitioned the Supreme Court for certiorari of the *New Jersey* decision and, as of this writing, the Court had not yet acted on that request. See *EPA v. New Jersey*, No. 08-512 (petition for cert. filed) (U.S. Oct. 17, 2008); *Utility Air Regulatory Group v. New Jersey*, No. 08-352 (petition for cert. filed) (U.S. Sept. 17, 2008). Given the arguments made by the environmental parties, EPA's cap-and-trade authority under Section 111 is, at least, subject to question, and any attempt to implement that program for GHGs will likely be challenged.

The question of EPA's basic legal authority to adopt a cap-and-trade program under Section 111, however, is not the only legal issue that would be raised if EPA attempts to adopt such a program for GHGs. Considerable legal doubt exists as to EPA's authority regarding various aspects of the mechanics of a cap-and-trade program, and these issues are only touched on generally in the ANPR. Because the ANPR does not contain detail on how a Section 111 cap-and-trade program would work, we confine our discussion here to two fundamental issues regarding design of a cap-and-trade program.

First, a basic issue in any cap-and-trade program is what the targets and timetables will be. This issue poses a fundamental challenge for a Section 111 GHG cap-and-trade program to the extent the program, as would be expected, sets caps that decline over time. Caps in the GHG

programs that have been proposed in Congress decline significantly over time and quickly reach levels that cannot be met using current technology. If these caps were enacted into law, covered sources would either have to develop new control technology to comply or they would be forced to operate less.

For a GHG cap-and-trade program promulgated by EPA, authority to establish declining caps under Section 111 would be circumscribed by the requirement that an NSPS reflect Best Demonstrated Technology (“BDT”). As discussed in more detail in Part V below in our analysis of the Section 111 NSPS program, BDT is limited to technology that has been “adequately demonstrated.” *Sierra Club v. Costle*, 657 F.2d 298, 330 (D.C. Cir. 1981) (overruled on other grounds). We do not see how, under this definition, EPA could set declining caps based on assumptions as to future, undemonstrated technology.

The ANPR posits authority to interpret Section 111 to authorize it to adopt standards based on assumptions as to technologies that EPA finds, “at the time of the rulemaking [to be] adequately demonstrated to be available for use at some future date.” 73 Fed. Reg. at 44,490. EPA states that it “recognize[s] that various legal issues and questions concerning legal authority” are raised by this formulation, noting “[f]or example, there might be greater uncertainty regarding the cost of technology for such standards than for standards based only on technology that is already commercially demonstrated at the time of promulgation.” 73 Fed. Reg. at 44,490.

In our view, the ANPR’s claim of authority to set standards for technology that is admittedly not demonstrated at the time of the rulemaking stands the statutory language on its head and appears to be a post hoc rationale for a policy preference that does not fit within statutory authority granted to the Agency. No judicial precedent endorsing such an expansive interpretation exists, and, to our knowledge, outside of the CAMR precedent cited in the ANPR, EPA has never ventured such an interpretation during the more than thirty-year regulatory history of Section 111.⁴ EPA’s formulation would obviously make standard setting under Section 111 a fundamentally speculative process. Predicting the degree to which technology will develop in the future depends on assumptions as to technological breakthroughs that are inherently unknowable and on the availability of research and development funding that may reflect political decisions that could vary with election results or other budget priorities. All assumptions as to future technologies come with a wide range of estimates as to when those technologies will actually become available and on what their cost will be. Setting standards based on this type of conjecture is wholly outside of the explicit language and intent of Section 111.

The second legal issue as to design of a GHG cap-and-trade program under Section 111 is whether EPA has authority to auction or otherwise sell allowances. A fundamental question in all of the GHG cap-and-trade programs that have been considered in Congress is whether allowances should be auctioned or allocated for free. The ANPR discusses the potential for

⁴ EPA’s justification for the declining caps in CAMR was based on an imaginative interpretation of the interrelationship of Sections 111(d) and Section 111(e). The issue was not raised in the CAMR litigation, but a similar interpretation in the context of GHGs is likely to be controversial.

auctioning allowances but does not cite any authority under Section 111 for EPA to do so. 73 Fed. Reg. at 44,411-12, 44,515-16. The closest the ANPR comes to discussing possible auction authority is in its discussion of emissions fees, but here the only authority cited is Section 110, not Section 111. 73 Fed. Reg. at 44,516. Indeed, the ANPR’s discussion of EPA authority to assess fees seems to indicate that EPA would not have authority to auction allowances under any CAA provision. *See* 73 Fed. Reg. at 44,411 (“[t]he CAA does not include a broad grant of authority for EPA to impose taxes, fees or other monetary charges specifically for GHGs and, therefore, additional legislative authority may be required if EPA were to administer such charges”). The ANPR also appears to recognize that the Agency does not have authority to distribute auction revenue. In its discussion of emissions fees, the document states that the distribution of revenues obtained from fees would “depend[] on the specific authority granted by Congress with respect to the disposition of revenue....” 73 Fed. Reg. at 44,516.

We do not believe that EPA has authority to auction allowances. None of the cap-and-trade programs EPA has implemented or attempted to implement under either Section 110 or Section 111 – the NO_x SIP Call, CAIR, CAMR – entailed auctioning allowances. EPA has limited authority to auction allowances under the Title IV program, but only because Congress gave it explicit authority to do so in Section 416. With no such authority granted in Section 111, we do not think EPA could withstand a legal challenge if it attempted to auction allowances.⁵

Furthermore, as a matter of policy, the ANPR all but concedes that the decision as to whether to auction or allocate allowances should not rest with EPA. 73 Fed. Reg. at 44,412 (“Allocating allowances or auction revenues for an economy-wide GHG trading system would be very challenging for an executive branch agency because of high monetary stakes and divergent stakeholder views on how to distribute the allowances or revenues to promote various objectives”). This may understate the problem, as cap-and-trade programs considered in Congress could generate trillions of dollars in auction revenue over time.

In sum, we think it unlikely that EPA has basic legal authority to adopt a GHG cap-and-trade program, and we see significant legal difficulties with various program elements if EPA were to try to adopt such a program.

III. Prevention of Significant Deterioration (PSD)

The ANPR recognizes that regulation of GHGs under any part of the Act will automatically trigger pre-construction requirements under the Prevention of Significant Deterioration (“PSD”) program for a very large number of buildings and facilities which emit GHGs and which have never before been regulated under this program. 73 Fed. Reg. at 44,498. PSD applicability to a huge number of small sources would likely be catastrophic for both the affected owners and operators of those sources as well as state and federal permitting authorities.⁶

⁵ Although we only discuss two key legal issues regarding design of a GHG cap-and-trade program, many other issues exist. For instance, we do not see any clear authority for the Agency to allow for offsets or for cost-containment measures that would limit allowance prices.

⁶ We note that representatives of certain large environmental organizations have stated that they believe that concerns as to the PSD program implications of GHG regulation have been overstated because they say neither they

A. *Applicability of the PSD program*

The New Source Review (“NSR”) programs require new and modified sources emitting more than defined levels of air pollutants to obtain an air quality permit prior to commencing construction. There are two types of programs – “non-attainment NSR” for sources located in non-attainment areas and “attainment NSR” implemented through the PSD program. The PSD program was adopted by Congress in 1977 and applies in all areas of the country where existing ambient air quality is better than the NAAQS. Although the NAAQS set maximum allowable levels of pollutants in the ambient air, Congress decided that in existing clean air areas the air should stay cleaner than the NAAQS, and for that purpose adopted the PSD program. *See generally* CAA §§ 160 *et seq.* The PSD program also applies to air pollutants for which NAAQS are not issued, so long as they are not regulated under the Section 112 Hazardous Air Pollutants (“HAPs”) program. Thus, the PSD program would apply to GHGs whether or not EPA establishes a NAAQS for GHGs, so long as it does not regulate such emissions through the HAPs program.⁷

Under Section 165(a) of the CAA, permits must be obtained before construction may begin on “major” new stationary sources of CAA-regulated air pollutants. Section 169(1) lists 28 specific types of stationary sources, such as power plants, refineries, steel mills, chemical plants, etc., that are “major,” and subject to the PSD program, if they can emit at least 100 tons per year (tpy) of any regulated air pollutant. CAA § 169(1). Other, unlisted types of new stationary sources do not trigger PSD permitting as “major” sources unless they can emit at least 250 tpy of any air pollutant. *Id.* The term “stationary source” is very broad. It includes “any building, structure, facility or installation” which emits or may emit a regulated pollutant. CAA § 111(a)(3).

In addition, once a facility is “major,” a change to that facility is subject to pre-construction PSD permitting if the change causes a “significant” emissions increase. EPA’s regulations numerically define a “significant” emission increase for a number of pollutants. 40 C.F.R. § 52.21(b)(23). For instance, an increase of particulate matter emissions of 25 tpy, or of sulfur dioxide or nitrogen oxides emissions of 40 tpy, is considered a “significant” increase. *Id.* For pollutants for which EPA has not provided a numerical “significance” definition, such as

nor industry would challenge EPA setting a PSD trigger threshold that is much higher than the PSD 100/250 tpy threshold. *See* Testimony of David Bookbinder, Chief Climate Counsel, Sierra Club, Before the Senate Comm. on Environ. and Public Works at 7 (Sept. 23, 2008); Testimony of David D. Doniger, Policy Dir., Climate Center, NRDC, Before the House Comm. on Energy and Commerce Subcomm. on Energy and Air Quality at 19-20 (Apr. 10, 2008). These statements, however, do not bind third parties from bringing challenges based on their desire to stop a particular small-emitting project, for instance a “large box store,” from being built in a particular instance. As described below, the PSD thresholds are statutory, and therefore beyond the ability of EPA or any particular parties to waive. Moreover, it makes little sense from a legal and regulatory perspective for EPA to take action that is likely illegal on the ground that perhaps no one will challenge it.

⁷ Our discussion of the implications of GHG regulation on the PSD permitting program assumes that EPA does not establish GHG NAAQS for which the country is in nonattainment. We discuss below in Part IV in the context of NSR non-attainment requirements the even greater consequences of regulating small sources under the nonattainment NSR permitting program.

CO₂ or any other GHG, any emission increase from a major stationary source is considered to be a “significant” increase. 40 C.F.R. §§ 52.21(b)(1)(ii), 52.21(b)(2), 52.21(b)(23).

Under Section 165(a)(4), in order to obtain a PSD permit, a source, among other requirements, must install Best Available Control Technology (“BACT”) for each pollutant which is “subject to regulation” under the Act. Under Section 169(3), BACT is determined on a case-by-case basis as the maximum emission reduction achievable, taking into account energy, environmental, and economic impacts and other costs.

The PSD program is largely implemented through a state-administered permitting system. Seven states administer the program through “delegated” authority from EPA; they essentially act as EPA’s agent in administering EPA’s PSD permit requirements. The remaining forty-three states administer their own PSD programs for which EPA regulations prescribe the minimum CAA requirements. These states must first promulgate their own revised PSD regulations in their State Implementation Plans (“SIPs”). Those revised SIPs must then be submitted to EPA for approval. In a few instances, such as a project being located in Indian country, EPA itself directly administers the PSD permit system.

As the ANPR states, the 100/250 tpy threshold for PSD applicability was established by Congress based on emission levels of traditional pollutants, such as particulate matter, nitrogen oxides and sulfur dioxide. 73 Fed. Reg. at 44,500. Emissions above this threshold were considered to be significant enough to trigger a need to regulate these pollutants. As the ANPR also states, the PSD-triggering threshold was not set based on the premise that 100/250 tpy is a significant enough level of CO₂ emissions to justify regulation. 73 Fed. Reg. at 44,506. CO₂ is not like traditional pollutants for a number of reasons, one of which is that 100 or 250 tpy are not a great deal of CO₂. Although the 100/250 tpy level for traditional pollutants generally limits PSD permit requirements to large stationary sources like coal-fired electric generators, chemical plants, refineries and the like, a 100/250 tpy threshold for CO₂ will subject a massive number of previously unregulated small fuel-combusting facilities to PSD requirements. *See* 73 Fed. Reg. at 44,498. According to the ANPR:

Congress excluded smaller sources from PSD by adopting 100 and 250 tpy major source cutoffs in 1977 when PSD was enacted, and EPA rules have long excluded smaller sources and modifications from the program. This cutoff would not exclude many smaller sources of GHGs because the mass emissions (i.e., tons per year) of the relevant GHG may be substantially higher than the mass emissions of traditional pollutants for the same process or activity. *Thus, while existing cutoffs for traditional pollutants capture a relatively modest number of new and modified sources per year, applying those same major source levels to CO₂, and possibly for other GHGs, would capture a very large number of sources, many of which are comparatively smaller in size when compared to “traditional” sources. Similarly, for modifications, the current absence of a significance level, or the future adoption of a significance level that is below the current major source thresholds,*

would subject numerous small changes to PSD permitting requirements.

73 Fed. Reg. at 44,500 (emphasis supplied).

A very large number of buildings and facilities emit more than 250 tpy of CO₂ solely because they utilize natural gas or oil for heating.⁸ As the ANPR states, in the Administrator's preface, PSD regulation at the 250 tpy of CO₂ trigger would capture "apartment buildings, large homes, schools, and hospitals." 73 Fed. Reg. at 44,355. The body of the ANPR similarly notes that "smaller industrial sources, as well as large office and residential buildings, hotels, large retail establishments, and similar facilities" would be captured. 73 Fed. Reg. at 44,499. A study sponsored by the United States Chamber of Commerce and included with the Chamber's comments in this docket, estimated that about 1.2 million buildings and facilities have actual emissions of 250 tpy of CO₂. See, Portia M.E. Mills & Mark P. Mills, U.S. Chamber of Commerce, *A Regulatory Burden, The Compliance Dimension of Regulating CO₂ as a Pollutant* (2008). Included are office and apartment buildings; hotels; enclosed malls; large retail stores and warehouses; colleges, hospitals and large assisted living facilities; large houses of worship; product pipelines; food processing facilities; large heated agricultural facilities; indoor sports arenas and other large public assembly buildings; restaurants, bakeries, breweries, and wineries; and many others. These buildings and facilities generally have never been regulated before under CAA programs because of their very small levels of emissions, but they will become subject to PSD permitting given the 250 tpy of CO₂ trigger if CO₂ is regulated under the CAA.

PSD regulation of a particular pollutant is not discretionary on EPA's part. It applies to any pollutant which is regulated under the CAA.⁹ Thus, if EPA regulates a GHG under *any* CAA program (other than the Section 112 HAPs program), it must also regulate that GHG under PSD. For instance, if on remand of the *Massachusetts v. EPA* case, EPA were to regulate GHG emissions from new motor vehicles, EPA would also be required to regulate GHGs under the PSD program for all stationary GHG-emitters above the PSD thresholds. The same result would ensue for regulation of GHGs under the other CAA programs, both under Title I and under Title II, discussed in the ANPR; any regulation of GHGs under any CAA program discussed in the ANPR would make the PSD program applicable to the regulated GHG.

B. *Number of sources that could be subject to PSD permitting*

The ANPR candidly recognizes that the PSD permit program could become overwhelmed by permit and permit modification applications for new and modified sources if CO₂ and other GHGs become regulated pollutants under the CAA. The ANPR estimates that the number of PSD permits required to be issued per year would likely, *at a minimum*, increase by an order of magnitude, from 200-300 permits per year currently to 2000-3000. 73 Fed. Reg. at 44,499. The ANPR notes, however, that the 2000-3000 number is likely far too small because

⁸ According to an EPA Technical Support Document, heating systems for residential buildings, such as multi-family apartment buildings and condominiums, will emit 250 tpy of CO₂ if the building is about 68,000 square feet or more. See EPA staff, *Estimates of Facilities that Emit CO₂ in Excess of 100 and 250 tpy Thresholds*, 5 (May 2008).

⁹ By regulated under the Act, we mean subject to emission controls and not, for instance, subject to monitoring and reporting requirements under Title IV.

(a) it includes only permits for new major sources and not the likely much higher number of permits that will be required for modifications; (b) it is calculated based on a building or facility's actual emission rather than its potential to emit ("PTE");¹⁰ and (3) EPA's estimate only includes combustion sources, even though the agency knows that there are also significant amounts of GHG emissions from non-combustion sources. 73 Fed. Reg. at 44,499; *see also* EPA staff, Estimates of Facilities that Emit CO₂ in Excess of 100 and 250 tpy Thresholds, 5 (May 2008). The ANPR states that if PTE rather than actual emissions were used to determine the number of permit applications that would be received annually given GHG regulation, EPA's estimate of 2000-3000 per year "would likely be an order of magnitude higher." 73 Fed. Reg. at 44,504. Similarly, according to the EPA Staff report on the subject, including modifications of existing sources in EPA's estimate of the annual permit application load "*could substantially increase the number of PSD permits.*" EPA staff, *Estimates of Facilities that Emit CO₂ in Excess of 100 and 250 tpy Thresholds*, 4 (May 2008) (emphasis supplied.)¹¹ Additionally, the ANPR estimate of annual permit applications excludes agricultural sources of CO₂ and methane emissions even though a large number of such sources would become subject to PSD if GHGs are regulated.

C. *Impairment of new development*

Requiring pre-construction PSD permits for the very large numbers of sources that will become subject to PSD if EPA regulates CO₂ and other GHGs may have a potentially catastrophic effect on economic development. Even under present conditions, where CO₂ is not regulated, the PSD permitting process is complicated, costly and lengthy. The process generally takes more than a year (even given the present, comparatively manageable, PSD permit load), requires the hiring of lawyers and consultants, and can cost hundreds of thousands of dollars or more. As the ANPR states, "there have been significant and broad-based concerns about PSD implementation over the years due to the program's complexity and the costs, uncertainty, and construction delays that can sometimes result from the PSD permitting process." 73 Fed. Reg. at 44,501.

Significantly increasing the number of sources that must undertake this complicated PSD permit process because of GHG regulation is likely to lead to regulatory gridlock. State and federal permitting agencies will not have the resources to handle the volume of permit applications that will be received. Delays will also result from legal and regulatory uncertainty as to permit requirements. Because construction activity for affected sources cannot begin until the PSD permit is obtained, an enormous amount of construction activity is likely to languish

¹⁰ This is an important distinction – for instance, given EPA's long-standing interpretation of PTE, for purposes of determining whether a building heated with a fossil fuel furnace produces emissions above the 250 tpy threshold, the building must assume that it runs its furnace at maximum capacity every hour of the year, even though it knows it will almost never do so, even during the winter.

¹¹ The ANPR properly expresses concerns as to the number of modification applications that could be filed by existing major stationary sources. As the ANPR states, for a hypothetical 500 MW coal-fired utility boiler and "[a]ssuming a 100 tpy significance level (rather than the current zero level for GHGs), any change resulting in just 10 additional minutes of utilization over the course of a year at such a source would be enough to result in an increase of 100 tons and potentially subject the change to PSD." 73 Fed. Reg. at 44,499.

while overburdened state and federal permitting authorities struggle under a mountain of new permit applications.

If CO₂ is regulated, processing PSD permit applications will be further impaired by the difficulty of defining BACT for CO₂. Since BACT requirements have never been applied to CO₂-emitting sources, no one knows what those requirements will be, and the process for each state and federal permitting agency to define BACT for the many source categories that will become subject to PSD if CO₂ is regulated will be highly challenging. BACT requirements are determined on a case-by-case basis, CAA §§ 165(a)(4) and 169(3), typically in accordance with the following complicated five-step process, with most of the work performed by the regulated source:

1. *Identification of available pollution control options.* Applicants must determine all “air pollution technologies or techniques with a practical potential for application to the emissions unit and the regulated pollutant under evaluation.” The search for available pollution control options is broad, and can extend to: technology vendors; federal, state, and local NSR permits; technology or emissions control practices required under other CAA programs; environmental consultants; technical journals and reports; and air pollution control seminars.
2. *Elimination of technically infeasible options.* To determine whether a control technology is technically feasible, an evaluation must be made of its availability and applicability. A technology is “available” when it has been licensed and can be obtained through ordinary commercial channels, as opposed to a concept or experimental technology. A technology is “applicable” if its emissions control qualities or characteristics are physically or chemically compatible with the emissions stream being evaluated, taking into consideration the chemical and physical characteristics of the emissions stream.
3. *Ranking of remaining control technologies by control effectiveness.* Technologies not eliminated by Step 2 above are ranked, from best to worst, according to their emissions reduction potential. Manufacturing data, engineering estimates, and determinations for other permits should be considered in determining achievable emissions control. Data to be considered includes, but is not limited to: emission rate (e.g., tons per year); emissions performance level (e.g., pollutant removal efficiency); emissions per unit product (e.g., lbs/mmBtu); emissions reduction (e.g., tons per year); emission concentration (e.g., parts per million).
4. *Evaluation of the most effective controls.* The following three statutory factors are evaluated on a case-by case basis for the most effective control technology identified in Step 3: (a) economic impacts (e.g., total annualized costs, average cost-effectiveness, incremental cost-effectiveness); (b) environmental impacts resulting from application of technology (e.g., impacts on other media such as soil or water); and (c) energy impacts (e.g., significant energy use or conservation). If that control technology is not selected as BACT, then the next most effective control technology in Step 3 is evaluated with the statutory factors.

5. *Making the BACT selection.* The applicant selects the most effective control technology that has not been rejected as BACT and submits that BACT selection for approval by the permitting authority.

See EPA, NEW SOURCE REVIEW WORKSHOP MANUAL (draft), at B.6 (1990).

Given the extensive information required for the candidate control technologies and the subsequent analyses in accordance with the above “top-down” procedure, it may take a considerable amount of time until a project developer will have comfort that it knows, as it develops plans for its new buildings or facilities, what types of BACT controls must be installed.

Apart from BACT uncertainties, state and federal regulators have little to no experience administering the PSD program for the many categories of small sources that will become subject to the program if EPA regulates GHGs. It will take time for the regulators to develop appropriate policies and procedures, and no doubt they will learn as they go. Similarly, because most of the small sources that will become subject to the program have never had to comply with substantive CAA requirements, they will face their own steep learning curve and will need to hire lawyers and consultants to advise them. Indeed, some kind of educational outreach will be needed to inform these many small sources that they cannot begin construction on any new small combustion equipment or modify an existing one without undertaking a study of their CO₂ emissions and, if the applicable thresholds are exceeded, obtaining a permit.

EPA is well-aware of the PSD permit problems that would result from CO₂ regulation. As the ANPR states:

Absent higher major source cutoffs and significance levels, it would be necessary to formulate a strategy for dealing with the tenfold increase in required permits that EPA projects permitting authorities will experience if GHGs become regulated for PSD purposes. *Even with advance notice, an increase of this magnitude over a very short time could overwhelm permitting authorities.* They would likely need to fund and hire new permit writers, and staff would need to develop expertise necessary to identify sources, review permits, assess control technology options for a new group of pollutants (and for a mix of familiar and unfamiliar source categories), and carry out the various procedural requirements necessary to issue permits. Sources would also face transition issues. Many new source owners and operators would need to become familiar with the PSD regulations, control technology options, and procedural requirements for many different types of equipment. *If the transition were not effectively managed, an overwhelmed permit system would not be able to keep up with the demand for pre-construction permits, and construction could be delayed on a large number of projects under this scenario.*

73 Fed. Reg. at 44,507 (emphasis supplied).

Notwithstanding EPA's frank discussion of the potential permit problems, we believe EPA understates the matter. As shown above, regulation of GHGs is likely to increase the number of sources subject to the PSD program by a considerably larger number than an order of magnitude and will introduce numerous and varied complexities to PSD permitting.

In short, regulating GHGs will significantly complicate, if not outright prevent, development activity in the United States. This may be particularly true given the tremendous pressure that has been put on EPA to immediately regulate GHGs under the CAA before the Agency or state permitting agencies are ready to handle the large number of permit applications that will ensue.

D. EPA's untested legal theories as to permit "streamlining" are unconvincing

Aware of the extremely negative PSD consequences regulating GHGs could have, the EPA in the ANPR suggests possible ways the Agency can "effectively manage[]" a "transition" to a streamlined system that eliminates or minimizes the permit burden on small sources. 73 Fed. Reg. at 44,405. Given applicable legal considerations, we believe that EPA's discussion seriously overstates its ability to do so. Indeed, EPA itself does not appear to be confident of its ability to avoid highly negative consequences. 73 Fed. Reg. at 44,501 ("...we are concerned that without significant tailoring (*and possibly with significant tailoring*), application of the existing PSD permitting program to these new smaller sources would be a very inefficient way to address the challenges of climate change,") (emphasis supplied). The following evaluates EPA's suggested ways for managing these negative consequences.

1. Increasing the 250 tpy threshold that triggers PSD

The ANPR's suggestion that EPA could increase the 250 tpy threshold is the most problematic of all of EPA's suggested streamlining strategies for limiting small source exposure to the PSD program. The threshold is statutory. *See* CAA § 169(1). The statutory language is mandatory and does not leave any room for EPA to exercise discretion or create exceptions. It is axiomatic that an agency does not have authority to substitute its own judgment for explicit requirements set forth by Congress. *Chevron U.S.A., Inc. v. NRDC*, 467 U.S. 837, 842-43 (1984). A court is unlikely to look favorably on an argument by EPA that the Agency may, based on its own view of the appropriate regulatory threshold, transform the statutory 250 tpy threshold into a threshold of 10,000, 25,000 or 100,000 tpy (or, for that matter, any threshold above 250 tpy).

The ANPR suggests that EPA may have authority to increase the PSD threshold because the threshold may represent one of the "rare cases" in which the plain meaning of statutory language should not be conclusive and legislative history should control instead. 73 Fed. Reg. at 44,503, 44,506. The ANPR also suggests that EPA may have authority to increase the thresholds based on "administrative necessity." 73 Fed. Reg. at 44,503.

EPA's legal arguments would likely fail. The most basic rule of statutory construction is that the language of the statute is the most persuasive indicator of congressional intent. In the recent case of *Sierra Club v. EPA*, 536 F.3d 673, 678 (D.C. Cir. 2008), both the majority and the

dissent cite, as the majority said, “Justice Frankfurter’s timeless advice on statutory interpretation: ‘(1) Read the statute; (2) read the statute; (3) read the statute!’ *In re England*, 375 F.3d 1169, 1182 (D.C. Cir. 2004 (Roberts, J.) (quoting Henry J. Friendly, *Benchmarks* 2002 (1967)).” Contrary to the ANPR discussion, legislative history never trumps statutory language; the “rare” doctrine that EPA cites applies only where the statutory term in question had a special meaning to Congress that differs from literal meaning but can be discerned from legislative history. That doctrine is unlikely to apply to the pre-construction permit program numerical threshold. What possible meaning could Congress have had for the number 250 other than 250?

The ANPR also appears to misinterpret the extent to which courts will allow an agency to depart from statutory requirements as a result of administrative necessity. In fact, the discussion from *Alabama Power Co. v. Costle*, 636 F.2d 323, 357-60 (D.C. Cir. 1979), that the ANPR cites, would seem to contradict rather than support the ANPR’s suggestion that EPA could increase the regulatory threshold based on administrative necessity. In *Alabama Power*, EPA adopted a rule similar to its suggestion here and based on the same rationale. It attempted to categorically exclude numerous small emitting sources from pre-construction permitting requirements based on EPA’s judgment that “application to such sources of the full preconstruction review and permit process would not be cost-effective and would strain to the limits the agency’s resources.” *Alabama Power*, 636 F.2d at 356. According to EPA in *Alabama*, “the costs to industry and permitting authorities entailed in reviewing” numerous small source PSD permit applications “would far outweigh the benefit of the ‘relatively insignificant’ reduction in emissions that would result.” *Id.* The Court, however, *rejected* EPA’s approach, holding that it “falls well beyond the agency’s exemption authority.” *Id.* The Court further noted that exemptions based on administrative necessity “are not favored” and that the “broad principle that frowns upon categorical administrative exemptions is strict.” *Id.* at 358.

2. Phase-in of PSD permitting requirements

The ANPR suggests that EPA might avoid overwhelming PSD permitting authorities with new applications “by initially adopting a relatively high major source size and significance level, and then periodically lowering the level until the full coverage is reached.” 73 Fed. Reg. at 44,507. As noted above, however, EPA has no authority to redefine the statutory thresholds. Any EPA attempt to do so under the Agency’s reading of *Alabama Power* would be unlikely to prevail, for reasons discussed above, and would, at a minimum, create high levels of uncertainty as to the legal validity of whatever phase-in requirements EPA adopted, with a significant negative effect on construction activity. In any event, at a time when state governments are facing a need for significant budget cuts, and given the very large number of sources that would be subject to PSD if EPA regulates GHGs, there is no reason to suppose that there would ever be “an orderly ramp-up in funding and in essential human capital” in anywhere near the amount that would be necessary to fully implement the statutory PSD requirements. 73 Fed. Reg. at 44,507.

3. Calculating the threshold as Carbon Equivalent

The ANPR explores the possibility of establishing PSD applicability thresholds based on carbon equivalent. As the ANPR states, using this approach, the 250 tpy threshold would be increased to 917 tpy for CO₂, but the threshold for methane and nitrous oxide would be reduced substantially below 250 tpy. 73 Fed. Reg. at 44,505.

EPA's carbon equivalent approach would be difficult to justify legally. The PSD thresholds apply to "air pollutants." That phrase is defined in Section 302(g) as actual physical substances. CE is not a physical substance; it is a formula for comparing the global warming potential of various GHGs. CE is therefore not an "air pollutant" that can be used to define the PSD threshold.

Moreover, the PSD thresholds are set forth in "tons" and have always been interpreted as being expressed as a unit of air pollutant's *mass* because there was never any doubt that Congress intended the use of that specific unit. We have already explained why the Agency is not at liberty to change the numerical values of those PSD "trigger" levels. EPA has no more authority to change the *unit* of those statutory thresholds than it has to change their numerical values. Thus, EPA almost certainly would exceed its delegated authority if it were to define a major stationary source of GHG emissions in terms of the Carbon Equivalent (rather than the mass) of those emissions.

4. A general permit with "presumptive BACT"

In order to minimize the permitting burden on small sources, the ANPR suggests that the PSD program could possibly be implemented for small sources through a general permit program. 73 Fed. Reg. at 44,510. This approach raises a number of legal issues and may not be possible at all.

First, general permitting has never been tested in court in a PSD context, and as the ANPR states, no explicit statutory authority exists for general PSD permits. 73 Fed. Reg. at 44,509. Thus, sources may have difficulty relying on general permitting absent judicial confirmation. Moreover, PSD permits may not be issued without a hearing. *See* CAA § 165(a)(2). Perhaps, a hearing in connection with adoption of the general permit program would satisfy this hearing requirement (*see* 73 Fed. Reg. at 44,509-10), but again this would generate legal uncertainty. EPA's citation of general permitting authority in the context of the Clean Water Act is unhelpful, since such an approach is specifically authorized under that statute, whereas CAA Section 165 specifically provides for individual permits.

Second, as stated above, PSD permits require sources to install BACT controls. The statutory definition of BACT requires that BACT be determined on a "case-by-case" basis, CAA §§ 165(a)(4) and 169(3), which facially would seem to rule out the general permitting approach. Obviously, the statute cannot simply be ignored. Perhaps EPA envisions a general permit that assumes predetermined "presumptive" BACT requirements, which presumably would be different for different categories of small sources. As set forth in the ANPR, there is some very limited administrative precedent for presumptive BACT, 73 Fed. Reg. at 44,508 n.278, but, again, this concept has not been tested in court and would entail significant legal risk. Moreover, determining presumptive BACT requirements for different categories of sources will generate controversy and consume time.

Third, as the ANPR recognizes, the timing of adoption of a general permit program would be critical. 73 Fed. Reg. at 44,510. Unless the program is in place at the time that EPA first regulates GHGs under any CAA program, small sources, at that time, will be forced to comply with the full panoply of pre-construction permit requirements. Easy adoption of a

general permit program should not be assumed, given that one has not been done adopted before in a PSD context and the controversy that will arise in attempting to define “presumptive BACT” limits for different categories of small sources. Thus, establishing a general PSD permitting program could take a great deal of time, particularly if, as expected, EPA and the public were simultaneously addressing a host of other GHG regulatory initiatives. Yet advocates of CAA regulation of GHGs demand immediate action, raising the prospect that EPA will proceed with GHG regulation before an effective general permitting program is in place.

Fourth, presumptive BACT and general permit requirements established by EPA would not be self-executing in most states. States acting under their own “non-delegated” permit authority would have to adopt these new provisions into law, probably through rulemakings, possibly through legislation. This significantly raises the difficulty of having an effective general permitting program in place at the time that EPA proceeds with GHG regulation.

Fifth, even if EPA were successful in implementing permit streamlining measures, sources would still have to hire lawyers and consultants or staff to understand the process and prosecute the necessary paperwork, regulators would need to hire staff to review and administer the paperwork, and both regulator and regulatee would need to engage in some form of monitoring and reporting. The ANPR nowhere defines the benefit of regulating small source GHG emissions that would justify even this level of effort.

Finally, whatever promise general permitting may have for reducing permitting burdens is likely to be far offset by the huge task of applying even a streamlined program to a source universe of 1.2 million buildings and facilities.

5. Redefining PTE may not be workable and doesn’t solve the problem

The ANPR recognizes that, under EPA’s current application of the PSD program, for purposes of determining whether a facility’s emissions exceed the 250 tpy threshold, the facility must assume that it operates at maximum capacity every hour of the year (its potential to emit, or PTE). Thus, if CO₂ is regulated under the CAA, a building heated with fossil fuels must calculate its emissions based on the assumption that the building will run its furnace and produce CO₂ emissions all day, year-round even if it is known that the furnace will only run during the winter and even then not all day. EPA suggests that this makes little sense and therefore suggests ways around its typical interpretation of a facility’s PTE. 73 Fed. Reg. at 44,504.

One of EPA’s suggested approaches is that the building could voluntarily limit the amount of time it operates its furnace or other GHG-producing equipment through a federally-enforceable permit limit. As the ANPR appears to recognize, this suggestion is unworkable and, in some states, is possibly illegal. Although sources would not be required to obtain major source PSD permits, they would be required to obtain “minor source” permits, and “the sheer volume of [such] permits and the process required for each one would severely strain permitting authority resources ... [and] some state and local agencies may lack the authority to establish minor source permit limits for non-NAAQS pollutants.” 73 Fed. Reg. at 44,504.

Another approach suggested by the ANPR is that EPA could by rule limit PTE for various categories of small sources of GHG emissions. 73 Fed. Reg. at 44,504. This suggestion

may have some promise, although there is only very limited precedent for adoption of such categorical limits on PTE. As with many of EPA's other proposals to avoid the 250 tpy threshold, the legal validity of EPA's PTE suggestion has not been tested in court and is therefore uncertain.

Most importantly, whatever success EPA might have in limiting PTE for small sources, limiting PTE will not prevent permitting gridlock. As stated above, EPA's estimate of an order of magnitude increase in the number of PSD permit applications – an increase that EPA said could result in extreme permitting problems absent some other way to limit the number of PSD permits or simplify the PSD process – assumed the use of actual emissions rather than PTE. As also stated above, EPA's estimate of the number of new permit applications is low for a number of reasons, not just because of its use of actual emissions rather than PTE. Furthermore, even if PSD could be avoided by limiting PTE with a minor source permit, a huge number of permits would still be required to accomplish that perceived "streamlining." Thus, limiting PTE, if possible, is important, but it does not solve the problem created by regulating GHGs under the CAA.

E. *Conclusion as to PSD*

GHG regulation under the CAA entails enormous risks under the PSD program. If EPA's untested legal theories about streamlining PSD permitting are wrong, new construction activity could stop. It is therefore noteworthy that "EPA has not performed an analysis of the GHG emissions that might be avoided or reduced under PSD preconstruction permitting, nor of possible increases through unintended incentives." 73 Fed. Reg. at 44,501. Similarly, the ANPR states that "[r]egarding the potentially large universe of smaller sources and modifications that could become newly subject to BACT, as described above, there are large uncertainties about the potential benefits of applying BACT requirements to GHG emissions from such sources." 73 Fed. Reg. at 44,501. In sum, the very large risks of PSD regulation of GHGs are not offset by any defined benefits that would result.

IV. National Ambient Air Quality Standards (NAAQS)

The ANPR identifies the NAAQS provisions of the CAA as a major pathway for potentially regulating GHG emissions. In our view, regulation of GHGs under the NAAQS program is fundamentally irrational and could lead to very serious economic consequences. In general we believe that the ANPR overstates both (a) EPA's potential ability to avoid NAAQS regulation if it makes an Endangerment Finding and (b) the Agency's ability to minimize the regulatory consequences if NAAQS regulation is triggered.

A. *The NAAQS program is not workable*

Under Section 108 of the CAA, EPA is required to publish and periodically revise a list of each air pollutant: "(A) the emissions of which, in his judgment, cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare; (B) the presence of which in the ambient air results from numerous or diverse mobile or stationary sources; and (C) for which air quality criteria had not been issued before December 31, 1970 but for which he plans to issue air quality criteria under this section." For each air pollutant included

on this list, EPA is required to issue air quality criteria reflecting the “latest scientific knowledge useful in indicating the kind and extent of all identifiable effects on public health or welfare which may be expected from the presence of such pollutant in the ambient air, in varying quantities.” CAA § 108(a)(2).

Under Section 109 of the CAA, EPA is required to simultaneously establish primary and secondary NAAQS for each pollutant for which air quality criteria are issued. Primary standards must be set at a level “which in the judgment of the Administrator, based on such criteria and allowing an adequate margin of safety, are requisite to protect the public health.” *Whitman v. American Trucking Assns*, 531 U.S. 457, 473 (2001). Secondary standards must be set at a level “which in the judgment of the Administrator, based on such criteria, is requisite to protect the public welfare.” *Id.* at 472n.3. The cost of attaining the NAAQS cannot be considered in setting the standards. *Id.* at 471.

The NAAQS are implemented and enforced through an elaborate federal-state partnership. In brief, under Sections 107 and 110, subject to EPA review and approval, a state establishes attainment and non-attainment areas within its external boundaries for each area meeting or not meeting the NAAQS. States also develop and submit implementation plans setting forth control measures for maintaining attainment status in attainment areas and for bringing non-attainment areas into attainment within defined time limits. States are given broad discretion to develop these control measures, so long as the ultimate goal of curing non-attainment and maintaining attainment are met. Severe sanctions apply to states which do not meet, attain and maintain the NAAQS.

It is hard to imagine how NAAQS regulation would work for a GHG. As stated, the establishment of a NAAQS triggers a process whereby attainment and non-attainment areas are designated, states are required to submit implementation plans to attain or maintain the NAAQS, and severe sanctions are mandated for non-compliance. This process cannot work for GHGs, however, given the nature of globally-circulating GHGs, where a ton of GHG emitted in, for instance, Maryland has the same impact on GHG concentrations over Maryland as a ton emitted in China. Moreover, even total U.S. emissions (much less Maryland’s) are only 20 percent of global GHG emissions, a number that is declining and will decline even more over time. Maryland can thus do nothing to attain or maintain a GHG NAAQS. Maryland could literally cease emitting any GHGs tomorrow and it would have no discernable impact on GHG concentrations in the atmosphere over the state. Yet Maryland would nevertheless be subject to severe sanctions for failing to attain or maintain the GHG NAAQS.

Similarly, GHG emissions are not a regional pollutant transport issue, such as ozone, where groups of states can combine to reduce emissions for the purpose of regional attainment, as is the case under the NO_x SIP Call. Given the nature of GHGs, not even the most draconian multi-state emission reductions could ensure attainment or maintenance of a GHG NAAQS. As a result, attempting to apply the NAAQS program to GHGs would be a hugely expensive exercise in futility.

B. *Endangerment finding could trigger NAAQS regulation*

As summarized above, the process of establishing a NAAQS begins under Section 108, with EPA's publication of a "Criteria Document" describing the public health and welfare effects of the pollutant at issue. Section 108(a) obligates the EPA Administrator to issue such a document for pollutants (i) which may reasonably be anticipated to cause or contribute to air pollution that endangers public health or welfare; (ii) which are emitted by "numerous or diverse mobile or stationary sources"; and (iii) for which EPA "plans" to issue a Criteria Document after the date of enactment of the 1970 CAA. If EPA issues a Criteria Document, it is then obligated to issue a NAAQS and NAAQS regulation is triggered.

The ANPR suggests the possibility that EPA might have discretion not to promulgate a Criteria Document under these requirements and therefore might be able to avoid initiating NAAQS regulation even if it makes an Endangerment Finding. The ANPR concedes that CO₂ is unquestionably emitted by numerous or diverse mobile or stationary sources. It therefore recognizes that if EPA makes an Endangerment Finding, it may only avoid issuing a Criteria Document and then a NAAQS if it has discretion to do so under the third Section 108(a) criterion. The ANPR states that EPA may have such discretion; according to the ANPR, EPA could simply "plan" not to issue a Criteria Document. 73 Fed. Reg. at 44,477.

EPA's theory, however, was tested and found wanting in *NRDC v. Train*, 545 F.2d 320 (2d Cir. 1976). In *Train*, the Court ruled that EPA's duty to establish a NAAQS is mandatory if the first two Section 108(a) factors are met. In *Train*, EPA had conceded that lead endangers public health and welfare and is emitted by numerous or diverse sources, but EPA contended that it had discretion under the third Section 108(a) factor not to issue a Criteria Document. The Court rejected EPA's statutory interpretation, ruling that the third factor applied only to pollutants included on the initial list of pollutants to be regulated under the NAAQS program, which EPA was required to promulgate within thirty days after December 31, 1970.

The ANPR's only attempt to distinguish *Train* is to argue that it was decided before *Chevron U.S.A. v. NRDC*, 467 U.S. 837 (1984), which is the seminal case setting forth standards for judicial review of agency action. *Chevron*, however, has never been interpreted as automatically invalidating cases decided before it. Indeed, in another section of the ANPR, EPA relies heavily on *Alabama Power v. EPA*, 636 F.2d 323 (D.C. Cir. 1979), which was also decided before *Chevron*. *Train* remains good law.

If EPA were to decline to establish a CO₂ NAAQS on the basis of the third factor of Section 108(a), that decision would likely be reviewed in the D.C. Circuit. The D.C. Circuit is not bound by Second Circuit precedent, although Circuit Courts generally give weight to the decisions of other Circuit Courts. In any event, given *Train*, any attempt by EPA to avoid promulgating a GHG NAAQS if it makes an Endangerment Finding will face a significant legal impediment.

Finally, it has been suggested that EPA need not worry about potential NAAQS regulation of GHGs because no party would seek to compel EPA to adopt such regulation. While the original rulemaking petition that led to the *Massachusetts v. EPA* court decision was still being considered by EPA, however, three northeastern states filed a lawsuit seeking to

compel EPA to establish a GHG NAAQS. That lawsuit was withdrawn after EPA denied the rulemaking petition and the legal focus shifted to an appeal of that denial. In light of this lawsuit, the possibility cannot be discounted that, if EPA makes an Endangerment Finding, a party or parties (not necessarily these states) will seek to compel NAAQS regulation.

C. *EPA's ideas for making NAAQS regulation palatable are unconvincing*

1. Attainment or non-attainment scenario

Section 110 of the Act establishes specific requirements that each SIP must address when responding to a new or revised NAAQS. Some of those SIP requirements vary depending on whether an area is designated as attainment or non-attainment. Thus, when analyzing how the Act could possibly support a NAAQS for GHGs, the ANPR's assessment included both attainment and non-attainment scenarios. The ANPR's discussion of both scenarios, however, is unrealistic.

In its attainment scenario, EPA contemplates setting the GHG NAAQS higher than the measured ambient concentrations of GHGs in the United States. But such a result appears to contradict the ANPR's discussion of the health and welfare effects created by global climate change. A NAAQS level in excess of measured ambient concentrations indicates the absence of adverse public health and welfare impacts from the regulated pollutant. The ANPR, however, expresses the conclusion that the global environment is currently being affected by atmospheric GHG concentrations. *See* 73 Fed. Reg. at 44,427 ("The scientific record shows there is compelling and robust evidence that observed climate change can be attributed to the heating effect caused by global anthropogenic GHG emissions," citing "changes in precipitation patterns, sea level rise, extreme hot and cold days, sea ice, glaciers, ecosystem functioning and wildlife patterns"). *See also* 73 Fed. Reg. at 44,478 (discussing the "margin of safety" required in setting primary NAAQS). Environmental groups likewise have vociferously expressed the view that current GHG concentrations are significantly degrading the environment. Thus, EPA is not likely to be able to set a NAAQS that results in NAAQS attainment.

Even if EPA were to succeed in setting GHGs NAAQS at a level reflecting attainment, very damaging regulatory consequences would result. States would be required to adopt attainment SIPs containing measures preventing GHG concentrations from rising to levels above the NAAQS, even though they would be powerless to do so. Additionally, they would be required to implement the PSD program described above.

In the Agency's non-attainment scenario, the GHG NAAQS would be set at a level lower than the currently measured concentration of GHGs. This seems to be the more appropriate setting because it would be consistent with an Endangerment Finding. However, because the entire country would be non-attainment for GHGs, extremely negative consequences would ensue.

For instance, in a non-attainment scenario, the PSD program would not be applicable and instead sources would be subject to the Non-attainment NSR permit program, which applies to a greater universe of sources than the PSD program. Under Section 172(c)(5) of the CAA, the threshold emission level that triggers Non-attainment NSR is a 100 tpy for *any* source category,

whereas the PSD permit threshold is 100 tpy for 28 source categories and 250 tpy for all other source categories.

Non-attainment NSR permit requirements are also much more onerous than PSD emissions requirements. Each new and modified major source in a non-attainment area must install Lowest Achievable Emission Rate (“LAER”) technology for any non-attainment pollutant. *See* CAA § 173(a)(2). As the name implies, a LAER level of emissions for a particular source category is either the lowest emission rate already permitted for a similar type of source or else the lowest emission rate achieved in practice by that same type of source. *See* CAA § 171(3). Because cost is not allowed to be considered in determining LAER, emission levels for LAER in a given source category are typically lower than those of their BACT counterparts. Moreover, because control technologies for GHGs are in their infancy, applicants and regulators alike would have great difficulty in establishing what constitutes LAER for any particular source category. Stagnation of Non-attainment NSR permitting would be inevitable as each permitting authority attempts to sort out the traditional hierarchy of BACT and LAER controls.

Even worse from an economic perspective, in addition to installing LAER, the applicant for a new or modified source in a non-attainment area must obtain “offsets,” i.e., contemporaneous emission reductions of the non-attainment pollutant from existing sources in the nonattainment area that will offset the increased emissions from the new or modified source. *See* CAA § 173(a)(1)(A). Even under current non-attainment NSR permitting that is applicable only to a relatively limited number of large industrial sources, the cost and availability of offsets represent a very significant challenge to new development. While new development may be allowed, the costs and time necessary to meet rigorous non-attainment permitting requirements can often result in project cancellation.

In the case of a nationwide GHG non-attainment area, the effect of non-attainment NSR permitting would be even more severe. With non-attainment NSR applicable to an extremely large number of sources, each of them competing for offsets, new development of virtually any kind would become essentially impossible.

The problems which arise from attempted compliance with non-attainment permitting requirements are exacerbated by the Act’s requirement that attainment be achieved within 10 years. In the event that a SIP does not demonstrate attainment within the maximum 10-year compliance period, significant sanctions must be applied to that state. Specific sanctions mandated by the Act include (1) even more stringent offset requirements, (2) restrictions on state highway funding, and (3) restricted approvals of transportation projects. *See* CAA § 179. Yet, as stated, nothing the states could do individually or collectively could result in attainment of a GHG NAAQS in 10 years or in any amount of time. Consequently, after 10 years, CAA sanctions would apply throughout the country. Thus, the ANPR understates the matter by saying that “it would appear to be an inescapable conclusion that the maximum 10-year horizon for attaining the primary NAAQS is ill-suited to [GHGs].” 73 Fed. Reg. at 44,367.

In sum, with a NAAQS for GHGs, the entire country would be designated as either attainment or non-attainment. A nationwide GHG attainment status would conflict with existing health and welfare effects that EPA has attributed to global climate change. Consequently, such

attainment designation would be subject to legal challenge. On the other hand, a scenario where the entire nation is designated as non-attainment for GHGs would be so extreme and oppressive that the United States economy's ability to function is highly doubtful.

2. Secondary NAAQS only

The ANPR suggests that EPA may have the authority to decline to set a primary standard. 73 Fed. Reg. at 44,478. The Agency seems particularly interested in this approach because, unlike non-attainment for a primary standard where the Act prescribes a deadline for achieving attainment, under a secondary standard the Act only requires SIPs to achieve attainment "as expeditiously as practicable." See CAA § 172(a)(2)(B). This approach raises significant legal issues.

It is by no means clear that the CAA allows EPA to set only a secondary NAAQS for a pollutant. The one example that EPA cites for possibly supporting its discretion to take such action involves the Agency's revocation of the secondary standard for carbon monoxide, after concluding there was no evidence that typical ambient levels of that pollutant resulted in any adverse welfare effects. 73 Fed. Reg. at 44,478. From the Agency's limited discussion of that action, however, it appears that its lawfulness was never tested in the courts. Moreover, because the purpose of a primary standard is different from that of a secondary standard, the absence of a secondary standard might be acceptable under the Act whereas the lack of a primary standard may not be.

In any event, a decision by the Agency only to promulgate a secondary standard for GHGs appears to contradict the ANPR's discussion of a possible Endangerment Finding. That discussion recites a number of adverse impacts to public health attributable to global climate change caused by current atmospheric levels of GHGs. 73 Fed. Reg. at 44,426 (discussing climate change effects on "respiratory infection, aggravation of asthma, and potential premature death," "additional human health concerns include a change in the range of vector-borne diseases, and a likely trend towards more intense hurricanes"). Because a primary standard is required to be set at a level that protects public health with an adequate margin of safety, CAA § 109(b)(1), it is questionable whether EPA could ignore that language simply because the documented health effects are "indirect" impacts on the public's health. 73 Fed. Reg. at 44,478.

Furthermore, the absence of any firm statutory deadline to achieve attainment of a secondary standard would not diminish the devastation of the American economy resulting from the entire country being non-attainment for GHGs. All of the same adverse impacts from numerous small sources being subject to Non-attainment NSR would ensure that development throughout the nation would essentially stop. Moreover, the fact that Section 172(a)(2)(B) provides for attainment of the NAAQS only "as expeditiously as practicable," as opposed to providing a defined deadline, does not mean that SIP measures would not need to result in significant progress towards attainment. "As expeditiously as practicable" does not mean "never." Thus, in addition to Non-attainment NSR requirements, states would be required to adopt onerous emission reduction measures to measurably reduce atmospheric GHG levels, even though such measures would be powerless to do so.

Finally, contrary to the ANPR’s assertion, “the regional haze program’s model for goal planning, control strategy development and control strategy implementation” *does not* “offer a possible framework for achieving a GHG secondary NAAQS.” 73 Fed. Reg. at 44,482. Indeed, the features of the regional haze program do not provide a model approach for achieving any GHG NAAQS, primary or secondary. The regional haze program operates under the same basic regulatory mechanism as that of the typical NAAQS-SIP linkage. A goal for increased visibility in a class I area is first established (like a NAAQS), and then the SIP requires specific emission reductions of visibility-impairing pollutants that impact that class I area for the purpose of making measured reasonable progress towards the visibility goal.

But for the same reasons discussed above, SIP provisions adopted pursuant to a GHG NAAQS will not result in measured progress towards attainment. As the ANPR states, with a secondary GHG NAAQS “it might not be possible to discern improvement in atmospheric concentrations of GHGs.” 73 Fed. Reg. at 44,482. The better view is that improvement in GHG atmospheric levels will *not* be discernable because a NAAQS-SIP program for GHGs will not function like the regional haze program.

3. Section 179B SIP approval

As the ANPR acknowledges, when a SIP cannot demonstrate attainment by the prescribed deadline, the Act mandates the application of long-term sanctions (e.g., more stringent offset requirements and restrictions on highway funding). *See* CAA § 179(b). In the case of a GHG NAAQS, non-attainment would be national in scope, so the resulting sanctions would likewise apply throughout the country. Section 179B of the Act, however, authorizes EPA to approve a SIP and not apply sanctions if the submitting state demonstrates that, “but for emissions emanating from outside the United States,” the state’s nonattainment area would attain and maintain the applicable NAAQS. The ANPR suggests that Section 179B could be used to obtain SIP approval and thereby avoid any otherwise impending sanctions. 73 Fed. Reg. at 44,481.

Section 179B, at best, would forgive a state’s failure to attain a GHG NAAQS within the statutory ten-year time period. A state would still be required to implement all of the onerous nonattainment measures discussed above. *See* Section 179B(a)(1) (state must show that its SIP “meets all the requirements applicable to it under the chapter other than a requirement that such plan or revision demonstrate attainment and maintenance of the relevant [NAAQS] by the attainment date specified under the applicable provision of this chapter, or in a regulation promulgated under such provision”). Thus, notwithstanding Section 179B, states would still be subject to the rigorous, costly and time-consuming requirements of Non-attainment NSR and a host of other non-attainment requirements, such as reasonably available control measures (RACM) and reasonably available control technology (RACT) for thousands of existing small sources.

4. Section 115 SIP Call

Section 115 of the Act requires a state to revise its implementation plan by adopting control measures as necessary to eliminate any endangerment in a foreign country caused by air pollution to which emissions from that state have either caused or contributed. This statutory

requirement only applies where the foreign country gives reciprocal rights to the United States. The ANPR contains a brief section suggesting that this CAA provision could be invoked on a national basis to require all states to reduce their GHG emissions. EPA suggests, without elaboration, that “[a]ddressing GHGs under this authority could allow some flexibility in program design.” 73 Fed. Reg. at 44,483. The ANPR has requested “comment on the efficacy of using Section 115 as a mechanism to facilitate more effective regulation of GHGs through a NAAQS.” 73 Fed. Reg. at 44,483.

In the first place, the ANPR does not explain why triggering Section 115 would result in any more effective or different regulation than triggering normal NAAQS regulation. Under Section 115, if emissions from a state endanger public health or welfare in a foreign country, the state must revise its SIP to eliminate the endangerment. But a state’s GHG emissions do not endanger public health or welfare in another country in any different way than those emissions endanger public health or welfare in the state itself or other states – the state’s emissions contribute to the global load of atmospheric GHGs. Thus, Section 115 in the context of GHGs is superfluous. Assuming endangerment, EPA must regulate under the NAAQS program anyway.

Moreover, Section 115 would be unworkable. Under Section 115, the SIP revision process cannot go forward unless EPA has sufficient information to trace the documented endangerment in a foreign country to pollutants emitted from specific sources in the United States. *Her Majesty The Queen in Right of Ontario v. EPA*, 912 F.2d 1525, 1533 (D.C. Cir. 1990). EPA apparently would resolve that particular cause-and-effect requirement by finding that GHG emissions of *every* source in *each* state are responsible for the endangerment in the foreign country. 73 Fed. Reg. at 44,483. Each state would then have to revise its SIP to require GHG emission reductions from all of its affected sources.

This approach, however, suffers from the same fundamental flaw that prevents a GHG NAAQS from eliminating endangerment in one state attributable to GHG emissions from another state. No linkage exists between “cause” (emissions) and “effect” (ambient nonattainment levels). Given the globally-mixed nature of GHGs in the atmosphere, EPA would be unable to correlate any portion of endangerment in a foreign country with specific GHG emissions from any United States source of GHGs. Consequently, any amount of GHG emission reductions required from a particular source by any SIP revision could not be justified – no legal or technical basis would support the emission reduction requirement.

Moreover, even if substantial GHG emission reductions were achieved from all of the states, the large burden of global GHGs in the atmosphere, the increasing GHG emissions from foreign countries and the persistent global mixing of all such emissions would prevent the Section 115 “endangered” foreign country from realizing any measurable reduction in that endangerment. Thus, there is no efficacy associated with the contemplated program of nationwide GHG emission reduction under Section 115. Success under that statutory provision is predicated on endangerment in a foreign country being “cured” by emissions reductions from one or more states. However, that requisite linkage, i.e., that source-receptor relationship, simply does not exist between GHG emissions and ambient levels of those pollutants.

V. New Source Performance Standards (NSPS)

Like the program for NAAQS and SIPs, the NSPS program was enacted by Section 111 of the Act as part of the Clean Air Act Amendments of 1970, Pub. L. No. 91-604, § 111, 84 Stat. 1676 (1970). As such, it is a mature program with which EPA has considerable experience and familiarity. Nevertheless, the Agency appears to have underestimated the challenges posed by several key legal requirements for it to proceed with establishing CO₂ and other GHG standards of performance for stationary source categories. Moreover, it is very unlikely that EPA has anywhere near the necessary resources to promulgate CO₂ emission standards for the number and sizes of stationary source categories that would be affected.

A. *“Standard of performance”*

The statute defines a “standard of performance” to mean “a standard for emissions of air pollutants which reflects the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction and any nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated.” See CAA § 411(a). This NSPS level of control is commonly referred to as “best demonstrated technology” or “BDT.”

This “best” nomenclature is misleading. The D.C. Circuit has interpreted the definition of “standard of performance” to be:

far different from the words Congress would have chosen to mandate that EPA set standards at the maximum degree of pollution control technologically achievable. Parsed, section 111 most reasonably seems to require that EPA identify the emission levels that are “achievable” with “adequately demonstrated technology.” After EPA makes this determination, it must exercise its discretion to choose an achievable emission level which represents the best balance of economic, environmental, and energy considerations. It follows that to exercise this discretion EPA must examine the effects of technology on the grand scale in order to decide which level of control is best.

Sierra Club v. Costle, 657 F.2d at 330. Adherence to the Court’s direction is essential to the development of the NSPS level of control for a particular source category.

B. *An “achievable” emission level for CO₂ control devices cannot be defined at this time*

The ANPR states that “EPA also has significant discretion to determine the appropriate level for the standards.” 73 Fed. Reg. at 44,486. The remainder of the ANPR discussion related to the meaning of “standard of performance” revolves around the Agency’s discretion to define what constitutes control technology that is “adequately demonstrated.” The Agency explains that it must find that it would be reasonable to apply adequately demonstrated technology to the regulated category. However, in the Agency’s view, “[t]he systems, and corresponding emission rates, need not be actually in use or achieved in practice at potentially regulated sources or even

at a commercial scale.” 73 Fed. Reg. at 44,487. We strongly believe that EPA sees the bounds of its discretion in this context to be far broader than that described by the courts.

In particular, case law teaches that the limits on determining what constitutes an “achievable” NSPS level of control are much more confined, and defined, than what the Agency suggests. In *Sierra Club v. Costle*, 657 F.2d at 377, the D.C. Circuit established the following two-pronged test for determining whether a level of emissions could be deemed “achievable” for NSPS purposes:

[I]n order for EPA to demonstrate the achievability of the standard [of performance] it must (1) identify variable conditions that might contribute to the amount of expected emissions, and (2) establish that the test data relied on by the agency are representative of potential industry-wide performance, given the range of variables that affect the achievability of the standard. .

A Technical Support Document discusses the types of GHG control approaches that are currently available for a variety of source categories considered to be among the largest sources of GHG emissions in the United States. EPA Office of Air and Radiation, *Technical Support Document for the Advanced Notice of Proposed Rulemaking for Greenhouse Gases; Stationary Sources, Section VII*, (June 2008) (hereafter “ANPR TSD, Section VII”). The Document identifies a number of different improvements in energy efficiency and process efficiency which could be implemented in order to reduce CO₂ emissions from those types of facilities. The Document, however, does not identify any “add-on” or “end-of-pipe” control technologies for CO₂ or other GHGs. The absence of any such control technology details and associated emission-reduction data confirms that at the present time the critical development of add-on CO₂ control devices for those surveyed source categories is in its infancy. In other words, currently “achievable” NSPS levels of control for adequately demonstrated technologies are limited to the kinds of emission reductions that can be obtained with various energy-efficiency and process-efficiency improvements to the facilities which comprise the different source categories.

The ANPR notes that “[o]ther controls may become available in the future whose costs and emission reduction effectiveness may differ substantially from what is discussed here today.” 73 Fed. Reg. at 44,488. For example, “technology to capture and geologically sequester CO₂ is the subject of ongoing projects in the United States and other countries and is a promising technology.” 73 Fed. Reg. at 44,492. Nevertheless, while there may be add-on technologies in the not-too-distant future with the promise for reducing major portions of a source’s CO₂ emissions, the Agency remains obligated, in promulgating an NSPS, to “establish that the test data relied on by the agency are representative of potential industry-wide performance, given the range of variables that affect the achievability of the standard.”

Having developed NSPS emission standards for over 35 years now, the Agency is well aware of the importance of background information containing sufficient and reliable test data that are representative of how a control system is expected to perform throughout that industry. At the current time data demonstrating the representative performance of an add-on control technique for any GHG emissions do not exist. Therefore, the Agency cannot satisfy the fundamental statutory requirement to demonstrate the “achievable” level of GHG emissions for

any add-on control technology which it might otherwise consider to be “adequately demonstrated.”

The Agency appears to recognize this critical restriction on its legal authority to adopt NSPS limits, but then pulls away from the necessary conclusion. For example, the ANPR recognizes that “various legal issues and questions concerning legal authority may be involved in setting standards based on technology only adequately demonstrated for use at a future date.” 73 Fed. Reg. at 44,490. EPA nevertheless posits that “it may be possible to establish a goal based on future availability of a technology and to revise the standard to reflect technological advancements at appropriate intervals.” 73 Fed. Reg. at 44,490. With respect to establishing NSPS limits, *Sierra Club v. Costle* and the line of cases leading up to it¹² teach that Section 111 plainly prohibits promulgating standards based on technology of uncertain performance capability. This legal issue should be clear for the Agency: EPA must have “test data . . . representative of potential industry-wide performance” before establishing the CO₂ emissions level achievable by any add-on control technology. See *Sierra Club*, 657 F.2d at 377. Of course, this principle applies equally to any performance standard that EPA considers as representative of an energy-efficiency or process-efficiency improvement or other action which might achieve more “modest” emission reductions.

The ANPR’s legal theory about using NSPS rulemaking to set more stringent NSPS limits for future years is also fatally flawed because EPA has overlooked a key provision within Section 111. When first enacted in 1970, Section 111(b)(1)(B) provided that “[t]he Administrator may, from time to time, revise such [NSPS] standards . . .”. Clean Air Act Amendments of 1970, Pub. L. No. 91-604, § 111(b)(1)(B), 84 Stat. 1676, 1684 (1970). Congress adopted that provision because “it should be clear that standards of performance are not static. The Secretary would be directed to review and promulgate new or modified standards *whenever new technology processes or operating methods become available.*” S. Rep. No. 1196, 91st Cong. 2d Sess. 16 (1970) (emphasis supplied). Subsequently dissatisfied with EPA’s pace for revising standards of performance, Congress amended that provision in 1977 to require EPA “at least every 4 years, to review the new source standards of performance and to revise them if appropriate.” H.R. Rep. No. 294, 95th Cong., 1st Sess. 11 (1977), *reprinted in* 1977 U.S.C.C.A.N.1077, 1088. The express purpose of this amendment was to ensure that EPA was required “to promulgate revised standards *when more efficient emission reduction technology becomes available.*” *Id.* at 195 (emphasis supplied).

In short, because control technologies will often be evolving and thus more efficient control systems will become available in the future, Section 111(b)(1)(B) requires affected NSPS standards to be revised to reflect the achievable emission levels of those advanced technologies when they do become available. In contrast, the ANPR envisions an approach where an NSPS standard would be set at the present time in anticipation of a particular technology becoming available by some future date. As we point out throughout this memorandum, EPA lacks the legal authority to prescribe a regulatory procedure when the Act already specifies the specific

¹² *National Lime Assn v. EPA*, 627 F.2d 416 (D.C.Cir. 1980); *Essex Chemical v. Ruckelshaus*, 486 F.2d 427 (D.C.Cir. 1973); *Portland Cement Assn v. Ruckelshaus*, 486 F.2d 375 (D.C.Cir. 1973).

procedure in question. For that reason, EPA's attempt to set undemonstrated NSPS emission limits to become effective in future years would very likely not survive a legal challenge.

C. *Applicability of Section 111(h)*

In lieu of promulgating a standard of performance, i.e., an emission standard or a percentage reduction requirement, Section 111(h) authorizes the use of a “design, equipment, work practice or operational standard, or combination thereof[.]” Section 111(h) is applicable when “the application of measurement methodology to a particular class of sources is not practicable due to technological or economic limitations.” *See* CAA § 7411(h).

EPA states that “[i]n some circumstances, it may not be possible to identify a specific performance level for sources in a particular category,” 73 Fed. Reg. at 44,491, and “[w]e have identified some [GHG control] approaches that are work practices because they create operational and process efficiencies that can reduce emissions, but may not capture or control emissions in a way that is readily comparable to a standard.” ANPR TSD, Section VII at 12. In other words, the Agency contemplates regulating some GHG emissions with work practice and/or operational standards. However, EPA “would only propose work practice standards for a category consistent with the requirements of Section 111(h).” *Id.* Finally, the Agency notes that it “has not evaluated whether the 111(h) criteria are satisfied for the source categories discussed in this TSD.” *Id.* For that reason, the ANPR has requested comment on the circumstances under which reliance on Section 111(h) would be satisfied as an alternative to prescribing a GHG emission standard or a GHG emission reduction requirement. 73 Fed. Reg. at 44,491.

Any EPA reliance on Section 111(h) to regulate GHG emissions must be informed by the court's holding in *Sierra Club v. EPA*, 479 F.3d 875 (D.C. Cir. 2007) (“Brick MACT decision”).¹³ In that case a clean-burning fuels standard, i.e., a work practice standard, had been promulgated instead of an emission standard. As EPA had explained, setting an emissions limit “was not feasible given the absence of data necessary to make this calculation [of an emissions standard].” Brick MACT decision at 884 (citing 68 Fed. Reg. at 26,712). The court, however, rejected the work practice standard because the statute authorized its use only if measuring emission levels is technologically or economically infeasible, not because the Agency simply lacked emissions data from the affected source category. *Id.*

¹³ Although the Brick MACT case involved EPA's reliance on CAA § 112(h), that provision was enacted at the same time and for the same purpose that § 111(h) was added during the 1977 Amendments to the Act. Section 112 had originally required the promulgation of emission standards for hazardous air pollutants. Subsequent EPA regulations requiring that work practices be used in the demolition of asbestos-containing structures were invalidated by the courts because work practices did not satisfy the meaning of “emission standard.” *See generally Adamo Wrecking Co. v. EPA*, 434 U.S. 275 (1978) and related lower court rulings. As a consequence of that litigation, Congress adopted section 112(h) to provide EPA with flexibility to promulgate work practice standards when emission standards were infeasible to prescribe or enforce. Because of the parallels between provisions in §§ 111 and 112, Congress also added section 111(h) to give the Agency the same flexibility when promulgating NSPS.

In sum, unless measurement of a facility's GHG emissions is either technologically or economically infeasible, a work practice standard cannot be promulgated for that facility simply because the Agency lacks representative GHG emission test data to promulgate an NSPS emission standard and/or percentage emission reduction requirement. Thus, for example, because CO₂ can easily be measured from a coal-fired boiler, an NSPS regulation that only prescribed a maximum allowable heat rate for that unit would not be authorized by Section 111(h).

D. *Highly complicated, costly and controversial rulemakings*

The ANPR does not appear to have a realistic view of the difficulty of adopting NSPS standards for the many categories of sources that emit GHGs and that presumably should be regulated if EPA makes an Endangerment Finding. The ANPR takes the view that EPA can "prioritize" NSPS rulemakings so that it can begin promulgating NSPS for the biggest GHG-emitting source categories before moving to other source categories. This view appears to be contradicted by the repeated use of the word "shall" in Section 111, although we recognize that EPA's history under Section 111 is one of not attempting to promulgate NSPS for all source categories at once. Nevertheless, the process of adopting NSPS for any one individual source category is very complex and consumes significant administrative resources. Even the development of NSPS standards for only the few source categories examined by the Technical Support Document would demand substantial legal, technical, scientific and administrative resources of the agency.

As previously indicated, development of an NSPS standard for a given source category requires determination of the best demonstrated technology (BDT) by comprehensive evaluations of all "adequately demonstrated" technologies and their associated "achievable" levels of emissions. The appropriate conduct of that process is not an easy task. The D.C. Circuit has stated that the BDT standard is a very broad standard indeed. According to the Court, "[t]he language of section 111 . . . gives EPA authority . . . to weigh cost, energy, and environmental impacts in the broadest sense at the national and regional levels and over time as opposed to simply at the plant level in the immediate present." *Sierra Club v. Costle*, 657 F.2d 298, 330 (D.C. Cir. 1981). The Court stated that "section 111 of the Clean Air Act, properly construed, requires the functional equivalent of a NEPA impact statement." *Id.* at 331 (quoting *Portland Cement Co. v. EPA*, 486 F.2d 375, 384 (D.C. Cir. 1973)).

In a 1980 case involving the limestone industry, the court noted the "rigorous standard of review under section 111" applied by reviewing courts. *National Lime Ass'n v. EPA*, 627 F.2d 416, 429 (D.C. Cir. 1980). The Court stated that the "sheer massiveness of impact of the urgent regulations," considered in that and other cases had "prompted the courts to require the agencies to develop a more complete record and a more clearly articulated rationale to facilitate review for arbitrariness and caprice" than had been applied in previous cases. *Id.* at 451 n.126.

If massiveness of regulatory impact was a concern in a limestone industry case not involving GHGs, that concern would be magnified many times in promulgating GHG standards of performance, particularly for large emitters such as electric utilities and refineries. A plethora of issues would be relevant in setting GHG standards, with EPA weighing the cost, energy, and environmental impacts of GHG regulation "in the broadest sense at the national and regional

levels and over time” as if it were preparing an Environmental Impact Statement. A large number of parties would be interested given the overwhelming importance of the issues.

In sum, establishing NSPS for GHG emissions from numerous – or even just some – source categories would be highly complex, controversial and time-consuming. Quick results, to say the least, cannot reasonably be expected.

VI. Hazardous Air Pollutants (HAPs)

The ANPR discusses several key considerations that would arise if GHGs were regulated as a HAP under Section 112 and acknowledges that such regulation would require EPA “to regulate a very large number of new and existing stationary sources, including smaller sources, than if alternative CAA authorities were used to regulate GHG.” 73 Fed. Reg. at 44,494. The risk that GHGs would be subject to regulation under Section 112 is significant. Under CAA Section 112(b), an air pollutant is “hazardous” if it present(s), or may present, through inhalation or other routes of exposure, a threat of adverse human health effects . . . or adverse environmental effects, whether through ambient concentrations . . . or otherwise” Reading Section 112(b) literally, GHGs would appear to meet this definition, assuming EPA made an Endangerment Finding.¹⁴

The ANPR correctly concludes that Section 112 appears “to allow EPA little flexibility regarding either the source categories to be regulated or the size of sources to regulate.” 73 Fed. Reg. at 44,495. Nevertheless, the ANPR stops short of projecting the severe adverse socioeconomic impacts that will result from that lack of regulatory flexibility.

In our view, regulation of CO₂ as a HAP would create an inestimable burden on the United States economy. CO₂ is emitted by every device that combusts a fuel containing carbon. Section 112 must regulate any source emitting 10 tpy or more of any HAP. Even a relatively small combustion device like a residential or commercial furnace can burn enough fuel to emit 10 tons of CO₂ per year. As a result, the facilities likely to be subject to HAP regulation under Section 112 likely number in the many millions and would be significantly more than even the numerous sources that would be swept up by the PSD program if CO₂ were to become a regulated pollutant under the Act.

The arithmetic of Section 112 regulation gets even worse. As the ANPR acknowledges, all categories of major sources of HAPs must be regulated under Section 112. 73 Fed. Reg. at 44,368. Moreover, for each category regulated under Section 112, EPA must promulgate MACT standards. Thus, EPA’s resources would likely be totally overwhelmed by the need to develop MACT standards for the very large number of source categories subject to Section 112 if CO₂ were a HAP. In turn, applying those MACT requirements to the large universe of affected combustion facilities emitting > 10 tpy of CO₂ would constitute a huge negative impact to the American economy, worse even than PSD or non-attainment NSR permitting. A similar phenomenon would occur if methane were regulated as a HAP.

¹⁴ Our own view is that GHGs are not properly subject to regulation under Section 112 because Congress intended to limit Section 112 to toxins, substances that cause significant health or ecological damage at relatively small dosages.

In sum, the lack of regulatory flexibility for EPA and the resultant enormous costs to the nation's businesses make potential regulation of GHGs under section 112 a very dangerous possibility.

VII. Title V

Should GHGs be regulated under the existing CAA, an enormous number of small sources would be covered by the Title V operating permit program, and this number would be multiplied even more if GHGs were regulated as HAPs.

The ANPR recognizes the vastly expanded scope of Title V applicability that would arise from GHG regulation. With GHGs being a regulated pollutant, Title V would apply to stationary sources with the potential to emit 100 tpy or more of GHGs. If GHGs were regulated as a HAP, stationary sources that emit either 10 tpy or more of any GHG or 25 tpy or more of combined GHGs would also be subject to Title V. Under the latter circumstances, the ANPR estimates that "the number of new Title V sources would easily number in the millions absent a means to limit PTE." 73 Fed. Reg. at 44,511.

A. *Legal theories for narrowing Title V applicability are not compelling*

Recognizing the complete infeasibility of attempting to make potentially millions of sources obtain Title V operating permits, the ANPR advances several legal theories as support for increasing the threshold GHG emission level for triggering Title V applicability. As it did for the huge number of sources that would be subject to PSD review following GHG regulation, EPA suggests that the Title V application of the statutory term "major source" "may be one of those rare cases where the courts will interpret a statute as meaning something other than what its plain language indicates." 73 Fed. Reg. at 44,512. As we noted above, the plain words of a statute cannot be rejected in favor of some other means of statutory construction. In this particular case, it would be difficult, if not impossible, to construe the term "major source" under Title V of the statute to mean anything other than what the statutory words say.

Alternatively, the ANPR suggests that the judicial doctrine of administrative necessity might be used as a way to diminish the applicability of Title V to sources of GHG emissions. As explained earlier in the discussion of PSD, the *Alabama Power* court considered a very similar EPA reliance on administrative necessity to exclude small-emitting sources from permitting coverage. The agency's approach was flatly rejected because it "falls well beyond the agency's exemption authority." *Alabama Power*, 636 F.2d at 356. There is no apparent reason why the courts would view EPA's claim of administrative necessity in this Title V matter any differently.

B. *Enormous burden - no benefit*

With sources subject to Title V estimated to be in the millions following any GHG regulation under the Act, the ANPR nevertheless appears to underestimate the tremendous impact this would have on the permitting authorities. For example, the ANPR states, "Because Title V does not create new applicable requirements, the new costs of Title V would be mainly attributable to administrative burden." 73 Fed. Reg. at 44,512. The Agency seems to miss the

point that the costs would nevertheless be enormous, in terms of both money and permitting resources. Yet the environmental benefit of imposing Title V permit requirements on those millions of small sources is vanishingly small, at best. The aggregate GHG emissions from that multitude of small sources represent such a small portion of the nation's GHG emissions and therefore very likely will not need to be reduced. Moreover, in a number of potential regulatory scenarios, Title V permits would be required for many small sources subject to no "applicable requirements," i.e., those Title V permits would be "hollow" permits. The rationale for requiring small sources to obtain permits that do not contain regulatory requirements is not immediately apparent.

CONCLUSION

The ANPR all but recognizes that the CAA is ill-suited for regulating GHGs. It attempts to fashion a coherent regulatory program for GHGs by picking and choosing which provisions EPA will and will not implement and by offering creative interpretations of statutory language. But these attempts are likely to meet with very significant legal difficulty. In the end, the ANPR's theories of CAA regulation of GHGs represent a large wager that the Agency can avoid triggering the hugely negative consequences that will result if the statute is implemented according to its plain language. The odds, however, are against EPA winning its wager, since the Agency has been repeatedly criticized by the Courts for regulating in a way the Agency sees best, as opposed to following Congress' dictates. The ANPR notwithstanding, regulation of GHGs under the CAA is a very poor and fundamentally irrational way of addressing global climate change concerns.