ORAL ARGUMENT NOT SET

Consolidated Nos. 08-1178, 08-1179, 08-1180

IN THE

United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA CIRCUIT

STATE OF CALIFORNIA BY AND THROUGH
ARNOLD SCHWARZENEGGER, GOVERNOR
OF THE STATE OF CALIFORNIA, THE
CALIFORNIA AIR RESOURCES BOARD, AND
EDMUND G. BROWN JR., ATTORNEY
GENERAL OF THE STATE OF CALIFORNIA, *ET AL.*,
Petitioners,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY,
Respondent.

On Petition for Review of Final Action of the
United States Environmental Protection Agency

BRIEF OF AMICI CURIAE AMERICAN PETROLEUM INSTITUTE, THE CHAMBER OF COMMERCE OF THE UNITED STATES OF AMERICA, AND THE UTILITY AIR REGULATORY GROUP IN SUPPORT OF RESPONDENT AND RESPONDENT-INTERVENORS AND SUPPORTING AFFIRMANCE OF THE FINAL AGENCY ACTION

Norman W. Fichthorn
Allison D. Wood
HUNTON & WILLIAMS LLP
1900 K Street, N.W.
Washington, D.C. 20006
(202) 955-1500
(202) 778-2201 (facsimile)

Counsel for Amicus Curiae Utility Air Regulatory Group

Jeffrey A. Lamken
Robert K. Kry
BAKER BOTTS LLP
1299 Pennsylvania Ave., N.W.
Washington, D.C. 20004
(202) 639-7700
(202) 639-7890 (facsimile)

Counsel for Amici Curiae American Petroleum Institute and Chamber of Commerce of the United States of America

Additional counsel listed on inside cover

Harry M. Ng
Michele Schoeppe
AMERICAN PETROLEUM
INSTITUTE
1220 L St., N.W.
Washington, D.C. 20005-4070
(202) 682-8250

Robin S. Conrad
Amar D. Sarwal
NATIONAL CHAMBER
LITIGATION CENTER, INC.
1615 H Street, N.W.
Washington, D.C. 20062
(202) 463-5337

Of Counsel

Matthew Paulson
Amber MacIver
BAKER BOTTS LLP
98 San Jacinto Blvd. #1500
Austin, TX 78701
(512) 322-2500
(512) 322-2501 (facsimile)

Counsel for Amici Curiae American Petroleum Institute and Chamber of Commerce of the United States of America

CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

Parties and *Amici*. All parties, intervenors, and *Amici* in this Court are listed in the Respondent-Intervenor's Brief.

Ruling Under Review. The ruling under review is listed in the Brief for Respondent United States Environmental Protection Agency.

Related Case. The related cases are listed in the Brief for Respondent United States Environmental Protection Agency.

CORPORATE DISCLOSURE STATEMENT

Pursuant to Federal Rule of Appellate Procedure 26.1 and D.C. Circuit Rule 26.1, *Amici* make the following disclosures:

American Petroleum Institute ("API") states that it is a nationwide non-profit trade association that represents approximately 400 members engaged in the petroleum and natural gas industry. API has no parent company, and no publicly held company has a 10% or greater ownership interest in API.

The Chamber of Commerce of the United States of America (the "Chamber") states that it is the world's largest business federation, representing an underlying membership of more than three million companies and professional organizations of every size, in every industry sector, and from every region of the country. The Chamber has no parent company, and no publicly held company has a 10% or greater ownership interest in the Chamber.

Dated: January 23, 2009

Respectfully submitted,

Jeffrey A. Lamken
Robert K. Kry
BAKER BOTTS LLP
1299 Pennsylvania Ave., N.W.
Washington, D.C. 20004
(202) 639-7700

Matthew Paulson
Amber MacIver
BAKER BOTTS LLP
98 San Jacinto Blvd. #1500
Austin, TX 78701
(512) 322-2500

Counsel for Amici Curiae American Petroleum Institute and Chamber of Commerce of the United States of America

Harry M. Ng
Martha Elizabeth Cox
AMERICAN PETROLEUM INSTITUTE
1220 L St., N.W.
Washington, D.C. 20005-4070
(202) 682-8250

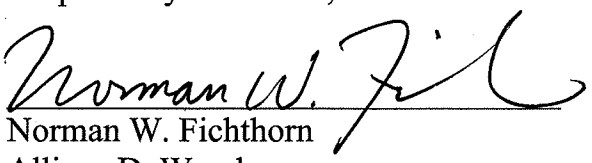
Robin S. Conrad
Amar D. Sarwal
NATIONAL CHAMBER LITIGATION CENTER, INC.
1615 H Street, N.W.
Washington, D.C. 20062
(202) 463-5337

Of Counsel

Pursuant to Federal Rule of Appellate Procedure 26.1 and Circuit Rules 26.1 and 28(a)(1), Amicus Curiae Utility Air Regulatory Group ("UARG") files the following statement:

UARG is a not-for-profit association of individual electric generating companies and national trade associations that participate collectively in administrative proceedings under the Clean Air Act, and in litigation arising from those proceedings, that affect electric generators. UARG has no outstanding shares or debt securities in the hands of the public and has no parent company. No publicly held company has a 10% or greater ownership interest in UARG.

Respectfully submitted,



Norman W. Fichthorn
Allison D. Wood
HUNTON & WILLIAMS LLP
1900 K Street, N.W.
Washington, D.C. 20006
(202) 955-1500

Counsel for Amicus Curiae
Utility Air Regulatory Group

Dated: January 23, 2009

TABLE OF CONTENTS

TABLE OF AUTHORITIES

Page(s)

CASES

STATUTES

OTHER AUTHORITIES

MISCELLANEOUS

*Authorities upon which we chiefly rely are marked with asterisks.

GLOSSARY

ANPR	Advance Notice of Proposed Rulemaking
API	American Petroleum Institute
BACT	Best Available Control Technology
CAA	Clean Air Act
Chamber	The Chamber of Commerce of the United States of America
CO_2	Carbon Dioxide
Compliance Dimension	A Regulatory Burden: The Compliance Dimension of Regulating CO_2 as a Pollutant
EPA	United States Environmental Protection Agency
EPCA	Energy Policy and Conservation Act
GHGs	Greenhouse Gases
ICR	Information Collection Request for Prevention of Significant Deterioration and Nonattainment New Source Review
NAAQS	National Ambient Air Quality Standards
NSR	New Source Review
PSD program	Prevention of Significant Deterioration Program
tpy	tons per year
UARG	The Utility Air Regulatory Group

I. INTERESTS OF *AMICI CURIAE*

The American Petroleum Institute ("API") is a national trade association that represents all aspects of America's oil and natural gas industry. API has approximately 400 members, from the largest major oil company to the smallest of independents, from all segments of the industry, including producers, refiners, suppliers, pipeline operators and marine transporters, as well as service and supply companies that support all segments of the industry.

The Chamber of Commerce of the United States of America ("the Chamber") is the world's largest business federation. The Chamber represents an underlying membership of more than three million companies and professional organizations of every size, in every industry sector, and from every region of the country.

The Utility Air Regulatory Group ("UARG") is an association of electric utilities, other electric generators, and trade associations. It participates in EPA proceedings under the Clean Air Act ("CAA" or "Act") affecting electric generators and related litigation.

The Court granted API, the Chamber, and UARG leave to participate as *Amici* on July 25, 2008. These *Amici* and their members have vital interests in the decision in this case. As explained below, a decision in favor of petitioners by this Court could set in motion events that could have enormous impacts on *Amici*'s members and the national economy.

II. STATUTES AND REGULATIONS

Pertinent statutory provisions are in Appendix A of Respondent-Intervenors' Brief.

III. INTRODUCTION AND SUMMARY

The CAA preempts state regulation of emissions from new motor vehicles. CAA § 209(a); 42 U.S.C. § 7543(a) (2000). Section 209(b) of the CAA, however, provides an exception for California, the history of which is rooted in how that state's geography and large population present unique local and regional challenges regarding certain traditional air pollutants (*e.g.*, ozone). Under that provision, California may adopt vehicle emission standards if the Administrator of the U.S. Environmental Protection Agency ("EPA") waives federal preemption. 42 U.S.C. § 7543(b).

In 2005, California adopted vehicle emission standards for certain greenhouse gases ("GHGs"), including carbon dioxide ("CO_2"), and requested a section 209 waiver. EPA denied that request, and properly so: Section 209(b) is intended to allow California to adopt different standards to address pollution problems caused by local or regional conditions in that state – not to adopt standards to address national or global issues such as climate change. Any effects of climate change in California, moreover, are not "compelling and extraordinary" compared to those elsewhere in the country. 73 Fed. Reg. 12,156-57 (Mar. 6, 2008); 42 U.S.C. § 7543(b)(1)(B) (waiver shall be denied if the Administrator finds California does not need the standards "to meet compelling and extraordinary conditions").

California's GHG standards on their face require reductions only in motor vehicle emissions. But if, as some have suggested, a section 209(b) waiver of those standards

constituted regulation of GHGs under the CAA itself,[1] granting that waiver could be deemed to trigger momentous, and potentially disastrous, consequences under CAA provisions governing stationary sources. *See generally* 73 Fed. Reg. 44,354, 44,417, 44,498-99 (July 30, 2008) (EPA's Advance Notice of Proposed Rulemaking on Regulating GHGs Under the CAA) ("ANPR") (discussing potential effects if GHGs became subject to regulation under CAA).[2]

As explained below, granting the waiver could give rise to arguments that GHGs are pollutants "subject to regulation under [the CAA]" within the meaning of CAA section 165(a)(4). 42 U.S.C. § 7475(a)(4) (2000). Although *Amici* believe such an argument should be rejected as a matter of law, it could, if accepted, trigger application of extensive stationary-source requirements for those gases under the Act's "prevention of significant deterioration" ("PSD") program.[3] If that were to occur, an additional 1.2 million facilities – everything from apartment buildings, to large houses of worship, to

---

[1] *Amici* do not believe that allowing otherwise-preempted state standards to take effect can properly be deemed to transform those *state* standards into regulation under the *federal* CAA or otherwise to make the pollutants addressed in the state standards "subject to regulation" under the CAA.

[2] *Amici* note, however, that petitioners do not ask the court to order EPA to grant the waiver request (*see* Pet. Br. 40), and such an order would be beyond the Court's authority even if it were to hold – as it should not – that EPA's decision on "compelling and extraordinary conditions" is unlawful. For example, EPA's decision did not (and had no need to) address the other two prerequisites that must be met before a waiver may be granted. Accordingly, EPA, pursuant to proper procedures, would have to address whether those criteria are met – and provide a lawful, reasoned justification for reversing its determination on "compelling and extraordinary conditions" – before it could grant the waiver.

[3] Under a proper construction of the CAA, granting the waiver would not trigger the Act's PSD requirements. The possibility, however remote, that a contrary view may prevail militates against any conclusion that denial of the waiver could be considered arbitrary and capricious.

dry cleaners – could become subject to that program's complex procedural and substantive requirements. *See* Portia Ellis & Mark Mills, *A Regulatory Burden: The Compliance Dimension of Regulating CO_2 as a Pollutant, for the Chamber of Commerce*, at 3 (Sept. 2008) ("Compliance Dimension") (Exhibit A). In that event, those 1.2 million facilities potentially would have to obtain permits for any new construction and certain modifications, 42 U.S.C. §§ 7475(a), 7479(2)(C) (2000), overwhelming a system that can barely handle the approximately 20,000 facilities currently covered. *See* NSR [New Source Review] 90-Day Review Background Paper, Docket A-2001-19, Document II-A-01, at 7 (June 22, 2001) (Exhibit B) (estimating 20,000 sources are "major," and thus potentially subject to PSD, under CAA). That sixty-fold increase would impose unprecedented delays, paralyze the permitting process, and subject an entirely new class of sources to compliance burdens and enforcement risks. All of the affected facilities, moreover, would have to use "best available control technology" ("BACT") to limit GHG emissions. 42 U.S.C. §§ 7475(a)(1) & (a)(4), 7479(3). BACT for GHGs has never been determined and would have to be adjudicated on a permit-by-permit basis.

Courts and agencies alike must "interpret [each] statute 'as a symmetrical and coherent regulatory scheme,' . . . . and 'fit, if possible, all parts into an harmonious whole.'" *FDA v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120, 133 (2000) (citations omitted). The CAA's preemption waiver authority is designed to allow California to meet its unique local pollution challenges, not to impose on the entire nation a massive regulatory scheme to address a global problem that is properly within the federal government's purview. The possibility, however remote, that granting

California's waiver request could be deemed to transform an otherwise "coherent" and "harmonious" statute – and the PSD provisions in particular – into an intrusive and unwieldy behemoth, an outcome never envisaged by Congress, is foreclosed by EPA's proper denial of the waiver.

IV. ARGUMENT

It is a "central tenet" of statutory construction that "a statute is to be considered in all its parts when construing any one of them." *Lexecon Inc. v. Milberg Weiss Bershad Hynes & Lerach*, 523 U.S. 26, 35-36 (1998). Constructions that seem plausible when a provision is viewed in isolation often lose their plausibility when the statute is read as a "whole" because they deprive an otherwise "symmetrical and coherent regulatory scheme" of its symmetry and coherence. *Brown & Williamson*, 529 U.S. at 133. Adopting the construction of section 209 urged by petitioners could threaten to bring about precisely such a result. Congress designed the CAA waiver authority to allow California to address its unusual local conditions, as EPA and respondent-intervenors explain in their briefs; that authority is not a license for California to alter the nature or drive the pace of the national government's response to global issues such as climate change.

A. Triggering PSD requirements for GHGs would have disastrous consequences.

The CAA establishes a complex regulatory regime with numerous interlocking programs designed to protect air quality. California's waiver request concerns regulation of mobile-source emissions. But California wholly overlooks the relationship among the

CAA's various programs, including the PSD program under Title I of the Act, a pre-construction permitting program for stationary sources that seeks, with respect to certain pollutants, to prevent local air quality from deteriorating beyond specified increments. 42 U.S.C. §§ 7470-79 (2000).

1. Granting the waiver could lead to claims that PSD has been triggered.

The CAA authorizes EPA to establish National Ambient Air Quality Standards ("NAAQS") for "criteria" pollutants, 42 U.S.C. §§ 7408-09, and directs EPA and the states to implement PSD for emissions from new "major stationary sources" and "major modifications" to such sources. "Stationary source" is defined expansively, covering *any* building, structure, facility, or installation which emits or may emit a regulated pollutant. 40 C.F.R. § 52.21(b)(5) (2008).

Sources qualifying as "major" are subject to extensive regulatory requirements under the PSD program. They must obtain a permit as a precondition to construction or modification, 42 U.S.C. §§ 7475(a), 7479(2)(C), and adopt BACT for any "pollutant subject to regulation under [the CAA]." 42 U.S.C. § 7475(a)(4); *id.* § 7479(3) (defining BACT); 40 C.F.R. § 52.21(a)(2)(iii), (b)(1)(i)(a)-(c).

Given the potentially enormous burdens the PSD program could impose on virtually all economic activity – almost all sources emit GHGs – Congress carefully limited its reach. To trigger PSD, the facility must emit one of the "pollutant[s] subject to regulation under" the CAA in sufficient volume to be a "major stationary source." To qualify as "major," a facility must (1) be within one of 28 statutorily specified categories

and have the *potential* to emit 100 tons per year ("tpy") of a "regulated NSR pollutant" or (2) have the *potential* to emit 250 tpy of such a pollutant.[4] 40 C.F.R. § 52.21 (b)(1)(i)(a), (b).

Currently, there are six "criteria" pollutants under the CAA (particulate matter, carbon monoxide, sulfur oxides, ozone, lead, and nitrogen dioxide), *see generally* 40 C.F.R. pt. 50 (2008); emissions of these pollutants, or their precursors, are those most commonly subject to PSD permits. The major source "thresholds" described above – 100 and 250 tpy – were designed with these pollutants in mind. By design, therefore, many smaller sources – *e.g.*, apartment buildings – are not subject to PSD. Thus, even if a grocery store emits some amount of a criteria pollutant, it is not subject to PSD because those emissions are below the threshold.

Some might seek to argue, however, that a waiver of preemption for California's GHG standards should be found to change that. PSD may apply to a pollutant when the pollutant becomes "subject to regulation" under the CAA. As EPA's ANPR notes:

> [R]egulation of GHG emissions from motor vehicles under [CAA] section 202(a)(1) [42 U.S.C. § 7521(a)(1)] or from other sources of GHG emissions under many other provisions of the Act would subject major stationary sources to preconstruction permitting under the CAA. . . . Because CO_2 is typically emitted in much larger quantities relative to traditional air pollutants, CAA regulation of CO_2 would potentially extend PSD requirements to many stationary sources not previously subject to the PSD program, including large buildings heated by natural gas or oil, and add new PSD requirements to sources already subject to the program.

---

[4] "Potential to emit" means "the maximum capacity of a stationary source to emit a pollutant under its physical and operational design." 40 C.F.R. § 52.21(b)(4). A "regulated NSR pollutant" includes, with specified exceptions, "[a]ny pollutant that . . . is subject to regulation under the Act." 40 C.F.R. § 52.21(b)(50)(iv).

73 Fed. Reg. at 44,399. Regulation under California's standards is not regulation under CAA section 202(a)(1), and the undersigned *Amici* believe waiver of preemption cannot, as a matter of law, be viewed as transforming state regulation into regulation under the CAA. If, nonetheless, granting California a waiver of preemption for its GHG standards under section 209(b) of the CAA *were* deemed to make those gases "pollutant[s] subject to regulation under" the CAA, then PSD would be triggered with respect to those gases. Although *Amici* do not believe this would be a correct result under the statute, several groups, including some that are petitioners in this case, have asserted, in litigation and other contexts, equally implausible arguments for finding that PSD has been triggered, and in one case have even found some success with such arguments.[5] EPA's denial of the waiver was properly made under the statutory criteria, and its reasonableness is further supported by the fact that it forecloses the possibility that petitioners or others might successfully (albeit erroneously) assert in other litigation that PSD applies.

In *Massachusetts v. EPA*, 549 U.S. 497 (2007), the Supreme Court held certain GHGs (including CO_2) are "air pollutants" under the CAA. However, as explained above, not all "air pollutants" under the CAA are "subject to regulation" under the Act. For PSD to apply, both CAA prongs – "air pollutant" and "subject to regulation under the CAA" – must be met. The first prong was satisfied by the holding in *Massachusetts*. If granting California's waiver request were deemed to satisfy the second, "subject to

---

[5] *See Friends of the Chattahoochee v. Ga. Dep't of Natural Res.*, No. 2008CV146398 (Ga. Super. Ct. Fulton County, June 30, 2008), *appeal pending sub nom. Longleaf Energy v. Friends of the Chattahoochee*, No. A08D0472 (Ga. Ct. App., June 30, 2008).

regulation" prong, that would subject GHGs to regulation under the CAA and trigger PSD for stationary sources.[6]

If PSD were in fact triggered, PSD requirements would potentially apply to every stationary source with the potential to emit the threshold amount of GHGs. As EPA has observed, "CAA standards applicable to GHGs for one category of sources could trigger PSD requirements for other categories of sources that emit GHGs." 73 Fed. Reg. at 44,418; *id*. at 44,420 (recognizing "the potential for a decision to regulate GHGs [from] mobile or stationary sources [under the CAA] to automatically trigger additional permitting requirements for stationary sources under the PSD program."). As explained below, that result would be wholly unworkable. It would have disastrous consequences for overwhelmed regulators and more than a million ordinary businesses that would

---

[6] Although not controlling in the present case, *see* 73 Fed. Reg. at 12,159 n.19, two district court cases have held that if EPA waives preemption of California's GHG standards, those standards should be considered tantamount to federal regulation for purposes of decision-making under the Energy Policy and Conservation Act ("EPCA"). *Green Mountain Chrysler Plymouth Dodge Jeep v. Crombie*, 508 F. Supp. 2d 295, 346-47 (D. Vt. 2007) (holding that if an EPA waiver is granted for California standards under the CAA, those standards would be treated as "other motor vehicle standards of the Government" as defined by EPCA and have "the same stature as a federal regulation" for purposes of the Department of Transportation's decision-making under that statute), *appeal pending*, Nos. 07-4342, 07-4360 (2d Cir., filed Oct. 5, 2007); *Cent. Valley Chrysler-Jeep, Inc. v. Goldstene*, 529 F. Supp. 2d 1151, 1173 (E.D. Cal. 2007) (same), *appeal pending*, Nos. 08-17378, 08-17380 (9th Cir., filed Oct. 30, 2008). *Amici* do not agree with these cases' holdings or reasoning – which in any event do not address the criteria for CAA preemption waivers – and, as noted above, believe it is clear that, as a matter of law, granting the waiver here would not cause GHG emissions to become subject to PSD requirements. However, some may attempt to argue that these district court decisions should be extended beyond the EPCA context, to argue that waiving CAA preemption of California's GHG standards would cause GHGs to become "subject to regulation" under the CAA, triggering its PSD program for stationary sources.

suddenly find themselves subject to the expensive and time-consuming requirements of the PSD program.

2. Regulating GHGs through the PSD program would be both unworkable and devastating in its consequences

Applying PSD requirements to GHGs such as CO_2 would grossly distort a regulatory scheme that was not designed to address emissions that are so ubiquitous and abundant. Such an expansion would have extraordinary consequences for regulators and the economy that Congress never intended.

a. Over 1 million businesses could be affected.

The potential impact of such a change on the scope of federal regulation is staggering. As noted above, about 20,000 sources currently are "major" and thus potentially subject to PSD, and expanding the PSD program to encompass GHGs could increase that number sixty-fold, to 1.2 million. For example, a combustion source in one of the 28 specified "100-tpy" source categories and emitting a tenth of the nitrogen oxide emissions necessary to make it a major source under that threshold (*i.e.*, emitting 10 tpy) would likely emit *10,000* tpy of CO_2 at the same level of production – 100 times the major source threshold. American Chemistry Council's ANPR Comments, at 6 (Nov. 26, 2008) (Exhibit C).[7]

[7] Although some have suggested EPA may have authority to increase the PSD 100 tpy and 250 tpy "major source" thresholds, no clear statutory basis exists for that suggestion, and at least one petitioner in this case argues no such authority exists. Center for Biological Diversity's ANPR Cmts., 23-24, EPA-HQ-OAR-2008-0318-1502.1 (Nov. 28, 2008) (Exhibit D).

The enormous regulatory burden that would result from such a change is difficult to overstate. The 1.2 million additional sources that would potentially become subject to PSD would include at least 1 million commercial buildings and 200,000 manufacturing operations. One-fourth of school buildings and one-third of office buildings, among others, could be subject to PSD regulation and enforcement. Compliance Dimension, at 3, 11-12.[8] The notion that Congress meant for such sources to become subject to PSD defies reason.

Because no new "major source" may be built, or existing major source modified (if the modification causes a "significant" net emissions increase), without first obtaining a PSD permit, the number of permit applications would increase dramatically. EPA's rules define "significance" for certain pollutants. 40 C.F.R. § 52.21(b)(23)(i). If EPA has not specified a "significance" level, however, the threshold is *zero* – meaning *any* increase of emissions can trigger PSD. *Id.* § 52.21(b)(23)(ii). That is the situation here; no significance level has been set for GHGs like CO_2, so *any* increase could subject a source to PSD. Thus, applying PSD requirements to GHGs would affect sources innumerable times, delaying countless necessary projects.

Compliance costs would be extraordinary. For businesses, preparing an average PSD permit application costs about $125,000 and takes 866 hours. Information Collection Request for Prevention of Significant Deterioration and Nonattainment New

[8] EPA's estimates for the PSD program as it stands now (*i.e.*, not covering GHGs), although lower, are still staggering. *See* Information Collection Request for Prevention of Significant Deterioration and Nonattainment New Source Review (Aug. 2008) ("ICR"), Doc. No. EPA-HQ-OAR-2004-0081-0015 (Exhibit E).

Source Review (Aug. 2008) ("ICR"), Doc. No. EPA-HQ-OAR-2004-0081-0015, at 2, 17 (Exhibit E). Using these figures, if the 1.2 million additional facilities applied for only 40,000 permits a year, annual costs to applicants would total about $5 billion. Moreover, preparing these applications would require the equivalent of over 17,000 additional full-time employees (assuming 2,000 hours per year per employee). *See id.* It is not at all clear that this extraordinary expense and effort would yield any significant GHG reductions or any other result that might be deemed a societal benefit. Indeed, it is entirely possible that applying PSD to GHGs would actually *increase* CO_2 emissions.

For example, as companies relocate U.S. manufacturing operations overseas to avoid these extreme regulatory burdens, new, less efficient – and higher-emitting – plants would be built in other countries. And, to avoid delays and other problems associated with obtaining a PSD permit for an office building, developers would construct more, but smaller, buildings. The resulting sprawl, combined with increased transportation needs of a more dispersed workforce, would be less energy-efficient, resulting in more GHG emissions overall.

Potential costs of non-compliance and confusion are also notable. Owners of smaller sources, such as apartment buildings, might be unaware of a new obligation to obtain PSD permits. This could result in thousands of unpermitted projects, making enforcement nearly impossible. In addition, energy-intensive industries, such as refining and chemical manufacturing, would likely find compliance very challenging. Even the smallest projects could require PSD permits because, as noted above, the GHG emission increase deemed "significant" would be anything above zero. Those industries could find

themselves in a never-ending cycle of PSD permit applications. Finally, oil and gas facilities with relatively small emissions of non-GHG pollutants could suddenly become subject to PSD.

b. Public agencies would be crippled by the number of new PSD applications.

Crushing burdens also would befall regulators. Agencies now must process 200 to 300 PSD permits annually. 73 Fed. Reg. at 44,499. Even at those relatively modest levels, costs are high. Processing a single PSD permit costs state and local agencies an average of over $23,000 and takes 301 hours of work. *See* ICR, at 18. The process of obtaining a PSD permit can be arduous. Backlogs are common, and it can take over a year to obtain permit approval. 73 Fed. Reg. at 44,500. Triggering PSD for GHGs would multiply the burden. To process permit applications from just 40,000 of the 1.2 million additional sources would cost cash-strapped state and local regulators more than $920 million and require approximately 6,000 new full-time employees. *See* ICR at 18.[9] The CAA's requirement of final action on a PSD permit application within one year, 42 U.S.C. § 7475(c), could quickly become a nullity. Congress did not intend to impose such overwhelming burdens on agencies, much less the concomitant regulatory delays and paralysis of economically important projects.

[9] Describing a similar potential expansion of the CAA's Title V operating permit program (42 U.S.C. §§ 7661-7661f (2000)) that would result from making GHGs subject to regulation under the Act, EPA expressed concern that "[t]he sheer volume of new permits would heavily strain the resources of state and local Title V programs." 73 Fed. Reg. at 44,511-12.

c. The PSD program's standards are wholly inapplicable to GHGs.

Apart from the enormous impact of completing and processing permit applications, the PSD program also imposes substantive requirements. As noted above, permit applicants must install and use BACT for relevant pollutants. 42 U.S.C. § 7475(a)(4). BACT is defined as an emission limitation based on the maximum achievable degree of emissions reductions for a pollutant, taking into account – case-by-case – energy, environmental, and economic impacts and other costs. 42 U.S.C. § 7479(3). In evaluating these factors and determining BACT for a given source, the applicant and regulator must address, on a case-by-case basis, whether the facility's proposed emission limitations qualify as BACT for each pollutant for which the BACT requirement applies at that facility. 42 U.S.C. § 7475(a)(4). Federal guidelines describe a complex, multi-step process to determine BACT. *See* EPA Draft NSR Workshop Manual Table B-1, at B.6 (1990) (Exhibit F).

Currently, however, no references exist for determining BACT for GHGs. If PSD were to apply to GHGs, permit applicants and agencies would be forced to conduct this lengthy and complex review without guidance regarding what control technologies are available. Thus, the costs associated with BACT cannot be known at this time but have the potential to vastly increase the expense of construction and operation of a wide array of industrial, commercial, and institutional facilities. The notion that Congress intended to impose those costs – or expose 1.2 million facilities to sudden regulatory uncertainty – simply defies logic.

V. CONCLUSION

The petitions for review should be denied for the reasons presented by EPA and respondent-intervenors. If, as petitioners seek, the waiver denial were remanded and then reversed by EPA, and if GHGs were held to be "pollutant[s] subject to regulation under [the CAA]" as a result of a grant of the waiver, agencies and businesses would face unprecedented compliance burdens, with devastating effects on the entire economy. EPA's proper denial of the waiver request forecloses this potential consequence and should be affirmed.

Dated: January 23, 2009

Respectfully submitted,

Jeffrey A. Lamken
Robert K. Kry
BAKER BOTTS LLP
1299 Pennsylvania Ave., N.W.
Washington, D.C. 20004
(202) 639-7700

Matthew Paulson
Amber MacIver
BAKER BOTTS LLP
98 San Jacinto Blvd. #1500
Austin, TX 78701
(512) 322-2500

Counsel for Amici Curiae American Petroleum Institute and Chamber of Commerce of the United States of America

Norman W. Fichthorn
Allison D. Wood
HUNTON & WILLIAMS LLP
1900 K Street, N.W.
Washington, D.C. 20006
(202) 955-1500
(202) 778-2201 (facsimile)

Counsel for Amicus Curiae Utility Air Regulatory Group

Harry M. Ng
Martha Elizabeth Cox
AMERICAN PETROLEUM INSTITUTE
1220 L St., N.W.
Washington, D.C. 20005-4070
(202) 682-8250

Robin S. Conrad
Amar D. Sarwal
NATIONAL CHAMBER LITIGATION CENTER, INC.
1615 H Street, N.W.
Washington, D.C. 20062
(202) 463-5337

Of Counsel

CERTIFICATE OF COMPLIANCE

1. This brief complies with the type-volume limitations of Fed. R. App. P. 32(a)(7)(B) and this Court's briefing order because:

_X_ this brief contains 3,944 words, excluding the parts of the brief exempted by Fed. R. App. P. 32(a)(7)(B)(iii) and D.C. Cir. R. 32(a)(2), or

___ this brief uses a monospaced typeface and contains [state the number of] lines of text, excluding the parts of the brief exempted by Fed. R. App. P. 32(a)(7)(B)(iii).

2. This brief complies with the typeface requirements of D.C. Cir. R. 32(a)(1) and the type style requirements of Fed. R. App. P. 32(a)(6) because:

_X_ this brief has been prepared in a proportionally spaced typeface using Microsoft Word in Times New Roman 13 point font, or

___ this brief has been prepared in a monospaced typeface using [state name and version of word processing program] with [state number of characters per inch and name of type style].

Robert K. Kry

CERTIFICATE OF SERVICE

I certify that today, January 23, 2009, the original and 14 copies of the foregoing were delivered to the clerk by hand delivery, and two copies were served by overnight delivery upon each of the following:

Marc Nathaniel Melnick
ATTORNEY GENERAL'S OFFICE OF
THE STATE OF CALIFORNIA
1515 Clay Street
P.O. Box 70550
Oakland, CA 94612-0550
(510) 622-2133

John David Gunter, II
Norman Louis Rave, Jr.
U.S. DEPARTMENT OF JUSTICE ENVIRONMENT
AND NATURAL RESOURCES DIVISION
P.O. Box 23986
L'Enfant Plaza Station
Washington, D.C. 20026-3986
(202) 514-3785

Barbara Beth Baird
Kurt R. Wiese
SOUTH COAST AQMD
21865 E. Copley Drive
P.O. Box 4940
Diamond Bar, CA 91765-0940
(909) 396-2302

Jon Alan Mueller
CHESAPEAKE BAY FOUNDATION
6 Herndon Avenue
Annapolis, MD 21403-0000
(410) 482-2162

Joseph Mendelson, III
CENTER FOR FOOD SAFETY
660 Pennsylvania Ave., S.E.
Washington, D.C. 20003-0000
(202) 547-9359

Jeffrey Bossert Clark
Andrew Brian Clubok
KIRKLAND & ELLIS LLP
655 15th Street, N.W.
Suite 1200
Washington, D.C. 20005
(202) 879-5000

Raymond B. Ludwiszewski
GIBSON, DUNN & CRUTCHER LLP
1050 Connecticut Avenue, N.W.
Washington, D.C. 20036-5306
(202) 955-8665

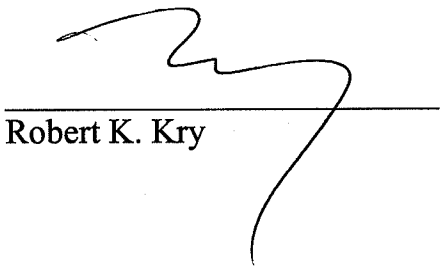
Yueh-ru Chu
Katherine Kennedy
ATTORNEY GENERAL'S OFFICE OF
THE STATE OF NEW YORK
120 Broadway
Department of Law, 26th Floor
New York, NY 10271-0000
(212) 416-8275

Daniel M. Galpern
Matthew G. Kenna
WESTERN ENVIRONMENTAL
LAW CENTER
1216 Lincoln Street
Eugene, OR 97401-0000
(541) 485-2471

David G. Bookbinder
SIERRA CLUB
408 C Street, N.E.
Washington, D.C. 20002-0000
(202) 548-4598

Aaron S. Colangelo
David D. Doniger
NATURAL RESOURCES DEFENSE COUNCIL
1200 New York Avenue, N.W.
Suite 400
Washington, D.C. 20005-0000
(202) 289-2376

Vickie Lynn Patton
James Todd Baldwin Tripp
ENVIRONMENTAL DEFENSE FUND
2334 North Broadway
Boulder, CO 80304-0000
(303) 440-4901



Robert K. Kry

APPENDIX

A Regulatory Burden: The Compliance Dimension of Regulating CO_2 as a Pollutant, for the Chamber of Commerce (Sept. 2008)	Exhibit A
NSR [New Source Review] 90-Day Review Background Paper, Docket A-2001-19, Document II-A-01 (June 22, 2001)	Exhibit B
Comments of the American Chemistry Council on EPA's Advance Notice of Proposed Rulemaking on Regulating Emissions of GHG Under the CAA (November 26, 2008)	Exhibit C
Comments of the Center for Biological Diversity on EPA's Advance Notice of Proposed Rulemaking, Regulating Greenhouse Gas Emissions Under the Clean Air Act (November 28, 2008)	Exhibit D
Information Collection Request for Prevention of Significant Deterioration and Nonattainment New Source Review (40 C.F.R. Part 51 and 52) Doc. No. EPA-HQ-OAR-2004-0081-0015 (August 2008)	Exhibit E
EPA Draft New Source Review Workshop Manual Table (1990)	Exhibit F

EXHIBIT A

A Regulatory Burden:

The Compliance Dimension of Regulating CO_2 as a Pollutant

For the U.S. Chamber of Commerce

Principal Researcher: Portia M. E. Mills
Strategic Advisor/Analyst: Mark P. Mills

September 2008

Executive Summary

Estimates of the costs of restricting carbon dioxide (CO_2) emissions have generally focused on the penalties arising from the associated direct or indirect increases in the cost of energy. Since hydrocarbons provide 85 percent of all U.S. energy, such fuel-cost penalties could be substantial and widespread. But generally missing from economic analyses to date is inclusion of the regulatory and bureaucratic costs from complying with and enforcing federal pollution laws should the U.S. Environmental Protection Agency regulate CO_2 and other greenhouse gases under the Clean Air Act (CAA).

Classifying CO_2 as a pollutant and regulating it under the CAA, or similar, domains would bring to force all the necessary related tracking, reporting and enforcement authorities. Many large enterprises (notably electric utilities, chemical plants, etc.) already accommodate the costs, and risks, of federal regulatory compliance. However, establishing operations and procedures to comply with federal Clean Air Act regulations would be a new experience for most small and mid-sized businesses, especially those that do not have infrastructure for such regulatory regimes, the staff time, consulting support and legal services. There is as well an associated potential risk for penalties arising from errors in compliance, recording, documenting or reporting. For many to-be-regulated businesses, it is possible that compliance costs could exceed the direct fuel price increase anticipated in a CO_2-constrained world.

Under proposed modifications to the CAA, a business would become a regulated "stationary source" if it emits over 250 tons per year (TPY) of CO_2.[1] On average, this emissions threshold is reached when a business uses about $70,000[2] of oil or natural gas per year in "stationary" equipment (i.e., not cars, trucks and similar). How many commercial businesses, manufacturers and farms exceed this threshold?

By analyzing U.S. Census and Energy Information Administration data for energy consumption in manufacturing, commercial buildings, and farming, this report finds that **at 250 TPY for CO_2, a total of over one million businesses[3] involved in manufacturing, operating buildings and services, and farming could become subject to new EPA regulations, monitoring, controls and enforcement.**

- At least **one million mid-sized to large commercial buildings** emit enough CO_2 per year to become EPA regulated stationary sources. The threshold would be reached, for example, by one-fifth of all food service businesses, one-third of those in health care, half of those in the lodging industry, even 10 percent of buildings used for religious worship.

- Nearly **200,000 manufacturing operations** would become regulated CO_2 sources. For the majority of industries, the average sized operation is big enough (in terms of emissions) to trigger the 250 TPY emissions threshold. At the top of the list are chemicals, metal fabrication, food processing, minerals, plastics, paper, and electrical equipment.

- About **20,000 large farms** emit enough CO_2 per year to become regulated stationary emissions sources. At the top of the list are greenhouses and nurseries, poultry and egg production, vegetable and melon farms, pig and dairy farms. (Limitations in primary data do not permit a complete analysis, and the number is likely an underestimate.)

1 Note that a small number of specifically designated industrial enterprises (e.g. oil refineries) would trigger this provision at a 100 ton-per-year level. This analysis incorporates those exceptions as indicated in relevant tables in this document.

2 Calculating 250 TPY in terms of dollars: assume $10 per 1000 cubic feet natural gas, or $3 per gallon oil yields ~ 7 lbs CO2/$

3 These estimates likely underestimate the impact because of limitations in the primary data.

Executive Summary Tables

The number and types of businesses potentially subject to proposed CO_2 regulation

Table 1: Industrial Sector Summary

Business type	Estimated # establishments regulated @ 250 TPY	Total Site CO_2 emissions subject to reg
		million tons
Fabricated Metal Products	26,000	9
Food	15,000	50
Machinery	12,000	3
Nonmetallic Mineral Products	11,000	60
Printing and Related Support	9,300	1
Plastics and Rubber Products	9,200	7
Chemicals	8,900	200
Wood Products	8,400	3
Transportation Equipment	7,300	10
Computer and Electronic Products	7,200	3
Miscellaneous	5,100	1
Paper	4,200	60
Primary Metals	4,200	100
Furniture and Related Products	3,600	0
Apparel	3,600	1
Electrical Equip., Appliances	3,500	3
Textile Product Mills	2,900	1
Textile Mills	2,200	7
Petroleum and Coal Products	1,900	50
Beverage and Tobacco Products	1,600	5
Iron and Steel Mills*	770	100
Semiconductors, Related Devices	550	1
Leather and Allied Products	360	0
Petroleum Refineries*	210	50
Cements*	190	30
Lime*	65	7
Primary Aluminum*	41	1
Pulp Mills*	34	2
Total**	**190,000**	**600**
Total CO_2 including kWh		1,000

** Calculated for 100 TPY* *** Total different from column due to rounding*

Executive Summary Tables

The number and types of businesses potentially subject to proposed CO_2 regulation

Table 2: Commercial Sector Summary

Business type	Estimated # establishments regulated @ 250 TPY	Total Site CO_2 emissions subject to reg
		million tons
Office	260,000	30
Warehouse and Storage	150,000	10
Mercantile	140,000	30
Education	100,000	30
Health Care	92,000	30
Lodging	71,000	20
Service	67,000	3
Food Service	58,000	10
Religious Worship	37,000	1
Public Assembly	26,000	8
Food Sales	23,000	4
Other	7,900	5
Public Order and Safety	7,100	2
Total*	**1,000,000**	**200**

** Total different from column due to rounding*

Table 3: Agricultural Sector Summary

Business type	Estimated # establishments regulated @ 250 TPY	Total Site CO_2 emissions subject to reg
		million tons
Oil seed, grain	3,400	9
Other Crop Farming Total	2,600	5
Poultry and egg	1,100	2
Vegetable, melon	1,500	2
Greenhouse, nursery, floriculture	1,400	2
Beef cattle ranching	920	5
Dairy cattle, milk production	910	2
Fruit and tree nut	880	1
Cattle feedlots	630	1
Hog and pig	560	1
Animal aquaculture, other	420	1
Sheep and goat	50	0
Total	**17,000**	**40**

Methodology

This study is intended to provide a reasonable estimate of the universe of stationary sources potentially exposed to Prevention of Significant Deterioration (PSD) permitting requirements should greenhouse gases become regulated pollutants under the Clean Air Act. Under the CAA, should CO_2 be deemed "regulated" in any way, no new or existing "major" stationary source of CO_2 can be built or modified (if the modification increases net emissions) without first obtaining a PSD permit. Major sources are defined as either a source in one of 28 listed categories (mostly industrial manufacturers and energy producers) with the potential to emit at least 100 tons per year of an air pollutant, or any other source with the potential to emit 250 tons per year (TPY) of an air pollutant. EPA defines "potential to emit" (PTE) as "the maximum capacity of a stationary source to emit a pollutant under its physical and operational design, including certain legal limitations, for example, on emissions or hours of operation."

The results in this report emerge from an analysis of macro-economic and energy data, by sector, from the Energy Information Administration (EIA), U.S. Census and similar. The (calculated) CO_2 emissions are based on reported total on-site fuel consumption by relevant sector categories (types of buildings, factories, or farms). While aggregate energy data are deemed to be reasonably accurate, EIA and Census data become weaker (leading to under-reporting) the more finely the data are disaggregated and more specific the source. Nonetheless, the actual aggregate energy use (and thus actual CO_2 emissions) provide a reasonable starting point to estimate the number of buildings, factories, or farms that appear to emit enough CO_2 to cross the 250 TPY threshold (or 100 TPY threshold). The results of the analysis provide an estimate of the total universe of buildings likely exposed to potential PSD permitting should new construction or modifications be undertaken.

EPA has conducted its own analysis of the potential number of permits required by PSD.[4] However, rather than using reported sector energy data, EPA instead chose to calculate and estimate emissions from the 'bottom' up. In doing so, EPA employed a "capacity factor" based on what EPA assumes to be the level of operations of reported energy-using equipment. For instance, EPA assumes the restaurant and food service sector only uses its equipment to ten percent of capacity, so it applies a ten percent capacity factor to that sector. Capacity factors are notoriously difficult to know, or obtain. (Capacity factors applicable to industrial boilers range from 25 to 66 percent.) By reducing the number of PTE-exposed sectors by anywhere from 40 to 90 percent, EPA's analysis results in a sample size much smaller than the one used here. EPA also lists a series of "uncertainties" that differ from this study, including: no estimates for the agricultural sector (Note: EPA incorrectly asserts that there are no on-site CO_2 emissions from combustion in agriculture); no estimates of PSD permits required for modifications; and no consideration of existing major sources for other pollutants that will be exposed to PSD for CO_2. However, the basic methodology EPA used to determine the number of buildings exposed to PSD—setting aside EPA's "capacity factor" de-rating, stated uncertainties, variables—is similar to that used here, and EPA's initial estimates of sources meeting PTE thresholds for CO_2 are in the same order-of-magnitude as that found in this analysis.

4 "Estimates of Facilities that Emit CO_2 in Excess of 100 and 250 tpy thresholds," prepared by EPA staff, May 2008.

Industrial-Manufacturing Sector

The majority of establishments in the industrial-manufacturing sector emit over 250 TPY. For some of these businesses, an operation as small as 1,000 square feet is sufficient to emit 250 TPY – e.g. chemicals and metals where the average sized operation is over 100,000 square feet.[5] On-site emissions intensity in industrial operations varies widely, from several thousand pounds CO_2 per square foot in heavy material and mineral industries, to 10 to 30 lbs per square foot for furniture, printing, computer and semiconductor industries. (See Table 5.)

Even dominantly electricity-intensive businesses, like semiconductor and related tech industries, are large enough users of hydrocarbons to become regulated entities. A semiconductor manufacturer larger than 20,000 square feet, and computer maker larger than 45,000 square feet, would exceed the 250 TPY regulated threshold. The *average* semiconductor operation is over 175,000 square feet, and computer makers average almost 100,000 square feet. Thus nearly every semiconductor business, and about half the computer and electronics industry would be subject to CO_2 regulatory compliance. At the other end of the tech spectrum are food processing businesses, where the average facility is over 100,000 square feet. Food processors hit the 250 TPY threshold with only 3,500 square feet of operations.

For many industries, the more CO_2 is emitted indirectly from their use of electricity, and thus the associated utility emissions, than from site combustion; e.g.; textiles, computers, wood products. Using the computer and semiconductor industry examples again, where on-site fuel use leads to 12 and 26 pounds of CO_2 per square foot respectively – their electricity use equals 75 and 176 pounds, respectively, of CO_2 per square foot because of average utility fuel use to make the kilowatt-hours. (See Table 6.) Consequently, of the approximately 600 millions TPY of total industrial CO_2 emissions subject to on-site regulation identified in this report, at least as much again is emitted by electric utilities to serve those industries.[6]

Many businesses may find it desirable to increase electric intensity (use more electric, instead of fuel-burning technologies – a long-standing trend) to attempt to drop below the regulatory threshold, and shift the CO_2 regulatory burden to electric utilities. The industrial sector, overall, is the least electrified part of the stationary energy economy, with less than 25 percent of total energy needs supplied from electric utilities. Many new and emerging electric technologies have inherent productivity benefits over combustion-based equipment (e.g., faster, more uniform drying times for electric infrared heaters vs gas heaters). A CO_2 regulatory regime could have the effect of accelerating turn-over in, or biasing new purchases towards, electric-based capital equipment. This would create the unintended consequence of increasing growth in electric demand – a "dash to electricity" – and increase CO_2 emissions from utilities.

A "dash to electricity" by facilities trying to avoid triggering CO_2 permit requirements would not only further strain the electric supply system, but would likely exacerbate the emerging problem associated with the utility industry's "dash to gas" as the primary means to generate electricity. A recent

5 EPA proposes a small number of specifically designated industrial enterprises would trigger this provision at a 100 ton-per-year level This analysis incorporates those exceptions as indicated by an *.

6 Total CO_2 emissions calculated from the available data yields ~ 600 million TPY, which is significantly lower than the > 1,000 tons of total aggregate CO_2 emissions identified by DOE/EIA for the overall industrial sector. This difference results from the limitations of the primary data as disaggregated by sector: many companies do not report (for proprietary or competitive reasons) specific uses of fuels. Thus the data available under-counts total industrial fuel use – and thus CO_2 emissions for specific industrial sectors.

Industrial-Manufacturing Sector continued

Department of Energy report highlights the challenges with the U.S. natural gas system meeting *current* needs, and the attendant expected rapid growth in the need for LNG imports from many of the same regions where the U.S. is currently dependent on oil imports.[7]

Table 4: Summary of Typical Industrial-Manufacturing Categories

- Food and Kindred Products
- Meat Packing Plants
- Canned Fruit and Vegetables
- Frozen Fruits and Vegetables
- Wet Corn Milling
- Bread, Cake, and Related Products
- Cane Sugar Refining
- Beet Sugar
- Soybean Oil Mills
- Malt Beverages
- Textile Mill Products
- Apparel and Other Textile Products
- Lumber and Wood Products
- Furniture and Fixtures
- Wood Furniture, Except Upholstered
- Paper and Allied Products
- Paper Mills
- Paperboard Mills
- Printing and Publishing
- Chemicals and Allied Products
- Alkalis and Chlorine
- Industrial Glass
- Inorganic Pigments
- Industrial Inorganic Chemicals
- Plastic Materials and Resins
- Synthetic Rubber
- Cellulosic Manmade Fibers
- Organic Fibers, Noncellulosic
- Gum and Wood Chemicals
- Cyclic Crudes and Intermediates
- Industrial Organic Chemicals
- Nitrogenous Fertilizers
- Phosphatic Fertilizers
- Petroleum and Coal Products
- Petroleum Refining
- Rubber and Miscellaneous Plastic Products
- Tires and Inner Tubes
- Miscellaneous Plastics Products
- Stone, Clay, and Glass Products
- Fret Glass
- Glass Containers
- Pressed and Blown Glass
- Cement, Hydraulic
- Lime
- Mineral Wool
- Primary Metal Industries
- Blast Furnace and Basic Steel Products
- Blast Furnaces and Steel Mills
- Electrometallurgical Products
- Gray and Ductile Iron Foundries
- Primary Copper
- Primary Aluminum
- Primary Nonferrous Metals
- Aluminum Sheet, Plate, and Foil
- Fabricated Metal Products
- Industrial Machinery and Equipment
- Computer and Office Equipment
- Electronic and Other Electric Equipment
- Transportation Equipment
- Motor Vehicles and Car Bodies
- Motor Vehicle Parts and Accessories
- Instruments and Related Products
- Surgical and Medical Instruments

7 *Natural Gas and Electricity Impacts on Industry: White Paper on Expected Near Term Cost Increases*, DOE National Energy Technologies Laboratory, April 28, 2008, DoE/NETL-2008/1320: "The decline in EIA's AEO2008 forecast for natural gas supply from the AEO2001 forecast for year 2020 alone, excluding LNG, is roughly 13Tcf, or nearly equivalent to the expected annual supply from ten Alaskan pipelines. Domestic production is projected to decline steadily, falling below 20 Tcf by 2030. Disappointing U.S. production, declining Canadian imports, minimal LNG imports to date, and the continued rise in the price of oil have caused natural gas prices to more than triple between 2002 and today." "In the event of climate change legislation, running existing natural gas combined cycle units at higher capacity factors can displace 20- 35% of current coal kilowatt-hours. Such substitution requires another 5.4 TCF per year. Clearly, the existing natural gas fleet cannot meet the growth in peak demand expected before 2016 and also substitute for coal to meet carbon caps."

Industrial-Manufacturing Sector continued

Table 5: Summary of Industrial-Manufacturing Sector CO_2 Emissions: Ranked by Minimum Size of Establishment to Reach 250 TPY CO_2

Business type	Size to emit 250 TPY	Average floor space per establishment	Site CO_2 emissions	Estimated # establishments regulated @ 250 TPY	Total # establishments
	sq ft	sq ft	lbs/sq ft		
Lime*	14	31,000	15,000	65	65
Cements*	41	110,000	4,900	190	200
Petroleum Refineries*	80	590,000	2,500	210	220
Iron and Steel Mills*	160	330,000	1,200	770	770
Pulp Mills*	330	490,000	610	34	34
Petroleum and Coal Products	360	58,000	1,400	1,900	1,900
Chemicals	940	110,000	530	8,900	8,900
Primary Metals	1,100	170,000	440	4,200	4,200
Nonmetallic Mineral Products	2,100	75,000	240	11,000	12,000
Paper	2,300	180,000	220	4,200	4,300
Primary Aluminum*	2,500	900,000	80	41	41
Food	3,400	100,000	150	15,000	15,000
Textile Mills	8,800	200,000	60	2,200	2,200
Beverage and Tobacco Products	9,000	160,000	60	1,600	1,600
Semiconductors, Related Devices	19,000	180,000	30	550	580
Transportation Equipment	22,000	220,000	20	7,300	7,700
Plastics and Rubber Products	24,000	94,000	20	9,200	11,000
Electrical Equip., Appliances	25,000	120,000	20	3,500	3,900
Fabricated Metal Products	25,000	48,000	20	26,000	35,000
Wood Products	26,000	65,000	20	8,400	10,000
Apparel	29,000	43,000	20	3,600	5,500
Textile Product Mills	33,000	100,000	10	2,900	3,500
Leather and Allied Products	35,000	38,000	10	360	690
Printing and Related Support	40,000	37,000	10	9,300	20,000
Machinery	43,000	72,000	10	12,000	17,000
Computer and Electronic Products	43,000	96,000	10	7,200	9,200
Miscellaneous	54,000	40,000	9	5,100	16,000
Furniture and Related Products	82,000	61,000	6	3,600	11,000
Total**				**190,000**	

** Calculations are for 100 TPY*

***Total different from column due to rounding*

Industrial-Manufacturing Sector continued

Table 6:
Summary of Industrial-Manufacturing Sector CO_2 Emissions Arising from Electricity Use (Emissions from Electric Utilities Allocated by Industrial Site Use)

Business type	Electricity CO_2 emissions allocated to site	Site CO_2 emissions	Electricity as Share Total Energy	Floor space to reach 250 TPY from electric use	Average floor space per establishment
	lbs/sq ft	lbs/sq ft	%	sq ft	sq ft
Lime*	1,800	15,000	10	280	31,000
Cements*	1,500	4,900	20	340	110,000
Petroleum Refineries*	1,200	2,500	5	430	590,000
Petroleum and Coal Products	620	1,400	5	810	58,000
Iron and Steel Mills*	440	1,200	20	1,100	330,000
Pulp Mills*	340	610	6	1,500	490,000
Primary Metals	340	440	30	1,500	170,000
Chemicals	300	530	20	1,700	110,000
Semiconductors	180	30	50	2,800	180,000
Paper	150	220	20	3,400	180,000
Textile Mills	130	60	40	3,900	200,000
Food	120	150	30	4,300	100,000
Nonmetallic Mineral Products	110	240	20	4,700	75,000
Plastics and Rubber Products	90	20	40	5,500	94,000
Computer and Electronic Products	75	10	50	6,700	96,000
Wood Products	60	20	30	8,200	65,000
Transportation Equipment	60	20	40	8,500	220,000
Electrical Equip., Appliances	60	20	30	8,500	120,000
Beverage and Tobacco Products	50	60	30	9,100	160,000
Fabricated Metal Products	50	20	40	10,000	48,000
Printing and Related Support	40	10	40	11,000	37,000
Apparel	40	20	40	12,000	43,000
Machinery	40	10	40	13,000	72,000
Miscellaneous	30	9	40	15,000	40,000
Textile Product Mills	30	10	30	18,000	100,000
Leather and Allied Products	30	10	40	18,000	38,000
Furniture and Related Products	20	6	40	26,000	61,000
Primary Aluminum*	N/A	80	N/A	N/A	900,000

** Calculations are for 100 TPY*

Commercial Sector

Like the industrial sector, the commercial sector uses lots of fuel. Unlike the industrial sector, fuel purchases are heavily weighted towards electricity; 80 percent of total commercial energy is supplied by electric utilities. Thus, given the importance of coal for the electric supply system (>50 percent of national generation), the effect of directly, or indirectly, taxing carbon will have an inordinately large effect on the commercial sector's cost of energy.

Nonetheless, many of the commercial sector's buildings use enough carbon-based fuels to face the same kinds of regulatory costs, controls, and enforcement from EPA that the industrial sector would in a regulated CO_2 regime.

Energy use varies by building type – but within a far narrower range than industrial operations. Commercial buildings emit from a few pounds of CO_2 per square foot (e.g., office buildings) to 10 to 15 pounds CO_2 per square foot in health care and food services. On average, a building with over 40,000 square feet uses enough hydrocarbons to become a regulated source.

Using data for each type of commercial building, energy use and size, we estimate that a total of over 1,000,000 commercial buildings would become classified as new regulated stationary emissions sources. This would include over one-fourth of all school buildings, over two-thirds of health care facilities, one-third of office buildings, half of those in lodging, and one-fifth of food services. (See Table 8.) Hotels and resorts emit a relatively low 6 pounds CO_2 per square foot, but need only be over 80,000 square feet in size to hit the regulatory threshold (80,000 square feet is only two to three times the size of many hotel ballrooms alone). Food services (restaurants, etc.) are heavily electrified and emit on average only 14 pounds of CO_2 per square foot, but that's enough to be subject to regulation with a 30,000 square foot operation.

For every class of commercial building, emissions per square foot associated with electricity (not on site, but at the utility) exceed the on-site emissions from combustion. Office buildings emit 23, hotels about 18, and food services about 50 pounds of CO_2 per square foot associated with their electricity use – each respectively eight times, three times and almost four times more than on-site emissions. Still, because many commercial buildings are large enough fuel users to trigger the CO_2 regulatory threshold, here as with the industrial sector, many building owners may seek increased use of electric technologies as a means to fall below thresholds for CO_2 regulations. (See Table 9.)

Commercial Sector continued

Table 7: Examples of Commercial Sector Categories

- Accessory Stores
- Amusement, Theme Parks
- Amusement Parks
- Art Dealers
- Art Drama and Music Schools
- Auto and Home Supply Stores
- Automotive Repair Shops
- Baked Goods Stores
- Bakeries
- Botanical and Zoological Gardens
- Cafeterias
- Carpet and Upholstery Cleaning
- Casino Hotels
- Catalog and Mail-Order Houses
- Caterers
- Children's Hospitals
- Colleges Universities and Professional Schools
- Continuing Care Retirement Communities
- Department Stores
- Diaper Service
- Dinner Theaters
- Dry-Cleaning Plants
- Eating and Drinking Places
- Family Planning Centers
- Fish and Seafood Markets
- Fitness and Recreational Sports Centers (pt)
- Full Service Restaurants
- General Medical and Surgical Hospitals
- Golf Clubs
- Grocery Stores
- Historical Sites
- HMO Medical Centers
- Hotels and Motels (except Casino Hotels)
- Industrial Launderers
- Libraries
- Linen Supply
- Medical Supply
- Medical Laboratories
- Men's Accessory Stores
- Men's Clothing Stores
- Mental Health Facilities
- Museums
- Offices of Lawyers
- Offices of Physicians
- Operators of Apartment Buildings
- Personal Appliance Stores
- Pet and Pet Supply Stores
- Psychiatric Hospitals
- Recreation Clubs and Facilities
- Stadium Operators
- Supermarket and Grocery Stores
- Warehouse Clubs and General Merchandise Stores
- Zoos and Botanical Gardens

Table 8: Summary of Commercial Sector CO_2 Emissions: Ranked by Minimum Size of Establishment to Reach 250 TPY CO_2

Business type	Size to emit 250 TPY	Mean building size	Site CO_2 emissions	Estimated # buildings regulated @ 250 TPY	Total # buildings
	sq ft	sq ft	lbs/sq ft		
Food Service	34,000	5,600	15	58,000	297,000
Health Care	51,000	25,000	10	92,000	129,000
Lodging	81,000	36,000	6	71,000	142,000
Other	83,000	22,000	6	7,900	79,000
Public Order and Safety	110,000	16,000	4	7,100	71,000
Public Assembly	120,000	14,000	4	26,000	277,000
Service	120,000	6,500	4	67,000	622,000
Education	120,000	26,000	4	100,000	386,000
Food Sales	130,000	5,600	4	23,000	226,000
Religious Worship	150,000	10,000	3	37,000	370,000
Mercantile	160,000	17,000	3	140,000	657,000
Office	170,000	15,000	3	260,000	824,000
Warehouse and Storage	290,000	17,000	2	150,000	597,000
Total				**1,000,000**	**4,859,000**

Commercial Sector continued

Table 9:
Summary of Commercial Sector CO_2 Emissions Arising from Electricity Use (Emissions from Electric Utilities Allocated by Commercial Site Use)

Business type	Electricity CO_2 emissions allocated to site	Site CO_2 emissions	Electricity as Share Total Energy	Floor space to reach 250 TPY from electric use	Mean floor space per establishment
	lbs/sq ft	lbs/sq ft	%	sq ft	sq ft
Food Sales	70	4	90	7,700	5,600
Food Service	50	15	80	9,700	5,600
Health Care	30	10	70	16,000	25,000
Other	30	6	80	17,000	22,000
Mercantile	30	3	90	19,000	17,000
Office	20	3	90	22,000	15,000
Public Order and Safety	20	4	80	24,000	16,000
Lodging	20	6	70	28,000	36,000
Public Assembly	20	4	80	30,000	14,000
Education	10	4	80	34,000	26,000
Service	10	4	80	35,000	6,500
Warehouse and Storage	10	2	80	53,000	17,000
Religious Worship	6	3	70	77,000	10,000

** Calculations are for 100 TPY*

Agricultural Sector

Farmers don't get off the hook. The agricultural sector's dependence on low-cost energy is widely recognized. In addition to the obvious economic penalty associated with increased fuel costs for wheeled farm machinery, there are significant additional costs increases in fertilizer and chemical supplies directly tied to fuel prices in the agricultural sector.[8]

Just as in the commercial and industrial sectors, however, significant cost for many farming businesses may arise not just from fuel price increases but also from all of the activities associated with becoming a regulated stationary source of emissions of CO_2 as a new pollutant.

In counting only non-vehicular use of fossil fuels – oil, liquid petroleum gas and natural gas – nearly 20,000 farms would become regulated stationary emissions sources. (See Table 10.)

The highest impacted sectors in farming, based on the use of fossil fuels for purposes other than tractors and similar farm machinery, include poultry, grains, general crops, horticulture, vegetables and melons, fruits and livestock.

Note that Census data are very limited with regard to specific assignment of farm energy uses by either type (oil, gas, etc.), or use (stationary, or vehicles). Census farm energy use data are provided in dollars and aggregated for all purposes -- which would include vehicles, not subject to stationary source regulations analyzed here. Table 14 was used in this analysis to develop an estimated approximate average pounds of CO_2 emitted per dollar of farm energy expenditures associated only with stationary equipment.

8 See for example: American Farm Bureau Federation Commends Doane Advisory Services' Analysis of Lieberman-Warner Bill, The Fertilizer Institute, June 2, 2008: "Due to increasing energy prices, operating costs for corn are forecast to rise by an additional $60.14 per acre by 2020. Potential climate change legislation will add up to $78.80 in operating costs per acre of corn, resulting in a total increase of well over $100 per acre by 2020."

Agricultural Sector continued

Table 10: Summary of Agricultural Sector CO_2 Emissions: Ranked by Minimum Size of Farm to Reach 250 TPY CO_2

Farm type	Size to emit 250 TPY	Average farm size	Site CO_2 emissions	Estimated # farms regulated @ 250 TPY	Total # Farms
	Acres	Acres	lbs/acre		
Greenhouse, nursery, floriculture	640	75	780	1,400	64,000
Poultry and egg	780	140	640	1,100	44,000
Vegetable, melon	1,600	320	310	1,500	35,000
Fruit and tree nut	2,000	120	250	880	96,000
Hog and pig	2,000	250	250	560	34,000
Dairy cattle, milk production	2,900	380	170	910	73,000
Cattle feedlots	5,800	470	90	630	55,000
Other Crop Farming Total	6,300	270	80	2,600	440,000
Oil seed, grain	6,400	690	80	3,400	350,000
Animal aquaculture, other	8,700	200	60	420	230,000
Beef cattle ranching	21,000	630	20	920	660,000
Sheep and goat	23,000	410	20	50	44,000
Total				**17,000**	**2,100,000**

Appendices

Data sources, detailed data tables, summary/calculation overview

Industrial-Manufacturing Sector Data:

- Subsector Energy Expenditures: Energy Information Administration
  - 2002 Energy Consumption by Manufacturers--Data Tables
  - Link: **http://www.eia.doe.gov/emeu/mecs/mecs2002/data02/shelltables.html**
  - Pertinent Tables 1.1, 9.1
- Emissions Factors: Energy Information Administration
  - Voluntary Reporting of Greenhouse Gases Program
  - link: **http://www.eia.doe.gov/oiaf/1605/coefficients.html**

Commercial Sector Data:

- Subsector Energy Expenditures: Energy Information Administration
  - 2003 CBECS Detailed Tables
  - **http://www.eia.doe.gov/emeu/cbecs/cbecs2003/detailed_tables_2003/detailed_tables_2003.html#consumexpen03**
  - Pertinent Tables: A1, C1A, A6
- EIA Commercial Data Contacts:
  - Joelle Michaels, CBECS Manager
    - Phone: (202) 586-8952
  - Alan Swenson
    - Phone: (202) 586-1129

Agricultural Sector Data:

- **Summary by North American Industry Classification System 2002: USDA**
  - 2002 Census Publications, U.S. National Level Data
  - **http://www.agcensus.usda.gov/Publications/2002/Volume_1,_Chapter_1_US/index.asp**
  - Pertinent Tables: 59 - Summary by North American Industry Classification System: 2002
- Contacts:
  - 202 694 5059 - ERS: Donnell Royster
  - 18007279540 - NASS
  - 2024010523 - Jim Duffield
- Agriculture Energy Information
  - "On-Farm Energy Use Characterizations," Brown, Elliott, American Council for an Energy-Efficient Economy, March 2005

General Energy Information

- **gasoline**: (dec) - **http://www.eia.doe.gov/pub/oil_gas/petroleum/data_publications/weekly_petroleum_status_report/historical/2003/2003_08_27/txt/table17.txt**
- **diesel**: (dec) - **http://www.eia.doe.gov/pub/oil_gas/petroleum/data_publications/weekly_petroleum_status_report/historical/2003/2003_08_27/txt/table17.txt**
- **natural gas**: (commercial) - **http://tonto.eia.doe.gov/dnav/ng/ng_sum_lsum_dcu_nus_a.htm**
- **electricity:** (commercial) - **http://www.eia.doe.gov/cneaf/electricity/epa/epat7p4.html**
- **petroleum: http://usasearch.gov**

Appendices continued

Table 11: Industrial-Manufacturing Sector Data

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Business type	Total # establishments	Average floorspace per establishment	Approximate Enclosed Floorspace of all buildings onsite	Net Electricity	Natural Gas	Total Oil	Total coal	Total site CO_2 emissions in sector	Site CO_2 emissions	Size to emit 250 TPY	250 TPY Reg Hurdle hit compared to avg size estab	Estimated # establishments regulated @ 250TPY	Total Site CO_2 emissions subject to reg	CO_2 Emissions from kWh @1.3lb/kWh	Electricity CO_2 emissions allocated to site	Floorspace to reach 250 TPY from electric use
	counts	sq ft	million sq ft	million KWh	billion cu ft	million bbl	million short tons	Million tons	lbs/ sq ft	sq ft	%	Count	million tons	million tons	lbs/sq ft	sq ft
Food	15,089	102,589	751	67521	567	5	8	55	146	3425	3.3	14837	54	44	117	4278
Beverage, Tobacco	1,595	163,082	181	7639	45	0	1	5	55	9032	5.5	1551	5	5	55	9113
Textile Mills	2,247	201,870	253	25271	73	1	1	7	57	8841	4.4	2198	7	16	130	3851
Textile Product Mills	3,457	100,663	225	4875	28	0	0	2	15	33482	33.3	2882	1	3	28	17751
Apparel	5,500	42,905	111	3588	16	0	0	1	17	28906	67.4	3647	1	2	42	11899
Leather and Allied Products	685	37,749	34	716	4	0	0	0	14	35417	93.8	364	0	0	27	18264
Wood Products	10,486	64,501	445	20985	56	2	0	4	19	25944	40.2	8377	3	14	61	8156
Paper	4,257	179,562	580	65503	490	18	11	63	218	2296	1.3	4230	63	43	147	3406
Pulp Mills*	34	490,005	6	1579	23	1	0	2	615	325	0.2	34	2	1	342	1461
Printing and Related	20,220	36,999	433	14714	45	0	0	3	12	40093	108.4	9265	1	10	44	11318
Petroleum, Coal products	1,916	58,241	78	37186	854	7	0	54	1397	358	0.6	1910	54	24	620	807
Petroleum Refineries*	215	592,841	40	35478	799	4	0	50	2490	80	0.0	215	50	23	1153	434
Chemicals	8,909	111,909	672	153104	2,246	16	16	179	533	938	0.8	8872	178	100	296	1688
Plastics, Rubber Products	10,538	94,074	767	53181	125	1	0	8	21	24077	25.6	9189	7	35	90	5547
Nonmetallic Mineral	11,593	75,319	501	41393	411	6	14	60	239	2095	2.8	11432	59	27	107	4655
Cements*	195	114,618	11	12471	21	1	11	27	4933	41	0.1	195	27	8	1474	339
Lime*	65	31,060	1	1353	7	0	3	7	14700	14	0.1	65	7	1	1759	284
Primary Metals	4,166	174,794	550	144502	686	3	34	121	440	1136	0.6	4152	121	94	342	1464
Iron and Steel Mills*	771	325,341	159	53915	406	2	32	99	1248	160	0.1	771	99	35	441	1134
Primary Aluminum*	41	901,645	28	0	19	0	0	1	81	2456	0.7	41	1	0	0	N/A
Fabricated Metal	35,349	48,426	1,277	47123	204	1	0	13	20	25130	51.9	26177	9	31	48	10423
Machinery	17,381	72,187	825	24563	80	0	0	5	12	42969	59.5	12208	3	16	39	12918
Computer, Electronic	9,238	96,297	665	38352	64	0	0	4	12	43294	45.0	7161	3	25	75	6669
Semiconductors	578	176,153	96	13001	21	0	0	1	26	19048	10.8	547	1	8	176	2840
Electrical, Appliances	3,886	122,535	309	13901	52	0	0	3	20	24760	20.2	3493	3	9	58	8549
Transportation Equipment	7,653	223,706	1,111	50508	198	2	0	13	23	21686	9.7	7282	12	33	59	8460
Furniture and Related Products	10,941	60,782	473	7062	24	0	0	1	6	82118	135.1	3550	0	5	19	25761
Miscellaneous	15,605	39,779	400	10374	31	0	0	2	9	53763	135.2	5059	1	7	34	14830
Total**	**200,710**	**80,268**	**10,643**	**832061**	**6,298**	**67**	**100**	**640**	**120**	**4158**	**5.2**	**190314**	**627**	**541**		

** Calculations are for 100 TPY*

Appendices continued

Industrial-Manufacturing Sector Data: Explanation of data/calculations for Table 11

Columns 1 – 8: primary data from **http://www.eia.doe.gov/emeu/mecs/mecs2002/data02/shelltables.html**

Columns 9 – 17: calculated values/estimates as follows.

9. CO_2 emissions from combustion of natural gas (6), oil (7), coal (8) are a added to yield total tons CO_2 for sector business.

10. Total emissions (9) divided by that sector's total square footage of all business in that sector (4) yields avg CO_2 lbs/sq ft

11. Divide 250 tons (500,000 lbs) by emissions per square foot (10) to yield size of operation that triggers 250 TPY

12. Divide the average 250 TPY trigger size (11) by the average size of facilities in that sector (3).

13. Rough estimate of number of establishments above 250 TPY by assuming: a) if size to trigger 250 TPY (11) is less than average size of establishment in that sector (3), then start with 50% of all establishments get regulated, then b) calculate how many more than 50% (i.e., "average") get regulated by using the ratio of trigger/overage (12) as the % additional that are smaller than average that are regulated. Thus if the 250 TPY trigger occurs at 30% of the average size of an operation, and assume for this example the sector has 15,000 establishments, then a) 7,500 establishments are regulated (the 50%, or "average), plus b) 70% (100 – 30%) of the remaining 7,500 establishments would be subject to regulation since only 30% of the average size is required to reach 250 TPY. (This calculation is done in reverse if the 250 TPY trigger is larger than the average size.) While this method is crude, at the broad statistical abstraction level, it yields a reasonable ballpark. There is no other means to estimate the distribution since the primary Census data does not provide granular information on energy use, but just overall totals, and overall averages. This method could both over, or under estimate. But it is notable regarding any potential overestimate of regulated establishments – such is likely, on average, to be more than offset by the entire data set's general underestimate of regulated establishments because the Census data is incomplete (i.e., undercounts by roughly 50%) total industrial energy use – Census/DOE does not have complete data for all companies which do not report all disaggregated data (for competitive reasons, or because of Census collection issues).

14. Total sector CO_2 emissions (10) are multiplied by ratio of number of regulated establishments (13) compared to total establishments (2).

15. Electric utility emissions of CO_2 associated with sector electric use (5) based on national average fuel use (and thus CO_2 emissions) for utility sector.

16. Sector electric-related emissions (15) divided by total square footage of that sector (4) to yield indirect CO_2 emissions per square foot from kWh use.

17. kWh-related CO_2 emissions (16) divided in to 250 TPY to yield number of square feet of operations that lead to 250 TPY trigger occurring at utilities for that specific industrial sector's average.

Appendices continued

Table 12: Commercial Sector Data

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Business type	Total # bldgs	Mean floor space per building	1,001 to 5, 000 sq ft	5,001 to 10,000 sq ft	10,000 to 25,000 sq ft	25,001 to 50,000 sq ft	50,001 to 100,000 sq ft	100,001 to 200,000 sq ft	200,001 to 500,000 sq ft	Over 500,000 sq ft	Floor space	total annual electricity consumption	total annual gas consumption	total annual fuel oil consumption	Avg gas used	Avg oil used	Site CO_2 emissions	Size to emit 250 TPY	# sq ft regulated (*Notes)	Estimated # buildings regulated @ 250 TPY	Total Site CO_2 emissions subject to reg	Total CO_2 emitted (incl from kWh)	Electric CO_2	Electricity CO_2 emissions allocated to site	Floorspace to reach 250 TPY from electric use	Electricity as share total energy
	x1000	x1000	Total floor space -- millions sq ft								million sq ft	trillion Btu	trillion Btu	trillion Btu	1000 Btu/sq ft	1000 Btu/sq ft	lbs/sq ft	(1000 sq ft)	millions	1000	million tons	million tons	millon tons	lbs/sq ft	1000 sq ft	%
Education	386	26	409	399	931	1,756	2,690	2,167	1,420	Q	9,874	1,121	268	47	27	5	4	124	2606	102	29	113	73	15	34	78
Food Sales	226	6	409	356	Q	Q	Q	Q	N	N	1,255	629	39	0	31	0	4	134	126	23	4	46	41	65	8	94
Food Service	297	6	544	442	345	Q	Q	N	Q	N	1,654	654	203	0	123	0	15	34	323	58	10	67	43	52	10	76
Health Care	129	25	165	280	313	157	364	395	514	973	3,163	748	243	11	77	3	10	51	2246	92	25	80	49	31	16	75
Lodging	142	36	99	160	631	803	841	930	1,185	Q	5,096	709	215	35	42	7	6	81	2562	71	23	78	46	18	28	74
Mercantile	657	17	771	1,173	2,409	1,291	1,505	1,677	462	1,905	11,192	2,214	264	21	24	2	3	160	2367	139	25	179	144	26	19	89
Office	824	15	1,382	938	1,887	1,506	1,209	1,428	1,493	2,365	12,208	2,170	269	18	22	1	3	174	3858	260	26	176	141	23	22	88
Public Assembly	277	14	336	518	1,077	301	474	868	Q	Q	3,939	506	102	29	26	7	4	117	365	26	8	50	33	17	30	79
Public Order and Safety	71	16	122	Q	Q	Q	Q	Q	Q	Q	1,090	172	29	8	27	7	4	114	109	7	2	16	11	21	24	82
Religious Worship	370	10	416	744	1,235	930	Q	Q	Q	N	3,754	188	82	18	22	5	3	148	375	37	1	25	12	6	77	65
Service	622	7	1,034	722	1,021	560	Q	Q	Q	Q	4,050	451	139	0	34	0	4	121	433	67	3	46	29	14	35	76
Warehouse, Storage	597	17	895	868	2,064	1,043	1,494	1,162	Q	Q	10,078	738	132	9	13	1	2	292	2552	151	11	65	48	10	53	84
Other	79	22	Q	Q	Q	Q	Q	Q	Q	Q	1,738	401	87	0	50	0	6	83	174	8	5	37	26	30	17	82
Vacant	182	14	239	Q	Q	471	Q	Q	Q	Q	2,567	46	28	0	11	0	1	382	0	0	0	6	3	2	218	62
Total	**4,859**	**15**	**6,922**	**7,033**	**12,659**	**9,382**	**10,291**	**10,217**	**7,494**	**7,660**	**71,658**	**10,746**	**2,100**	**228**	**29**	**3**	**4**	**124**	**20263**	**1374**	**181**	**987**	**699**	**20**	**26**	**82**
																				1040	173	*Total from calculations*				

Commercial Sector Data: Explanation of data/calculations for Table 12

Columns 1 – 15: primary data from
http://www.eia.doe.gov/emeu/cbecs/cbecs2003/detailed_tables_2003/detailed_tables_2003.html#consumexpen03

Columns 16 – 27: calculated values/estimates as follows.

16. Divide total sector gas use (13) by total square footage (12) to yield avg gas used per sq ft

17. Ditto re oil

18. Calculate site CO_2 emissions by adding avg emissions per sq foot from gas, and oil – by first converting gas or oil use to CO_2 emissions.

19. Divide 250 tons (as pounds) by avg pounds emitted per square foot (18) to yield avg size space that hits 250 TPY

20. To estimate how many square feet are subject to regulation, add up the number of square feet less than the trigger (19) from the disaggregated data in columns (4) – (11). Pro-rate the number of square feet in the relevant column where the average (19) falls in the relevant range in columns (4) – (11).

21. Estimate, roughly, number of buildings regulated by assuming share of total square footage regulated is approx the same as share of total buildings in that sector regulated. Share of square footage calcu lated by dividing (20) by (12) – multiply this ratio by total buildings in the sector (2).

22. Multiply same ratio in (21) by total sector emissions – latter calculated by multiplying emissions per sq ft (18) by total square footage in sector (12).

23. Multiply sector total electric use (13) by national average utility CO_2 emissions per kWh – add to total site CO_2 emissions (18).

24. As above without site CO_2 emissions.

25. Calculate utility emissions associated with kWh by dividing sector kWh CO_2 (24) by total square footage (12)

26. Calculate same way as (19).

27. Divide primary energy to make electricity (13) by total sector energy use.

Appendices continued

Table 13: Agricultural Sector Data

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Farm type	Total # Farms	Land in farms	Average farm size	Average size of farm	total annual purchases - gasoline, fuels, oils	Farms with gas, fuel, oil expenses of				64% Share All Energy purchases not for vehicles	TOTAL Site CO_2 emissions subject to reg	Site CO_2 emissions	Size to emit 250 TPY	Estimated # farms regulated @ 250 TPY	Total CO_2 emission incl on-site vehicles
	count	acres	Acres	$US	1000 $US	$1 - 4,999	$5,000 - $24,999	$25,000 - $49,999	$50,000+	$million	million tons	lbs/ acre	Acres	count	lbs/ sq ft
TOTAL	2,128,982	938,279,056	441	97,320	6,675,419	1,738,679	242,029	29,049	14,382	4,272	32	68	7,321	14,382	50
Oil seed, grain	349,023	242,218,224	694	115,964	1,962,572	231,615	95,273	9,816	3,447	1,256	9	78	6,428	3,447	15
Vegetable, melon	34,624	11,215,546	324	382,581	358,743	24,765	4,711	1,467	1,499	230	2	307	1,628	1,499	3
Fruit and tree nut	95,680	11,525,130	120	141,680	301,769	83,938	8,016	1,264	882	193	1	251	1,989	882	2
Greenhouse, nursery, floriculture	64,366	4,819,149	75	234,219	393,875	50,194	7,502	1,472	1,433	252	2	785	637	1,433	3
Other Crop Farming Total	442,932	118,327,994	267	36,372	977,535	377,832	27,038	4,971	2,576	626	5	79	6,305	2,576	7
Beef cattle ranching	664,431	419,821,930	632	30,902	1,028,713	606,388	39,440	2,470	920	658	5	24	21,255	920	8
Cattle feedlots	55,472	25,984,434	468	415,480	231,441	44,677	6,735	970	633	148	1	86	5,848	633	2
Dairy cattle, milk production	72,537	27,351,777	377	323,182	488,176	44,487	23,524	2,129	909	312	2	171	2,918	909	4
Hog and pig	33,655	8,317,127	247	369,531	214,618	22,437	7,727	1,112	555	137	1	248	2,018	555	2
Poultry and egg	44,219	6,153,409	139	552,989	411,022	25,184	14,015	2,478	1,062	263	2	641	780	1,062	3
Sheep and goat	43,891	17,910,791	408	10,815	39,759	40,363	978	72	50	25	0	21	23,463	50	0
Animal aquaculture, other	228,152	44,633,545	196	19,034	267,197	186,763	7,070	828	416	171	1	57	8,700	416	2
TOTAL from calculations											37			16,958	57

Agricultural Data: Explanation of data/calculations for Table 13

Columns 1 – 10: primary data from
http://www.agcensus.usda.gov/Publications/2002/Volume_1,_Chapter_1_US/index.asp

Columns 11 – 16: calculated values/estimates as follows.

11. Share of total energy purchases used for stationary equipment (non-vehicle) derived from Table 14. Data set in Table 13 and 14 both for year 2002 – permitting consistent transfer of derived value.

12. Conversion factor (16 lbs CO_2/$) for average CO_2 emissions per energy $ spent derived from Table 14. Multiply (16) by 16 lbs/$ and convert to tons.

13. Divide (12) by total acres per category (3)

14. Divide 250 TPY by (13)

15. 250 TPY in 2002 ~ $50,000 of fuel expenditures – thus only farms in (10) subject to regulation.

16. Multiply total fuel spending for all purposes (6) by average emissions per $ (16 lbs per Table 14).

Agricultural Data: Explanation of data/calculations for Table 14

Columns 1 – 7: data from "On-Farm Energy Use Characterizations," American Council for an Energy-Efficient Economy, March 2005.

Columns 11 – 16: calculated values/estimates as follows.

8. Convert BTU data from (2) to (7) to relevant units (gallons oil, cubic feet n gas, kWh electricity).

9. Fuel units

10. Cost per unit of relevant fuel in 2002 (DOE/EIA national average data)

11. Expenditures for each fuel type: total at bottom of column – all non-electric spending of $8,415 million.

12. Calculate CO_2 emissions; multiply BTU in (7) by CO2/BTU for each fuel type

13. Divide (12) by (11) to yield lbs CO_2/$ spent on each fuel type: bottom of column derive straight statistical avg of 16 lbs CO_2/$ of fuel purchases.

14. Estimate share of each fuel type associated with stationary source equipment (non-vehicle) from statistical avg of (18) through (22)

15. Multiply (14) by (11) for total spending on non-vehicle energy: total column $5,348 million – divide by total for all non-electric energy spending (11) to yield 64% share of energy spending for stationary uses.

16. Multiply (15) by 16 lbs/$ for total CO_2 emissions from non-vehicle

17. Same categories as (1)

18 – 22. Estimate share of fuel used for non-vehicle purposes based on category of use (e.g., 0% of "onsite transportation" energy is for stationary; but estimate 75% of all "machinery" is stationary.

Appendices continued

Table 13: Agricultural Energy End-Uses

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	total motors	total lighting	onsite transport	machinery	other not categorized	total	Energy Units (b)		Cost/Unit (c)	Total Expenditures	Total CO_2	CO_2	Estimated share stationary sources (d)	Total Expenditures for non-mobile energy use	Total Emissions CO_2 non-mobile	ESTIMATED SHARE STATIONARY	total motors	total lighting	onsite transport	machinery	other not categorized
									US (cents)	mil-lion $	million tons	lbs/$	%	mil-lion $	mil-lion tons	total - all farm-types	%	%	%	%	%
total - all farm-types							million														
gasoline	134	-	2	1	5	142	1,235	gallons	142	1753	11	13	51	886	6	gasoline	50	-	0	75	70
diesel	7	-	28	77	249	361	2,777	gallons	142	3943	29	15	73	2868	21	diesel	80	-	0	75	80
natural gas	2	-	-	-	94	98	98,000	cubic feet	600	588	6	20	90	529	5	natural gas	100	-	-	-	90
other (a)	15	2	-	2	169	195	1,500	gallons	142	2130	16	15	50	1065	8	other (a)	75	0	-	75	80
electricity	9	3	-	-	136	153	44,842	kWh	8	3538	29	16	0	0	29	*(kWh not counted in total below)*					
total petroleum	158	2	30	80	517	796			73.7/gallon												
total energy	167	5	30	80	653	949				11953	62	***16***	***Avg lbs***	5348	69						
										8415	*excludes kWh*										
ACEE pg. 7																					
(a) treated as diesel											*Note: compare "Total Purchases" of energy (excluding kWh) result here with Table 59 Census total of ~$*										

U.S. Chamber of Commerce
1615 H Street NW
Washington, DC 20062
www.uschamber.com

EXHIBIT B

Docket A-2001-19
Document II-A-01

NSR 90-Day Review
Background Paper

June 22, 2001

source can purchase additional offsets periodically to meet the offset requirement.
.

Each applicant must also conduct an analysis of "alternative sites, sizes, production processes, and environmental control techniques...[that] demonstrates the benefits of the proposed source significantly outweigh the environmental and social costs of its location, construction, or modification." The applicant must also certify that all of its other sources operating within the state are in compliance with the Clean Air Act and SIP requirements. Finally, the public must be given adequate notice and opportunity to comment on each permit application.

In addition to the basic steps identified above, when preparing a permit application, the applicant must research and propose LAER for the source category at issue and secure valid offsets as a condition of the project's approval.

Basic PSD Requirements

New major sources and existing sources that undertake major modifications that are subject to PSD must apply best available control technology (BACT). When preparing a BACT analysis, the permit applicant must typically undertake the following steps: (1) identify available pollution control options; (2) eliminate the technically infeasible options; (3) rank the remaining control technologies by control effectiveness; (4) evaluate the most effective controls (considering energy, environmental, and economic impacts) and document the results; and (5) discuss the appropriate BACT selection with the permitting authority. The permitting authority then specifies an emission limit for the source that represents BACT.

Each PSD applicant must also perform an air quality analysis, which may include pre-application monitoring data, to demonstrate that the new emission increase will not cause or contribute to a violation of any applicable NAAQS or result in a significant deterioration of the air quality. Finally, each applicant must also conduct an analysis to ensure that the increase does not result in adverse impact on air quality related values, including visibility, that affect designated Class I areas, such as wilderness areas and national parks.

Changes that do not trigger NSR

There are a number of ways that sources can undertake new construction or modification without the need for a major NSR permit. First, as noted above, there are certain activities that are exempt from NSR because they are defined in the regulations as exclusions from the definition of a physical change or change in the method of operation. For example, a routine change is exempt from NSR. Certain pollution control projects are also exempt from NSR, even those that increase emissions, if they meet environmental safeguards established by EPA.

Even if a change does not qualify for one of these exemptions, a change at a major source does not trigger NSR if the emissions increase is below the level defined as significant. Many projects have emissions increases that are below these levels and never trigger NSR. Where a project's maximum capacity to emit would be above the significance levels, a source often uses a common NSR avoidance strategy -- a limit on potential to emit, or PTE limit. In a PTE limit, a source agrees to limit the size of the proposed project's emissions increase by taking a permit

limit to keep emissions below the significance level. Such limitations can be accomplished by installing modern pollution controls, or by limiting some unit's operation (e.g., limiting fuel burned or hours operated)[11].

Furthermore, even if the proposed change would result in a significant increase and cannot be limited as just described, the source may offer past or future emissions decreases at other units to offset the increase from the proposed change. Many more sources rely on netting or PTE limits to avoid NSR than actually obtain NSR permits. These transactions can result in significant emissions reductions, but a full review of these benefits is beyond the scope of this report.

General data on the NSR program's implementation

Preliminary estimates based on EPA's most recent data indicate that approximately 250 facilities apply for a PSD or nonattainment NSR permits annually. There are approximately 20,000 sources that would be classified as major under the Clean Air Act, and many more stationary sources that are not large enough to be called major. Specific permitting data for utilities and refineries are presented in the sector-specific portions of this paper; the data in this section pertain to all source categories.

Based on an EPA review of about 900 permits since 1997, the average time needed to obtain a major NSR or PSD permit, across all industries, is approximately 7 months from receipt of the complete permit application. Specific data for the electric generation and refining industries are reported in the sector-specific sections of this paper. In recent years, permitting times have been reduced for all source types.

Figure 1: Average Permitting Time for PSD permits*

Permitting Time 1997 - 1998	Permitting Time 1999 - early 2001	Overall Average Time 1997 - 2001
Average: 8 - 9 months Range: 1.5 – 35 months	Average: 6 - 7 months Range: 3 - 12 months	7.2 months

*These times are based on a total of 391 PSD sources for which sufficient data were available to calculate permitting time. Permitting time is defined to include the time period from the date on which the permit application is filed through the date on which the final permit is issued.

Improved permitting time can be explained in part by permit applicants having more pre-application meetings with the permitting agency and submitting applications with what is believed to be current BACT. Based on experience, the most common sources of delay in permit issuance are the submittal of an incomplete application, the selection of a BACT option that the permitting authority believes to be less stringent than required, and public opposition to the permitting authority's draft BACT determination. Over time, as permit engineers from the industrial sector, the permitting authority, and EPA become familiar with specific issues, permitting can be done faster, as has recently been the case with turbines. Finally, recent emphasis by EPA, state, and local permitting authorities on permitting for new electric generating capacity and refining capacity appears to be resulting in shorter permitting processes.

[11] In addition to limiting the PTE of a project to stay below the significance levels for a major modification, some sources limit their entire facility PTE to levels that keep the source from being classified as a major source.

General environmental impacts of NSR

Recent work by EPA indicates that over the period from 1997-1999, the BACT component of the PSD program has resulted in emissions reductions of over 4 million tons (or an annual average of about 1.4 million tons) compared to what emissions would have been if the controls otherwise required in the absence of PSD had been applied instead[12]. These data are based on a thorough review of approximately 900 PSD permits issued since 1997. Figure 2 summarizes these data by pollutant.

Figure 2: Estimated Emissions Avoided Due to PSD BACT Permitting (1997 – 1999) (short tons)

PM/PM10	180,000
SO2	1,260,000
NOx	2,540,000
CO	65,000
VOC	25,000
TOTAL	**4,100,000**
Annual average over time period	***1.4 million tons per year***

The review on which these numbers are based included only PSD permits. Therefore, these emissions reductions estimates do not include emissions reductions for control technology and offsets in nonattainment areas.

The emissions reductions that result from pollution control required under NSR are not the only way that the NSR program keeps pollution out of the air. Each year many companies make modifications to existing facilities, and even construct entirely new facilities, without obtaining and NSR permit by keeping emissions lower than the amounts for which permits are required. This process is sometimes referred to as "netting out" of NSR. [13] Because EPA is usually not involved when companies make changes that do not require NSR permits, we do not have data on the amount of pollution avoided as a result.

Benefits Associated with Electricity Generating Emissions Reductions Realized Under the NSR Program

[12] Typically, in the absence of BACT, the controls required would be a federal New Source Performance Standard (NSPS), and/or a limit from an applicable State Implementation Plan (SIP).

[13] For example, if a power plant located in an attainment area makes a change that would increase its emissions of NOx by 50 tons per year but at the same time installs pollution control technology that would reduce its NOx emissions by 35 tons per year, the plant would not have to obtain an NSR permit because its net emissions increase (15 tons per year) would be less than the 40 tons per year that makes a change a major modification.

EXHIBIT C

Comments on
EPA's Advance Notice of Proposed Rulemaking (ANPR) on Regulating Emissions of Greenhouse Gases (GHGs) under the Clean Air Act (CAA)

73 Federal Register 44354, July 30, 2008
Docket EPA-HQ-OAR 2008-0318

Submitted by
The American Chemistry Council
November 26, 2008

Executive Summary

The Environmental Protection Agency (EPA) presented many options for regulating greenhouse gas (GHG) emissions under the Clean Air Act (CAA) in its Advance Notice of Proposed Rulemaking (ANPR). The ANPR explores, in great detail, the intricacies and complexities of using existing CAA statutory authority and regulatory programs for addressing GHG emissions. The American Chemistry Council (ACC) believes that these complexities and the significant economic impact of using CAA authority to regulate GHG emissions all point to the fact that the Act is poorly suited for this purpose.

For stationary sources, the ANPR examined the impacts of regulating GHG emissions under CAA sections 108, 111, 112, and 129, along with the accompanying permitting requirements under the Title V and New Source Review/Prevention of Significant Deterioration programs. These impacts range from targeting specific emission sources, to forcing each state to develop implementation plans for reducing GHG emissions, to locking in control technology for years in the future. Furthermore, under the current CAA, any regulatory scenario for GHG emissions would result in much higher operating costs for a large number of sources with little proven reductions in emissions due to burdensome permitting programs.

ACC believes that the CAA is not suited to regulate GHG emissions. The structure, language and focus of the Act cannot be effectively reshaped and reinterpreted to address global pollutants such as carbon dioxide and other greenhouse gases, which are emitted by virtually all sources and respect no local or national boundaries.

Instead, ACC supports the development of a comprehensive national energy policy that promotes high environmental standards; a diverse, flexible energy supply at globally competitive prices; and efforts to improve the efficiency of energy supply and consumption throughout the economy. Legislation to address climate change should recognize the interdependent nature of energy and climate issues, the need to link climate policy to a national energy policy, and the significant economic and environmental challenges that could result from such legislation.

Introduction

The American Chemistry Council (ACC)[1] appreciates the opportunity to comment on the Environmental Protection Agency's (EPA) Advance Notice of Proposed Rulemaking (ANPR) for regulating greenhouse gas (GHG) emissions under the Clean Air Act (CAA) (73 FR 44354, July 30, 2008). As EPA notes in the preamble, the ANPR reflects the complexity and magnitude of the question of whether and how GHGs could be effectively controlled under the Clean Air Act (CAA). ACC represents the U.S. chemical manufacturing industry, one of the industrial sectors that could be subject to GHG emissions regulation under the CAA. As such, we have a critical interest in any regulatory action that EPA may propose to address GHG emissions, particularly if that action has any impact on stationary sources.

EPA's decision to issue an ANPR was a good public policy decision because it opens a dialogue with all interested parties on the challenge and complexities of addressing greenhouse gas emissions in the United States when dealing with a global issue, and the pros and cons of using the various provisions and programs of the CAA to address these emissions. Because developing environmental regulations without a full understanding of the legal, economic and technical issues can only lead to ill-advised policy decisions, the ANPR approach of gathering facts and information is a good one. The record developed in response to the ANPR will inform the public as to what could be expected if EPA regulates greenhouse gases under the CAA.

The U.S. business of chemistry has a unique interest in a number of the issues raised in the national climate policy debate and in this ANPR. These issues include the industry's distinct use of fossil fuels as feedstocks, our competitive vulnerability to increases and volatility in natural gas and energy prices, credit for early reductions of GHG emissions taken by ACC members, efficiency gains resulting from downstream use of the products of chemistry, and the overall treatment of the chemical industry given our participation in globally competitive markets and highly leveraged impact on the U.S. economy. In addition, the industry has an interest in assuring that other countries with large GHG emissions do their fair share to reduce emissions within an appropriate timeframe, so that the burden of GHG emissions reductions does not fall disproportionately on the United States.

[1] The American Chemistry Council (ACC) represents the leading companies engaged in the business of chemistry. ACC members apply the science of chemistry to make innovative products and services that make people's lives better, healthier and safer. ACC is committed to improved environmental, health and safety performance through Responsible Care®, common sense advocacy designed to address major public policy issues, and health and environmental research and product testing. The business of chemistry is a $664 billion enterprise and a key element of the nation's economy. It is one of the nation's largest exporters, accounting for ten cents out of every dollar in U.S. exports. Chemistry companies are among the largest investors in research and development. Safety and security have always been primary concerns of ACC members, and they have intensified their efforts, working closely with government agencies to improve security and to defend against any threat to the nation's critical infrastructure.

For U.S. climate policy to have a global impact, and to assure the global competitiveness of the business of American chemistry, international cooperation on climate policy is essential. A U.S. climate policy must include a mechanism linking U.S. emission reductions to some level of international participation, especially large GHG emitting countries such as China and India. A domestic climate policy should also provide a sound basis for engaging the United States in the larger international climate debate, while taking care not to create incentives to relocate chemical manufacturing facilities outside the country. Relocation of chemical manufacturing facilities abroad does not serve to reduce global GHG emissions. In fact, it is very likely that global GHG emissions will increase if production moves to countries without comparable GHG reduction policies and costs.

ACC members are committed to improving energy efficiency and reducing GHG emissions. The chemical industry has already significantly reduced its greenhouse gas emissions. Excluding indirect (or embedded) carbon dioxide emissions from purchased electricity, the chemical industry's GHG emissions fell 13.2 percent in absolute terms between 1990 and 2007. Looking at indirect (or embedded) carbon dioxide emissions from purchased electricity, the chemical industry's greenhouse gas emissions fell 7.5 percent between 1990 and 2007.

The impetus for the ANPR was the recent U.S. Supreme Court ruling in *Massachusetts v. EPA*, 549 U.S. 497 (2007). In *Massachusetts*, the Court held that carbon dioxide and other greenhouse gases fall within the definition of "air pollutant" found in section 301 of the CAA, thereby giving EPA authority to regulate greenhouse gases under the CAA. In light of that ruling, the Court remanded the matter back to the Agency, directing that pursuant to the rulemaking petition filed for regulation of GHG emissions under section 202(a) of the Act, EPA must either:

(i) determine that GHG emissions cause or contribute to air pollution which may be reasonably anticipated to endanger public health or welfare;
(ii) determine that GHG emissions do not present an endangerment; or
(iii) provide a reasonable explanation as to why EPA cannot or will not exercise its discretion to determine whether GHG emissions present an endangerment.

To date, EPA has not made a formal endangerment finding, nor is it under a deadline to do so. The matter, along with a number of other similar petitions for rulemaking, remains before EPA. The Court stated in *Massachusetts* that "EPA …has significant latitude as to the manner, timing, content, and coordination of its regulations with those of other agencies." (*Id.* at 1462.) Because EPA has such latitude, it is both appropriate and necessary for EPA to have published this ANPR and solicited comment on a myriad of issues before taking any further action on the pending rulemaking petitions.

The ANPR contains roughly 400 open-ended legal and policy questions, ranging from the general (the best available science for an endangerment finding) to the specific

(application of CAA section 179B to attainment plan requirements)[2]. Clearly, much thought and technical expertise went into the ANPR. After consideration of the issues presented in the ANPR, we are convinced that the CAA is not the appropriate statute through which to regulate GHG emissions. As we explain in detail below, the structure, language and focus of the Act cannot be reshaped and reinterpreted to address global pollutants such as carbon dioxide and other greenhouse gases, which are emitted by virtually all sources and respect no national boundaries. In short, we believe the Clean Air Act is a blunt instrument for GHG regulation.

I. The Clean Air Act is not an appropriate statute by which to regulate greenhouse gas emissions for the purpose of addressing the impacts of global climate change.

A. EPA Administrator Johnson and numerous Federal Agencies have concluded that the Clean Air Act should not be used to regulate greenhouse gas emissions.

In an unprecedented action, EPA Administrator Johnson introduces the ANPR by publicly stating that the CAA should not be used to regulate GHG emissions. ACC unequivocally supports that position.

> "I believe that the ANPR demonstrates the Clean Air Act, an outdated law originally enacted to control regional pollutants that cause direct health effects, is ill-suited for the task of regulating global greenhouse gases. Based on the analysis to date, pursuing this course of action would inevitably result in a very complicated, time-consuming and, likely, convoluted set of regulations. These rules would largely pre-empt or overlay existing programs that help control greenhouse gas emissions and would be relatively ineffective at reducing greenhouse gas concentrations given the potentially damaging effect on jobs and the U.S. economy." (73 FR 44355.)

Other Federal Agencies and the White House also have concluded that regulation of greenhouse gases under the Clean Air Act could have disastrous impacts on every sector of the U.S. economy. This level of Federal Agency concern should serve as a strong signal that we need new legislation and that we need to proceed very cautiously and fully understand the consequences of regulating GHG emissions before taking any action.

[2] The 600-page ANPR is backed up by more than 11,450 pages of highly complex, technical materials EPA has placed in the ANPR public docket. These 11,450 pages of technical materials refer in turn to more than 6,613 pages of core references and scientific studies.

B. Despite the shortcomings in using the Clean Air Act to regulate greenhouse gases, the ANPR presents the Act as a suitable way to address greenhouse gas emissions from every sector of the US economy.

The ANPR represents an enormous effort by EPA to discuss the pros and cons of using the CAA to regulate GHG emissions. However, the ANPR glosses over the impediments of the Act and proposes ways that EPA could get around these obstacles that rely on untested legal theories, contorting or disregarding the plain language of some of the Act's provisions, and rationalizing that the end to be achieved, i.e., the regulation and reduction of GHG emissions in the United States, justifies the means. We discuss this in greater detail below when we address the inappropriateness of using various CAA programs to regulate GHG emissions from stationary sources.

The overarching flaw of the CAA is the interconnections in its provisions. As the ANPR recognizes, this is by Congressional design and for the most part, has proven effective in reducing pollution from mobile and stationary sources on a local, state, and in some cases, regional level. However, this overlap of provisions is what undermines the use of the CAA to address global pollutants such as carbon dioxide and other GHGs. Even if there were a reasonable and effective way to regulate GHGs from a specific type of source under one provision of the Act (e.g., mobile sources under section 202), the statute is drafted in such a way that the regulation of GHG emissions from mobile sources could easily trigger the regulation of GHG emissions from stationary sources under the National Ambient Air Quality Standards (NAAQS) provisions in sections 108-111 of the Act, with the overlap between the two being the finding of an "endangerment."

II. A positive endangerment finding and regulation of carbon dioxide and other GHG emissions under section 202 would trigger regulation of stationary sources under the Prevention of Significant Deterioration Program, and permitting under Title V.

A. Congress did not envision regulating GHG emissions under the Prevention of Significant Deterioration Program.

If EPA regulates GHG emissions from new motor vehicles and engines under section 202 of the Act, these greenhouse gases would be deemed pollutants "subject to regulation" under the Clean Air Act. As such, any "major" stationary source which emits or has the potential to emit (PTE) a regulated pollutant becomes subject to the Prevention of Significant Deterioration (PSD) Program. *See*, 42 U.S.C. § 7475(a)(4). "Potential to emit" assumes that the source operates 24 hours per day, 365 days per year, unless limited by a permit issued by the appropriate permitting authority. Section 169 of the Act defines a "major" source using two thresholds: for a statutorily listed industrial source the threshold is 100 tons per year (tpy) or more of any air pollutant; for any other stationary source, the threshold is 250 tons per year or more. Because the 100/250 tpy are statutorily mandated thresholds, we do not see a way for EPA to establish thresholds for greenhouse gas emissions above these levels. This would mean that potentially millions

of small businesses and commercial establishments would be caught up in the PSD permitting program.

A PSD permit must be obtained (usually from the state permitting authority) before beginning construction of a new major source, or modifying an existing major source in such a way that could result in a "significant" increase in emissions of a regulated pollutant. Although the Act does not define "significant" increase, EPA regulations establish certain numerical values for several pollutants; but for all other pollutants, "any" increase would be considered "significant." Therefore, any major source emitting *any* amount of a regulated greenhouse gas would be subject to the PSD permitting.

PSD permits are designed to evaluate a wide range of impacts from the amount of emissions that these sources are authorized to emit, and are necessarily complex in how these impacts are evaluated. EPA anticipates that each PSD major source construction permit should take between one and three years to complete, including the time to develop the required data, assemble the permit application, submit the application to the permitting authority, wait for permitting authority, EPA, and potential Federal Land Manager review of the application, conduct the public participation process, and issue the permit. Each of these sources must apply best available control technology (BACT) to new and modified sources in order to comply with the PSD program, as defined by pollutant-specific historical permitting activities.

An example of a PSD major source today would be one that included a boiler firing natural gas using low-NO_x burners at a rate of 500 million British thermal units (Btu) per hour (MMBtu/hr) at a facility where the major source threshold was 250 tpy. This facility would be major for PSD because the source would have a PTE of more than 250 tpy of nitrogen oxides (NO_x), a regulated air pollutant in today's regulatory system.

Combustion sources emit approximately 1,000 times more carbon dioxide (CO_2) than NO_x. Therefore, if CO_2 were to be regulated under the PSD program, the size of a combustion unit that could trigger PSD permitting in our example would be over 1,000 times smaller, or approximately 500,000 Btu/hr. A report prepared for Oak Ridge National Laboratory estimated that in 2005 there were approximately 163,000 industrial and commercial boilers in the U.S., but the capacity of the majority of these boilers (117,145) was less than 10 MMBtu/hr. The report identified another 16,000 units in the non-manufacturing boiler inventory (agriculture, mining and construction)[3]. Most small warehouses, larger homes, restaurants, schools, and office parks operate fuel-fired sources which could trigger PSD permitting requirements if GHG emissions were regulated under the CAA. In recent discussions between industry and EPA on the establishment of a section 112 area source rule for boilers, et al., EPA estimated that there could be 1.3 million area sources. Clearly, Congress could have never intended to ensnare millions of small sources into a complex PSD construction permitting program originally intended for a relatively small number of "major" source facilities nationwide.

[3] "Characterization of the U.S. Industrial Commercial Boiler Population," submitted to Oak Ridge National Laboratory by Energy and Environmental Analysis, Inc., May 2005.

For ACC members, such an expansion of the PSD permitting programs will result in permitting delays for new construction projects and upgrades to existing facilities in the chemical industry, which has more boilers and capacity than any other industry[4].

We do not believe that Congress ever considered or intended for EPA to have the authority under the Clean Air Act to profoundly impact the U.S. economy by establishing a greenhouse gas PSD program. EPA cannot expect that commercial real estate development, small businesses never before subjected to any Clean Air Act permitting program, or other small stationary air pollution sources can wait between one and three years to obtain PSD permits to install normal and customary equipment such as heating and cooking appliances. In addition, EPA does not have any information to describe how a facility would determine BACT for GHG emitting equipment, so any such permitting would necessarily become stalled pending a series of decisions to establish enough of a BACT baseline to allow the permitting authorities to proceed with permitting decisions.

According to an August 2008 EPA report[5], EPA issued 282 PSD permits last year, with an average cost of $125,120 to the applicant and a burden of 866 hours. Each permit also cost state and local agencies $23,280 and had a burden of 301 hours. Even if only a fraction of facilities that would be subject to PSD for GHG emissions needed a permit, the aggregate costs would be astronomical.

B. Regulation of CO_2 under the CAA will lead to a massive increase in the number of facilities subject to Title V permitting

Major sources under PSD are also major sources for purposes of the Title V permitting program of the CAA. Title V has a 100 tpy threshold, so once a pollutant is subject to regulation, any source that has the potential to emit 100 tpy or more of CO_2, for example, would be required to apply for and obtain a Title V operating permit.

There are approximately 14,700 facilities that currently have a Title V permit and meet the definition of "major" source under Title V due to either criteria or hazardous air pollutant emissions[6]. The ANPR estimates that more than 550,000 additional sources would require Title V permits, including 139,500 industrial facilities[7]. Including GHGs in the Title V operating permit program would result in the regulation of many sources that previously were not regulated by the Clean Air Act, including schools, commercial buildings, and residential complexes. In addition, regulation of GHG emissions would trigger the reopening of existing permits to incorporate new terms. Permits with three or more years remaining would be required, under current rules, to be reopened within 18 months of promulgation of each new rule to incorporate any new requirements.

---

[4] *Id.*
[5] EPA, Information Collection Request for Prevention of Significant Deterioration and Nonattainment New Source Review (40 CFR Part 51 and 52), August 2008
[6] Page 7, http://ombwatch.org/regs/PDFs/CO2rulefacilityestimates.pdf
[7] Table 1, http://ombwatch.org/regs/PDFs/CO2rulefacilityestimates.pdf

The methodology used in the ANPR to estimate the increase in permits underestimates the number of sources potentially subject to Title V permitting, in that the analysis was only based on an estimate of actual CO_2 emissions. Since the determination of Title V applicability is based on the potential to emit, it can be expected that significantly more facilities will be subject to Title V permitting. Numerous commercial, industrial, and residential complexes have actual emissions well below their potential to emit since combustion sources (e.g. space heating) do not operate 100% of the time.

The U.S. Chamber of Commerce recently issued a report entitled "A Regulatory Burden: The Compliance Dimension of Regulating CO_2 as a Pollutant" (September 2008). This report indicated that over 1.2 million facilities have CO_2 emissions greater than 250 tpy. If this study had taken into account the potential to emit CO_2, Title V permitting could conceivably exceed 2 million.

1. Applying the Title V operating permit program to GHG emissions will result in an overwhelming increase in permitting administrative costs and permit delays with no substantive environmental benefits.

If and when the Title V program becomes applicable to GHG emissions, the Act requires the submission of permit applications within one year of the date the source becomes subject to Title V. We are not aware of any statutory authority to extend this one year timeframe. The permitting authority reviews the information in the permit application and issues the source a permit to operate. A Title V source generally may not operate without a permit. While the permitting authority must take final action on permit applications with 18 months of receipt, this is not always the case. EPA has 45 days from receipt of a proposed permit to object to its issuance and citizens have 60 days to petition EPA to object.

In addition, it is expected that the increase in permit applications and permits will not result in any corresponding environmental benefits since the Title V program generally does not add new substantive requirements for pollution control, but rather incorporates all existing applicable requirements into the permit.

The types of costs typically associated with Title V permits include:

- State/Local Regulatory Agencies: development of program and approval process, ongoing program management, processing permit applications, modifications, and renewals, public hearings, and report reviews. The intent is for permit fees to offset costs related to the permit program.

- Industry: application development, permit negotiations, hardware/software to manage the permit, compliance assurance systems, ongoing permit management (*e.g.*, reporting, updates), modifications and renewals, monitoring, and permit fees.

- Citizen Group Participants: accessing and reviewing applications, permits and supporting documents, and the filing of any FOIA requests.

For industry, permitting burdens and delays translate into higher operating costs. In April 2006, the multi-stakeholder Title V Task Force presented their findings and recommendations to the Clean Air Act Advisory Committee and EPA. The following comment on cost is from the final report[8]:

> Industry trade organizations and representatives provided detailed comments on how added Title V-related initial and ongoing costs significantly exceeded Agency cost estimates. Institutionalized higher costs, particularly given that Title V is an administrative program versus an emissions reduction/control program, directionally impacts competitiveness. While recognizing that the program was not established on a benefit to cost basis, the perspective from those commenters bearing most of the costs (regulated entities) is that the costs of the program far outweigh the benefits. The perspective is that it is possible to achieve the overall Title V program benefits at a cost significantly lower than the current costs, and recommendations focused on ideas to streamline the program and to avoid any program modifications that would further increase costs.

The American Chemistry Council submitted additional information to the Task Force on costs associated with the permit program as currently structured. These comments[9] include:

> The implementation of the Title V program has resulted in costs that far exceed original estimates with no significant environmental benefit, along with significant delays in issuing permits and modifications. The net effect has been an inefficient use of capital and workforce resources.
>
> EPA estimated the initial burden costs (interpreting regulations and generating data and information needed for the first permit application) as ranging between $30,000 and $55,000 for large sources. ACC member companies report initial costs significantly higher at $35,000 to $3.3 million. Member companies' cost data did not include additional investments in computer hardware/software to manage the program.
>
> More significant, and more important because it results in institutionalized higher costs, are the recurring costs of the program. For ACC member companies, these typically include costs for a site Title V Coordinator, permit changes/corrections, added systems costs, report preparation, legal reviews, public notices and hearings, multi-level compliance tasks, and management reviews of Title V compliance systems and issues. EPA estimated these annual costs at only $3,000 to $8,000 per facility. Member companies report costs in the range of $50,000 to $200,000, which is significantly higher than EPA's estimate.
>
> The implications of the major understatement of costs on industry are significant. EPA estimated that the annualized costs to industry in the first five years as $352

[8] "Final Report to the Clean Air Act Advisory Committee, Title V Implementation Experience" dated April 2006, page 21
[9] American Chemistry Council comments to the Title V Task Force, March 31, 2005

million. Extrapolating chemical industry experience to other industries, which is appropriate given other feedback we have received, suggests that the cost of the program is closer to $2-5 billion dollars per year. In a competitive business environment, companies need to find ways to offset these costs to maintain competitiveness.

Again, it is important to note that the Title V program is not designed to reduce emissions, but rather is designed to incorporate in a facility's operating permit all applicable requirements. In a competitive business environment, added costs for administrative purposes to address climate change concerns are not feasible. If necessary, business will relocate to countries that have lower transaction costs.

2. The two legal approaches suggested to reduce the Title V operating permit program are untested and not likely to be accepted.

The ANPR has identified two steps to potentially reduce program burden, both for the Title V program and for PSD. They are 1) potential for higher major source cutoffs, and 2) potential for phase-in of Title V requirements.

Given the statutory language, the ANPR suggests two legal theories that could be considered in addressing burden reductions. In rare cases, the courts will interpret or apply statutory provisions in a manner other than what is indicated by their plain meaning. Part of the Agency's argument is that courts will do so when Congress's intent differs from the plain meaning, as indicated by other statutory provisions, legislative history, or the absurd, futile, strange or indeterminate results produced by literal application. The second argument is that "the administrative burden of literal application of the Title V provisions may also provide a basis for EPA based on the judicial doctrine of administrative necessity to craft relief in the form of narrowed source coverage, exemptions, streamlined approaches or procedures, or a delay of deadlines." (73 FR 44512.)

To accept the first theory, one would have to argue that the CAA was never intended to regulate GHG emissions. This would undermine the Agency's ability to regulate GHG emissions under the Clean Air Act. For either approach, recent court decisions relating to EPA's interpretation of CAA provisions and the court's focus on the plain meaning of the Act suggests that the Agency would have a significant hurdle to convince the court of its position.

III. A positive endangerment finding for GHG emissions from mobile sources under CAA section 202 would trigger a similar finding of endangerment from stationary sources under CAA section 108

We agree and support EPA's admonition that "careful attention needs to be paid to the consequences and specifics of decisions regarding endangerment and regulation of any particular category of GHG sources under the Act." (*Id.* at 44418.) Those who have advocated for a positive endangerment finding under section 202 of the Act to respond to

the Supreme Court's directive in *Massachusetts v. EPA* may not fully understand the ramifications of such a finding for stationary sources.

Section 202(a) requires the Administrator to regulate the emissions of any air pollutant from any new motor vehicle or new motor vehicle engine, which in his judgment causes or contributes to air pollution which may reasonably be anticipated to endanger public health or welfare. If EPA makes a positive endangerment finding for emissions of GHG from mobile sources, what is the effect of such a finding on other provisions of the Act that have similar, but not identical, endangerment language as a condition precedent to regulation?

Putting aside the issue of whether the scientific evidence at this time does or does not support a positive endangerment finding for purposes of section 202, if the Administrator were to make such a finding many have suggested that because the endangerment language of section 202 is similar to that in section 108 of the Act, this would trigger the regulation of stationary sources under the NAAQS program.

The process of establishing a NAAQS begins with section 108. Section 108(a)(1) states that EPA "*shall* from time to time *** list *** each air pollutant –

(A) emission of which in [the Administrator's] 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 the date of enactment of the Clean Air Act Amendments of 1970, but for which [the Administrator] plans to issue air quality criteria under this section." (Emphasis added)

Section 108 obligates EPA to list a pollutant that meets the criteria of (A) and (B) above, and once listed to issue a "Criteria Document" describing the public health and welfare effects of that pollutant. If EPA issues a Criteria Document, it is then obligated under section 109 to establish a NAAQS for that pollutant and regulate those emissions.

The ANPR suggests that EPA could make a positive endangerment finding for purposes of section 202, but avoid having to establish a NAAQS for CO_2 or other GHGs. The ANPR states that (C) above could be interpreted to give the Administrator discretion not to list GHGs under section 108. The rationale seems to be that if the Administrator has no plans to issue air quality criteria for GHGs, then the Administrator would not have to list GHGs as pollutants, or it could list the GHGs but refrain from issuing a Criteria Document. For the reasons given below, we think this rationale is legally unsupportable.

The ANPR recognizes that the Second Circuit has already addressed the issue in *NRDC v. Train*, 545 F. 2d 320 (2nd Cir. 1978) and that the *Train* ruling is contrary to EPA's reasoning. In the *Train* case, EPA agreed that lead endangers public health and welfare and was emitted by numerous diverse sources, thereby meeting the first two

prongs of section 108(a)(1). However, EPA contended that under the third prong of section 108(a), it did not have to issue a Criteria Document for lead. The Agency advanced three arguments to support its position that the Administrator has discretion whether to list a pollutant even though the conditions of section 108(a)(1)(A) and (B) have been met: the plain meaning of the language in prong (C); the structure of the Act as a whole; and the legislative history of the Act.

The Second Circuit disagreed with EPA's arguments, stating that EPA's interpretation of the Act "…is contrary to the structure of the Act as a whole, and that if accepted, it would vitiate the public policy underlying the enactment of the 1970 amendments as set forth in the Act and its legislative history." *Id.* at 324. The court ruled that the third prong relates only to pollutants to be included on the *initial* list, not later revisions of the list. For revisions, if the first two prongs are met, EPA must promulgate a standard.

Nonetheless, EPA reasons that because the *Train* ruling was prior to the Supreme Court's landmark decision in *Chevron v. NRDC*, 467 U.S. 837 (1984), EPA may be able to convince the D.C. Circuit Court of Appeals that the language of section 108(a)(1) is not clear and that its interpretation of the third prong is reasonable. We think this is highly unlikely since the review of EPA's action by the federal district court and the Second Circuit fully accords with the standards of judicial review of final agency action set forth in *Chevron*.

IV. The potential regulatory approaches available to EPA are not suited for the regulation of greenhouse gas emissions.

Below we address the CAA's three main regulatory programs for addressing stationary sources: national ambient air quality standards (NAAQS), new source performance standards (NSPS), and hazardous air pollutant (HAP) standards and show why each of them is ill equipped to address GHG emissions from stationary sources.

A. The NAAQS Program is not designed and is not suitable for regulating GHG emissions from stationary sources.

The NAAQS program is often considered the heart of the CAA. In passing the Clean Air Act of 1970, Congress was responding to and concerned with the slow progress and inefficiencies of the 1963 and 1967 air pollution acts. Thus, Congress specifically established procedures and timetables in sections 108 – 110 of the 1970 Act for EPA to follow "to speed up, expand and intensify the war against air pollution *in the United States*"[10]. (Emphasis added.) As explained below, the NAAQS program is wholly unsuited to regulate GHG emissions because these gases are not traditional pollutants which present a risk to public health or welfare at a local, state or regional level.

[10] H.R. Rep. 91-1146, 91st Cong. 2d Sess. 1(1970), U.S. Code Cong. & Admin. News, p.5356

As the ANPR correctly notes, the atmospheric concentrations of GHGs are relatively uniform and the impacts of climate change are global in nature. (73 FR 44479.) This means that, regardless of the reductions of GHG emissions made by states in trying to achieve a NAAQS, the standard would never be attainable given the anticipated increase of GHG emissions from other countries around the world. Again, the ANPR accurately notes that, despite the fact that the U.S. presently represents a significant portion of worldwide GHG emissions, even if U.S. emissions of GHG were reduced to zero, a standard (unless set at an extremely high level) would in all likelihood be unachievable.

Some of the more serious impediments presented by the use of the Act's NAAQS provisions are: EPA's inability to consider costs in establishing a standard; the stringent control requirements applicable to classes of nonattainment; and, the automatic statutory penalties associated with certain areas that fail to meet attainment within a specific time frame. All of these impediments are highlighted in the ANPR and EPA acknowledges that "there are …significant technological, legal and program design challenges that would limit the appropriateness of the NAAQS program." (*Id.* at 44485.) We wholeheartedly agree with this statement.

1. Establishing a primary or secondary NAAQS will raise unique and untested challenges.

As the ANPR correctly notes, EPA would face "special challenges in determining the level of the NAAQS." (*Id.* at 44478.) We agree with the challenges identified in the ANPR. One issue deserving specific comment is the issue of whether EPA can promulgate a secondary standard without promulgating a primary standard. The ANPR suggests that EPA may have this discretion.

EPA's rationale for not establishing a primary standard is that GHG emissions do not directly affect public health. As has been detailed by EPA, the Intergovernmental Panel on Climate Change (IPCC)[11] and other scientific organizations, the generally accepted conclusion is that increases in GHG concentrations may cause variations in climate. The changes in climate in turn, may cause other changes (e.g. high temperature events, floods, droughts, fires, pest outbreaks) that can impact public health, but these effects should be considered indirect, not direct. We think this distinction is vulnerable to legal challenge and EPA has provided no legislative history or other support for believing that it could avoid establishing a primary NAAQS based on "indirect" public health effects.

The ANPR clearly favors the establishment of a secondary standard (to protect public welfare) because the "direct" effects of GHG seem to be welfare related and a secondary standard presents no NAAQS attainment deadline, but rather attainment "as expeditiously as practicable." *See*, CAA section 172(a)(2)(B). This requirement would

[11] *Stabilization of Atmospheric Greenhouse Gases: Physical, Biological, and Socio-economic Implications*. IPCC Technical Paper III. February 1997. p. 4.

have to be considered in conjunction with the information about (1) the deadlines for international actions; and (2) the availability of reasonable control measures. This is a policy decision that should be made by Congress and not EPA.

More importantly, "expeditiously as practicable" does not mean the twenty to forty years it is expected to achieve the ambient GHG concentrations discussed by the IPCC. We believe that any greenhouse gas NAAQS, be it primary or secondary, is not attainable given the stringent limitations of the program. Stationary sources in areas designated as attainment or nonattainment are going to be subject to stringent best available control technology (BACT) or lowest achievable emission rate (LAER) requirements, the application of which will have serious economic impacts yet not make any noticeable difference in atmospheric GHG levels.

2. Designating areas as attainment or nonattainment will have a different effect than what Congress envisioned under the Clean Air Act.

Should EPA list GHG emissions under Section 108(a)(1), it (in conjunction with the states and tribal governments) would be required to identify those areas of the U.S. that are "attainment," "nonattainment," or "unclassifiable" with respect to the NAAQS. The built-in constraints of this process are another example of why the NAAQS program should not be used to regulate GHG emissions.

Current NAAQS air pollutant concentrations are regional and can vary widely from point to point in the U.S. As the ANPR points out, this is based to a large extent on the fact that most NAAQS air pollutants have short lifetimes (days to weeks) because they (1) react to form other compounds, (2) are deposited back to the surface, or (3) are flushed from the air through precipitation events. In contrast, GHG emissions have very long atmospheric lifetimes (decades to centuries). As a result, the emissions from every source on Earth mix in the atmosphere. EPA concluded that GHG concentrations measured across all locations in the U.S. would not vary. (73 FR 44480.) As a result, all areas of the U.S. would necessarily be classified the same. If the U.S. is classified as nonattainment, attainment is not possible in the time-frames set forth in the Clean Air Act.

3. The implementation plan structure of the Clean Air Act is an inefficient and costly method for regulating GHG emissions.

As stated before, under the NAAQS program, EPA must classify areas as "attainment," "nonattainment" or "unclassifiable" with a GHG standard. The CAA requires states and tribal governments to develop and implement plans to demonstrate how they will come into attainment with the standard and requires that the plans contain at least the following elements:

- Reasonably Available Control Measures (RACM) for GHG sources that provide for attainment of the NAAQS;

- Reasonable Further Progress (RFP) measures that ensure interim progress toward attainment;

- An emissions inventory;

- Permit programs for major new or modified stationary sources (New Source Review or Prevention of Significant Deterioration);

- Contingency measures in the event that the NAAQS is not attained by the deadline; and,

- General Conformity and Transportation Conformity measures.

Even if EPA were able to identify a reasonable "expeditious" deadline for attainment of a secondary standard, forcing GHG controls into the "implementation plan" structure of the CAA would remain an enormously inefficient and costly method due to the added costs of permits and controls. In addition, because each state must develop its own state implementation plan, companies would have different requirements in different states, even though ambient GHG concentrations would be the same everywhere.

Finally, under EPA's New Source Review (NSR) program, NSR permitting in NAAQS nonattainment areas is governed by even stricter technology requirements than under the PSD program, i.e., facilities are required to emit at the lowest achievable emission rate (LAER) possible and to obtain emission offsets (unless the source is located in an EPA-approved growth area). These strict requirements would hinder industrial growth, and likely result in fewer facilities being built or modified.

4. EPA does not have authority under the NAAQS program to establish a cap-and-trade program to reduce GHG emissions.

The D.C. Circuit's July 11, 2008 ruling in *North Carolina v. EPA* answers the question as to whether EPA could establish a GHG cap-and-trade program under the NAAQS program. In *North Carolina,* the court invalidated the CAIR cap-and-trade program in part because cap-and-trade allows a state to avoid eliminating its significant contribution to downwind nonattainment by simply purchasing allowances from another state. The court did not accept EPA's reasoning that, on a regional basis, cap-and-trade is equally effective and represents a more cost-effective and flexible means of reducing emissions. Instead, the court ruled that EPA must require states to actually control and reduce their emissions that significantly contribute to a downwind state's nonattainment of NAAQS.

B. The Standards of Performance for New Stationary Sources program is not suitable for regulating GHG emissions from stationary sources.

Section 111(b) provides authority for EPA to promulgate New Source Performance Standards (NSPS) for new and modified sources, regardless of whether or not a NAAQS has been established for GHG emissions. An endangerment finding is a prerequisite for listing additional source categories under section 111(b), but would not be required to regulate GHG emissions from source categories that have been already listed. The ANPR implies that section 111 gives the Agency significant discretion to identify the facilities within a source category that should be regulated and to determine the appropriate level for the standards.

To date, EPA has promulgated NSPS for more than 70 source categories and subcategories. EPA believes that it could add NSPS for GHG emissions to some or all of these existing source categories. In determining which source categories to regulate for GHG emissions, EPA would base its decision on a number of factors, including the amount of GHG emissions from the source category or subcategory, the availability of data, the availability of technology, etc. Even if EPA has the authority and discretion it hopes for, history has shown that the Agency will nonetheless be challenged by certain states and/or the environmental community to regulate specific, if not all, source categories, even if EPA does not want to address that source category. In addition, regulating GHG emissions under NSPS would also trigger Title V permit requirements. ACC has little faith in the Agency being able to use whatever discretion it has to prioritize and proceed at its own determined pace to regulate GHG emissions from listed source categories.

1. Section 111 would create a piecemeal approach to regulating GHG emissions.

The discretion given to EPA to create performance standards for individual facilities would create a patchwork of regulations covering only selected categories of stationary sources. Regulations drafted under this approach would take many years to fully implement, based on the decades-long process to write all of the National Emission Standards for Hazardous Air Pollutants (NESHAP) rules, some of which are still not final. Since GHG emissions come from all sectors of the economy and are a global issue, these emissions would not result in "hot spots" that typically are addressed through facility-level regulatory action.

Furthermore, many chemical facilities contain a large number of different GHG emission sources. Depending on the manner in which sources are categorized, ACC member facilities could be subject to a number of applicable performance standards that may not be harmonized with each other as to the best method to reduce GHG emissions.

2. EPA's definition of an "adequately demonstrated" system may result in technologies or practices being selected that will not be viable or readily achievable.

Section 111(a)(1) defines standard of performance as one which reflects the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into account costs, etc.) the Administrator determines has been "adequately demonstrated." The ANPR states that "adequately demonstrated" means that a system, and corresponding emission rates, need not be actually in use or achieved in practice at potentially regulated sources or even at a commercial scale. (*Id.* at 44487.) The ANPR further asserts that EPA could establish a "future-year standard" based on technology that is "adequately demonstrated" for "use at a date in the future." In so doing, EPA believes that this would promote the development of technology.

The ANPR's position is not supportable or realistic. First, the plain meaning of "adequately demonstrated" is that a technology must be in existence; be readily available; and is supported by data demonstrating its capabilities. *See*, Webster's Dictionary. Second, section 111 states that standards of performance shall be effective upon promulgation. That means that any source that is constructed or modified after the *proposal* of regulations prescribing a standard of performance must be in compliance with the standard on or before the date it is promulgated. Section 111 further requires that once EPA proposes standards for comment and considers the comments, it shall promulgate final standards within one year after proposal. Even under the most optimistic view, the probability of a technology being developed within twelve months (i.e., time between proposal and promulgation of regulations) and being readily available for application is negligible. Furthermore, unless a system is fully demonstrated and commercially available, EPA will be constrained from undertaking the analysis required by the Act, that is, properly evaluate its cost, energy requirements and effectiveness.

EPA's technical support document (TSD) for Stationary Sources[12] identified a number of sectors that may be regulated under section 111. Of these highlighted sectors, the industrial boiler sector is of most concern to ACC members. The TSD identified the following potential GHG control measures for industrial boilers: thermal efficiency improvement, process improvements to reduce steam and electricity usage, and biomass firing/co-firing. While the cited measures are already being used by some industrial boilers, it can be very difficult for some sources to make changes. For example, switching to biomass fuel is not available to all boilers, and presents a supply problem.

Promoting the use of fuel switching in order to gain efficiency presents a great concern to ACC members. Chemical feedstocks are derived from natural gas, and any suggestions of fuel switching should be accompanied by a robust discussion of current U.S. energy supplies. Furthermore, gaining efficiency frequently occurs when equipment is replaced. Due to the high capital costs of such replacement, it is unlikely that boilers will be retired merely to gain efficiency. Manufacturers have long recognized that optimizing equipment efficiency yields cost savings, and many have already made energy

[12] Document # EPA-HQ-OAR-2008-0318-0081, June 5, 2008

efficient improvements. The TSD also does not note that industrial boiler emissions are regulated under both the NESHAP and NSPS programs, and any changes made to regulated boilers would be subject to the NSR/PSD provisions. The time and costs required to obtain an NSR/PSD permit would likely offset any cost savings from installing non-necessary, energy efficient equipment.

3. ***It is unclear whether EPA may establish a cap-and-trade program using the NSPS program.***

EPA theorizes in the ANPR that it could use a cap-and-trade program under Section 111 in lieu of plant-by-plant standards of performance. EPA attempted to do this in its Clean Air Mercury Rule (CAMR). *See,* 70 FR 28,606 (May 18, 2005). CAMR established plant-specific standards of performance for mercury emissions from new coal-fired electric generating units (EGUs) under section 111(b), and established a national mercury emissions cap for new and existing EGUs, allocating to each state and certain tribal areas the mercury emissions budget, pursuant to section 111(b) and (d). This was supplemented by a voluntary cap-and-trade program. In so doing, EPA in a concurrent rulemaking delisted coal-and oil-fired EGUs from the list of sources to be regulated under section 112, choosing instead to regulate these sources under section 111. These two EPA actions were challenged and the D.C. Circuit ruled in February 8, 2008 that EPA's delisting of these EGUs violated the CAA because EPA failed to make the specific findings required by section 112(c)(9). Because coal-fired EGUs are listed sources under section 112, EPA may not regulate these sources under section 111, thereby invalidating CAMR's cap-and-trade approach. Though the court did not reach the merits of the issue of whether EPA could use its authority under section 111 to establish a cap-and-trade program, EPA's interpretation of its CAA authority over the past 8 years has often not been sustained by the D.C. Circuit.

C. Regulating sources under Section 112 provides EPA with very little discretion and flexibility to tailor a regulatory program that best addresses GHG emissions.

As noted in the ANPR, section 112 of the CAA requires the control of hazardous air pollutant (HAP) emissions from stationary sources, including toxic pollutants with localized or more geographically widespread effects. EPA states in the ANPR, "in comparison to section 111, section 112 provides substantially less discretion to EPA concerning the size and types of sources to regulate, and is specific about when EPA may and may not consider cost." The lack of flexibility in establishing thresholds for applicability and in selecting emission controls, the high costs, and associated inefficiencies of using the section 112 program to reduce GHG emissions, are all reasons that EPA should not pursue regulation of GHG emissions under section 112 of the CAA. (73 FR at 44493.)

The regulation of CO_2 and other global greenhouse gas pollutants requires a new strategy and program that above all incorporates flexibility in both its applicability and its control requirements. The section 112 air toxics program is the antithesis of what is

needed. The legislative history supporting the 1990 amendments to section 112 demonstrates Congress' intent to limit EPA discretion and flexibility in addressing HAP and this intent is embodied in the prescriptive provisions of the air toxics program. We highlight below some of the constraints EPA would face in regulating GHG emissions under section 112.

1. Greenhouse gas emissions should not be listed as Hazardous Air Pollutants under section 112 of the Clean Air Act.

Section 112(b)(2) of the CAA outlines criteria to be applied in deciding whether to add a particular pollutant to the list of HAPs. A pollutant may be added to the list because of either human health effects or adverse environmental effects. The criteria with respect to adverse health effects are pollutants that present, or may present, through inhalation or other routes of exposure, a threat of adverse human health effects (including, but not limited to, substances which are known to be or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, neurotoxic, which cause reproductive dysfunction, or which are acutely or chronically toxic). The phrase "adverse environmental effect" is defined in section 112(a)(7) as any significant and widespread adverse effect, which may reasonably be anticipated, to wildlife, aquatic life, or other natural sources, including adverse impacts on populations of endangered or threatened species or significant degradation of environmental quality over broad areas. Section 112(b)(2) further clarifies that no substance, practice, process or activity regulated under Title VI (Stratospheric Ozone Protection) of the Act shall be subject to regulation under section 112 solely due to its adverse effects on the environment.

As noted throughout the ANPR, there are no direct adverse effects from emissions of carbon dioxide and other greenhouse gas emissions. GHGs are different from the majority of pollutants that are currently regulated as HAPs in that direct exposure to GHGs at current or projected ambient levels appears to have no known adverse effects on human health or the environment. The effects on human health are described by EPA as indirect impacts resulting from possible ecological and meteorological changes. Hazardous air pollutants regulated under section 112 are generally substances that may cause toxic effects at relatively small doses, hence the relatively low 10 or 25 tpy applicability thresholds.

In addition, the air toxics program is in large part designed to protect the population in urban areas and in the vicinity of each facility. Given the global nature of GHGs and the lack of direct health effects from such emissions at ambient levels, it is not appropriate to address GHG emission concerns under section 112.

2. The low thresholds of section 112 would require the regulation of hundreds of thousands of stationary sources, most of which have not been previously subject to regulation under the CAA.

As discussed earlier in our comments, once EPA lists CO_2 or any other GHG as a HAP, EPA must then identify, list and regulate all categories and subcategories of major sources and area sources emitting that listed HAP. A "major" source is defined as a stationary source that emits or has the potential to emit 10 tons per year or more of any one HAP, or 25 tpy or more of any combination of HAP. An "area" source is any stationary that is not a "major" source. Under the source definition, EPA would be forced to regulate hundreds of thousands of sources of GHG emissions, potentially including large, single family residences. To date, EPA has identified 170 source categories and subcategories emitting listed HAP and has promulgated regulations for those source categories and subcategories. No doubt many of the sources already regulated under section 112 emit GHG. In addition to promulgating regulations for new categories and subcategories of sources, EPA may be required to revise existing NESHAP rules to include GHG emissions. Regulating GHG emissions under section 112 would also trigger Title V permitting, in that Title V applies to any major source of HAP emissions.

3. Regulating GHG emissions under section 112 would demand an enormous amount of resources and data to establish control requirements, and would preclude the use of market-oriented approaches.

Section 112(d) requires the maximum degree of reduction in emissions of HAP using maximum achievable control technology (MACT) for major sources. This specified degree of control would preclude the use of other market-oriented approaches. In order to determine the appropriate level of MACT, EPA would have to collect emissions data from each category or subcategory of affected sources and determine a "floor" representing the level of performance achieved by the best-controlled 12% of similar sources for "existing" sources, or the level achieved by the best-controlled similar source for "new" sources. We believe that this would be an enormous undertaking that would necessitate significant EPA resources. Furthermore, a MACT program would likely stifle any incentives for the development of new control technologies, as sources would have no incentive to revisit MACT controls until EPA's periodic review of the standards under section 112(d)(6).

To establish controls for GHG emissions from area sources, EPA may require either MACT or less stringent "generally available control technology" (GACT) or the use of "management practices." Establishing these requirements would also be a resource intensive activity and would result in nothing more than microscopic decreases in overall GHG emissions.

In addition, it is worth noting that efforts to control emissions of traditional HAPs in many cases result in emission increases of GHGs since many of the control options

require combustion of the HAP waste gas streams in thermal oxidizers or other similar combustion devices. Thus, EPA will have to develop further criteria to determine an optimal level of emission controls for traditional HAPs and GHGs particularly when evaluating existing rules.

In summary, regulation under Section 112 of the CAA will preclude EPA's ability to use market-oriented programs, and will require EPA to develop a number of source-specific regulations for hundreds of major and area source categories

D. Solid waste combustion standards only regulate a very small portion of GHG emitting sources.

Section 129 of the CAA requires EPA to set performance standards under section 111 to control emissions from only solid waste incineration units. EPA is also authorized to regulate additional pollutants under Section 129, but it includes no endangerment test or other criteria for determining when it is appropriate to do so.

The provisions of this section limit its reach to solid waste incineration units, a very small percentage of the total number of sources that emit GHGs. In that GHGs are emitted by virtually all sources, it would be a complete waste of resources to single out these sources for regulation.

V. Other countries are addressing GHG emissions outside of their existing regulatory programs.

Climate change is a global issue that many of the United States' peers have already addressed through regulation. The U. S. should build on the experiences in other countries relating to GHG regulations. These countries, including countries with statutory authority similar to the U.S. Clean Air Act, have uniformly rejected micro-regulation of individual sources under traditional air permit programs. A decision by the U.S. to regulate greenhouse gases under the CAA would continue to put our country out of step with the rest of the world in a way that could have a devastating effect on an already strained economy.

Many other countries have air permit programs that generally address the effects of regional and local air pollution. Like the U.S. Clean Act Air programs, these programs typically include pre-construction authorization for large sources, and specific emissions limits and work-practice standards for individual source categories.

However, these countries have rejected the regulation of GHG emissions under their CAA analogue. Instead, Germany and Ireland employ cap-and-trade programs covering defined industrial sectors focused on large emitters. Canada proposed a program to establish emission intensity targets for industrial sources with limited trading.

And Australia is looking closely at a national cap-and-trade program applicable to facilities with a threshold of 25,000 annual metric tpy CO_2-equilvalent.

These countries also do not use their air permitting program to regulate GHG emissions. German law precludes licenses (permits) from including GHG emissions limits unless the limits are aimed at preventing local air pollution and harmful effects. The Irish EPA does not consider GHG emissions for an Integrated Pollution Prevention and Control license (air permit) unless necessary to ensure that no significant local pollution is caused. Canada's proposed GHG program would apply outside of the traditional air permitting program.

VI. Voluntary GHG emission reduction programs have worked to successfully in the U.S. to lower GHG emissions.

As EPA wrestles with the issue of potentially regulating GHG emissions, we believe that it is important to note that many industries have voluntarily reduced their GHG emissions. There are several existing programs – Climate VISION, Climate Leaders, DOE's 1605(b) voluntary registry – in which industry participates, with the goal of reducing GHG emissions.

ACC member companies are committed to reducing GHG emissions. In the Climate VISION program, ACC members agreed to an overall greenhouse gas intensity reduction target of 18% by 2012 from 1990 levels. As a part of the ACC Responsible Care® program, a global chemical industry performance initiative implemented in the United States, ACC collects and reports member energy efficiency and greenhouse gas emissions intensity data.

Our reduction in GHG emissions speaks for itself. Excluding indirect (or embedded) carbon dioxide emissions from purchased electricity, the chemical industry's GHG emissions fell 13.2 percent in absolute terms between 1990 and 2007, a reduction that would have exceeded the Kyoto Protocol target had the United States been party to the agreement. During the same period, chemical industry production rose 45.7 percent. As a result, GHG intensity improved 40.4 percent.

Looking at indirect (or embedded) carbon dioxide emissions from purchased electricity, the chemical industry's greenhouse gas emissions fell 7.5 percent between 1990 and 2007, a level that matches the agreed reductions under the Kyoto Protocol had the United States been party to the agreement. At the same time chemical industry production rose 41 percent. As a result, GHG intensity improved 36.5 percent.

Conclusion

The issue of addressing climate change is extremely complex, and programs to control U.S. GHG emissions will touch all aspects of the U.S. economy. The ANPR clearly demonstrates that the CAA is ill-suited to regulate GHG emissions, which come from a myriad of sources and are dispersed on a global level. The manner in which the CAA was crafted by Congress leaves EPA with little discretion in how to regulate emissions under the various provisions. Instead, EPA would be forced to choose a regulatory path with very large costs and uncertain results. Under a CAA regulatory scheme, there is the potential for extremely large numbers of smaller sources to be subject to permitting and control requirements. The added costs of doing business in the U.S. under such regulations could very well drive companies overseas or out of business.

As such, it is imperative that Congress enact new legislation with broad authority and guidance to all applicable federal departments and agencies so that programs are fully coordinated and integrated in order to achieve defined goals in the most efficient and cost-effective manner possible. This legislation must focus on balancing the desire to reduce GHG emissions with the need for U.S. businesses to remain competitive in a global marketplace. Ensuring a diverse energy supply will be a critical component of any successful climate legislation.

ACC is committed to working with EPA, other Federal Agencies, and Congress in shaping a national energy policy that also considers and addresses climate change issues. The significant contributions that chemical manufacturers have made, and will continue to make, in reducing GHG emissions reflects our commitment to addressing this challenge.

EXHIBIT D

COMMENTS OF THE CENTER FOR BIOLOGICAL DIVERSITY ON EPA'S ADVANCE NOTICE OF PROPOSED RULEMAKING, REGULATING GREENHOUSE GAS EMISSIONS UNDER THE CLEAN AIR ACT, 73 FED. REG. 44354 (JULY 30, 2008), DOCKET ID NO. EPA–HQ–OAR–2008–0318

TABLE OF CONTENTS

November 28, 2008

Via email to a-and-r-Docket@epa.gov and uploaded to Docket ID No. EPA–HQ–OAR–2008–0318 at regulations.gov

Administrator Stephen Johnson
Air and Radiation Docket and Information Center
Environmental Protection Agency
Mailcode: 2822T,
1200 Pennsylvania Ave., NW.,
Washington, DC 20460

Re: Comments of the Center for Biological Diversity on EPA's Advance Notice of Proposed Rulemaking, Regulating Greenhouse Gas Emissions Under the Clean Air Act, 73 Fed. Reg. 44,354 (July 30, 2008), Docket ID No. EPA–HQ–OAR–2008–0318

Dear Administrator Johnson,

This letter transmits the comments of the Center for Biological Diversity on the EPA's Advance Notice of Proposed Rulemaking, Regulating Greenhouse Gas Emissions Under the Clean Air Act, 73 Fed. Reg. 44,354 (July 30, 2008), Docket ID No. EPA–HQ–OAR–2008–0318.[1] The Center for Biological Diversity works through science, law, and creative media to secure a future for all species, great or small, hovering on the brink of extinction. The Center has over 180,000 members and online activists with a vital interest in the immediate regulation of greenhouse gas emissions under the Clean Air Act as one of the primary solutions to the climate crisis.

I. Introduction

As a threshold matter, given the urgency of the climate crisis and the clear statutory mandate to act based on the facts before the agency, the EPA has delayed inappropriately and inexcusably in its response to climate change. The agency has failed to issue an endangerment finding under Clean Air Act section 202 and failed to respond to the petitions before it that request regulation of nonroad mobile sources under the Clean Air Act. Moreover, the agency should long ago have begun the process of setting BACT standards under the PSD program for major sources of greenhouse pollution. Taking these actions would have been far more productive than the delay that has been incurred while the agency engages in this lengthy exercise of requesting comments on the Advanced Notice of Proposed Rulemaking. Resolving any remaining questions regarding the precise mode and scope of appropriate regulation under the Act could be

[1] The Center gratefully acknowledges research assistance provided for these comments by the UCLA School of Law's Frank G. Wells Environmental Law Clinic, by students Pat Allen, Heather Brooks, Fidelia Chieng, James Field, Danae McElroy, Dustin Maghamfar, Chris Geissinger, Jaclyn Prange, Lidiana Rios, Karen Shah, Dan Terzian, and Robert Thompson under the direction of Sean Hecht and Katherine Trisolini.

Another key advantage is that instead of BACT, sources subject to nonattainment NSR must comply with the Lowest Achievable Emission Rate (LAER), which is the most stringent emission limitation that is (1) contained in any SIP for that type of source, or (2) achieved in practice for sources of the same type as the proposed source. If the rate is achievable, LAER does not allow for consideration of costs or of the other factors that BACT does. Finally, there are additional requirements for nonattainment NSR that would also apply, such as the alternatives analysis requirement, the requirement that source owners and operators demonstrate statewide compliance with the Act, and the prohibition against permit issuance if the SIP is not being adequately implemented.[102]

Because the PSD program applies where no NAAQS have yet been set for a regulated pollutant, the EPA should immediately begin regulating GHGs pursuant to the PSD program. The agency should transition to regulation pursuant to the NNSR program once NAAQS and air quality criteria have been established, consistent with our comments on regulation pursuant to sections 108-110, below. Regulating GHGs from new sources, and in particular CO_2 from new coal-fired plants, by immediately requiring Best Available Control Technology ("BACT") (and provide BACT guidance) is one of the single most effective actions that the EPA could take. Unlike other regulatory pathways, this could be accomplished literally in a matter of days -- EPA could simply reverse, on remand from an Environmental Appeals Board decision,[103] its current legally untenable position that CO_2 is not "subject to regulation" under the CAA.

EPA currently asserts that CO_2 is not currently "subject to regulation" under the CAA. This position is incorrect. As the petitioners in the *Deseret* case have explained, Part 75 of Title 40 of the Code of Federal Regulations, which requires monitoring and reporting of carbo dioxide emissions, renders carbon dioxide "subject to regulation" under the Act.

The EPA's position has already been overturned both by the EPA's Environmental Appeals Board[104] and a Georgia state trial court.[105] In *In Re Deseret Power Electric Cooperative*, the Sierra Club, supported by numerous amici curiae, including the Center for Biological Diversity, challenged the EPA's decision to exclude CO_2 from its BACT limits in approving a PSD permit for the Bonanza coal plant. The EAB rejected the EPA's rationale for the exclusion and remanded the permit to the EPA for reconsideration. In *Friends of the Chattahoochee v. Couch*, the Georgia Superior court similarly overturned EPA's issuance of a PSD permit for a 1200 MW coal-fired power plant in Early County, Georgia. The Court held that CO_2 is a pollutant "subject to regulation" under the Act, and therefore EPA's failure to set a BACT emission limit was unlawful.

---

[102] *Id.*

[103] *In re: Deseret Power Electric Cooperative*, PSD Permit No. PSD-OU-0002-04.00, PSD Appeal No. 07-03.

[104] *Id.*.

[105] *Friends of the Chattahoochee v. Couch*, No. 2008cv146398, Superior Court of Fulton County, State of Georgia (Opinion issued June 30, 2008).

The EPA's position that GHGs are not "subject to regulation" under the Act cannot stand, even in the current absence of an endangerment finding under Section 202 or other sections discussed herein. Moreover, as EPA notes in the ANPR, as soon as the EPA takes any one of the required additional steps outlined here, there can be no question that New Source Review will apply to GHG-emitting major sources. The agency, therefore, should save precious time and resources and avoid further legal battles by immediately regulating GHGs under the PSD program. Doing so would allow EPA to quickly and effectively regulate GHGs from the largest emitters like coal-fired plants that contribute extensively to climate change and would avoid locking in unnecessarily high emissions. We note that doing so would also give additional certainty to the regulated community.

While it is uncontroversial that EPA should prioritize the largest pollution sources first, one of the reasons that the NSR program will be such an effective tool for reducing GHG emissions is that it applies to a wide array of sources that will emit in excess of the applicable statutory thresholds of 250 or 100 tons per year. As the EPA notes, it is generally more effective and less expensive to engineer and install controls at the time a source or major modification is being designed and built as opposed to retrofitting controls independently at an existing facility. Instead of appreciating this aspect of the act as the enormous opportunity that it is, the EPA and the commenting agency heads instead have vastly exaggerated procedural and administrability issues associated with an increase in permitting.

While all government activity inherently implicates procedural and administrability issues, federal agencies deal with such challenges every day in the ordinary course of business. The issues that the EPA has raised pale in comparison to the physical risks of continued business as usual GHG emissions. For example, the ANPR contains pages of discussion of the increase in permitting that will be required in order to cover all sources emitting more than 250 tons per year of $CO_{2.}$ The EPA estimates that the number of permits issued each year would increase from 200-300 per year to 2,000-3,000 per year.[106] The EPA asserts, without any support, that regulating smaller sources through the NSR will be inefficient and would create a problematic administrative burden. Then the EPA proposes a number of creative yet legally unsupportable proposals to "solve" the asserted problems. As a threshold matter, the asserted belief of EPA officials that the statutory requirements are burdensome or not "efficient" as they should be simply does not excuse the agency from following the law. The EPA has no authority to weaken the requirements of the statute simply because its political appointees don't like the law's requirements.

Several of the suggestions that the EPA has advanced are outside the scope of its authority. The EPA has no authority to set higher GHG major source cutoffs and significance levels. The EPA may not "calculate the costs and benefits of a PSD program for that universe of affected sources, and select a cutoff that optimizes the benefit cost ratio."[107] This is not the statutory standard, and such a system is subject to manipulation

[106] 73 Fed. Reg. 44,498-44,499.
[107] *Id.* at 44,505.

and abuse, as demonstrated by the CAFÉ system, in which NHTSA manipulates inputs into a cost-benefit model in order to keep "optimal" fuel economy levels suppressed. The EPA has no authority to implement a "scaling approach," nor to designate a "de minimis" level of GHG emissions that is higher than the 250 ton per year threshold.[108] And the EPA's proposal to increase the 250 ton limit by a factor of 3.6 by using a carbon equivalent measure instead of CO_2 is certainly creative, but highly legally questionable. The PSD threshold requirements do not present one of "those rare cases in which congressional intent differs" from the plain meaning of the statutory language.[109] And there is no legal support for EPA's proposal to interpret "major emitting facility" in a way that is "more narrow" than the plain statutory language.[110]

Despite pages of discussion of an increased administrative burden from regulating additional sources, the most the EPA can point to, at the end of the day, is that agencies

> 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 groups 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 would need to become familiar with the PSD regulations, control technology options, and procedural requirements for many different types of equipment.[111]

These are hardly insurmountable administrative hurdles, and we are confident that both agency and industry personnel are fully up to the challenge. Such administrative issues are not legally cognizable reasons to ignore the statute's requirements, and should not be allowed to stand in the way of achieving the emissions reductions necessary to avert climate catastrophe. The reality of the climate crisis is that we must ultimately reduce emissions from all pollution sources. The strength of the CAA is that it provides an existing regulatory structure with a proven track record of success to do just that. The EPA should comply with its statutory mandate to enact the regulations that are necessary in order to avert climate disaster.

That said, so long as EPA's regulatory proposals are consistent with the statutory scheme and neither arbitrary nor capricious, the agency may tailor the NSR process to address legitimate administrative and procedural issues associated with the regulation of GHGs. While EPA's proposals discussed above are unacceptable and legally unsupportable, EPA's discussion of ideas related to phasing in the applicability of PSD for GHGs, developing streamlined approaches to implementing the BACT requirement, and issuing general permits for numerous similar sources hold more potential. In exploring any and all such options, however, the EPA must be mindful not to adopt

---

[108] *Id.*
[109] *Id.* at 44,506.
[110] *Id.* at 44,507.
[111] *Id.*

regulatory interpretations that have the effect of weakening the Act, as there is no justification for doing so.

Finally, we note that many of the perceived hurdles or complications identified in the ANPR would be eliminated or reduced if the EPA would simply comply with its legal obligation to regulate GHGs under all applicable CAA sections.

VI. The EPA Must Regulate under the Section 111 New Source Performance Standards

A. The Section 111 Process

Section 111 provides EPA with authority to set national performance standards for stationary sources. There are two alternative pathways for using section 111 to regulate GHGs: as part of an implementation program for a GHG NAAQS or as a freestanding program. In the event of a GHG NAAQS, section 111 authorizes EPA to set emissions performance standards for new and modified sources but not for unmodified existing sources. In the absence of a GHG NAAQS, section 111 offers the potential for an independent, comprehensive program for regulating most stationary sources of GHGs. Section 111(b) provides authority for EPA to promulgate New Source Performance Standards (NSPS) which may be issued regardless of whether there is a NAAQS for the pollutant being regulated, but which apply only to new and modified sources. Once EPA has elected to set a NSPS for new and modified sources in a given source category, section 111(d) calls for regulation of existing sources, with certain exceptions.

Under Section 111(b), the EPA is required to publish and update a list of stationary source categories. A stationary source is defined as "any building structure, facility, or installation which emits or may emit any air pollutant."[112] A source category must be listed if the EPA finds that the source "causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare." A new source category may be listed regardless of whether the source pollutant is regulated under NAAQS.[113] Once a category is listed, the EPA must establish federal standards of performance for new sources within the category. Performance standards are emission standards "setting forth an allowable rate of emissions into the atmosphere, establishing an allowance system, or prescribing equipment specifications for control of air pollution emissions."[114] In establishing such standards of performance, the EPA "may distinguish among classes, types, and sizes within categories of new sources."[115] These standards must be reviewed at least every eight years and revised when appropriate unless the "Administrator determines that such review is not appropriate in light of readily available information on the efficacy of such standard."[116]

[112] CAA §111(a)(3).
[113] CAA §111(b)(1)(A).
[114] 40 C.F.R. §60.21(f).
[115] CAA §111(b)(2).
[116] CAA §111(b)(1)(B).

it also happens to be the case that total GHG climate forcing change is now determined mainly by CO_2.

As Hansen et al. (2008) conclude,

> Coincidentally, CO_2 forcing is similar to the net human-made forcing, because non-CO_2 GHGs tend to offset negative aerosol forcing. Thus we take future CO_2 change as approximating the net human-made forcing change, with two caveats. First, special effort to reduce non-CO_2 GHGs could alleviate the CO_2 requirement, allowing up to about +25 ppm CO_2 for the same climate effect, while resurgent growth of non-CO_2 GHGs could reduce allowed CO_2 a similar amount.[246]

While there is a range of permissible approaches to regulating GHGs either individually or as a group, EPA must choose an approach that allows it to ensure that public health and welfare is protected with an adequate level of safety. At the current time, the most recent scientific knowledge indicates that this level is no more than 350 ppm CO_2 ± ~25 ppm CO_2 depending on future emissions of the non- CO_2 pollutants.

IX. Conclusion

The EPA has illegally delayed the implementation of GHG regulation pursuant to Clean Air Act authorities for far too long. The delay not only jeopardizes public health and welfare, but has taken us almost to a point of no return that may change our planet's future in profound and costly ways. For all the reasons discussed above, we urge the EPA to expeditiously implement the steps described in these comments. Please contact me at (760) 366-2232 x.302 or at ksiegel@biologicaldiversity.org with any questions regarding these comments.

Yours Sincerely,

Kassie Siegel
Director, Climate Law Institute
Center for Biological Diversity

[246] *Id.* at 229.

EXHIBIT E

INFORMATION COLLECTION REQUEST
FOR
PREVENTION OF SIGNIFICANT DETERIORATION AND NONATTAINMENT NEW SOURCE REVIEW (40 CFR PART 51 AND 52)

by

Carrie Wheeler
Operating Permits Group (C504-03)
Air Quality Policy Division
Office of Air Quality Planning and Standards
Office of Air and Radiation
United States Environmental Protection Agency
RTP, North Carolina 27711

INFORMATION COLLECTION REQUEST
FOR
PREVENTION OF SIGNIFICANT DETERIORATION
AND NONATTAINMENT NEW SOURCE REVIEW
(40 CFR PART 51 AND 52)

TABLE OF CONTENTS

LIST OF TABLES

1. IDENTIFICATION OF THE INFORMATION COLLECTION

1(a) TITLE OF THE INFORMATION COLLECTION REQUST (ICR)

This report is entitled Prevention of Significant Deterioration and Nonattainment New Source Review, EPA ICR number 1230.23, OMB control number 2060-0003.

1(b) ABSTRACT/EXECUTIVE SUMMARY

The analyses in this document have been performed in support of a renewal of the New Source Review (NSR) Program Information Collection Request (ICR) (Office of Management and Budget (OMB) Control Number 2060-0003; EPA Number 1230.23). The regulations covered under this ICR are contained in parts 51 and 52 of Title 40 of the *Code of Federal Regulations* (*CFR*). These requirements govern the State and Federal programs for preconstruction review and permitting of major new and modified sources pursuant to Part C "Prevention of Significant Deterioration" (PSD) and Part D "Program Requirements for Nonattainment Areas" of the Clean Air Act (CAA). The types of information collection activities addressed in this ICR are those necessary for the preparation and submittal of construction permit applications and the issuance of final permits. Specific burden-producing activities are listed in Appendix A. The administrative, reporting, and record keeping burden for industry respondents (permit applicants), State and local implementing agencies and the Environmental Protection Agency are summarized in Table 6-4.

The NSR Program ICR was last renewed in November, 2004. Since this renewal of this ICR, the estimated number of respondents has increased by 51 as a result of the decision by the U.S. Court of Appeals for the D.C. Circuit to vacate the Clean Units and Pollution Control Project Exclusion provisions of the NSR Program. *See New York v. EPA*, 413 F. 3d 3 (D.C. cir. 2005).

The EPA is proceeding with implementation of the $PM_{2.5}$ NSR program and these changes were addressed in a revised ICR completed in May, 2008[1]. For sources that must obtain major NSR permits, the change in burden increased 38,875 hours. For the reviewing authorities, the increase in burden is 16,107 hours. Relative to the entire currently approved 2004 NSR Program ICR, this represents about a one percent increase in average annual burden.

The 2007 renewal ICR for the NSR programs estimated the burden at approximately $487 million per year for 150,821 respondents. The change (net increase) in burden estimate is partially due to use of current labor rates for the respondents and EPA ("Agency") as well as an increase in respondents subject to NSR after the Clean Units and Pollution Control Project Exclusion provisions were vacated. Consequently the estimated burden for the program is about 3.5 million hours to industry with a cost of $302 million and about 2.4 million hours to

[1] U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards Information Collection Request for changes to 40 CFR Part 51 and 52 Prevention of Significant Deterioration and Nonattainment New Source Revew: Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers ($PM_{2.5}$). October 2007.

permitting agencies with a cost of $185 million, for a total respondent cost of $487 million per year. The costs are based on an annual average of 282 Part C major NSR permit applications (industrial respondents), 519 Part D major NSR permit applications, and 74,591 minor NSR actions. The Agency expects its costs will be $785,000 per year. The hourly labor costs for respondents were re-estimated as described in section (6)(b) to account for increases in the labor rates from 2004 to 2007.

Table 6-1 identifies the changes in hourly rates and total hours to estimate industry's cost per source for each type of permit. The estimated total cost to industry is approximately $302 million. On a per source (response) basis, these costs are approximately $125,000 for each Part C permit, $62,600 for each Part D permit, and $3,100 for each minor NSR permit. The Part C per permit cost includes a direct cost of $11.4 million for 34 permit applicants who must conduct preconstruction air quality monitoring.

1(c) PAPERWORK REDUCTION ACT REQUIREMENTS

For any existing rule, § 3507(g) of the Paperwork Reduction Act (PRA) limits the amount of time that a Director may approve a collection of information to three years. Consequently, the annual burden estimates are calculated for the three-year period beginning May, 2008 and ending May, 2011.

Except for information collections in notices of proposed rules or those exempted under the emergency processing provisions of 44 U.S.C. § 3507(j), the PRA requires EPA to solicit comments on each proposed information collection, including the renewal or modification of any existing ICR. This ICR renewal and its supporting statement were publicly noticed in the Federal Register to solicit comments on the data, analyses, and conclusions. Revisions to this supporting statement are complete and the ICR will be submitted to OMB for approval.

The information that this ICR covers is required for the submittal of a complete permit application for the construction or modification of all major new stationary sources of pollutants in attainment and nonattainment areas, as well as for applicable minor stationary sources of pollutants. EPA certifies that the information collection is necessary for the proper performance of EPA's functions, and that it has practical utility; is not unnecessarily duplicative of information EPA otherwise can reasonably access; and reduces, to the extent practicable and appropriate, the burden on persons providing the information to or for EPA.

2. NEED FOR AND USE OF THE COLLECTION

2(a) NEED/AUTHORITY FOR THE COLLECTION

Section 110 of the Clean Air Act (CAA) requires all States to submit an implementation plan which contains a preconstruction review program for all major new or modified stationary sources, including any provisions necessary for this program to meet the specific requirements of Parts C and D of Title I of the CAA related to major construction. Section 110(a)(2)(C) of the

CAA requires that no new or modified stationary source, in conjunction with existing source emissions in the same area, can interfere with the attainment or maintenance of the National Ambient Air Quality Standards (NAAQS). It further requires that no source can construct without securing a permit to ensure that the objectives of Parts C and D of the CAA are met.

Part C of Title I of the CAA outlines specific construction requirements for new and modified sources constructing in areas that do not violate the NAAQS. These requirements are more commonly referred to as the prevention of significant deterioration (PSD) rules, which require a prospective major new or modified source to: (1) demonstrate that the NAAQS and increments will not be exceeded, (2) ensure the application of best available control technology (BACT), and (3) protect Federal Class I areas from adverse impacts, including adverse impacts on air quality related values (AQRVs).

Similarly, Part D of Title I of the CAA specifies requirements for major new and modified sources constructing in areas designated as nonattainment for a NAAQS pursuant to Section 107 of the CAA. The Part D provisions also apply to major source permitting in the Northeast Ozone Transport Region as established under Section 184 of the CAA. The Part D rules generally require a prospective major construction project to: (1) ensure the application of controls which will achieve the lowest achievable emission rate (LAER), (2) certify that all major sources in a State which are owned or controlled by the same person (or persons) are in compliance with all air emissions regulations, and (3) secure reductions in existing source emissions to comply with specific statutory offset ratios and are otherwise, equal to, or greater than those reductions necessary to show attainment and maintenance of the applicable NAAQS (offsets).

2(b) PRACTICAL UTILITY/USERS OF THE DATA

Before the owner or operator of a facility can commence construction or modification of its source, it must comply with all applicable construction permit requirements. The owner or operator of a stationary source must develop or collect all relevant information not otherwise available to the Federal, State, or local permitting authority (PA). The PA reviews the application materials submitted by the owner or operator and either declares the permit application complete for processing or provides the owner or operator guidance on how to correct the deficiencies in the application. If the application has deficiencies, the applicant collects any additional data identified by the PA so that the permit application can be deemed "complete." Although sufficient information must be submitted by the applicant before its permit can be classified as complete, some additional clarifying information can be submitted at a later date by the applicant to assist the PA in processing the permit application.

For major sources to be constructed or modified in attainment areas, the PA uses the permit application information to determine: (1) whether the source will cause or contribute to a violation of the NAAQS and air quality increments, (2) if the technology the source is proposing is BACT, and (3) whether the source's emissions will adversely affect any Federal Class I areas, including AQRVs in these areas. For major sources to be constructed or modified in nonattainment areas, the permit application information is used by the PA to determine whether:

(1) the source will apply LAER, (2) the source will have secured the required emissions offsets, and (3) the source has demonstrated that all other of its major sources in the same State are in compliance with all applicable air emissions regulations.

Once the application is complete, the PA makes a preliminary determination regarding the approvability of the permit application. This determination, along with the application and supporting information, is made available to the public for at least 30 days. The PA must then respond to public comments and take action on the final permit. Typically a final action must be taken on a permit by the PA within one year of receipt of a complete application.

In addition, the public and other permit applicants may use some of the data collected. EPA operates a RACT/BACT/LAER Clearinghouse (RBLC)[1] which contains many BACT and LAER determinations to aid applicants and reviewers in identifying reasonable and available control technologies. The Clean Air Act Amendments require that the BACT or LAER information in each permit must be gathered by the PA and submitted for entry into the RBLC database as a reference for making future control technology determinations. Annual reports containing RBLC update information are also available to the public through the National Technical Information Service.

3. NONDUPLICATION, CONSULTATIONS, AND OTHER COLLECTION CRITERIA

3(a) NONDUPLICATION

The information collection activities required under the NSR regulations are not routinely performed elsewhere by EPA. However, similar information may be collected during the development of certain environmental impact statements (EIS). In such cases, regulations and policies require that information collected for EIS's and NSR programs be coordinated to the maximum extent possible so as to minimize duplicating the collection of data. Some of the required information also may already be available from States or other federal agencies. However, even when these data are available, they are not generally adequate to address completely the relevant NSR requirements.

3(b) PUBLIC NOTICE REQUIRED PRIOR TO ICR SUBMISSION TO OMB

The first public notice of this ICR renewal was published in the November, 30, 2007 Federal Register (FR). No comments were received by the closing date, January, 29, 2008. However, active consultation conducted for the ICR is discussed in section 3(c).

---

2 The RBLC is available on the OAQPS Technology Transfer Network. Access to the RBLC on the TTN is via a computer through Internet access – http://cfpub.epa.gov/rblc/htm/bl02.cfm. For assistance in accessing the TTN, contact the TTN Help Desk at (919) 541-4814 in Research Triangle Park, North Carolina, 1:00 p.m. to 5:00 p.m. Eastern Time. http://www.epa.gov/ttn/

3(c) CONSULTATIONS

This ICR is a renewal of the existing ICR for the NSR program. It incorporates the base elements of the program which have not been changed for this renewal plus the vacated provisions for the Clean Units and Pollution Control Project Exclusion. Extensive consultation through public hearings and stakeholder meetings with environmental groups; industry; and state, local, and federal agency representatives were conducted previously for the rules included in this ICR. Also, EPA contacted the National Association of Clean Air Agencies (NACAA), and received comments from three of its members in January 2008. Consistent with NACAA's input during that consultation period, changes have been made to the burden estimates for certain activities performed by permitting authorities. This is described more fully in section 6(a).

3(d) EFFECTS OF LESS FREQUENT COLLECTION

The Act defines the rate of reporting by sources, states, and local entities. Consequently, less frequent collection is not possible.

3(e) GENERAL GUIDELINES

OMB's general guidelines for information collections must be adhered to by all Federal Agencies for approval of any rulemaking's collection methodology. In accordance with the requirements of 5 CFR 1320.5, the Agency believes:

1. The NSR regulations do not require periodic reporting more frequently than semi-annually.
2. The NSR regulations do not require respondents to participate in any statistical survey.
3. Written responses to Agency inquiries are not required to be submitted in less than thirty days.
4. Special consideration has been given in the design of the NSR program to ensure that the requirements are, to the greatest extent possible, the same for Federal requirements and those reviewing authorities who already have preconstruction permitting programs in place.
5. Confidential, proprietary, and trade secret information necessary for the completeness of the respondent's permit are protected from disclosure under the requirements of §503(e) and §114(c) of the Act.
6. The NSR regulations do not require more that one original and two copies of the permit application, update, or revision to be submitted to the Agency.
7. Respondents do not receive remuneration for the preparation of reports required by the Act or parts 51 or 52.
8. To the greatest extent possible, the Agency has taken advantage of automated methods of reporting.
9. The Agency believes the impact of NSR regulations on small entities to be insignificant and not disproportionate.

The recordkeeping and reporting requirements contained in the current NSR program and the changes made in this rulemaking do not exceed any of the Paperwork Reduction Act guidelines contained in 5 CFR 1320.5, except for the guideline which limits retention of records by respondents to three years. The Act requires both respondents and State or local agencies to retain records for a period of five years. The justification for this exception is found in 28 U.S.C. 2462, which specifies five years as the general statute of limitations for Federal claims in response to violations by regulated entities. The decision in U.S. v. Conoco, Inc., No. 83-1916-E (W.D. Okla., January 23, 1984) found that the five year general statute of limitations applied to the Clean Air Act.

3(f) CONFIDENTIALITY

Confidentiality is not an issue for the NSR program. In accordance with Title V, Section 503 (e), the information that is to be submitted by sources as a part of their permit application and update, applications for revisions, and renewals is a matter of public record. To the extent that the information required for the completeness of a Federal permit is proprietary, confidential, or of a nature that it could impair the ability of the source to maintain its market position, that information is collected and handled according to EPA's policies set forth in Title 40, Chapter 1, Part 2, Subpart B--Confidentiality of Business Information (see 40 CFR 2). States typically have similar provisions.

3(g) SENSITIVE QUESTIONS

The consideration of sensitive questions, (i.e., sexual, religious, personal or other private matters), is not applicable to the NSR program. The information gathered for purposes of establishing an operating permit for a source do not include personal data on any owner or operator.

4. THE RESPONDENTS AND THE INFORMATION REQUESTED

4(a) RESPONDENTS/STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODES

Table 4-1 lists the industrial groups the EPA expects will contain the majority of the industrial respondents affected by the NSR program. These categories were chosen because of their historic relative incidence in seeking NSR permits as established in prior ICRs and confirmed by a nationwide air pollutant emission inventory developed by the EPA in 1986-87. These industries have been used as the basis for impact analysis since that inventory.

Table 4-1. Most Numerous Industrial Respondents by Industrial Group

Industry Group	SIC	NAICS[†]
Steam Electric Plants	491	221111, 22112, 22113, 221119, 221121, 221122
Petroleum Refining	291	32411
Chemical Processes	281	325181, 32512, 325131, 325182, 211112, 325998, 331311, 325188
Natural Gas Transport	492	48621, 22121, 48621
Pulp Mills	261	32211, 322121, 322122, 32213
Paper Mills	262	322121, 322122
Automobile Manufacturing	371	336111, 336112, 33612, 336211, 336992, 336322, 33633, 33634, 33635, 336399, 336212, 336213
Pharmaceuticals	283	325411, 325412, 325413, 325414

[†]1997 North American Industry Classification System

The respondents also include State and local air regulatory agencies. Because of the national scope of the NSR program, these governmental respondents are in all 50 States.

4(b) INFORMATION REQUESTED

4(b)(1) DATA ITEMS, INCLUDING RECORD KEEPING REQUIREMENTS

Tables A-1 and A-2 of Appendix A summarize the respondent data and information requirements which owners or operators of major sources must include in PSD and nonattainment NSR construction permit applications. The tables also include the appropriate references in 40 CFR part 51 for the data and information requirements that govern the way States implement NSR programs. For each reference in Part 51, corresponding language will be found in part 52. In this ICR analysis, the minor source burden is for owners or operators of minor sources to submit information to demonstrate that they are exempt from the major source construction permit requirements. Once exempt from major source requirements of either PSD or Nonattainment NSR, owners or operators will not have to comply with all of the respective requirements shown in Appendix A, Tables A-1 and A-2.

4(b)(2) RESPONDENT ACTIVITIES

Table 6-1 lists the activities, burden, and estimated costs of the NSR activities required under 40 CFR parts 51 and 52. These activities include three broad categories: Preparation and Planning; Data Collection and Analysis; and Permit Application. Within each of these categories, further subdivision of a source's activities can be found. The Agency anticipates it will take 282 Part C major sources an average of approximately 866 hours to complete each NSR application, for a total of 244,212 hours. Each of the 519 Part D NSR sources will require an average of 642 hours, or a total of approximately 333,198 hours each year, to complete Part D NSR applications. Each minor source will require 40 hours to complete its NSR application requirements, for a total of 2,983,640 hours.

5. THE INFORMATION COLLECTED – AGENCY ACTIVITIES, COLLECTION METHODOLOGY, AND INFORMATION MANAGEMENT

5(a) STATE AND LOCAL AGENCY ACTIVITIES

Table A-3 of Appendix A summarizes the data and information requirements which State and local agencies must meet. Table A-3 also shows the Part 51 references for the data and information requirements specified. The appropriate language from the CAA, 40 CFR 51 and 40 CFR 52 for State and local agencies is also included.

5(b) COLLECTION METHODOLOGY AND MANAGEMENT

The owners and operators of new or modified stationary sources affected by the NSR regulations will be responsible for submitting construction permit applications to the PA. The PA will log in permit applications, store applications in a central filing location at the PA, notify the Federal Land Manager (FLM) and provide a copy of the application (if applicable), and transmit copies of each application to EPA. Once construction permits have been approved, the reviewing authority will submit control technology information to EPA's RBLC database. Because the construction permits and associated control technology determinations are performed on a case-by-case basis, the regulations will not contain additional forms that owners or operators would have to fill out and submit to the PA. States will likely use their current permit application forms for NSR purposes.

Qualified personnel who work for the PA will perform permit reviews and check the quality of data submitted by the applicant on a case-by-case basis. The applicant will be required to submit information on how the data were obtained (*e.g.*, indicate whether emissions data were obtained through the use of emissions factors or test data) and how the calculations were performed. The PA personnel will check data quality by reviewing test data and checking engineering calculations, and by reviewing control technology determinations for similar sources. The RBLC and other sources will be reviewed for information on control technology determinations made for sources similar to the sources included in the permit application. Confidential information submitted by the applicant will be handled by the permit reviewing authority's confidential information handling procedures. The public will be provided the

opportunity to review a permit application and other materials relevant to the PA's decision on issuing the permit, including FLM findings, by obtaining a copy from the permit reviewing authority or by attending the public hearing. The NSR regulations will not require information through any type of survey.

Table 6-2 lists the State and local agency burden and costs associated with the major NSR permitting rule, as modified by the final NSR Reform rule changes. As is the case with the respondents, State and local agencies that approve NSR permits will only have start-up costs for any given permit. Consequently, while the State or local agency will approve many permits each year, the annual burden for that function is simply equal to the burden found in any one year.

5(c) SMALL ENTITY FLEXIBILITY

The Regulatory Flexibility Act (RFA) requires regulatory agencies, upon regulatory action, to assess that actions potential impact on small entities (businesses, governments, and small non-governmental organizations) and report the results of the assessments in (1) an Initial Regulatory Flexibility Analysis (IRFA), (2) a Final Regulatory Flexibility Analysis (FRFA), and (3) a Certification. For ICR approval, the Agency must demonstrate that it "has taken all practicable steps to develop separate and simplified requirements for small businesses and other small entities" (5 CFR 1320.6(h)). In addition, the agencies must assure through various mechanisms that small entities are given an opportunity to participate in the rulemaking process.

A Regulatory Flexibility Act Screening Analysis (RFASA) developed as part of a 1994 draft Regulatory Impact Analysis (RIA) and incorporated into the September 1995 ICR renewal analysis reported an initial regulatory flexibility screening analysis showed that the changes to the NSR program due to the 1990 Clean Air Act amendments would not have an adverse impact on small entities.[2] This analysis encompassed the entire universe of applicable major sources that were likely to also be small-businesses. The Agency estimates there are approximately 50 "small business" major sources.[3] Because the administrative burden of the NSR program are the primary source of the NSR program's regulatory costs, the analysis estimated a negligible "cost to sales" (regulatory cost divided by the business category mean revenue) ratio for this source group. Currently, there is no economic basis for a different conclusion at this time.

5(c)(1) MEASURES TO AVERT IMPACTS ON SMALL ENTITIES

The Agency may not, under any circumstances, exempt a major source of air pollution. Since the impacts of NSR regulations which may impact small entities are predominantly to major sources, little room exists for regulatory flexibility to avert the impact of the proposed rulemaking on small entities through exemption.

---

3 "Economic Assessment of the Impacts of Part C and D Regulatory Changes," June 2, 1994.

4 The definition for "small business" employed for all SIC categories in this analysis was any business employing fewer than 500 employees.

5(c)(2) MEASURES TO MITIGATE IMPACTS ON SMALL ENTITIES

Even though the NSR program is not anticipated to have an adverse impact on a significant number of small businesses, measures are in place to assist in those incidental exceptions. Implementation of small business stationary source technical and environmental compliance assistance programs, as called for in section 507 of the Act (at the Federal and State levels) can reduce the reporting burden of small entities which are subject to major NSR. These programs may significantly alleviate the economic burden on small sources by establishing: 1) programs to assist small businesses with determining what Act requirements apply to their sources and when they apply, and 2) guidance on alternative control technology and pollution prevention for small businesses.

5(d) COLLECTION SCHEDULE

Respondents are not subjected to a collection schedule per se under NSR permitting regulations of parts 51 and 52. In general, each affected source is required to submit an application as a prerequisite to receiving a construction permit. Preparation of a construction permit application is a one-time-only activity for each project involving construction of a new source or modification of an existing source. The applicable SIP typically states the time period that is necessary to process a permit application and issue a permit; consequently, a prospective source would be obliged to work backward from the hopeful commencement of construction to determine the optimum submittal date for the application. The NSR permit regulations will not require periodic reporting or surveys.

6. ESTIMATING THE BURDEN AND COST OF THE COLLECTION

6(a) ESTIMATING RESPONDENT BURDEN

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. The burden estimate should be composed of (1) a total capital and start-up cost component annualized over its useful life; (2) a total operation, maintenance and purchases of services component. Each component should be divided into burden borne directly by the respondent and any services that are contracted out.

Table 6-1 identifies the average burden by activity for the industrial respondents. Note that only 34 of the 282 Part C (PSD) permit applications require preconstruction air quality monitoring. The $1.06 million increase in direct costs for preconstruction monitoring from the 2007 ICR for the $PM_{2.5}$ NSR Program Final Rule is due solely to the application of a 1.09 adjustment factor to obtain a 2007 value.

The average burden for preparing and submitting minor NSR permit applications reflects a range of estimated burden from 8 to 120 hours, depending on the nature of the permit action required. The average assumes the following average burdens for different types of permit actions (percent of total actions in parentheses): 40 hours for new minor sources, new synthetic minor sources, and synthetic-based modifications (30%); 8 hours for true minor modifications (30%); 120 hours for netting-based minor modifications (20%); and 8 hours for minor/administrative permit revisions (20%).

Table 6-2 identifies the average burden by activity for the State and local respondents. Estimates are greater than the 2007 ICR for the $PM_{2.5}$ NSR Program Final Rule, in part because of the vacature of the Clean Units and Pollution Control Project Exclusion provision. Additional changes were made pursuant to consultation with NACAA to more accurately reflect the burdens of the highlighted activities. As this table looks at average amount of time spent actively working on these activities, numbers are going to vary from permitting authority to permitting authority; any time required by the source participation is accounted for separately in Table 6-1.

Consultation responders indicated that the time required to complete the Part D (nonattainment) permit process is greater than our estimate of 109 hours due to the amount of time required to address the offset requirement and associated paperwork necessary for the transfer of offsets. We agree that demonstrating offsets does require time; however, we interpret these comments to be towards the wrong dataset. As indicated in Table 6-1, the time required to demonstrate offsets is accounted for in the industrial respondent burden and cost.

When examining the average application approval burden estimate – comments indicated a range of 10-80 hours, depending on the specific permit. We recognize that some permits will require more time for application approval, while others require less. Our estimate falls within this range; therefore, the estimated average burden per permit for application approval remains 40 hours.

Comments also indicate that the length of time required for a minor permit can vary from 40-100 hours per permit. We agree that the complexity of the source can at times require a greater number of hours than the average 30 we estimated. However, as with the source burden listed above, the range can vary from 8-120 hours. Thus, our estimate of 30 hours seems reasonable to reflect the average burden for a minor permit.

Finally, it was suggested that the preliminary burden estimate should be somewhere in the range of 140-160 hours for a Part C permit. Numbers will vary for preliminary determination, and for these two permitting authorities, an average of 150 hours is more reasonable. However, for some of the112 permitting authorities the average hours required may be much lower. We acknowledge that this activity can take more time than originally estimated; therefore, the average number of burden hours for this activity increased from 24 to 36 hours per permit.

6(b) ESTIMATING RESPONDENT COSTS

6(b)(i) Estimating Labor Costs

In this ICR, the entire burden for most respondents (and the Agency) is treated as a labor cost. The one exception is for 34 of the 282 Part C (PSD) permit applications that require preconstruction air quality monitoring. This one-time cost includes pre-application monitoring of air quality via contract services. The explanation for the absence of capital and operations and maintenance costs for the remaining respondents appears below in sections 6(b)(ii) and 6(b)(iii). There is only an annual value of the costs of the ICR burden, which is equal to the cost of the first yearly outlay. The same annual ICR burden and cost are reported for each year because the EPA projects that the yearly average number of permit applications will be constant over the term of the ICR.

In order to improve the accuracy of burden estimates, this renewal ICR uses 2007 values with the wage rate methods established in the July, 1997 renewal ICR. The 1997 renewal was the source for the extrapolated values used in the 2001 and 2004 renewal ICRs. The single exception is the estimate of pre-construction ambient air quality costs, which were adjusted from the 2007 ICR for the $PM_{2.5}$ NSR Program Final Rule.

The labor rate used to calculate the industrial respondents' labor cost is $97.61/hr. The industrial labor rate was obtained from Table 2 in the Bureau of Labor Statistics (BLS) survey "Employer Costs for Employee Compensation," September 2007[5]. To determine the rate per hour, a 110% overhead was assumed. The resultant rate equals $97.61/hr.

Following the same assumptions as the 2007 ICR for the $PM_{2.5}$ NSR Program Final Rule, 34 of the industrial respondents submitting Part C (PSD) permit applications will conduct pre-construction ambient air quality monitoring[6]. The average cost for this activity is estimated to be $335,165, which is the inflation-adjusted figure used in the October 2007 ICR. The adjustment factor is 1.09, the factor used to adjust the industry's labor rate.

The labor rate used to calculate the State and local respondents' labor cost is $77.22/hr. This rate was also obtained from the BLS survey[7]. Assume 100% overhead for State and Local Agency Labor. Table 6-2 presents the State and local agency respondents' burden and costs. Their annual cost is equal to the cost of the first year outlay, which recurs each year.

6(b)(ii) Estimating Capital and Operations and Maintenance Costs

---

5 Industrial Labor Rates obtained from "Employer Costs for Employee Compensation, Table 2: Employment Costs for Civilian Workers by Occupational and Industry Group," U.S. Dept. of Commerce, BLS, September 2007.

6 U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards. Information Collection Request for changes to 40 CFR Part 51 and 52 Prevention of Significant Deterioration and Nonattainment New Source Revew: Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers ($PM_{2.5}$). October 2007.

7 State and Local Respondent Labor Rates obtained from "Employer Costs for Employee Compensation, Table 4: Employment Costs for State and Local Government Workers by Occupational and Industry Group," U.S. Dept. of Commerce, BLS, September 2007.

Even if an applicant is a brand new company and the prospective source is a "greenfield" source (the EPA estimates less than one percent of the combined number of major and minor industrial respondents fit that description) most, and perhaps all, of the equipment needed to prepare permit applications (for example, the computers and basic software) will be part of the source's business operation inventory. Furthermore, much of the data and regulatory and policy information for making technology determinations and even models for performing ambient air impact analyses are available in electronic form from several different EPA bulletin boards for just the communication charges, which are typically absorbed in routine business overhead expenses.

Since the purchase of capital equipment is believed to be an insignificant factor in permit application preparation, the EPA assumes the operation, maintenance, or services for same are negligible. Further, once a permit is issued, there is no operations and maintenance cost associated with it. It remains unaltered unless the source or the permitting authority discovers specific reasons to reexamine it and change any conditions or specifications. If purely administrative, the changes are handled exclusively by the permitting authority. If changes have the potential for environmental consequences, the action may be significant enough to be counted as a separate and new application, to which a new burden and cost may be ascribed.

6(b)(iii) Capital/Start-up Operating and Maintenance (O&M) Costs

Capital/start-up and O&M costs are non-labor related costs. One-time capital/start-up costs are incurred with the purchase of durable goods needed to provide information. According to the Paperwork Reduction Act, capital/start-up cost should include among other items, preparations for collecting information such as purchasing computers and software, monitoring, sampling, drilling, and testing equipment. As a practical matter, these costs are not typical of the costs associated with preparing a major source permit application. For the same reason, the O&M costs associated with start-up capital equipment are zero for most of the sources for this ICR. However, as shown in Table 6-1, 34 of the 282 Part C (PSD) permit applications require preconstruction air quality monitoring, which costs $11,396,000. This one-time cost includes pre-application monitoring of air quality via contract services.

6(b)(iv) Annualizing Capital Costs

Typically annualized capital cost would be derived from a discounted net present value of the stream of costs that would occur over the life of the permit, or the ICR, whichever is shorter. However, in the case of NSR, there are only labor costs for preparing and processing permit applications. Labor costs are expensed when incurred and not amortized. Therefore, the capital costs for NSR permitting are zero.

6(c) ESTIMATING AGENCY BURDEN AND COST

Staff in EPA's regional offices typically review major NSR permits. The EPA expects its review of NSR permits to comprise the tasks listed in Table 6-3. The cost estimate uses a "loaded" labor rate of $43.17/hr. The rate reflects the assumption that the staff reviewing

permits are classified as Grade 12 Step 1. The corresponding salary is loaded with benefits at the rate of 60%.[7]

6(d) ESTIMATING THE RESPONDENT UNIVERSE AND TOTAL BURDEN AND COST

For the purpose of estimating burden in this ICR, the respondent universe is defined by the annual number of permit applications prepared by major and minor sources, and the annual number of permit applications processed by State and local agencies. We began with the baseline data found in the current ICR (265 Part C, 488 Part D, 74,609 minor NSR) change, from that baseline, we then made several adjustments to reflect the expected effect of the U.S. Court of Appeals for the D.C. Circuit decision to vacate the Clean Units and Pollution Control Project Exclusion provision, as well as consultation with members of NACAA.

This analysis uses the 112 reviewing authorities count used by other permitting ICRs and the appropriate source count for individual permit-related items (e.g., attending pre-application meetings with the source). The resulting number of respondents for this ICR renewal is then estimated to be as follows:

1. 282 Part C (PSD) permit applications prepared by industry.
2. 519 Part D (nonattainment) permit applications prepared by industry.
3. 74,951 minor NSR permit applications prepared by industry.
4. 282 Part C (PSD) permit applications processed by State and local agencies.
5. 519 Part D (nonattainment) permit applications processed by State and local agencies.
6. 74,951 minor NSR permit applications processed by State and local agencies.

For each category of permit application, the total number of respondents is twice the number of permit applications. In addition, each reviewing authority must submit changes to its existing SIP program or demonstrate that its existing programs are at least equivalent to EPA's new requirements. This SIP revision is a one-time burden that will occur during the three-year period. Therefore, the average annual number of such revisions is 37.33 per year. This increases the total number of reviewing authority responses to 838 annually.

The total annual effort for industrial respondents submitting Part C (PSD) permit applications is 244,212 hours, and the corresponding annual cost is $35,233,000. The total annual effort for industrial respondents submitting Part D (nonattainment) permit applications is 333,198 hours, and the corresponding annual cost is $32,523,000. The total annual effort for industrial respondents submitting minor NSR permits is 2,983,640 hours, and the corresponding annual cost is $234,138,000. For industrial respondents, the overall total annual effort is 3,561,050 hours and $301,895,000.

8 The annual salary for Grade 12 Step 1 in the 2007 General Schedule is $56,301 (http://www.opm.gov/oca/07tables/html/gs.asp). Division by 2080 hrs/hr yields the hourly rate used in this supporting statement.

The total annual effort for State and local respondents processing Part C (PSD) permit applications is 84,882 hours, and the corresponding annual cost is $6,555,000. The total annual effort for State and local respondents processing Part D (nonattainment) permit applications is 65,913 hours, and the corresponding annual cost is $5,090,000. The total annual effort for State and local respondents processing minor NSR permits is 2,237,730 hours, and the corresponding annual cost is $172,798,000. State and local respondents also will spend approximately 1,493 hours for SIP revisions due to the $PM_{2.5}$ Implementation Final Rule, for an annual cost of $115,000. For the State and local respondents, the overall total annual effort is 2,390,018 hours and $184,557,000.

6(e) BOTTOM LINE BURDEN HOURS AND COST TABLES

6(e)(i) Respondent Tally

Table 6-4 summarizes the estimated burden and cost to industry respondents, State and local agency respondents, and the EPA for submittal and processing of NSR permit applications and the issuance of the permits. It also includes the cost to the respective respondents and reviewing agencies for nonapplicability findings, which preclude sources from further major source requirements. For industrial and State and local agency respondents, the overall total annual burden is 5,951,068 hours and $486,452,000.

6(e)(ii) The Agency Tally

The total annual effort for the Agency for processing Part C (PSD) permit applications is 4,230 hours, and the corresponding annual cost is $183,000. The total annual effort for the Agency for processing Part D (nonattainment) permit applications is 8,304 hours, and the corresponding annual cost is $358,000. The total annual effort for the Agency for processing minor NSR permits is 5,650 hours, and the corresponding annual cost is $244,000. For the Agency, the overall total annual effort is 18,184 hours and $785,000.

6(f) REASONS FOR CHANGE IN BURDEN

The burden has changed due in part to a change in the labor rates. As explained in section 6(b)(i) in order to improve the accuracy or burden estimates, the rates were recalculated using 2007 values and following the same methodology established in the July 10, 1997 renewal ICR.

Also contributing to the increase in burden has been an increase in the number of respondents due to the U.S. Court of Appeals for the D.C. Circuit decision to vacate the Clean Units and Pollution Control Project Exclusion provision of the NSR Program. As a result, there are an additional 51 respondents.

Finally, the burden per permit for Part C major NSR permit applications increased based on active consultation with NACAA, conducted in January, 2008. The burden per permit for Part D and minor NSR permits are unchanged from the 2007 ICR for NSR $PM_{2.5}$ Implementation Final Rule.

6(g) BURDEN STATEMENT

The average annual burden on an industrial respondent submitting a Part C (PSD) permit application is 866 hours. The average annual burden on an industrial respondent submitting a Part D (nonattainment) permit application is 642 hours. The average annual burden on an industrial respondent submitting a minor NSR permit application is 40.

The average annual burden on a State or local agency respondent processing a Part C (PSD) permit application is 301 hours. The average annual burden on a State or local agency respondent processing a Part D (nonattainment) permit application is 127. The average annual burden on a State or local agency respondent processing a minor NSR permit application is 30.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, verifying, processing, maintaining, disclosing, and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR part 9 and 48 CFR Chapter 15.

To comment on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques, EPA has established a public docket for this ICR under Docket ID No. EPA-HQ-OAR-2004-0081, which is available for online viewing at www.regulations.gov, or in person viewing at the Air and Radiation Docket and Information Center in the EPA Docket Center (EPA/DC), EPA West, Room 3334, 1301 Constitution Avenue, NW, Washington, DC. The EPA Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Reading Room is (202) 566-1744, and the telephone number for the Air Docket is (202) 566-1742. An electronic version of the public docket is available at www.regulations.gov. This site can be used to submit or view public comments, access the index listing of the contents of the public docket, and to access those documents in the public docket that are available electronically. Once in the system, select "search," then key in the docket ID number identified above. Also, you can send comments to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW, Washington, DC 20503, Attention: Desk Office for EPA. Please include the EPA Docket ID No. EPA-HQ-OAR-2004-0081 and OMB control number 2060-0003 in any correspondence.

Table 6-1. Industrial Respondent Burden and Cost (Annual)				
Activity	Units	Hours per Unit	Annual Hours	Annual Cost ($1000)
I. Part C (PSD)				
A. Preparation and Planning				
Determination of Compliance Requirements	282	170	47,940	$4,679
Obtain Guidance on Data Needs	282	120	33,840	$3,303
Preparation of BACT Analysis	282	102	28,764	$2,808
B. Data Collection and Analysis				
Air Quality Modeling	282	200	56,400	$5,505
Determination of Impact on Air Quality Related Values	282	100	28,200	$2,753
Post-construction Air Quality Monitoring	282	50	14,100	$1,376
C. Permit Application				
Preparation and Submittal of Permit Application	282	60	16,920	$1,652
Public Hearings	282	24	6,768	$661
Revisions to Permit	282	40	11,280	$1,101
D. Subtotal Burden		866	244,212	$23,838
E. Direct Costs for Pre-construction Air Quality Monitoring	34			$11,396
F. Total Costs				$35,233
II. Part D (Non-attainment)				
A. Preparation and Planning				
Determination of Compliance Requirements	519	150	77,850	$7,599
Obtain Guidance on Data Needs	519	100	51,900	$5,066
B. Data Collection and Analysis				
Preparation of LAER Engineering Analysis	519	52	26,988	$2,634
Demonstrate Offsets	519	52	26,988	$2,634
Prepare Analysis of Alternative Sites, Processes, etc.	519	60	31,140	$3,040
Air Quality Modeling	519	130	67,470	$6,586
C. Permit Application				
Preparation and Submittal of Permit Application	519	49	25,431	$2,482
Public Hearings	519	25	12,975	$1,266
Revisions to Permit	519	24	12,456	$1,216
D. Total		642	333,198	$32,523
III. Minor NSR				
A. Preparation and Submittal of Minor NSR Permit Application	74,591	40	2,983,640	$234,138
IV. GRAND TOTAL	75,392		3,561,050	$301,895

Table 6-2. State and Local Respondent Burden and Cost (Annual)				
Activity	Units	Hours per Unit	Annual Hours	Annual Cost ($1000)
I. Part C (PSD)				
A. Attend Preapplication Meetings	282	36	10,152	$784
B. Answer Respondent Questions	282	20	5,640	$436
C. Log In and Review Data Submissions	282	16	4,512	$348
D. Request Additional Information	282	8	2,256	$174
E. Analyze for and Provide Confidentiality Protection	282	24	6,768	$523
F. Prepare Completed Applications for Processing	282	38	10,716	$827
G. File and Transmit Copies	282	8	2,256	$174
H. Prepare Preliminary Determination	282	36	10,152	$784
I. Prepare Notices for and Attend Public Hearings	282	40	11,280	$871
J. Application Approval	282	48	13,536	$1,045
K. Notification of Applicant of PA Determination	282	8	2,256	$174
L. Submittal of Information on BACT/LAER to RBLC	282	19	5,358	$414
M. Total		301	84,882	$6,555
II. Part D (Non-attainment)				
A. Attend Preapplication Meetings	519	7	3,633	$281
B. Answer Respondent Questions	519	10	5,190	$401
C. Log In and Review Data Submissions	519	10	5,190	$401
D. Request Additional Information	519	4	2,076	$160
E. Analyze for and Provide Confidentiality Protection	519	4	2,076	$160
F. Prepare Completed Applications for Processing	519	16	8,304	$641
G. File and Transmit Copies	519	4	2,076	$160
H. Prepare Preliminary Determination	519	10	5,190	$401
I. Prepare Notices for and Attend Public Hearings	519	18	9,342	$721
J. Application Approval	519	21	10,899	$842
K. Notification of Applicant of PA Determination	519	2	1,038	$80
L. Submittal of Information on BACT/LAER to RBLC	519	21	10,899	$842
M. Total		127	65,913	$5,090
III. Minor NSR				
Total for Preparation and Submittal of Minor NSR Permit Application	74,591	30	2,237,730	$172,798
IV. SIP Revisions				
Revision of SIP	37	40	1,493	$115
IV. GRAND TOTAL	75,429		2,390,018	$184,557

Table 6-3. Agency Burden and Cost (Annual)				
Activity	Units	Hours per Unit	Annual Hours	Annual Cost ($1000)
I. Part C (PSD)				
A. Review and Verify Applicability Determination	282	2	564	$24
B. Review Control Technology Determination	282	4	1,128	$49
C. Evaluate Air Quality Monitoring	282	4	1,128	$49
D. Evaluate Alternative and Secondary Impact Analysis	282	2	564	$24
E. Evaluate Class I Area Analysis	282	2	564	$24
F. Administrative Tasks	282	1	282	$12
G. Total		15	4,230	$183
II. Part D (Non-attainment)				
A. Review and Verify Applicability Determination	519	2	1,038	$45
B. Review Control Technology Determination	519	4	2,076	$90
C. Evaluate Offsets	519	1	519	$22
D. Evaluate Air Quality Monitoring	519	5	2,595	$112
E. Evaluate Alternative and Secondary Impact Analysis	519	3	1,557	$67
F. Administrative Tasks	519	1	519	$22
G. Total		16	8,304	$358
III. Minor NSR				
Review Synthetic/Netting-Based Minor NSR Permits	2,825	2	5,650	$244
IV. GRAND TOTAL	3,626	33	18,184	$785

Table 6-4. NSR Program Information Collection Burden Summary								
		Total				Per Unit		
		Part C (PSD)	Part D (Non-attainment)	Minor NSR	Cumulative Total	Part C (PSD)	Part D (Non-attainment)	Minor NSR
Number of Respondents[a]		563	1,038	149,182	150,821[a+b]			
Respondent Burden Hours	Industry	244,212	333,198	2,983,640	3,561,050	866	642	40
	State/Local	84,882	65,913	2,237,730	2,390,018	301	127	30
	Industry and State/ Local Agency Totals	329,094	399,111	5,221,370	5,951,068	1,167	769	70
Federal (Agency) Burden		4,230	8,304	5,650	18,184	15	16	2
Program Grand Total Burden		333,324	407,415	5,227,020	5,969,252			
Respondent Annual Cost ($1000)[c]	Industry Labor[d]	$23,838	$32,523	$234,138	$290,499	$84.65	$62.64	$3.14
	Other Direct Costs[e]	$11,396	$0	$0	$11,396	$335.17	$0.00	$0.00
	Total Industry Costs	$35,233	$32,523	$234,138	$301,895	$125.12	$62.64	$3.14
	State/Local Costs[f]	$6,555	$5,090	$172,798	$184,557	$23.28	$9.80	$2.32
	Industry and State/Local Agency Totals	$41,788	$37,613	$406,936	$486,452			
Agency Annual Costs ($1000)		$183	$358	$244	$785	$0.65	$0.69	$0.00
Program Grand Total Costs ($1000)		$41,970	$37,972	$407,180	$487,237	$149.04	$73.14	$5.46

(a) Number of respondents is twice the number of permitting actions for a given category due to (1) the applicant preparing the application and (2) the permitting agency reviewing and issuing the permit.
(b) Each of the 112 reviewing authorities must submit one SIP revision to conform their major NSR programs to the revised rules. The average annual number of such revisions is 112/3 = 37.33 per year.
(c) All costs are in thousands of current (2007) dollars. All costs represent one-time permit application costs.
(d) The EPA estimates that 30% of the in-house hourly burden may be contracted, but because it is at the discretion of the applicant, the cost has not been converted to direct cost. Furthermore EPA assumes the labor rate would remain the same, in which case there is no impact on total annual costs.
(e) These direct costs are for 34 (approximately 13%) PSD sources at $335,165 per source, for pre-application monitoring of air quality via contract services. This cost is not incurred by Part D permit applicants.
(f) Per unit cost for PSD permits reflects the direct cost for pre-application monitoring averaged over all PSD permits. The estimated 34 sources that require preconstruction monitoring are estimated to incur a total cost of $419,697 per application. The others will incur $84,532.

APPENDIX A

INFORMATION REQUIREMENTS

TABLE A-1. INDUSTRY RESPONDENT DATA AND INFORMATION REQUIREMENTS FOR PREPARING PART C (PSD) CONSTRUCTION PERMITS

Current Requirements	Regulation Reference
Description of the nature, location, design capacity, and typical operating schedule	40 CFR 51.166(n)(2)(I)
Detailed schedule for construction	40 CFR 51.166(n)(2)(ii)
Description of continuous emission reduction system, emission estimates, and other information needed to determine that BACT is used	40 CFR 51.166(n)(2)(iii)
Air quality impact, meteorological, and topographical data	40 CFR 51.166(n)(3)(I)
Nature and extent of, and air quality impacts of general commercial, residential, industrial, and other growth in area of source	40 CFR 51.166(n)(3)(ii)
Use of air quality models to demonstrate compliance with NAAQS and increment	40 CFR 51.166(k)&(l)
A demonstration that the benefits of the proposed source significantly outweigh the environmental and social costs imposed as a result of its location, construction, or modification	Not a current requirement, but is a 1990 Act Requirement §173(a)(5)
Information necessary to determine impact on AQRVs in Class I areas	40 CFR 51.166(n)(4)
Air quality monitoring data	40 CFR 51.166(m)
Impairment of visibility, soils, and vegetation	40 CFR 51.166(o)(1)
Air quality impact resulting from general commercial, residential, industrial, and other growth associated with source	40 CFR 51.166(o)(2)
Written notice of proposed relocation from portable source	40 CFR 51.166(I)(4)(iii)(d)
Description of the location, design construction, and operation of building, structure, facility, or installation	40 CFR 51.160(c)(2)
Description of the nature and amounts of emissions to be emitted	40 CFR 51.160(c)(1)

Description of the air quality data and dispersion or other air quality modeling used	40 CFR 51.160(f)
Sufficient information to ensure attainment and maintenance of NAAQS	40 CFR 51.160(c)-(e), 40 CFR 51.161-163

Table A-2: INDUSTRY RESPONDENT DATA AND INFORMATION REQUIREMENTS FOR PREPARING PART D (NONATTAINMENT NSR) CONSTRUCTION PERMITS

Requirements	Regulation Reference
Documentation that LAER is being applied	40 CFR 51.165(a)(2); 40CFR part 51, Appendix S, Section IV.A; 40 CFR 52.24(k)
Documentation that all sources owned or operated by same person are in compliance	40 CFR 51.165(a)(2); 40 CFR part 51, Appendix S, Section IV.A; 40 CFR 52.24(k)
Documentation that sufficient emissions reductions are occurring to comply with specific offset requirements and to ensure RFP	40 CFR 51.165(a)(3); 40 CFR part 51, Appendix S, Section IV.A; 40 CFR 52.24(k)
Documentation that benefits of proposed source significantly outweigh the environmental and social costs imposed as a result of its location, construction, or modification	40 CFR 51.165(a)(2)
Description of the location, design construction, and operation of building, structure, facility, or installation	40 CFR 51.160(c)(2)
Description of the nature and amounts of emissions to be emitted	40 CFR 51.160(c)(1)
Description of the air quality data and dispersion or other air quality modeling used	40 CFR 51.160(f)
Sufficient information to ensure attainment and maintenance of NAAQS	40 CFR 51.160(c)-(e) 40 CFR 51.161 40 CFR 51.162 40 CFR 51.163

TABLE A-3. PERMITTING AGENCY DATA AND INFORMATION REQUIREMENTS

Requirement	Regulation Reference
Early FLM notification and opportunity to participate in meetings	40 CFR 51.166(p)(1)(ii)
Submission of all permit applications to EPA	40 CFR 51.166(q)(1)
Submission of notice of application, preliminary determination, degree of increment consumption, and opportunity for public comment	40 CFR 51.166(q)(2)(iv)
Submission to FLM of permit applications	40 CFR 51.166(p)(1)
Submission of written request to exempt sources from review	40 CFR 52.21(I)(4)(vi)
Written request for use of innovative control technology	40 CFR 51.166(s)
Establishing and operating a permitting program for all new sources	40 CFR 51.160
Provide notice to EPA of all permits	40 CFR 51.161(d)
Provide for public comment for all NSR permits	40 CFR 51.161

EXHIBIT F

D R A F T
OCTOBER 1990

New Source Review Workshop Manual

Prevention of Significant Deterioration and Nonattainment Area Permitting

PREFACE

This document was developed for use in conjunction with new source review workshops and training, and to guide permitting officials in the implementation of the new source review (NSR) program. It is not intended to be an official statement of policy and standards and does not establish binding regulatory requirements; such requirements are contained in the regulations and approved state implementation plans. Rather, the manual is designed to (1) describe in general terms and examples the requirements of the new source regulations and pre-existing policy; and (2) provide suggested methods of meeting these requirements, which are illustrated by examples. Should there be any apparent inconsistency between this manual and the regulations (including any policy decisions made pursuant to those regulations), such regulations and policy shall govern. This document can be used to assist those people who may be unfamiliar with the NSR program (and its implementation) to gain a working understanding of the program.

The focus of this manual is the prevention of significant deterioration (PSD) portion of the NSR program found in the Federal Regulations at 40 CFR 52.21. It does not necessarily describe the specific requirements in those areas where the PSD program is conducted under a state implementation plan (SIP) which has been developed and approved in accordance with 40 CFR 51.166. The reader is cautioned to keep this in mind when using this manual for general program guidance. In most cases, portions of an approved SIP that are different from those described in this manual will be more restrictive. Consequently, it is suggested that the reader also obtain program information from a State or local agency to determine all requirements that may apply in a area.

The examples presented in this manual are presented for illustration purposes only. They are fictitious and are designed to impart a basic understanding of the NSR regulations and requirements.

A number of terms and acronyms used in this manual have specific meanings within the context of the NSR program. Since this manual is intended for use by those persons generally familiar with NSR these terms are used throughout this document, often without definition. To aid users of the document who are unfamiliar with these terms, general definitions of these terms can be found in Appendix A. The specific regulatory definitions for most of the terms can be found in 40 CFR 52.21. Should there be any apparent inconsistency between the definitions contained in Appendix A and the regulatory definitions or requirements found in Part 40 of the Code of Federal Regulations (including any policy decisions made pursuant to those regulations), the regulations and policy decisions shall govern.

III. A STEP BY STEP SUMMARY OF THE TOP-DOWN PROCESS

Table B-1 shows the five basic steps of the top-down procedure, including some of the key elements associated with each of the individual steps. A brief description of each step follows.

III.A. STEP 1--IDENTIFY ALL CONTROL TECHNOLOGIES

The first step in a "top-down" analysis is to identify, for the emissions unit in question (the term "emissions unit" should be read to mean emissions unit, process or activity), all "available" control options. Available control options are those air pollution control technologies or techniques with a practical potential for application to the emissions unit and the regulated pollutant under evaluation. Air pollution control technologies and techniques include the application of production process or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of the affected pollutant. This includes technologies employed outside of the United States. As discussed later, in some circumstances inherently lower-polluting processes are appropriate for consideration as available control alternatives. The control alternatives should include not only existing controls for the source category in question, but also (through technology transfer) controls applied to similar source categories and gas streams, and innovative control technologies. Technologies required under lowest achievable emission rate (LAER) determinations are available for BACT purposes and must also be included as control alternatives and usually represent the top alternative.

In the course of the BACT analysis, one or more of the options may be eliminated from consideration because they are demonstrated to be technically infeasible or have unacceptable energy, economic, and environmental impacts on a case-by-case (or site-specific) basis. However, at the outset, applicants

TABLE B-1. - KEY STEPS IN THE "TOP-DOWN" BACT PROCESS

STEP 1: IDENTIFY ALL CONTROL TECHNOLOGIES.

- LIST is comprehensive (LAER included).

STEP 2: ELIMINATE TECHNICALLY INFEASIBLE OPTIONS.

- A demonstration of technical infeasibility should be clearly documented and should show, based on physical, chemical, and engineering principles, that technical difficulties would preclude the successful use of the control option on the emissions unit under review.

STEP 3: RANK REMAINING CONTROL TECHNOLOGIES BY CONTROL EFFECTIVENESS.
Should include:

- control effectiveness (percent pollutant removed);
- expected emission rate (tons per year);
- expected emission reduction (tons per year);
- energy impacts (BTU, kWh);
- environmental impacts (other media and the emissions of toxic and hazardous air emissions); and
- economic impacts (total cost effectiveness, incremental cost effectiveness).

STEP 4: EVALUATE MOST EFFECTIVE CONTROLS AND DOCUMENT RESULTS.

- Case-by-case consideration of energy, environmental, and economic impacts.
- If top option is not selected as BACT, evaluate next most effective control option.

STEP 5: SELECT BACT

- Most effective option not rejected is BACT.

should initially identify all control options with potential application to the emissions unit under review.

III.B. STEP 2--ELIMINATE TECHNICALLY INFEASIBLE OPTIONS

In the second step, the technical feasibility of the control options identified in step one is evaluated with respect to the source-specific (or emissions unit-specific) factors. A demonstration of technical infeasibility should be clearly documented and should show, based on physical, chemical, and engineering principles, that technical difficulties would preclude the successful use of the control option on the emissions unit under review. Technically infeasible control options are then eliminated from further consideration in the BACT analysis.

For example, in cases where the level of control in a permit is not expected to be achieved in practice (e.g., a source has received a permit but the project was cancelled, or every operating source at that permitted level has been physically unable to achieve compliance with the limit), and supporting documentation showing why such limits are not technically feasible is provided, the level of control (but not necessarily the technology) may be eliminated from further consideration. However, a permit requiring the application of a certain technology or emission limit to be achieved for such technology usually is sufficient justification to assume the technical feasibility of that technology or emission limit.

III.C. STEP 3--RANK REMAINING CONTROL TECHNOLOGIES BY CONTROL EFFECTIVENESS

In step 3, all remaining control alternatives not eliminated in step 2 are ranked and then listed in order of over all control effectiveness for the pollutant under review, with the most effective control alternative at the top. A list should be prepared for each pollutant and for each emissions unit (or grouping of similar units) subject to a BACT analysis. The list should present the array of control technology alternatives and should include the following types of information:

- control efficiencies (percent pollutant removed);
- expected emission rate (tons per year, pounds per hour);
- expected emissions reduction (tons per year);
- economic impacts (cost effectiveness);
- environmental impacts (includes any significant or unusual other media impacts (e.g., water or solid waste), and, at a minimum, the impact of each control alternative on emissions of toxic or hazardous air contaminants);
- energy impacts.

However, an applicant proposing the top control alternative need not provide cost and other detailed information in regard to other control options. In such cases the applicant should document that the control option chosen is, indeed, the top, and review for collateral environmental impacts.

III.D. STEP 4--EVALUATE MOST EFFECTIVE CONTROLS AND DOCUMENT RESULTS

After the identification of available and technically feasible control technology options, the energy, environmental, and economic impacts are considered to arrive at the final level of control. At this point the analysis presents the associated impacts of the control option in the listing. For each option the applicant is responsible for presenting an objective evaluation of each impact. Both beneficial and adverse impacts should be discussed and, where possible, quantified. In general, the BACT analysis should focus on the direct impact of the control alternative.

If the applicant accepts the top alternative in the listing as BACT, the applicant proceeds to consider whether impacts of unregulated air pollutants or impacts in other media would justify selection of an alternative control option. If there are no outstanding issues regarding collateral environmental impacts, the analysis is ended and the results proposed as BACT. In the event that the top candidate is shown to be inappropriate, due to energy, environmental, or economic impacts, the rationale for this finding should be

documented for the public record. Then the next most stringent alternative in the listing becomes the new control candidate and is similarly evaluated. This process continues until the technology under consideration cannot be eliminated by any source-specific environmental, energy, or economic impacts which demonstrate that alternative to be inappropriate as BACT.

III.E. STEP 5--SELECT BACT

The most effective control option not eliminated in step 4 is proposed as BACT for the pollutant and emission unit under review.