



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

SEP 21 2011

OFFICE OF
AIR AND RADIATION

The Honorable Fred Upton
Chairman
Committee on Energy and Commerce
U.S. House of Representatives
Washington, D.C. 20515-6115

Dear Mr. Chairman:

Thank you for your letter dated July 14, 2011, co-signed by two of your colleagues, posing questions about greenhouse gas rules the EPA has issued under the Clean Air Act, and EPA's consideration of future actions. As you know, the EPA is committed to continuing to make common-sense decisions regarding regulation of greenhouse gas emissions under the Clean Air Act and has focused its efforts on reducing emissions from the largest emitters. Enclosed are detailed answers to the questions set forth in your letter.

Thank you for your interest in this important subject matter. If you have any questions, please contact me or have your staff contact Tom Dickerson in EPA's Office of Congressional and Intergovernmental Relations at (202) 564-3638.

Sincerely,

A handwritten signature in black ink, appearing to read "Gina McCarthy". The signature is fluid and cursive, with a large initial "G" and "M".

Gina McCarthy
Assistant Administrator

Enclosures

cc: The Honorable Henry A. Waxman
Ranking Member

Response to Question 10

State-by-State Analysis of GHG Regulatory Authority¹

Table 1: State/Local Agencies Subject to the “Limitation of Approval of Prevention of Significant Deterioration Provisions Concerning Greenhouse Gas Emitting-Sources in State Implementation Plans” (Narrowing Rule)

State/Local Agency	Regulatory Changes Required	New Rules Issued (Effective at State Level)	Regulatory Process Complete	Status of Regulatory Process	Expected Completion
Alabama	Required revisions to state rules to conform language to EPA	Yes	Yes	Complete	N/A
California – Mendocino County	Required revisions to state rules to conform language to EPA	Yes	No	SIP submitted to EPA region for review on February 28, 2011. Partial approval effective July 5, 2011	Expected November 2011
California – North Coast Unified	Required revisions to state rules to conform language to EPA	Yes	No	SIP submitted to EPA region for review on February 28, 2011	Expected November 2011
California – Northern Sonoma County	Required revisions to state rules to conform language to EPA	Yes	No	SIP submitted to EPA region for review on February 28, 2011. Partial approval effective	Expected November 2011

¹ These tables provide state by state information on adoption of PSD rules involving GHG. EPA is in the process of compiling state by state information on adoption of Title V rules involving GHG.

State/Local Agency	Regulatory Changes Required	New Rules Issued (Effective at State Level)	Regulatory Process Complete	Status of Regulatory Process	Expected Completion
				July 5, 2011	
Colorado	Required revisions to state rules to conform language to EPA	Yes	No	SIP revision submitted to EPA region for review on May 25, 2011	Expected November 2011
Georgia	Required revisions to state rules to conform language to EPA	Yes	Yes	Complete	N/A
Indiana	Required revisions to state rules to conform language to EPA	Yes	No	Proposed rule published, comment period ended.	Expected September 2011
Iowa	Required revisions to state rules to conform language to EPA	Yes	No	Proposed approval drafted.	Expected October 2011
Louisiana	Required revisions to state rules to conform language to EPA	Yes	No	Awaiting state submission to EPA	Dependent on submission from state.
Maine	Required revisions to state rules to conform language to EPA	Yes	No	SIP submission expected from state by end of 2011	Dependent on submission from state
Maryland	Required revisions to state rules to conform language to EPA	Yes	No	SIP revisions submitted to region for review June 23, 2011	Expected December 2011
Mississippi	Required revisions	Yes	Yes	Complete	N/A

State/Local Agency	Regulatory Changes Required	New Rules Issued (Effective at State Level)	Regulatory Process Complete	Status of Regulatory Process	Expected Completion
	to state rules to conform language to EPA				
Missouri	Required revisions to state rules to conform language to EPA	Yes	No	Proposed approval being drafted by EPA Region	Expected November 2011
New Hampshire	Required revisions to state rules to conform language to EPA	Yes	No	Proposed approval published, comment period ended.	Expected September 2011
New Mexico	Required revisions to state rules to limit GHG regulation to large sources	Yes	Yes	Complete	N/A
North Carolina ²	Required revisions to state rules to conform language to EPA	Yes	No	Proposed approval drafted by EPA region.	Expected October 2011
Ohio	Required revisions to state rules to conform language to EPA	Yes	No	SIP submitted to EPA region for review 04/04/2011	Expected December 2011
Oklahoma	Required revisions to state rules to conform language to EPA	Yes	No	State expected to submit SIP revisions EPA in October	Dependent on timing of state submission.
Rhode Island	Required revisions	Yes	No	SIP submitted to	Expected November

² Local programs in North Carolina wait for state SIP approval before proceeding.

State/Local Agency	Regulatory Changes Required	New Rules Issued (Effective at State Level)	Regulatory Process Complete	Status of Regulatory Process	Expected Completion
	to state rules to conform language to EPA			EPA region for review January 18, 2011.	2011
South Carolina	Required revisions to state rules to conform language to EPA	Yes	No	State has not yet submitted SIP revision.	Dependant on timing of State submittal.
South Dakota	Required revisions to state rules to limit GHG regulation to large sources	Yes	No	SIP revision submitted to EPA region for review on June 20, 2011	Expected November 2011.
Tennessee ³	Required revisions to state rules to conform language to EPA	Yes	No	State has not yet submitted SIP revision.	Dependant on timing of State submittal.
Utah	Required revisions to state rules to limit GHG regulation to large sources	Yes	No	SIP revision submitted to EPA region for review on April 14, 2011	Expected November 2011
Vermont	Required revisions to state rules to conform language to EPA	Yes	No	SIP revision submitted to EPA region for review February 14, 2011.	Expected November 2011
Virginia	Required revisions to state rules to conform language to EPA	Yes	Yes	Complete	N/A

³ Memphis-Shelby County and Chattanooga-Hamilton County incorporate the state's rules by reference, so are waiting for final approval of the state's rules. Knox and Davidson County have submitted SIP revisions, which are currently under review by the EPA region.

State/Local Agency	Regulatory Changes Required	New Rules Issued (Effective at State Level)	Regulatory Process Complete	Status of Regulatory Process	Expected Completion
Wisconsin	Required revisions to state rules to conform language to EPA	No – Will be effective September 1, 2011	No	SIP will be submitted for review after effective in state	Expected December 2011

Table 2: State/Local Agencies Subject to the “Action to Ensure Authority to Issue Permits Under the Prevention of Significant Deterioration Program to Sources of Greenhouse Gas Emissions: Finding of Substantial Inadequacy and SIP Call” (SIP Call)

State/Local Agency	Regulatory Changes Required	New Rules Issued (Effective at State Level)	Regulatory Process Complete	Status of Regulatory Process	Expected Completion
Arizona – Pinal County	Revise regulations and submit SIP revision to provide authority to regulate GHG	No	No	FIP in place. Delegation agreement in process.	Delegation expected September 2011. Final SIP approval dependent on action by local program.
Arizona – Rest of State	Revise regulations and submit SIP revision to provide authority to regulate GHG	No	No	Delegated FIP in place	Final SIP approval dependent on State action.
Arkansas	Revise regulations and submit SIP revision to provide authority to regulate GHG	No	No	Federal Implementation Plan (FIP) in place. State in process of finalizing state rules	Dependent on timing of State submission.
California –	Revise regulations	Yes	Yes	Complete	N/A

State/Local Agency	Regulatory Changes Required	New Rules Issued (Effective at State Level)	Regulatory Process Complete	Status of Regulatory Process	Expected Completion
Sacramento Metropolitan AQMD	and submit SIP revision to provide authority to regulate GHG				
Connecticut	Revise regulations and submit SIP revision to provide authority to regulate GHG	Yes	Yes	Complete	N/A
Florida	Revise regulations and submit SIP revision to provide authority to regulate GHG	State is not in the process of changing State laws and/or regulations in order to allow them to regulate GHG emissions. Federal Implementation Plan (FIP) is in place.			
Idaho	Revise regulations and submit SIP revision to provide authority to regulate GHG	Yes	No	Submitted SIP revisions to region for review June 27, 2011	Expected December 2011
Kansas	Revise regulations and submit SIP revision to provide authority to regulate GHG	Yes	Yes	Complete	N/A
Kentucky – Jefferson County	Revise regulations and submit SIP revision to provide authority to regulate GHG	Yes	No	FIP in place. SIP revisions submitted, approval being drafted by region	Expected November 2011
Kentucky – Rest of	Revise regulations	Yes	Yes	Complete	N/A

State/Local Agency	Regulatory Changes Required	New Rules Issued (Effective at State Level)	Regulatory Process Complete	Status of Regulatory Process	Expected Completion
State	and submit SIP revision to provide authority to regulate GHG				
Nebraska	Revise regulations and submit SIP revision to provide authority to regulate GHG	Yes	Yes	Complete	N/A
Nevada – Clark County	Revise regulations and submit SIP revision to provide authority to regulate GHG	Yes	No	SIP revisions submitted to EPA region for approval.	Expected October 2011.
Oregon	Revise regulations and submit SIP revision to provide authority to regulate GHG	Yes	No	FIP in place, SIP revisions submitted to EPA region 5/4/2011.	Expected November 2011
Texas	Revise regulations and submit SIP revision to provide authority to regulate GHG	State is not in the process of and does not plan to change State laws and/or regulations in order to allow them to regulate GHG emissions. FIP is in place.			
Wyoming	Revise regulations and submit SIP revision to provide authority to regulate GHG	State is not in the process of changing State laws and/or regulations in order to allow them to regulate GHG emissions. FIP is in place.			

Abbreviations:

GHG – Greenhouse Gas

SIP – State Implementation Plan

FIP – Federal Implementation Plan

Responses to July 14, 2011 Upton et al letter

1. EPA has a number of petitions pending before it requesting that the agency undertake new rulemakings to regulate GHG emissions under the CAA. Please list all such petitions, and for each petition state:

a. The sectors of the economy potentially affected by the petition or request;

Combined response to a and b below.

b. The CAA authorities or program(s) that would be used for the requested regulation;

Since the April 2007 Supreme Court decision in *Massachusetts v. EPA*, 127 S. Ct. 1438 (2007), the EPA has received nine petitions requesting that we make endangerment findings and undertake rulemaking procedures using our authority under CAA section 211, 213, and 231. Below we list the petitioners, dates filed, and sectors potentially affected. A full discussion of these petitions can be found in the July 20, 2008 Advance Notice of Proposed Rulemaking (ANPR) issued by the EPA under the prior Administration (See 73 Fed. Reg. 44,399).

- Marine shipping vessels: Two October 2007 rulemaking petitions from the State of California and from Friends of the Earth (FOE), Center for Biological Diversity (CBD) and other groups, and one January 2008 petition from South Coast Air Quality Management District seeking GHG and black carbon standards under sections 211 and 213 from the following sectors: marine vessels and marine fuel.
- New nonroad vehicles/engines and rebuilt heavy-duty engines (HDEs): Two January 2008 rulemaking petitions from the State of California and other states and from the International Center for Technology Assessment, FOE and Center for Food Safety under sections 202 and 213 from the following sectors: new nonroad vehicles and engines, other marine categories, and rebuilt HDEs.
- Aircraft: Two late 2007 rulemaking petitions from the State of California and other states and from FOE, CBD, Natural Resources Defense Council and Oceana seeking GHG, black carbon and water vapor standards under section 231 from the aircraft sector.
- Vehicle fuels: July 2009 rulemaking petition from New York University Law School Institute for Policy Integrity seeking cap-and-trade system under sections 211 and 231 for GHG emissions from fuels used in motor vehicles, nonroad vehicles, and aircraft, (relevant to the fuels sector and the three mobile sectors just mentioned).

- Locomotives: September 2010 rulemaking petitions from CBD, FOE, and ICTA to address GHGs and black carbon under section 213 (a) (5).

In addition, the EPA has received two petitions requesting promulgation of new source performance standards (NSPS) under CAA section 111(b) and emission guidelines for existing sources under section CAA 111(d)) for greenhouse gases. These petitions are:

- September 2009 rulemaking petition from the Humane Society and other groups seeking NSPS listing, standards and emissions guidelines for GHGs and other pollutants from Concentrated Animal Feeding Operations (CAFOs).
- June 2010 rulemaking petition from the Sierra Club and other groups seeking NSPS listing, standards and emission guidelines for GHGs from coal mines.

c. Whether EPA has prepared any studies analyzing the benefits and costs of the requested regulation.

At this time the EPA has not granted any of these petitions to initiate notice-and-comment regulatory action on GHGs, and the Agency is currently in litigation on some of these petitions. Accordingly, it is too early to address the question of the costs and benefits of particular regulatory alternatives. If the EPA were to propose an economically significant rule for any of these categories, a cost-benefit analysis would be conducted, and a draft would be made available to the public for review and comment.

2. In the past, EPA has explored numerous potential mechanisms for regulating GHG emissions under the Clean Air Act. Please describe or provide a written copy of EPA’s current plans for issuing GHG regulations under the CAA (including any potential rules not subject to a petition), and for responding to the petitions to adopt GHG regulations. Include in your response:

Combined response to a, b and c below.

- a. EPA’s projected timetable for proposing and finalizing the regulations;**
- b. The sectors of the economy that will be affected; and,**
- c. The specific CAA programs to be used for regulation.**

Under two settlement agreements entered in December 2010, the EPA has committed to issuing performance standards for new sources under CAA section 111(b) and emission guidelines for existing sources under CAA section 111(d) for power plants and refineries. For power plants, the agreement (as modified) currently requires the EPA to sign a proposed rule by September 30, 2011, and to take final action with regard to the rule by May 26, 2012. The EPA has announced that we plan to seek an extension of the deadline with regard to this proposed rule. For

refineries, the settlement agreement requires the EPA to sign a proposed rule by December 10, 2011, and to sign a final rule by November 10, 2012.

The EPA has not established any timetable for proposing or finalizing any of the regulatory actions requested by any of the petitions listed in the response to question 1 above.

There have been some recent developments in litigation on the petitions listed above that relate to nonroad vehicles and engines, marine vessels, aircraft, or nonroad or aircraft fuels. The Center for Biological Diversity (CBD) and others filed a complaint in the U.S. District Court for the District of Columbia in June 2010, claiming that the EPA had unreasonably delayed in responding to petitions and in making endangerment determinations regarding three categories: marine vessels, aircraft, and nonroad. The EPA filed a motion to dismiss. In response to that motion, the Court ruled¹ on July 5, 2011, that CAA section 231 gives EPA an affirmative duty to make a finding with regard to whether GHG emissions from any class or category of aircraft cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare. The Court held, however, that the EPA is not required to make such a finding under CAA section 213 (for nonroad engines and vehicles). On July 27, the EPA responded to the petitioners' motion for summary judgment,² arguing it has not unreasonably delayed in responding to their petitions or in making a finding with regard to endangerment for aircraft GHG emissions. In that filing, the EPA committed to responding to the petitions within 90 days from the Court's order. The Agency represented to the court that any schedule for conducting a rulemaking to determine whether GHG emissions from any class or category of aircraft cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare would have to take into account the EPA's need to continue work in other high-priority GHG policy areas. Further, the EPA stated in its filing that the likely amount of time for such a rulemaking would be approximately 22 months from the time of initiation. A finding with regard to endangerment for aircraft GHG emissions would be separate from any potential standard-setting rulemaking.

3. Does EPA maintain it is currently legally compelled to adopt further GHG regulations under the CAA?

a. If yes, state:

i. The CAA programs under which EPA maintains it is now legally required to adopt GHG regulations;

¹ *Center for Biological Diversity, et al. v. U.S. EPA.* (No. 10-00985 (D.D.C.)), See Memorandum Opinion and Order of July 5, 2011 (Dkt No. 25) ("July 5 Order")

² *Center for Biological Diversity, et al. v. U.S. EPA* (No. 10-00985 (D.D.C.)), See Combined Memorandum in Opposition to Plaintiffs' Motion for Summary Judgment and In Support of EPA's Cross-Motion for Summary Judgment, filed July 27, 2011.

**ii. The basis for EPA's position that it is legally obligated to adopt such regulations;
and,**

iii. The timetable under which EPA intends to adopt such regulations.

The EPA believes that it was legally compelled to adopt GHG emission standards for light duty and new heavy duty motor vehicles and engines pursuant to CAA section 202(a). Section 202(a)(1) states that

“[t]he Administrator shall by regulation prescribe . . . standards applicable to the emission of any air pollutant from any class or classes of new motor vehicles or new motor vehicle engines, which in [her] judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare.”

The EPA found, pursuant to section 202 (a)(1), that six greenhouse gases in combination endanger both the public health and the public welfare of current and future generations. The EPA further found that the combined emissions of these greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas air pollution that endangers public health and welfare. See 74 Fed. Reg. 66496 (Dec. 15, 2009). Having made that endangerment finding, section 202(a)(1) establishes a mandatory duty for the EPA to issue standards for new motor vehicles and motor vehicle engines, since section 202(a)(1) states that the EPA “shall” issue such rules. See *Massachusetts v. EPA*, 549 U.S. 497, 533 (2007). The EPA finalized GHG standards for light-duty motor vehicles for model years 2012-2016 (see 75 Fed. Reg. 25323, May 7, 2010) and standards for new heavy-duty motor vehicles and engines (see 76 Fed. Reg. 57106, September 15, 2011). Strong support for the recently finalized heavy-duty rule has been expressed in the public comments, and in public statements, from virtually all of the affected industry and dealers, and from most of the environmental community.

In addition, as noted in the response to question 2 above, the EPA in December 2010 entered into two settlement agreements relating to the development of regulations under CAA section 111 for GHG emissions from power plants and refineries, respectively. For power plants, the agreement (as modified) currently requires the EPA to sign a proposed rule by September 30, 2011, and to take final action with regard to the rule by May 26, 2012. The EPA has announced that we plan to seek an extension of the deadline with regard to this proposed rule. For refineries, the settlement agreement requires the EPA to sign a proposed rule by December 10, 2011, and to sign a final rule by November 10, 2012.

As noted in the response to question 2 above, a recent decision by the Federal District Court for the District of Columbia in *Center for Biological Diversity v. EPA*, No. 10-00985 (D.C.D.C., July 5, 2011) held that the EPA is required, under CAA section 231, to make a finding with regard to whether GHG emissions from any class or category of aircraft cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare. The EPA is

currently under no mandatory timetable to make such a finding, or to take any other further action with regard to these emissions. However, as explained above, the Agency has made representations to the court with regard to the time frame within which it will respond to the plaintiff's petition for rulemaking and with regard to the time frame that would be required to conduct a rulemaking with regard to endangerment.

4. Pursuant to a press release issued on January 24, 2011, EPA announced that the agency, together with the Department of Transportation and the State of California, will be proposing fuel economy and greenhouse gas standards for model year 2017-2025 cars and light-duty trucks by September 1, 2011. The press release stated that "[p]rior to today's announcement, [the California Air Resources Board] announced its intention to propose greenhouse gas emissions standards for model years 2017 to 2025 in March of this year, while EPA and [the National Highway Traffic Safety Administration] were working on an end of September timeline for proposal." Our understanding is that the standards are currently scheduled to be proposed in September 2011 and finalized in July 2012.

a. What role does the State of California have in setting the standards?

The EPA and the National Highway Traffic Safety Administration (NHTSA) have been working closely with California in our efforts to develop federal GHG emission standards for model year (MY) 2017-2025 GHG and fuel economy standards, as requested by the May 21, 2010 Presidential Memorandum. Our shared goal is to continue the National Program, first established with the MY 2012-2016 standards issued in April 2010, so that automakers can build a single U.S. fleet of vehicles that meets the requirements of all programs. The EPA and NHTSA, in coordination with the California Air Resources Board (CARB), published an Interim Technical Assessment Report (TAR) in September 2010, which included an initial assessment of the technologies, strategies and underlying analyses that would be considered in setting standards for 2017-2025.³ Our efforts in collaboration with CARB were further discussed in the EPA and NHTSA's joint Notice of Intent (NOI) published in October 2010, a Supplemental NOI in December 2010, and a Supplemental NOI in August 9, 2011.⁴

b. Will there be three separate proposed regulations issued by EPA, NHTSA and the State of California?

The EPA and NHTSA plan to issue a joint Proposed Rulemaking for GHG and fuel economy standards for MY 2017-2025 vehicles in fall 2011. As the rulemaking for MY 2012-2016 standards, it will be a joint rulemaking, but there will be separate standards under the Clean Air Act for GHGs and under the Energy Policy and Conservation Act (EPCA) and the Energy Independence and Security Act (EISA) for the CAFE standards. CARB is planning to issue a

³ "Interim Joint Technical Assessment Report: Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards for Model Year 2017-2025," September 2010, available at <http://www.epa.gov/otaq/climate/regulations.htm>.

⁴ 75 FR 62739, October 13, 2010; 75 FR 76337, December 8, 2010; 76 FR 48758 (August 9, 2011)..

proposal in the same timeframe. As mentioned above, our shared goal is to continue the National Program, first established with the MY 2012-2016 standards issued in April 2010, so that automakers can build a single U.S. fleet of vehicles that meets the requirements of all programs.

c. Explain the basis for the Administration's decision to set standards for an 8-year period (2017-2025).

In the Presidential Memorandum of May 21, 2010, the President requested that the agencies work together to develop a national program that would "...produce a new generation of clean vehicles." The President specifically requested that the agencies develop "...a coordinated national program under the CAA [Clean Air Act] and the EISA [Energy Independence and Security Act of 2007] to improve fuel efficiency and to reduce greenhouse gas emissions of passenger cars and light-duty trucks of model years 2017-2025."⁵ The Memorandum recognized our country could take a leadership role in addressing the global challenges of improving energy security and reducing greenhouse gas pollution, stating that "America has the opportunity to lead the world in the development of a new generation of clean cars and trucks through innovative technologies and manufacturing that will spur economic growth and create high-quality domestic jobs, enhance our energy security, and improve our environment."

This timeframe allows more certainty to industry to support long-term planning and product plan development.

d. Explain how an 8-year period comports with the provisions of Section 102(b)(3)(B) of the Energy Independence and Security Act of 2007 which directs that the Secretary of Transportation may issue regulations "prescribing fuel economy standards for at least 1, but not more than 5, model years."

The EPA sets GHG standards under the Clean Air Act. This question should be directed to NHTSA.

5. Based on EPA documents, raising fuel economy standards to 56 miles per gallon in 2025 would increase the costs per vehicle by an average of \$2,100 to \$2,600 per vehicle.

- a. What would be the increase in average cost per vehicle by 2025 for the following vehicles classes?**
- i. Subcompact**
 - ii. Compact**
 - iii. Sedan**
 - iv. Crossover**
 - v. Minivan**
 - vi. SUV**

⁵ The Presidential Memorandum is found at: <http://www.whitehouse.gov/the-press-office/presidential-memorandum-regarding-fuel-efficiency-standards>.

vii. Pickup Truck

In the Technical Assessment Report (described in the response to Question 4.a.), the agencies did not report a breakdown of vehicle costs by vehicle segment. However, we did include estimates for all cars and all trucks. For the report's 5% per year reduction scenario (equivalent to 56 mpg if all reductions were from fuel economy technologies), the range of costs for all cars was \$1420 - \$2940, and for all trucks was \$1917 - \$3412, across the range of the four technology pathways evaluated.⁶ Fuel cost savings from the 2017-2025 standards are expected to be substantial. As noted in the response to question 7 below, the fuel savings over the life of the vehicles for the MY 2012 -2016 fuel economy and GHG standards are four times the incremental cost of the vehicles.

b. Would this increase be in addition to the average increase of \$948 per vehicle associated with EPA/NHTSA's Model Year 2012-2016 vehicles (published in May 2010)?

Yes, the costs presented in the Technical Assessment Report are incremental to the MY 2016 standards which are already in place.

6. In April 2011, the U.S. Energy Information Administration (EIA) stated: "Setting LDV fuel economy standards 6 to 14 years into the future is a difficult undertaking, given the uncertainties associated with technology availability and cost, consumer acceptance and willingness to pay for unfamiliar technology, and fuel prices. The availability and cost of advanced vehicle technologies are critical in determining the ability of manufacturers to meet more stringent standards, but there is a high degree of uncertainty regarding the cost and availability of key technologies so far into the future."

a. If the new EPA/NHTSA fuel economy standards proved not to be commercially feasible, what mechanism would be available to lower the standards?

The EPA and NHTSA discussed the issue of a mid-term review in the Supplemental Notice of Intent, published August 9, 2011, 76 FR 48758, at 48760, and Appendix A. Further details about a mid-term review will be included in the upcoming notice of proposed rulemaking.

7. In April 2011, EIA also projected that the new fuel economy standards would result in consumers deferring new vehicle purchases and utilizing older, less fuel-efficient vehicles.

EPA and NHTSA will be providing an explicit estimate of the projected impact on new vehicle prices in our upcoming proposal. It is important to note, however, that EIA stated that "While this measure attempts to quantify the potential impact of the increase in vehicle price on sales, it

⁶ See Technical Assessment Report, Table 6.5-4 through 6.5-10, pages 6-18 to 6-24; available at <http://www.epa.gov/otaq/climate/regulations.htm>.

is not intended to be inclusive of all the potential factors that could affect new vehicle purchase decisions made by consumers.” Specifically, EIA departed from its historical consideration of consumer fuel savings when calculating the impact of more stringent standards on future sales. Without stating a rationale, EIA did not consider consumer fuel savings when estimating the impact of higher vehicle prices on future sales. This means, for example, that EIA would project that a \$10 or \$100 increase in vehicle price would decrease sales even if the technology were to produce fuel savings many times those levels. This is inconsistent with both past practice at EIA and with the current market demand for high fuel economy vehicles. The fuel savings over the life of the vehicles for the MY 2012 -2016 fuel economy and GHG standards were four times the incremental cost of the vehicles.

a. Could increasing the costs by a several thousand dollars per vehicle price some buyers out of the new car market?

Combined response to a and b below.

b. What is the potential impact of the proposed new standards on low income households?

There will be two primary economic impacts of more stringent, future fuel economy and GHG emissions standards on new car buyers: a somewhat higher up-front price coupled with ongoing fuel savings over the life of the vehicle. While the EPA and NHTSA are still completing our analysis of projected vehicle price increases, we are confident that both the lifetime and 5-year consumer fuel savings, discounted to account for net present value, will exceed the projected vehicle price increases. It is also likely that consumers who buy a vehicle with a 5-year loan will benefit from positive cash flow immediately upon purchase as the monthly fuel savings exceed the incremental monthly loan payment.

c. What is the potential impact of the new standards on families that need larger vehicles?

Combined answer to c. and d. below.

d. What is the potential impact of the new standards on small businesses, including farmers, that need larger vehicles?

Future proposed standards will continue to be “footprint” or size-based, whereby smaller vehicles have more stringent numerical standards and larger vehicles have less stringent standards. All vehicle sizes must improve, but no vehicles are discouraged or forced from the market. Consumers will continue to have access to the same full range of vehicle choices that they have today. The EPA and NHTSA have heard from multiple vehicle manufacturers that it might be particularly challenging for larger vehicles, which have high cargo carrying and towing capacities, to meet the same rate of annual improvement, and we are addressing this issue as we develop the proposed rulemaking.

9. For the GHG preconstruction permits being processed by EPA or state or tribal permitting agencies under the CAA Prevention of Significant Deterioration (PSD) program:

a. How many GHG PSD permits have been issued since January 2, 2011?

The EPA is aware of seven GHG PSD permits issued since January 2, 2011. All of these permits were issued by state permitting authorities. They include:

- Nucor Steel, St. James Parish, Louisiana
- We Energies, Rothschild, Wisconsin
- PacifiCorp Lake Side Power Plant, Utah County, Utah
- MidAmerican Energy, Salix, Iowa
- Wolverine Power Co-op, Rogers City, Michigan
- Lafarge Cement, Ravena, New York
- Abengoa BoRefinery, Hugoton, Kansas

It should be noted that a permit issued in February 2010 by the Bay Area Air Quality Management District (BAAQMD), under a delegation agreement with the EPA, included voluntary PSD limits for GHG emissions. The BAAQMD issued the permit to Calpine for their Russell City Energy Center in Hayward, CA.

b. Of the GHG PSD permits that have been issued, how many are currently subject to administrative or judicial challenges?

The aforementioned Calpine permit was challenged to the EPA's Environmental Appeals Board (EAB). In November 2010, the EAB denied review and upheld the permit. In December 2010, the Chabot Las Positas Community College District appealed the decision to the Ninth Circuit Court of Appeals, and the appeal is currently pending review.

The EPA Administrator has received two petitions for objection to the Nucor permit filed under CAA Title V authority. One of the petitions addresses the GHG PSD issues presented in the permit.

The EPA does not have information regarding the status of administrative or judicial challenges under state administrative procedure and in state courts for the remaining permits identified above.

10. In the Notice of Proposed Rulemaking for the Tailoring Rule, EPA stated that certain States would be required to change their laws and/or regulations in order to authorize GHG regulations, and indicated that "EPA intends a separate regulatory action in the near future that will identify the [state implementation plans] in question and address them" by March 2010. However, EPA did not complete this activity until December 13, 2010, and did not publish its related Federal Implementation Plan Rule for GHG permitting until December 30, 2010.

a. Provide a State-by-State analysis of the States and local permitting authorities which are in the process of changing State laws and/or regulations in order to allow them to regulate GHG emissions under their PSD and Title V programs and to change their permitting thresholds to conform to the Tailoring Rule thresholds for GHGs. For each State and local permitting authority:

i. Describe what regulatory changes are needed and why; whether new rules have been issued; whether the regulatory process has been completed; and, if it has not been completed, the status of the regulatory process and when it is expected to be completed.

SEE SEPARATE FILE LABELED “RESPONSE TO QUESTION 10”

11. In the GHG Federal Implementation Plan Rule (GHG FIP Rule) announced December 23, 2010, and published in the Federal Register December 30, 2010, EPA stated that it "is working expeditiously to develop recommended approaches for EPA regions and affected states to use in addressing the shared responsibility of issuing PSD permits for GHG-emitting sources." EPA further stated that "in this interim period, we intend to delegate permitting responsibility to those states that are able to implement it and that request it. States that request and receive a delegation will be responsible for issuing both the GHG part and the non-GHG part of the permit, and that will moot commenter's concerns about split permitting."

a. What documentation is required and has it been developed?

The delegation agreement is an agreement signed by the EPA and the state environmental agency, under the authority of EPA regulations at 40 CFR 52.21(u). A delegation agreement specific to GHG PSD permits has been developed by EPA Region 9 for Arizona, and is available as a model that can be used for other states that wish to take delegation of the GHG PSD program.

b. How long does the delegation process take to complete?

The State of Arizona received delegation in three months. Other states could be expected to receive delegation in a shorter time using the agreement that was developed for Arizona as a model. Each state/local agency has its own approval process which could affect the length of the process.

c. What is the status of the delegation process for each State affected by this rule?

The State of Arizona has a GHG Federal Implementation Plan (FIP) delegation agreement in place. Separately, the local program for Pinal County, Arizona, has requested delegation.

Completion of that delegation agreement is expected this summer. To our knowledge, no other states or local programs have requested delegation.

12. For PSD permitting in States where there is split permitting (between EPA and State or tribal permitting authorities) because of the new GHG permitting requirement:

a. What is the appeals process for challenges to the permits?

Where the EPA and a state with an EPA-approved PSD program are each issuing a portion of a required PSD permit, the appeals process would be determined on the basis of both state and federal law. The appeals process for the EPA-issued part of the permit for GHGs will be the same as for any other PSD permit issued by the EPA. Under EPA regulations at 40 C.F.R. 124.19, the first step of the appeals process is for parties to file a petition for an administrative review by the EPA's Environmental Appeals Board (EAB). The EAB is the final decision maker on administrative appeals. If the EAB denies review and does not remand the permit for correction of an error, parties who requested the administrative appeal may petition a federal court (the appropriate United States Court of Appeals) for review of the EPA's final action, although it is rare that any parties do so. This appeal process also applies when a state lacks an approved PSD program but issues a portion of the PSD permit under delegated federal authority.

The decision on a state permit issued for pollutants other than GHGs would be subject to any administrative appeals process established under state law and then appealable to state court after such administrative remedies are exhausted.

b. Will appeals of PSD permits for which there has been split permitting potentially proceed on multiple tracks and in multiple federal and State forums?

If there are challenges to both the part of the permit issued by the State, and to the GHG portion issued by the EPA, there should be no more than two appeal tracks. If the state permit is issued under an EPA-approved PSD program, there would be one appeal track in the applicable state forum and one federal appeal track. The applicable federal and state processes are described above.

Where a state that lacks an approved PSD program issues a portion of the PSD permit under delegated federal authority, there would be no appeal track in any state forum. Under the latter scenario, it is possible parties could file separate petitions with the EAB for review of the state and EPA actions, resulting in two appeals tracks under the federal procedures. However, if this situation were to arise, the EPA would seek to coordinate the timing of these actions and have the appeals consolidated into a single track before the EAB and, in the rare event that the EAB decision was appealed, in federal court.

c. What is the maximum length of time that the appeals process could take for appeals relating to the GHG permitting in a PSD permit?

It is difficult to predict how long the entire appeals process could take. The EAB takes approximately 5 months, on average, from the time a petition is filed, to receive and review briefs, hold oral argument, and render a comprehensive written decision in a PSD case. However, some complex cases have taken more time. In almost all cases, the EAB's decision resolves the disputes and concludes litigation, avoiding protracted federal court review. If a permit is then appealed to the federal courts, the time required depends on the length of time required for briefing and the number of other matters pending on the Court's docket. The EPA does not have information on how long state appeals processes may take.

d. Will an applicant be able to proceed with new construction pending appeal of a permit?

The applicant would likely not be able to proceed with construction until administrative appeals to the permit are resolved, whether those challenges are to the portion of the permit issued by the state, or to the portion issued by the EPA. Under EPA regulations, an administrative appeal prevents the PSD permit from becoming effective until the appeal is resolved and any errors identified by the EAB are corrected. A request for an administrative appeal in states likely has the same effect, but will depend on the specifics of the state regulations. Construction may not begin until both permits are effective. If an effective EPA permit is subsequently appealed to federal court, which rarely happens, the applicant could proceed with construction unless the court issues a stay of the agency action pending appeal. Similar principles should apply in state court, but will depend on the specifics of state law.

13. In October 2009, a "Climate Change Work Group" was formed within EPA's Clean Air Act Advisory Committee to discuss and identify for EPA the major issues and potential barriers to implementing the PSD program under the CAA for GHGs. The charge for the Work Group anticipated eventual recommendations for EPA.

- a. The Climate Change Work Group produced an interim "Phase I" report to the EPA's Clean Air Act Advisory Committee (CAAAC) in February 2010. Was there a final report or report on potential barriers to implementing the PSD program under the CAA? Were there final recommendations to the EPA resulting from this group's work? If recommendations have been made, how has EPA implemented those recommendations?**

The CAAAC issued a Phase II report in August 2010 that addresses how the best available control technology (BACT) process can be used to encourage the development of energy efficient processes and technologies, and the permitting of innovative emissions reduction measures. The Phase II report is available on the CAAAC website at http://www.epa.gov/air/caaac/pdfs/bact_phase_II.pdf. The CAAAC recommendations have been

useful in informing the development of the “PSD and Title V Permitting Guidance for Greenhouse Gases” issued in November 2010 (and updated in March 2011), as well as the answering additional GHG permitting questions that EPA continues to receive (see <http://www.epa.gov/nsr/ghgqa.html>).

- b. Provide all correspondence and records of communications between EPA and members of the Climate Change Work Group, the CAAAC, and any subcommittees of CAAAC concerning the work of the Climate Change Work Group.**

The formal correspondence and final documents transmitted between EPA and the Clean Air Act Advisory Committee (CAAAC) entities can be accessed at the following sites:

<http://www.epa.gov/oar/caaac/climatechangewg.html> (Multiple documents are available at this site.)

<http://www.epa.gov/air/caaac/climate/charge.pdf>

http://www.epa.gov/air/caaac/pdfs/ghg_permitting_activities.pdf

http://www.epa.gov/air/caaac/pdfs/phase_II_report.pdf

http://www.epa.gov/air/caaac/pdfs/ICT_Background_Presentation_to_CAAAC.pdf

http://www.epa.gov/air/caaac/pdfs/Climate_Change_Work_Group_Report.pdf

<http://www.epa.gov/air/caaac/pdfs/ccworkgroup.pdf>

<http://www.epa.gov/oar/caaac/climate/NSRBACTReview20091006.pdf>

http://www.epa.gov/oar/caaac/climate/2010_02_PresentationtoCAAAC.pdf

Because EPA staff served as work group coordinators, there also were numerous emails to arrange meetings, distribute work group member ideas, etc. Due to the volume, these emails are not provided here. The EPA is prepared to work with your staff to accommodate your interest in this subject matter.

14. On November 10, 2010, EPA issued its “Best Available Control Technology” (BACT) Guidance for greenhouse gases from stationary sources. This guidance was issued in final form, and EPA provided only a “few weeks” for public comment and restricted such comments to “any aspect that contains technical or calculation errors or where the guidance would benefit from additional clarity.”

- a. Provide copies of all comments on the BACT Guidance and all summaries of those comments prepared by EPA staff or contractors.**

All comments submitted on the EPA's "PSD and Title V Permitting Guidance for Greenhouse Gases" released on November 10, 2010 can be accessed at www.regulations.gov under docket EPA-HQ-OAR-2010-0841. A separate enclosure provides a table summarizing those comments. The summary, prepared by EPA contractors, is titled "GHG Permitting Guidance Comment Summary.pdf."

b. Is EPA planning further changes to the BACT Guidance based on the comments received?

At present, the EPA is not planning further changes to the GHG Permitting Guidance document. Since the March 2011 update of the GHG guidance, the EPA has posted on the web implementation Q&A's that address several issues related to the permitting of GHGs (see <http://www.epa.gov/nsr/ghgqa.html>). Thus far, we feel permitting authorities have been successful in following the guidance to issue GHG permits. We remain committed to working closely with permitting authorities on individual, site-specific issues that may not be explicitly covered by our guidance. Where we identify a need for additional Q&A's or other responses on specific issues, we plan to consider the comments received that speak to the issue(s) under consideration.

Furthermore, the EPA has issued a number of white papers which summarize available information on control techniques and measures to reduce GHG emissions from various industries. Most recently, the EPA issued a white paper on GHG reduction strategies for municipal solid waste landfills. These white papers can be found at <http://www.epa.gov/nsr/ghgpermitting.html>.

15. Although EPA is defending its Tailoring Rule and expects to prevail in the litigation, the rule is subject to numerous legal challenges. If it is not upheld in the federal courts, what will happen to those smaller sources that EPA concluded in the Final Tailoring Rule would, absent the Tailoring Rule, be subject to new permitting requirements?

a. Would tens of thousands of stationary sources become subject to new PSD permitting requirements?

Combined response to a, b and c below.

b. Would six million or more facilities become subject to new Title V permitting requirements/

Combined response to a, b and c below.

c. Does EPA have a plan for addressing this outcome, should the Tailoring Rule be overturned?

The EPA believes that the Tailoring Rule has a strong legal basis and will defend the rule vigorously in the pending litigation.

It is difficult to provide an informative response to your “what if” question, because the answer could vary considerably depending on the specifics of the outcome of the litigation.

For example, the main argument advanced by industry and some States in their challenges to the Tailoring Rule is that the rule should be vacated because the Clean Air Act’s prevention of significant deterioration (PSD) program should be triggered based only on sources’ emissions of pollutants for which the EPA has established National Ambient Air Quality Standards (NAAQS), and not based on emission of GHGs. If the Court were to agree with this argument and vacate the Tailoring Rule on this ground, then no sources would trigger the preconstruction permitting requirements of the PSD program based on their GHG emissions, not even the largest emitters of GHGs.

Alternatively, it is possible that the Court could remand the Tailoring Rule for the EPA to, for example, cure a deficiency in the administrative record supporting the rule, without vacating the Rule. In that scenario, the Tailoring Rule would remain on the books and would continue to limit the applicability of PSD and Title V only to the sources at or above the Tailoring Rule thresholds.

16. When Administrator Jackson initiated the regulatory development process for making her Endangerment Finding for greenhouse gases, did EPA as part of its Action Development Process prepare an Analytic Blueprint for developing the finding?

- a. If yes, provide any preliminary Analytic Blueprint and detailed Analytic Blueprint prepared for or relating to the Endangerment Finding or its Technical Support Document.**

Combined response to a and b below.

- b. If no such documents exist, explain why the documents were not prepared when the Administrator initiated the regulatory development process.**

In 2007, EPA’s Office of Transportation and Air Quality initiated a rulemaking to determine whether greenhouse gas emissions from sources covered under CAA section 202(a) cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare and if so, to set new standards for certain motor vehicles. As part of this effort, the EPA held an early guidance meeting and outlined a “plan for developing the Endangerment Finding.” Management briefings regarding the development plan communicated the topics covered in an Analytic Blueprint, including the approach, scope, underlying science and review mechanisms for the technical support document (TSD) associated with the endangerment finding. In 2009,

EPA management separated the elements of the original action into separate actions (i.e., endangerment finding followed by proposed vehicle emission standards). Hence, the 2009 action was not a new action that required the workgroup to start over. In 2009, EPA management chose to proceed using the same approach for the TSD identified in 2007, as the approach laid out in 2007 remained valid. If further information would be helpful to understand this process, the EPA can work with your staff to address that interest.

17. When Administrator Jackson initiated the regulatory development process for making her Endangerment Finding, what regulatory or legal analyses were performed or provided to assist or inform her decision-making? Provide all such analyses and briefing or decision memoranda, for the Administrator or for the EPA Assistant Administrator for Air and Radiation, relating to the Endangerment Finding.

The regulatory development process was initiated under the prior Administration. There are no responsive documents because Administrator Jackson did not initiate the regulatory development process.

18. On May 19, 2009, approximately one month after the Endangerment Finding was proposed and before the public comment period had closed on the proposed finding, President Obama announced at a Rose Garden event that his Administration would be issuing proposed GHG standards under the CAA for cars and trucks. In particular, he stated that as part of an historic agreement, the Department of Transportation (DOT) and EPA would be jointly adopting new national efficiency standards for cars and trucks, and that "a series of major lawsuits will be dropped in support of this new national standard."

a. Prior to the May 19, 2009, announcement, were the President, the Secretary of Transportation, and other key decision-makers in the Administration made aware by EPA that an agreement committing the agency to establish GHG emissions standards under the CAA for cars and trucks could automatically trigger new permitting requirements for stationary sources?

Combined response to a and b below.

b. Were the President, the Secretary of Transportation, and other key decision-makers in the Administration made aware by EPA that new operating permit requirements could be triggered for potentially millions of stationary sources, and new preconstruction permit requirements for potentially tens of thousands of stationary sources?

The link between the GHG light-duty vehicle rule and stationary source permitting requirements was discussed thoroughly in the Advance Notice of Proposed Rulemaking (ANPR): Regulating Greenhouse Gas Emissions Under the Clean Air Act, published in the Federal Register on July 30, 2008. After publication of the ANPR, there was substantial public discussion and press coverage of this issue.

The final GHG Tailoring Rule, published on June 3, 2010, in the Federal Register, was developed using in large part the same legal theories that were laid out in the ANPR (pp. 44497-44514). The CAA permitting program emissions thresholds for criteria pollutants such as lead, sulfur dioxide and nitrogen dioxide, are 100 and 250 tons per year (tpy). While these thresholds are appropriate for criteria pollutants, they are not feasible for GHGs without first having developed measures to streamline PSD and Title V applicability, because GHGs are emitted in much higher quantities.

Without the Tailoring Rule, the lower emissions thresholds would have taken effect automatically for GHGs on January 2, 2011, and numerous small sources would have been subject to permitting requirements.

c. Did EPA, prior to the May 19, 2009, announcement, prepare any assessment of the potential economic costs and employment impacts for stationary sources of this agreement? If yes, was this information shared with the President and other key decision-makers, including the Secretary of Transportation?

Prior to the May 19, 2009, announcement, the EPA did not know the form or the stringency of any stationary source standards it would propose or finalize. Therefore, there was no draft standard upon which to conduct an economic analysis or an analysis of benefits to public health and welfare. The EPA will conduct economic analyses, including analyses of costs and benefits, as part of the rulemaking process under section 111 for power plants and refineries. As with other rules, these analyses will be made available for public comment along with the proposed rules.

d. According to a White House press release referenced above, Administrator Jackson said that "The President brought all stakeholders to the table" to reach the agreement announced on May 19, 2009.

- i. Were any stakeholders representing stationary sources present during the formulation of the agreement announced on May 19, 2009? If yes, please identify those stakeholders and when and where consultations with these stakeholders occurred in advance of announcement of the settlement.**

Stakeholders that were required to meet the standards under the GHG vehicle rule were brought to the table. Leaders in the environmental community, the United Auto Workers, the State of California and other states also supported the announcement.

e. Did EPA share with any of the stakeholders or participants in the development of the agreement announced on May 19, 2009, any information about the potential implications of the agreement for stationary sources? If so, when did EPA share such information and with whom did EPA share that information? Please provide copies of any documents that were shared relating to stationary source implications.

As stated in response to 18b, the link between the GHG gas light-duty vehicle rule and stationary source permitting requirements was discussed thoroughly in the Advance Notice of Proposed Rulemaking (ANPR): Regulating Greenhouse Gas Emissions Under the Clean Air Act, published in the Federal Register on July 30, 2008. After publication of the ANPR, there was substantial public discussion and press coverage of this issue.

19. According to EPA's interpretation of the CAA, the regulation of GHGs from light-duty vehicles automatically triggered stationary source permitting requirements under EPA's Prevention of Significant Deterioration (PSD) and Title V programs for preconstruction and operating permits. Given this interpretation, in formulating the Light-Duty Vehicle Rule, why did EPA not analyze the full potential costs to stationary sources of complying with PSD and Title V requirements for GHG emissions?

The EPA conducted the economic analyses required by statute or by Executive Order. E.O. 12866 requires EPA to estimate the economic impacts of certain proposed and final regulations. The requirements for stationary sources to obtain PSD permits and Title V permits are statutory requirements not subject to the analysis requirements of the executive order.⁷ As noted in the response to question 22 below, EPA did conduct an economic analysis of the proposed and final Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule. This rule reduced permitting burdens that, in the absence of the rule, would have fallen on permitting authorities and sources.

In addition, note that any cost estimates of “full potential costs” would have been highly speculative. To estimate the control costs for stationary sources undergoing Clean Air Act permitting, the EPA would need to know (1) the numbers and types of large stationary emitters that would be seeking to undertake major pollution-increasing construction projects, (2) the nature and timing of those projects, and (3) the level of control that state permitting authorities would determine on a facility-by-facility basis as best available control technology for GHGs, considering cost and other statutory factors. Much of this information was unavailable. Moreover, the EPA is sensitive to the likelihood that companies with large facilities would strongly object if they were required to disclose their plans over the foreseeable future for undertaking large, pollution-increasing construction projects.

20. Since issuing the Endangerment Finding, EPA published its Tailoring Rule which concluded that once the agency began regulating GHG emissions under its Light-Duty Vehicle Rule, it would automatically trigger new PSD permitting requirements for approximately 82,000 facilities annually (compared to 280 permits currently issued annually), and new Title V permitting requirements for 6.1 million facilities (compared to approximately 14,700 currently issued each year).

⁷ In the light-duty vehicle rule, EPA discussed issues related to stationary source permitting at 75 Fed. Reg. 25402, and Response to Comment 7-66.

a. Was Administrator Jackson aware at the time she was considering moving forward with the Endangerment Finding that so many stationary sources could be impacted by the finding? When was she made aware that so many stationary sources could be impacted by the finding?

Combined response to a and b below.

b. Provide all documents prepared for the Administrator or the Assistant Administrator for Air and Radiation relating to the permitting implications associated with issuing a positive Endangerment Finding and the regulatory actions that would flow from that finding.

Administrator Jackson was well aware, in the process leading up to making the Endangerment Finding, of the implications for the PSD and Title V programs of regulating greenhouse gas emissions from new vehicles and engines under Title II of the CAA. As indicated above, these implications already had been discussed in the context of the Advance Notice of Proposed Rulemaking (ANPR): Regulating Greenhouse Gas Emissions Under the Clean Air Act, published in the Federal Register on July 30, 2008. As discussed above, the Tailoring Rule is intended to address precisely these PSD and Title V implications. The proposed Tailoring Rule was signed on September 30, 2009, months before the Endangerment and Cause or Contribute Findings were signed (on December 7, 2009). The proposed and final Tailoring Rule and supporting analyses discuss these issues in greater detail. The Regulatory Impact Analysis for the final Tailoring Rule can be accessed at <http://www.epa.gov/ttn/ecas/regdata/RIAs/riatailoring.pdf>. The EPA will work with your staff to accommodate any further interest in this subject.

21. EPA, in a Fact Sheet accompanying its Tailoring Rule, states that the agency is planning to look at smaller sources of GHGs and that by April 30, 2016, EPA will have completed a study and that the agency "may decide that successful streamlining will allow us to phase in more sources, but we may also decide that certain smaller sources need to be permanently excluded from permitting."

a. Upon what specific legal authority can EPA rely to decide "that certain smaller sources need to be permanently excluded from permitting"?

In the preamble for the final Tailoring Rule, the EPA answered this question as follows:

“While committing to future action, we do not decide in this rule when the phase-in process will ultimately end, or at what threshold level, because all that depends on uncertain variables such as our progress in developing streamlining approaches and in permitting authorities’ progress in developing permitting expertise and acquiring more resources. We may continue the phase-in process with further rulemaking(s) after 2016. Alternatively, we may make a final determination through future rulemaking that, under a Chevron analysis, accounting for the “absurd results” doctrine, PSD and/or title V do not

apply to GHG sources that, while small and relatively inconsequential in terms of GHG contribution, are above the statutory tonnage thresholds for these programs, and thereby end the phase-in process.”⁸

b. Upon what specific legal authority would EPA rely to implement that decision?

As noted in the excerpt from the preamble for the final Tailoring Rule quoted above, we would implement any such decision through a further rulemaking.

22. What studies or analyses has EPA undertaken concerning the benefits and costs of regulating GHGs under the CAA (excluding analyses on legislative proposals)? Please include in your response any studies or analyses relating to the amount of emissions reductions that could be expected, and the potential impacts on U.S. jobs, economic growth or competitiveness in energy-intensive and trade-exposed industries in the United States, Provide all such studies and analyses.

The EPA has conducted economic analyses for each of the national CAA GHG rules that applies to emissions sources: the 2012-2016 light-duty vehicle GHG rule (proposed and final), the heavy-duty vehicle GHG rule (proposed and final), and the Renewable Fuel Standard Program (proposed and final). All the economic analyses included benefit-cost analyses. For both the light-duty and heavy-duty vehicle rules, the EPA performed economy-wide side analyses, which were included in the rulemaking docket, of the effects of the rules on GDP and personal consumption. For the light-duty vehicle rule, which was a joint rulemaking with the National Highway Traffic Safety Administration (NHTSA), NHTSA estimated employment impacts. For the heavy-duty vehicle rule, the EPA developed a qualitative employment analysis. (Web links for accessing these analyses are listed below.)

The EPA also conducted economic analyses for the proposed and final Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule. This rule reduced permitting burdens that, in the absence of the rule, would have fallen on permitting authorities and sources.

Proposal: <http://www.epa.gov/ttnecas1/regdata/RIAs/riaghtailoring092109.pdf>

Final: <http://www.epa.gov/ttn/ecas/regdata/RIAs/riatailoring.pdf>

The EPA also is conducting economic analyses in conjunction with planned proposed rules for GHG from EGU and from 2017-2025 light-duty vehicles. As with other EPA rules, these analyses will be made available for public comment along with the proposed rules.

With respect to possible future regulations, it would be speculative to attempt to estimate the benefits and costs in advance of decisions regarding whether or not to issue such regulations, and if so, what degree of control to require. Each of these decisions requires amassing and considering technical and cost data in light of the relevant language in the law. The EPA cannot reliably prejudge decisions that will be made years in the future based on future technical, legal

⁸ 75 Fed. Reg. at 31,572/1-2

and policy analyses and future insights that will be gained from public comments during the rulemaking process.

Web addresses -- Economic analyses for heavy-duty vehicle GHG rule

- Regulatory Impact Analysis (RIA) for final heavy-duty vehicle GHG rule -- <http://epa.gov/otaq/climate/documents/420r11901.pdf>
- Both the benefit-cost analysis and the employment analysis are in the final rule preamble and RIA. The reference to the economy-wide modeling is on p. 57315 of the preamble -- <http://www.gpo.gov/fdsys/pkg/FR-2011-09-15/pdf/2011-20740.pdf>
- Draft Regulatory Impact Analysis (DRIA) for the proposed heavy-duty vehicle GHG -- <http://www.epa.gov/otaq/climate/regulations/420d10901.pdf>

Web addresses -- Economic analyses for light-duty vehicle GHG rule 2012-2016

- EPA RIA for final light-duty vehicle GHG rule for 2012-2016 -- <http://epa.gov/otaq/climate/regulations/420r10009.pdf>
- NHTSA RIA -- http://www.nhtsa.gov/staticfiles/rulemaking/pdf/cafe/CAFE_2012-2016_FRIA_04012010.pdf. The employment analysis is pp. 354-357.
- The reference to economy-wide modeling is on p. 25510 of the preamble -- <http://edocket.access.gpo.gov/2010/pdf/2010-8159.pdf>
- EPA DRIA for the proposed 2012-2016 light-duty vehicle GHG rule -- <http://www.epa.gov/oms/climate/regulations/420d09003.pdf>

Web addresses -- Renewable Fuel Standard Program (RFS2)

- RIA for final RFS2 -- <http://www.epa.gov/otaq/renewablefuels/420r10006.pdf>
- RIA for proposed RFS2 -- <http://www.epa.gov/otaq/renewablefuels/420d09001.pdf>

23. What studies or analyses has EPA undertaken of the potential cumulative economic impacts of its GHG rulemakings taken together with other CAA rulemakings? Provide all such studies and analyses. If EPA has not done a cumulative analysis, state whether there are any path to undertake such an evaluation, and the timetable for the completion of such an evaluation.

The EPA conducts a regulatory impact analysis for each economically significant proposed and final rule pursuant to Executive Order 12866. Generally speaking, each such cost-benefit analysis includes in the base case the other rules that have preceded it. In other words, the starting point for analysis of each rule takes into account the effects of previous rules, and examines the incremental costs, and the incremental benefits (quantifiable and unquantifiable), of the rule being proposed for comment. This analysis helps to illuminate whether the regulatory action is beneficial for the welfare of society overall. A regulatory impact analysis of a rule requires considerable resources; the EPA does not typically conduct supplemental cost-benefit analysis for groups of rules.

As noted above, with respect to potential future regulations, it would be speculative to estimate the benefits and costs in advance of decisions regarding whether or not to issue such regulations,

and if so, what degree of control to require. Each of these decisions requires amassing and considering technical and cost data in light of the relevant language in the law. The EPA cannot reliably prejudge decisions that will be made years in the future based on future technical, legal and policy analyses and future insights that will be gained from public comments during the rulemaking process.

24. In the Tailoring Rule announced on May 13, 2010, EPA states that "[promulgating the [Light Duty Vehicle Rule] now provides important advantages because the [stationary] sources that would be affected by the initial steps [of the Tailoring Rule] are responsible for most of the GHG emissions from stationary sources."

a. Has EPA conducted a study examining or quantifying the benefits to the public health and welfare of regulating GHG emissions from the stationary sources? If yes, provide the results of any such analysis.

The EPA will conduct economic analyses, including analyses of costs and benefits, as part of the rulemaking process under section 111 for power plants and refineries. As with other rules, these analyses will be made available for public comment along with the proposed rules.

The EPA did not provide a cost-benefit analyses for applying the BACT requirement under the PSD program to GHGs. BACT control levels for sources will be established by permitting authorities after considering energy, environmental, and economic impacts and other costs. The EPA provided guidance on the analytical process for states to determine BACT, and provided information on a range of technologies and controls for key categories, but did not require or recommend any particular technology or level of control as presumptive BACT for any source category.

As noted above, it would be speculative to estimate the benefits and costs of possible future regulations to control GHGs under the Clean Air Act in advance of decisions regarding whether or not to issue such regulations, and if so, what degree of control to require. Each of these decisions requires collecting and considering technical and cost data in light of the relevant language in the law. The EPA cannot reliably prejudge decisions that will be carefully made years in the future based on future technical, legal and policy analyses and future insights that will be gained from public comments during the rulemaking process.

b. How much of the potential benefits from regulating GHG emissions are expected to come from reductions in traditional pollutants versus reductions in greenhouse gases?

The EPA will conduct economic analyses, including analyses of costs and benefits, as part of the rulemaking process under section 111 for power plants and refineries. As with other rules, these analyses will be made available for public comment along with the proposed rules.

c. Does EPA contend that there is a health or welfare emergency or necessity justifying commencing GHG regulation of stationary sources under the PSD and Title V permitting programs as of January 2, 2011? If yes, please provide the results of any such analysis.

We stated the following in the preamble for the final Tailoring Rule, as part of justification for the rule, in responding to commenters who argued that the EPA should defer promulgating the Light Duty Vehicle Rule in order to defer triggering PSD and Title V applicability to GHG-emitting sources:

“Congress wrote the CAA to, among other things, promote the public health and welfare and the productive capacity of the population. CAA §101(b)(1). EPA’s path forward does just this. Thus, proceeding with the endangerment/cause or contribute findings, the LDVR, and with PSD and title V through the phase-in approach of the Tailoring Rule maximizes the ability of EPA to achieve the Congressional goals underlying sections 202(a) and the PSD and title V provisions, and the overarching CAA goal of protecting public health and welfare. Congress called for EPA (1) to determine whether emissions from new motor vehicles contribute to air pollution that endangers, (2) if that the determination is affirmative, to issue emissions standards for new motor vehicles to address the endangerment, and (3) to implement the PSD and Title V program to address similar emissions in their permitting program as another tool to address the air pollutant at issue. Delaying both the LDVR and PSD/title V implementation, as commenters have called for, would run directly counter to these Congressional expectations”.⁹

Thus, we stated that because we had found that GHG emissions cause or contribute to GHG air pollution that may reasonably be expected to endanger public health and welfare, delaying regulation of motor vehicles and motor vehicle engines, as well as large stationary sources, would mean delaying the reduction of those emissions and therefore delaying addressing those public health and welfare concerns.

25. In the Notice of Proposed Rulemaking for the Tailoring Rule, EPA states that "[t]he EPA recognizes the importance of reducing climate change emissions for all sources of GHG emissions including those sources afforded regulatory relief in this rule and plans to address potential emission reductions from these small sources using voluntary and energy efficiency approaches."

⁹ 75 Fed. Reg. at 31576/1-2.

a. How does EPA define "small source"? Provide examples of the types of sources that would be covered.

In this context, we consider a “small source” to be a source with GHG emissions that are below the Tailoring Rule thresholds

b. What are the "voluntary and energy efficiency approaches" EPA is planning for these small sources?

These approaches refer to the EPA’s existing voluntary programs, such as the ENERGY STAR program.

c. Has EPA performed a cost-benefit study or analysis of such approaches to determine their appropriateness before committing to this policy?

EPA’s climate protection programs are a very cost-effective approach for reducing U.S. GHG emissions. Moreover, it is clear from sources such as the IPCC’s Fourth Assessment Report and McKinsey’s study, “Reducing Greenhouse Gas Emissions: How Much at What Cost?” that there are still great untapped opportunities for these programs to capture additional GHG emissions reductions —meaning they will continue to be cost-effective far into the future. Through 2009 every federal dollar spent on these partnership programs through 2009 resulted in:

- Reductions in greenhouse gas emissions of 1.0 metric ton of carbon equivalent.
- Savings for partners and consumers of more than \$75 on their energy bills.
- Private sector investment of more than \$15.

c. What statutory authority does EPA intend to rely on for using such approaches?

The ENERGY STAR program was established by EPA under the authority of the Clean Air Act Section 103 (g). In the Energy Policy Act of 2005, Congress formally authorized the ENERGY STAR program to identify and promote energy efficient products and buildings.

d. Does EPA intend to work with the Small Business Administration prior to acting to obtain input from potentially affected businesses?

Because the EPA simply encourages these sources to participate in existing voluntary programs, it is not necessary to work with the Small Business Administration in this regard.

COMMENTS ON THE DRAFT GHG GUIDANCE		12/10/10	
BIN 1 Editorial comments (Minimal issues with formatting or wording that clearly don't need to be corrected in the near term)			
		Extensive comments	
		Other commenters	
1	In order to avoid misinterpretation or use of this guidance out of context, request that EPA distinguish whether use of the term “ultimate efficiency” in this document refers to energy efficiency or pollutant control efficiency (see p33). Further, the Cabinet requests that EPA specifically refer to energy efficiency or pollutant control efficiency rather than using the general term “efficiency” or terms such as “ultimate efficiency” that have no regulatory definition.	KY DEP-0082/0091 pp6-7	
2	The flowchart in Appendix D of the guidance document is entitled, GHG Applicability Flowchart – Existing Sources (on or after July, 1, 2011) . However, Table II-B on page 15 of the guidance document, which contains the same information, is entitled Summary of PSD Applicability Criteria for Modified Sources of GHGs. It would be clearer if the table and the flowchart titles were consistent and used the same word: either “modified” or “existing”.		KY DEP-0082/0091 p8
3	To clarify that CCS is available as an option for all fossil fuel-fired power plants, not just those with high-purity streams , on pp33-34 the phrase "for large CO2-emitting facilities including fossil fuel-fired power plants and industrial facilities with high-purity CO2 streams" should be revised by placing a comma after the word "plants."		Sierra Club-0090.2 p8

COMMENTS ON THE DRAFT GHG GUIDANCE		12/10/10	
BIN 2 Comments that may need to be addressed now (Inconsistencies in guidance; requests for clarification)			
		Extensive comments	
		Other commenters	
1	CCS: Clarify that consideration in Step 1 should be confined to instances where the option for enhanced oil recovery is available.		Dominion-0012.1 p2
2	CCS: Clarify that BACT determinations should not require new or modified units be made "capture ready." Will affect the overall efficiency of the unit's current operations and also runs the risk of locking in obsolete or design modifications that could become stranded or never used.		Dominion-0012.1 pp2-3
3	CCS: Clarify that a BACT determination should not require the relocation of a proposed facility based on potential or future geographic proximity to future storage sites.		Dominion-0012.1 p3
4	CCS: (If CCS is to be considered "available" under Step 1 of BACT) Streamline consideration of CCS under Step 2 by clarifying: 1) what preconditions must be met before CCS would be considered to be "technically feasible" for a source type; and 2) what level of documentation is required to demonstrate technical infeasibility.	EEl-0094.1 pp7-8	
5	CCS: Acknowledge the significant costs and regulatory uncertainty of carbon dioxide (CO ₂) transportation and storage, and do not overstate the ability of enhanced oil recovery (EOR) operations to mitigate the costs of CCS.	EEl-0094.1 pp8-9	
6	On p. 30 of the Guidance, EPA "encourages permitting authorities to use the discretion available under the PSD program to include the most energy efficient options in BACT analyses for both GHG and non-GHG regulated NSR pollutants. " To date, EPA and state permitting authorities have not comprehensively and consistently considered emissions unit efficiency in BACT determinations for non-GHG pollutants. Thus, this statement in the draft guidance is inconsistent with current practices and should be deleted. Such a change represents a significant shift in EPA's interpretation of its BACT regulations and, as such, can be accomplished only through notice and comment rulemaking.		Am. Elec. Power-0016.1 pp2-3 Southern Co.-0023.1 p3 FirstEnergy-0031.1 p2 UARG-0088.1 p9
7	GHG vs. Other Pollutant Emission Tradeoffs The guidance asserts that, if a trade-off materializes between GHGs and non-GHG regulated pollutants, permitting authorities should focus on the amount of GHG emission reductions that may be gained or lost by employing a particular control strategy and how that compares to the level of collateral increase for other regulated NSR pollutants. EPA itself admits that there is no technically valid way to attribute any particular degree of climate change to a particular source. Accordingly, there is no basis for suggesting that the amount of GHG emission reductions gained or lost by a particular control measure is a suitable metric. In addition, given that CO ₂ is emitted from power plants in significantly greater quantities than non-GHG constituents, the relative changes in GHG emissions will in most cases always be greater for GHGs than for non-GHGs. Permitting authorities should be free to make their own reasoned judgments when faced with a trade off in the BACT context. This presumption in favor of GHG emissions reductions should be deleted from the guidance.		Dominion-0012.1 p3 Am. Elec. Power-0016.1 p3 UARG-0088.1 p11
8	EPA has not provided guidance on how to balance local versus global considerations (i.e., GHG vs. other pollutants). For example, provide guidance on how GHG BACT, which often addresses CO ₂ emissions, should be balanced against CO BACT, which often operates by converting CO to CO ₂ .		Nucor-0079.1 pp5-6
9	EPA should provide specific guidance that where proposed GHG BACT and an NSPS or SIP provision for a non-GHG pollutant conflict , the NSPS prevails.		Nucor-0079.1 p6

		Extensive comments	Other commenters
10	The Guidance provides little clarity on how conflicts between conventional pollutants and GHG emissions should be considered. Specific examples provided.		CIBO-0059.1
11	EPA Needs to Clarify What Constitutes Available Control Technologies for New and Existing Sources under Step One of the BACT Process. (1) The actual "redefining the source" issue is ultimately at the discretion of the permitting authority. As part of this Guidance Document, EPA should explicitly provide clarification on what specific control technologies are "available" for new versus existing facilities to reduce the need for regulated entities to rely on the discretion of individual permitting authorities. The list of available technologies for new facilities is anticipated to be more extensive because these facilities have the opportunity as part of a BACT review to potentially redefine their source. However, existing sources under any contemplated modification (retrofit) would not be able to consider using available technology that would redefine the existing source. (2) EPA should emphasize throughout the Permitting Guidance that clean fuels or fuel switching should be considered in the BACT analysis only if such action does not redefine the source.		MidAmerican-0037.1 p4 ACC-0047.1
12	Cost Effectiveness. (1) EPA should provide permitting authorities with greater guidance on cost effectiveness values by articulating a specific level or range of cost effectiveness values that would constitute the upperbounds of reasonableness , at least until permitting authorities develop more experience and are able to draw from determinations included in the RBLC. EPA might look to its recent Boiler MACT proposal for valuable precedent where it proposed to define cost effective measures as those that have a payback period of 2 years or less. (2) Guidance provides no meaningful dollar per ton restrictions on BACT - Appropriate dollar per ton cut-offs are necessary to set reasonable limits on EPA's intrusive BACT energy efficiency analysis. (3) EPA Should Clearly Set a Range of Acceptable Cost-Effectiveness Numbers - ACC is concerned that, without a range of cost-effectiveness guidance for GHGs, different permitting authorities may use widely different cost numbers. (4) EPA should establish fixed C/E criteria, as well as the cost impact per unit of production (pg. 36). 4. Pg. 55, last paragraph.	SMA/SSINA-0043.1 pp5-6 Nucor-0079.1 p5 Ohio Coal Assoc-0044 ACC-0047.1 APF-0051.1 FSI-0052.1	Air Products and Chemicals, Inc-0055.1 ACCCE-0068.1 p3
13	EPA should provide guidance on emissions leakage in internationally competitive industries. In evaluating whether a particular control technology reduces emissions and is cost effective on a \$/ton of GHGs basis, permitting authorities should consider (in Step 4) whether the controls will impact the competitiveness of the facility and perversely result in increased emissions from less efficient overseas producers. For global pollutants like GHGs, the traditional BACT process for local pollutants should be modified to allow for consideration of international impacts.		SMA/SSINA-0043.1 p6
14	Including GHGs in the PSD and Title V programs is a fundamental change which may require additional guidance related to dealing with program implementation across multiple jurisdictions and even across country borders where USEPA has no jurisdiction.		US Steel-0021.1 pp1-2
15	Clarify that where an existing facility already has adopted energy efficiency measures, those measures may be classified as BACT. Further clarify that BACT does not require the addition of yet more energy efficiency measures unless such additional energy efficiency gains are significant and result in greater GHG emissions efficiency at the source, as opposed to elsewhere in the grid.		Nucor-0079.1 p4
16	Clarify that only "significant" units require GHG BACT for new facilities. Suggests a threshold of perhaps 5% of total energy use at the facility from an operation or group of similar operations.		Nucor-0079.1 p5

		Extensive comments	Other commenters
17	<p>Discussion of Step 4 of Appendix G is inadequate and diverges from existing regulation and historic BACT interpretation and implementation. (1) The cost-effectiveness comparison of flare and engine options in the Appendix G discussion is cursory and a gross oversimplification. (2) Should illustrate how EPA would advise a permitting agency to reconcile control of GHG emissions with collateral increases in criteria pollutants. (3) Presents a BACT decision in direct conflict with existing regulations. (4) states that it is to include both direct and indirect considerations but that the economic and energy analyses are to focus only on direct impacts. (5) EPA should not be recommending how available strategies for reducing GHG emissions from a stationary source may affect secondary GHG emissions from off-site locations. NSWMA suggests that EPA remove the last sentence in this section, in the Step 4 discussion, and the Appendix G discussion to make it consistent with other appendices. (couple of paragraphs)</p>	<p>Waste Mgt-0075.1 pp2-6 The Amalgamated Sugar Co.-0007 NSWMA-0049.1</p>	
18	<p>Appendix G. (1) Application of Top-Down BACT Analysis in Appendix G Should be Substantially Revised; (2) BACT example - Municipal Solid Waste Landfill - Identifying All Available Controls: The identified bullets for control of captured landfill gas are not the options that are typically considered under NSPS (Part 60 Subpart WWW) for a new, large MSW landfill. (3) Appendix G BACT Example for MSW landfill - Example problematic. A. Example is a new facility whereas the majority of landfill projects that permitting authorities will encounter, are not. Most projects will be landfill expansion projects that will most likely already have NSPS capture and control in use. Requests that EPA advise permitting authorities to recognize existing systems as BACT for expansion projects and not to mandate changes to their control systems. B. Example is a proposed landfill with a PTE in excess of 100,000 tpy CO₂e. For new facilities, initially, landfill gas quantities will be very small and otehr control mechanisms may be utilized, which need to be recognized and accepted as BACT. C. New site will not generate sufficient quality and quantity to fuel any type of renewable project. D. The consideration of diverted emissions in inconsistent with BACT precedent and application for other industries. Requests that EPA allow diverted emissions to be used in determining PTE and PSD applicability. E. Example does no comment on the possibility of triggering PSD for other pollutants while controlling GHGs (e.g., renewable energy projects may trigger PSD for CO, while flares would not). Requests that EPA recognize cover soil application as BACT for a new facility until a LFG collection and control system is practical.</p>	<p>Waste Mgt-0075.1 pp6-8; 11-14 NSWMA-0049.1 DSWA-0063.1</p>	
19	<p>PSD Major Classification. (1) Need to clarify if being a major PSD source for CO₂e makes a source a PSD major source for all pollutants. (2) PSD Applicability for GHGs (New Sources): Pg. 12 discussion re: PSD applicability for GHGs focuses only on GHGs and is therefore confusing and deficient. Should address non-GHG pollutants in narrative/flow diagrams/appendices.</p>	<p>FSI-0052.1</p>	<p>RAandMS-0009</p>
20	<p>Netting/Calulation of Emissions Increases and Decreases. (1) Clarification of Fleet Needing Needed/Allowed? (2) Additional guidance is needed on monitoring and how to calculate creditable increases and decreases - Although the guidance provides a general netting example, it does not go into the details of how emissions were calculated.</p>	<p>Iowa Dept. of Natural Resources-0010.1 SCDHEC-0073.1</p>	
21	<p>Lack of Consistency in Mass Basis Applicability (inconsistent with 52.21)</p>	<p>Iowa Dept. of Natural Resources-0010.1</p>	
22	<p>The EPA GHG guidance document creates a significant emission increase threshold based on emissions of GHGs on both a mass basis and CO₂e basis that is in contradiction to the clear regulatory language. The EPA GHG guidance document lays out EPA's dual mass and CO₂e threshold to determine if a project's GHG emissions are "significant" in multiple places within the document. However, this contradicts the clear regulatory language in the Final Tailoring Rule.</p>	<p>Georgia Dept. of Natural Resources-0026.1</p>	

		Extensive comments	Other commenters
23	Requests ranking (similar to AP-42) of GHG emission factors.	Iowa Dept. of Natural Resources-0010.1	
24	Need to add definitions (e.g., for "ultra-supercritical"), need to clarify if EPA intends to allow CO2 to be used as a surrogate for all GHGs, need to clarify the basis for compliance with GHG BACT emission limits to be determined by methods other than direct emission measurement.....more...	Georgia Dept. of Natural Resources-0026.1	
25	Emission Limits/Averaging Periods. (1) EPA Guidance on Averaging Periods Should be No Shorter than a 12-Month Rolling Average; (2) Even a 12-month rolling sum is too short an averaging period for GHGs. EPA's own climate change science indicates, if anything, that longer averaging periods would provide an appropriate connection between GHG emissions and the impacts of concern, since climate change is a long-term, not a short-term, issue. (3) EPA should not impose 30-day or 365-day averaging periods - EPA's own climate change science indicates, if anything, that longer averaging periods would provide an appropriate connection between GHG emissions and the impacts of concern since climate change is a long-term, not a short-term, concern. (4) If emission limits are set for BACT, these limits must consider and be based on reasonable averages based on all operating scenarios vs. being based on efficiencies determined at optimum operating conditions. While efficiency limits may be possible for certain pieces of equipment it would be extremely difficult to set limits for a complex operation so we encourage the agency to consider other approaches. (2 paragraphs) (5) If emission limits must be imposed, they should be based on longer-term averages—not on a 30-day or 365-day rolling average basis. (2 paragraphs)	NPRA-0033.1 ACC-0047.1 RFA-0050.1 APF-0051.1 CIBO-0059.1	
26	Appendix F. (1) The example in Appendix F seems to imply that a facility must install every technology that is feasible, has a reasonable payout, and will add to the overall efficiency. This could lead to an almost limitless list of modifications that could be made. That is a very high burden and will often be untested in practice.	NPRA-0033.1	

		Extensive comments	Other commenters
27	<p>Title V Permits. (1) Requests that EPA clarify that T5 permits currently in the renewal process that won't be issued prior to 1/2/2011 need only provide a description of the GHG emission sources at the facility that cause the facility to have a PTE equal to or greater than 100,000 tpy CO₂e and 100 tpy GHGs mass basis, unless a PSD review is required as part of the renewal application process for the facility in question; (2) EPA should clarify the initial T5 applicable requirements for GHGs, e.g., provide an example of an applicable T5 requirement for GHGs and a corresponding T5 permit condition that meets the standard set forth by the permitting requirement. (2) Title V Guidance should be expanded - The section addressing Title V permitting is not covered adequately in the Permitting Guidance. EPA should expand this section and focus on those facilities that are now only subject to Title V permitting due solely to GHG emissions. (3) Under the Title V program, sources identify their applicable requirements and provide emissions information needed to determine those requirements, e.g., if a source claims it is not subject to a requirement because its emissions are too low, then emissions information is needed. Otherwise, emission estimates are not required. Should the permitting authority have a question about applicable requirements, it may ask for the information, but the information is not required in the first instance in the application. The guidance should be revised to make this point clear. (4) As EPA explained in White Paper No. 1, emissions information in permit applications is only needed to determine applicable requirements. The guidance's statement that it is "possible" that some sources will need to address GHG-related information in their applications even if they will ultimately not have any GHG-specific applicable requirements in the permit is incorrect. The guidance should be revised to make this point clear. Finally, RFA agrees that the GHG Reporting Rule is not a part 70 applicable requirement and should not be included in Title V permits. (5) Pg. 55, last paragraph. Discussion and example incorrect. The T5 process does not require a PSD applicability analysis for a physical change. Title V can only contain currently applicable requirements. (6) For Title V purposes, EPA should clarify that if a source that is minor for all other pollutants has submitted a complete application to legally limit GHG PTE to below the 100,000 TPY threshold prior to July 1, 2012, that the source is not required to file a Title V application by that date. (7) Need to clarify that when existing Title V sources are required to submit GHG information. SC recommends that sources do not need to update their Title V permits till renewal.</p>	<p>SRS-0038.1 ACC-0047.1 RFA-0050.1 APF-0051.1 FSI-0052.1 CIBO-0059.1 SCDHEC-0073.1</p>	
28	<p>Baseline actual emissions/contemporaneous period determination. (1) The Agency fails to provide any guidance to either stationary sources or permitting agencies regarding how the baseline actual emission and contemporaneous period are to be determined when GHGs only became subject to regulation on January 2, 2011 and, as such, GHG emissions data may not be available. (2) Best available data. Because GHG emissions are not yet a regulated pollutant, EPA should clarify that the best available data on GHG emissions should be allowed for use in establishing baseline actual emissions for a project (i.e. the 24-month consecutive period in the past 10 years).</p>	<p>TFI-0041.1 CIBO-0059.1</p>	
29	<p>EMS. The guidance suggests that a permit can also include conditions requiring the use of Environmental Management Systems (EMS) focused on energy efficiency as part of BACT. EPA should delete this sentence from the guidance. Guidance at 47. The use of a "system" is not BACT and creates the potential for a moving BACT target with unbounded costs in the future (a few paragraphs). (2) The guidance suggests that a permit can also include conditions requiring the use of Environmental Management Systems (EMS) focused on energy efficiency as part of BACT. EPA should delete this sentence from the guidance. Guidance at 47. (2 paragraphs of discussion).</p>	<p>ACC-0047.1 RFA-0050.1 APF-0051.1</p>	

		Extensive comments	Other commenters
30	Step 1 Available Control Technologies. Step 1 Available Technologies is overly broad - The guidance's approach of eliminating nothing until the very last step of the BACT process simply serves to make GHG BACT an unmanageable process that will discourage sources from undertaking projects that reduce emissions and improve efficiency	RFA-0050.1	
31	Concerned with one example (pg. 31). (1) Example that permit applicants should consider combined cycle combustion turbines as an option in lieu of simple cycle turbines provides incomplete guidance to permitting authorities by ignoring some practical considerations in gas turbine selection. The guidance should reflect the fact that simple cycle gas turbine systems (notably those that utilize advanced technology such as intercooling) are highly efficient (long paragraph discussion). Request that EPA make a correction related to how technologies like IGCC should be evaluated. (Makes specific recommendations)	GE-0054.1	
32	BACT Review Process. (1) The proposed guidance advocates solely a "top-down" BACT analysis in Step 4 (Economic, Energy and Environmental Impact) of the traditional 5-Step BACT determination. Air Products believes permitting authorities should have greater flexibility to employ alternate approaches , such as "bottom-up" or "incremental effectiveness" analysis techniques... (2) RMA recommends that EPA follow the traditional top-down BACT process as established in the 1990 New Source Review 1990 Workshop Manual. (2.5 pgs)		Air Products and Chemicals, Inc-0055.1 RMA-0067.1
33	Presumptive BACT. Consideration of Presumptive BACT for Common Sources - Air Products encourages EPA to take a stronger position in defining what feasible energy efficiency measures would be considered "presumptive" or "model" BACT for common GHG emissions sources, such as boilers and fired heaters.		Air Products and Chemicals, Inc-0055.1
34	The Guidance Should Not Prejudge the Outcome of Studies Designed to Determine whether Further Phase-In Delays of the GHG Permitting Programs Will Be Required After 2016 - EPA impermissibly opines that emissions from smaller sources (those not currently within the Tailoring Rule thresholds) are not likely ever to be covered by the GHG permitting programs even after 2016 , while simultaneously admitting that the outcomes of studies to determine whether further phase-in delays will be necessary are not yet known. Guidance at 3, 4.		Center for Biological Diversity-0058.1
35	Appendix H and in the white papers. Guidance could go further to ensure that CHP and waste heat recovery reach their full potential by clarifying that these technologies should be considered in Step 1 of BACT for all permits. Guidance should clarify that these technologies are available for all sources and that GHG BACT represents the floor...not the ceiling in the absence of NSPS. (4 pgs)		Alliance for Industrial Efficiency-0071.1 USCHPA-0093.1
36	Remove discussions on State discretion and focus on providing clear, straightforward guidance.		SCDHEC-0073.1
37	EPA did not address how to approach fuel mixes in the BACT analysis. There are situations in which an existing facility or a new facility may propose a higher-emitting secondary or tertiary fuel as a supplement to a cleaner fuel (provides examples). SC requests that EPA include guidance on how cleaner burning fuels should be viewed in these cases. The EPA should include 2 examples: 1 - an example of an existing major source that has applied to add a higher-polluting secondary or tertiary fuel, and 2 - an example of a new source that is requesting to have several fuels, including some higher-polluting options, available in their mix.	SCDHEC-0073.1	
38	The EPA must provide clarity on applying BACT to existing non-modified sources. The EPA recognizes in the guidance that a BACT review is not required for equipment or units that are not modified as part of a project. However, in the Pulp and Paper White Paper, it is implied that, based on many of the suggested emerging technologies for reducing GHGs, that the permitting authorities could pursue BACT requirements for non-modified sources.	SCDHEC-0073.1	
39	Need to clarify that delayed construction may require a PSD permit.	SCDHEC-0073.1	

		Extensive comments	Other commenters
40	Need to clarify whether insignificant activities need to be addressed. More guidance is needed on what may be considered "trivial" or "insignificant" source of GHG emissions. The EPA needs to provide a list of GHG-emitting equipment that is typically found at industrial sites and state at what size, capacity, production, etc...that GHG emissions do not need to be calculated or described.	SCDHEC-0073.1	
41	GHGs will continue to be considered "regulated NSR pollutants," but will not become "regulated air pollutants" under Title V (see paragraph 3 on page 51 of the guidance document), seriously impairing the regulatory framework of Title V programs. For example, an activity that is currently approved as an insignificant activity for all regulated air pollutants may at the same time result in significant GHG emissions. This causes the current authorization for use of "insignificant activities" under Title V programs to become problematic for GHGs. Since there is no "de minimus" threshold for GHG emissions and no guidance about how to track and analyze potential GHG emissions from sources, there is no means to ensure that contemporaneous netting is properly performed. The document does not provide concrete guidance concerning such issues, and without such clearly defined procedures, permitting authorities can expect difficult and chaotic implementation of the GHG rules.	KY DEP-0082/0091 p3	
42	With respect to the need for a state agency to obtain and maintain emissions inventories of GHGs, the guidance document is not consistent with traditional approaches to ensure compliance with potentially applicable requirements. The guidance seems to discourage the development of emission inventories to track both actual emissions and as a resource to determine past actual emissions when a source becomes subject to a threshold.	KY DEP-0082/0091 p3	
43	"Actual construction" vs. permit issuance for Step 2 of the Tailoring Rule: inconsistency between Tailoring Rule preamble and Guidance Document. The difference between these two interpretations is immense. Step 2 should be based on the permit issuance date since 1) it reduces regulatory uncertainty, 2) it is simpler for permitting authorities to implement and to communicate to industry and the public, 3) the "begin actual construction" concept was not included in the proposed Tailoring Rule with the opportunity for comment, and 4) the usage of the "begin actual construction" concept would potentially subject projects to PSD that were permitted as minor sources prior to finalization of the Light Duty Vehicle GHG rule.	KY DEP-0082/0091 p4 GA DNR-0026.1	
44	Request that the EPA clarify or provide further guidance on the amount of energy consumption that would be considered "largest" (see pp 32-33 of guidance). Is this in terms of a percentage of a facility's total energy consumption? What are the thresholds and cutoffs for equipment that EPA would recommend for further review: 10, 20, 30, 40, or 50 percent?		KY DEP-0082/0091 p6
45	If a BACT control generates CO2e emissions while controlling a PSD pollutant, would that make the control device subject to PSD for CO2e? For example, flares, which create CO2e emissions while being and established BACT control for other pollutants. Also, some flares use methane purges.		KY DEP-0082/0091 p7
46	Since methane is now a pollutant that is subject to PSD review, uncertainties are raised concerning compliance demonstration and quantifying emissions for sources that operate flares fueled by methane and/or utilizing a methane purge. This will likely have an effect on the BACT determination process for new facilities where a flare is a possible control option. Request that EPA specifically address how new and existing sources utilizing flares (or evaluating the possible use) account for or quantify methane emissions (including methane slip) from flares and how to demonstrate compliance with emission limitations for methane from flares.	KY DEP-0082/0091 p8	
47	Language on page 46 indicates that the permitting authority is responsible for "defining the form of the BACT Limits." The absence of clear federal guidance for BACT leaves major issues up to state permitting agencies. This has the potential of encouraging the regulated community to propose, and for states to approve, many experimental BACT determinations, resulting in many legal challenges to these questionable determinations.		KY DEP-0082/0091 p8

		Extensive comments	Other commenters
48	The guidance document states that “If an applicant is unable to provide to the permitting authority’s satisfaction an adequate demonstration for one or more control alternatives, the permitting authority should proceed to establish BACT and prepare a draft permit based on the most effective control option for which an adequate justification for rejection was not provided.” The document should emphasize that in the absence of adequate justification for a control device the agency cannot issue a permit.		KY DEP-0082/0091 p8
49	At the top of page 47, the guidance document states that “. . . metrics should focus on longer-term averages (e.g. 30- or 365- day rolling average) rather than short-term averages (e.g. 3- or 24-hr rolling average).” EPA should provide states with the tools necessary to determine and convert emission limitations with different averaging periods. (Specific questions asked.)	KY DEP-0082/0091 p9	
50	EPA’s regulation of GHG emissions means that the installation of flue gas desulfurization systems (scrubbers) could trigger NSR and add to the difficulty of meeting the compliance deadlines proposed in the Transport Rule. EPA must provide guidance to the electric power sector so that it can meet the SO2 reduction requirements under EPA’s proposed Transport Rule	ACCCE-0068.1 pp2, 5	
51	What actions must an existing facility that already holds a Title V permit take upon becoming a new major source of regulated greenhouse gases on or after July 1, 2011 by operation of law (i.e., without a particular modification to the facility) and when must those actions be taken? Clear guidance on this question is important in light of the 14,700 existing facilities that currently hold a Title V permit (for criteria pollutants and hazardous air pollutants). §70.7(f)(1)(i), which requires permitting authorities under certain circumstances to reopen permits when additional requirements become applicable to an existing Title V source, is not clearly relevant because such sources are not necessarily subject to additional applicable GHG requirements. Also, as a practical matter, permitting authorities rarely, if ever, reopen Title V permits under §70.7(f)(1)(i) because they would constantly be reopening permits to incorporate the frequent changes to environmental regulations. The permitting authorities clearly don’t have the resources to reopen, process and reissue up to 14,700 Title V permits.	Baker & McKenzie LLP-0086.1 pp1-3	
52	Guidance on remanded permits that were “issued” before 1/2/11 is needed to clarify that such permits must be re-issued after January 2, 2011, and therefore cannot escape GHG permitting requirements.		Sierra Club-0090.2 p1
53	Clarification of Prerequisites for Electing the Actual-to-Potential Test. Consistent with historic approach under the 1992 WEPCO Rule, clarify that if a source fails to satisfy the pre- and post-change recordkeeping (and when applicable, reporting) requirements for the actual-to-projected-actual test, it must calculate emissions increases according to the actual-to-potential test.		Sierra Club-0090.2 p1
54	The Guidance’s references to “conservative engineering estimates” and “safety factors” in setting BACT emissions limits are inconsistent with the BACT definition , and could encourage BACT emission limits to be set at far weaker levels than the emission levels that a technology is capable of achieving. These references should be revised.	Sierra Club-0090.2 pp6-8	
55	To be consistent with the Tailoring Rule and Endangerment Finding, guidance should advise permit-writers to carefully consider in Step 3 how to maximize emissions reductions by assessing suites of technologies that may control different combinations of the constituent GHGs , rather than focusing only on the final CO2e-adjusted emissions of the source.		Sierra Club-0090.2 pp8-9
56	To be consistent with past guidance and decisions, the guidance document should stress that collateral benefits must be evaluated at Step 4 in all cases. Ignoring the collateral benefits of more stringent control options may lead permitting authorities to eliminate those options from consideration without an adequate evaluation of their impacts. This is important because GHG control choices can have important collateral environmental benefits (such as the reductions in hazardous air pollutant emissions often associated with switching from coal to cleaner fuels like gas) .	Sierra Club-0090.2 p9	

COMMENTS ON THE DRAFT GHG GUIDANCE		12/10/10	
BIN 3 Comments on approach that have been resolved or are not related to the Guidance Document			
(Issues on GHG regulation; aspects of guidance that have been resolved; legal issues; comments on sector-specific technical documents; other)			
		Extensive comments	Other commenters
Applicability			
1	Allow and/or clarify issues related to project netting (in general or for energy efficiency projects specifically)	Am. Iron and Steel Inst.-0025.1 pp3-5	FirstEnergy-0031.1 p2 Progress-0081.1 p2 RFA-0050.1 Air Permitting Forum-0051.1 Air Products and Chemicals-0055.1 CIBO-0059.1 UARG-0088.1 p3
2	Include off-site emission reductions in applicability determinations for energy efficiency projects		Am. Iron and Steel Inst.-0025.1 pp5-6 US Steel-0021.1 p2
3	Energy efficiency measures that result in increased utilization should not trigger PSD. At power plants, such improvements will generally result in both lower CO2 emissions per MWh and lower dispatch costs, which could result in additional hours of operation. Since efficiency measures are BACT, emissions associated with utilization increases attributable to efficiency projects should be excluded as demand growth.	Oglethorpe-0040.1 p3 UARG-0088.1 p12	
4	EPA Should Exempt Renewable Sources. Existing geothermal facilities in the U.S. will be required to obtain Title V permits as a result of the Tailoring Rule and the interpretation provided in this Guidance Document. These sources are not required to report their GHGs. What will the applicable Title V requirements be (if there is no reporting, monitoring, and/or recordkeeping)? How exactly would a renewable energy facility undergo a BACT analysis? Since the level of GHG emissions from a geothermal facility is highly dependent on the nature of the underlying geothermal resource (which is extremely limited in specific geographic locations and conditions), will a permitting authority be forced to deny a permit for a more gaseous geothermal resource for a lower emitting resource?	MidAmerican-0037.1 pp5-6	
BACT			
5	Projects Designed to Recover Waste Heat or Process Gases and/or CHP Should be Presumed to Constitute BACT	Am. Iron and Steel Inst.-0025.1 p6	Weyerhaeuser Company - 0046.1 Alliance for Industrial Efficiency-0071.1 USCHPA-0093.1

		Extensive comments	Other commenters
6	Fundamental Redesign of Sources (redefining the source) in the BACT process is inappropriate (and guidance needs to be more definitive)	Am. Iron and Steel Inst.-0025.1 pp6-8 Dominion-0012.1 p3 SMA/SSINA-0043.1 pp3-4 Nucor-0079.1 pp3-4 NPRA - 0033.1 NEDA/CAP-0035.1 NCDEQ-0042.1 UARG-0088.1 pp6-7	Am. Elec. Power-0016.1 p3 Southern Co.-0023.1 p2 Oglethorpe-0040.1 p2 Progress-0081.1 pp3-4 API - 0030.1 ACC-0047.1 RFA-0050.1 Air Permitting Forum-0051.1 Air Products and Chemicals-0055.1 CIBO-0059.1 NMA-0062.1 AECT-0083.1 pp1-2
7	EPA should discard the “redefining the source” concept. All potentially available control options must be considered in Step 1 of the BACT analysis; any exclusion for "redefining the source" must be narrowly focused on the source's product or scenarios analogous to the unique situation recognized by the EAB in its Prairie State opinion.	Sierra Club-0090.2 pp3-6	
8	The reviewing authority (RA) should not be able to require a particular design of a given technology over another. BACT should be determined based upon overall emissions performance, which includes emission control practices and equipment.		Dominion-0012.1 p3
9	Fuel Switching to a cleaner fuel should not be an “available” control option	Air Permitting Forum-0051.1	Am. Iron and Steel Inst.-0025.1 pp8-9 Dominion-0012.1 p3 Oglethorpe-0040.1 p2 Progress-0081.1 p4 The Fertilizer Institute - 0041.1 NCDEQ-0042.1 CIBO-0059.1 RMA-0067.1 ACCCE-0068.1 p4
10	A full analysis of fuel switching as an available control option is required under Step One of the BACT analysis	Center for Biological Diversity-0058.1	
11	Clean Fuel/Redefining the Source - It is incorrect that in “most” cases that natural gas would be redefining the source for a coal-fired power plant	ANGA-0045.1	Encana Natural Gas, Inc-0061.1 NMA-0062.1
12	EPA's interpretation of " clean fuels " is incorrect.	Ohio Coal Assoc. - 0044.1 NMA-0062.1	

		Extensive comments	Other commenters
13	Consideration of a cleaner fuel of the same type in the BACT process does not give RA unfettered authority to force fundamental process changes (many add that can't dictate type of coal)	Gulf Coast Lignite Coalition-0078.1 pp2-4 UARG-0088.1 pp7-8	Dominion-0012.1 p3 FirstEnergy-0031.1 p2 Oglethorpe-0040.1 p2 Progress-0081.1 p4 Ohio Coal Assoc. - 0044.1 AECT-0083.1 p2 ACCCE-0068.1 p4
14	Carbon Capture and Sequestration Is Not "Available" and Should Be Excluded from Step 1 Until Significant Advances Are Made	Am. Iron and Steel Inst.-0025.1 pp9-11 MidAmerican-0037.1 p2-4 The Fertilizer Institute - 0041.1 UARG-0088.1 pp2-3 EEI-0094.1 pp1-7	US Steel-0021.1 p2 Dominion-0012.1 p2 Am. Elec. Power-0016.1 p2 Southern Co.-0023.1 p2 FirstEnergy-0031.1 p2 Ameren-0039.1 p2 Oglethorpe-0040.1 p2 SMA/SSINA-0043.1 p5 Progress-0081.1 p2 Nucor-0079.1 pp6-7 Gulf Coast Lignite Coalition-0078.1 pp4-5 API-0030.1 NPRA-0033.1 Ohio Coal Assoc. - 0044.1 RFA-0050.1 IRFA-0053.1 Air Products and Chemicals-0055.1 CIBO-0059.1 NMA-0062.1 AF&PA-0069.1 AWC-0072.1 KY DEP-0082/0091 pp10-11 ACCCE-0068.1 pp5-6
15	Carbon Capture and Sequestration and Other Technologies Offering the Potential for Deep GHG Reductions Should be Encouraged by EPA Through the BACT Process, and Afforded the Full Statutory Waiver Term Available for Innovative Technologies	CATF-0077.1 pp5-8	Sierra Club-0090.2 p8
16	No basis exists for a presumption that IGCC will not redefine a facility's fundamental purpose (contesting p31, FN78)		UARG-0088.1 pp8-9
17	IGCC should be included for consideration in BACT analyses of proposed coal-fired permit applications when it is more efficient than proposed technology.		NESCAUM-0092.1 p2
18	CHP should be considered in Step 1 for all permits. The guidance should clarify that CHP technologies are available for all sources.		USCHPA-0093.1

		Extensive comments	Other commenters
19	Including non-emitting units is not appropriate for BACT (or not clear/limited enough)	UARG-0088.1 pp5-6	Dominion-0012.1 pp3-4 Am. Elec. Power-0016.1 p2 Southern Co.-0023.1 p2 Ameren-0039.1 p2 SMA/SSINA-0043.1 p2 Progress-0081.1 p3 Nucor-0079.1 p4 API - 0030.1 Air Permitting Forum-0051.1 FL Sugar Industry-0052.1 NMA-0062.1 ACCCE-0068.1 p3
20	BACT should only be applied to new or modified units at an existing facility (and not to debottlenecked units). That is, should not expand the definition of "source" beyond the unit undergoing modification	Nucor-0079.1 pp4-5	Nucor-0079.1 p2 Air Products and Chemicals-0055.1 CIBO-0059.1 NMA-0062.1
21	BACT should not include offsite facility construction.	NPRA-0033.1	
22	EPA should clearly specify that energy efficiency assessment under BACT should be done at a "macro" level rather than a "micro" level. BACT should be analyzed for an emissions unit as an integrated whole, and it is not appropriate to consider detailed intrinsic design elements.	Progress-0081.1 pp4-5 UARG-0088.1 pp9-10	
23	BACT analysis is inapplicable to secondary emissions and "should not include energy efficient options that may achieve reductions in a facility's demand for energy from the electric grid but that cannot be demonstrated to achieve reduction[s] in emissions released from the stationary source." [Some add that if indirect emissions decreases are more cost effective and greater reductions could be achieved , permitting authorities should have the flexibility to consider proposals from applicants (at the source's option) to consider such reductions as an alternative to a traditional BACT analysis.]	SMA/SSINA-0043.1 pp2-3 KY DEP-0082/0091 pp4-6 (includes legal points)	Nucor-0079.1 p2 Ohio Coal Assoc. - 0044.1
24	The top-down approach to BACT is appropriate and well-understood. It is especially important at the outset of greenhouse gas PSD permitting that decisions at various points in the process must be both well explained and fully supported in the record.		Sierra Club-0090.2 p2
25	The five-step BACT process is unnecessary and too resource-intensive inquiry for many industries. For some industries, such as the EAF steel industry, EPA can make a reasonable and supportable judgment that energy efficiency strategies are the only available and cost-effective options for control of GHGs at this time.	SMA/SSINA-0043.1 pp4-5	

		Extensive comments	Other commenters
26	Alternative Approaches to BACT. EPA should explore approaches like the presumptive -BACT approach that EPA noted in the GHG Tailoring Rule and additional approaches mentioned by the CAAC' s Climate Change Work Group, such as averaging or trading, reductions in carbon intensity , and demand reduction strategies.		SMA/SSINA-0043.1 p7
27	ENERGY STAR Sector-Specific benchmarking tools are not meant for regulatory use	Weyerhaeuser Company - 0046.1 AF&PA-0069.1	
28	Energy efficiency and benchmarking not clear enough	NPRA-0033.1	Dominion-0012.1 pp3-4 NCDEQ-0042.1
29	Performance benchmarking has limitations and there is a lack of consistent publicly-available benchmarking data	NPRA-0033.1 NEDA/CAP-0035.1	
30	Energy efficiency benchmarks can be a source of information for control measures that may need to be considered in a BACT analysis, but should not be used to determine BACT itself.	UARG-0088.1 pp4-5	
31	Energy Performance Indicators (EPI) are not available for ammonia, nitric acid, an urea plants.	The Fertilizer Institute - 0041.1	
32	EMS should not be required as BACT		Dominion-0012.1 p4 Ameren-0039.1 p2 UARG-0088.1 pp11-12
33	EPA <u>should</u> advise permitting authorities to integrate work practice standards like EMS into BACT determinations as much as possible under the Act.		SMA/SSINA-0043.1 p7
34	EMS and other work practices may only be required for units subject to BACT whose emissions are difficult to measure. The guidance (p47) appears to contemplate applying such BACT requirements to existing equipment that are not subject to BACT, which is not permissible under existing federal and state PSD regulations.	KY DEP-0082/0091 pp9-10	
35	EPA <u>should</u> allow work practices for GHG BACT		CIBO-0059.1
36	Vendor guarantees: not reasonable to assert that a control technology merits further review (beyond Step 2) if a suitable vendor guarantee cannot be obtained on the application of a particular technology to a source type.		Dominion-0012.1 p4 American Electric Power-0016.1 p3 Oglethorpe-0040.1 p2 Progress-0081.1 p5 CIBO-0059.1 FSI-0052.1 AECT-0083.1 p2 UARG-0088.1 p10
37	EPA should state plainly that BACT for GHGs should be conducted in the same manner as it is done for other PSD regulated pollutants. EPA indicates in the Guidance that it has done this, but EPA's language regularly deviates from previous BACT policy.		Southern Co.-0023.1 p3 (SC's cmts above are said to be examples where EPA has deviated from past BACT practices)

		Extensive comments	Other commenters
38	Guidance improperly modifies the BACT process under the guise of summarizing BACT principles.	API - 0030.1	
39	EPA should expand availability of the innovative control technology waiver	RFA-0050.1	Air Permitting Forum-0051.1
40	To simplify the BACT process for existing facilities, GHG BACT should be limited to units identified as significant in the Mandatory GHG Reporting Rule or units for which significant GHG performance data are available.		Nucor-0079.1 p3
41	The BACT Analysis Is Part of a Technology-Forcing Statutory Scheme, and GHG BACT Reviews and Guidance Must Reflect that Scheme.	CATF-0077.1 pp3-5	
42	Energy evaluations should not be required in BACT Step 5	Weyerhaeuser Company - 0046.1	
43	Support Off-site Impact Assessment in BACT Step 4	Weyerhaeuser Company - 0046.1	
44	Support Uncertainty Considerations for BACT Analysis and Permitting of Energy Efficiency	Weyerhaeuser Company - 0046.1	
45	Support Ranking Based on Total CO2e	Weyerhaeuser Company - 0046.1	
46	Support Consideration of Non-traditional BACT Limit Averaging Times and Units of Measurement	Weyerhaeuser Company - 0046.1	<i>Note: A number of other commenters also supported long-term averaging times</i>
47	EPA should involve the industry when developing emissions estimation methods	RFA-0050.1	IRFA-0053.1
48	Description of ICI Boiler design types should include " suspension boilers " and " hybrid stoker/suspension boilers. " (Section V, VI, and IX of the Guidance)		FL Sugar Industry-0052.1
49	Waste heat technologies should be considered in Step 1 of BACT for all permits.		TAS Energy-0084.1 p2
50	A readily available, comprehensive database of BACT determinations and available technologies must be created to include all industries.		TAS Energy-0084.1 p2
Comments on Sector-Specific Technical Documents			
51	Iron and Steel Industry Technical Document Requires Substantial Amendment	Am. Iron and Steel Inst.-0025.1 pp11-13 Nucor-0079.1 pp6-7	US Steel-0021.1 p3
52	EPA should amend the iron and steel white paper to only include eligible BACT technologies (i.e., <u>not</u> include technologies that reduce electricity use but do not reduce emissions from the site). EPA should refer to the recently promulgated GHG Reporting Rule and target only those emissions that are reported under that rule.	SMA/SSINA-0043.1 pp2-3	
53	Technical white paper for EGUs details a proposed coal-fired EGU that completed an evaluation of different technologies on page 37. This example and any other reference to an analysis of different generating technologies should be excluded from any BACT guidance and/or supporting document since this would constitute a re-definition of the source and is outside the scope of a BACT analysis.		Southern Co.-0023.1 p3

		Extensive comments	Other commenters
54	Improvements to EPA's White Paper on "Available and Emerging Technologies for Reducing Greenhouse Gas Emissions from Coal-Fired Electric Generating Units " are Needed.	CATF-0077.1 pp 12-15	
55	Intended use of the GHG Mitigation Strategies Database is unclear. The information is essentially a high-level literature review of mitigation strategies at various stages of development. The database, by including GHG mitigation strategies at various stages of development (e.g., concept, laboratory, pilot, commercial, and mature), is misleading if EPA intends the information to be used during a BACT analysis. EPA should either remove this database or adjust it to include only those technologies that are commercially available in the United States.		Southern Co.-0023.1 p3
56	EPA has not solicited comment on the document entitled Available and Technologies for Reducing Greenhouse Gas Emissions from the Nitric Acid Production Industry . As previously discussed, TFI believes that this document is a substantive regulation that the Agency must promulgate pursuant to the CAA and APA rulemaking provisions	The Fertilizer Institute - 0041.1	
57	Comments on the Pulp/Paper Sector White Paper a. Generally, this Guidance is a Compilation of Technologies but Lacks Insight b. Some Technologies are Missing c. Recovery Furnaces/Boilers Serve Multiple Functions d. An Inaccuracy of Omission to Correct Regarding Biogenic Emissions	Weyerhaeuser Company - 0046.1	
58	EPA should request comment on White Papers	ACC-0047.1	
Legal and Procedural Issues			
59	Guidance is illegal or unconstitutional	The Heartland Institute - 0020.1 NPRA-0033.1	Ohio Coal Assoc. - 0044.1 FL Sugar Industry-0052.1
60	Guidance document should be debated, discussed, and passed by Congress rather than unilaterally by the EPA, a non-elected organization.		Private citizen-0096 p1 Private citizen-0097 p1 Private citizen-0098 p1 Private citizen-0104 p1
61	EPA seeks to effect major policy changes through guidance rather than rulemaking		US Steel-0021.1 p1
62	Despite EPA Assurances to the Contrary, the PSD and Title V GHG Documents are Meant to be Binding on Permitting Agencies and Regulated Sources	The Fertilizer Institute-0041.1	

		Extensive comments	Other commenters
63	2 weeks is not enough time to comment		Am. Iron and Steel Inst.-0025.1 p2 US Steel-0021.1 p1 Basin Elec.-0017.1 p2 MidAmerican-0037.1 p2 Nucor-0079.1 p2 Portland Cement Assoc. - 0022.1 Georgia Dept. of Natural Resources - 0026.1 API - 0030.1 Ohio Coal Assoc. - 0044.1 Air Permitting Forum - 0051.1 CIBO-0059.1 NMA-0062.1 SCDHEC-0073.1 UARG-0088.1 p1
64	Should respond to comments or, if unable to respond to comments, at least prepare a FAQ document to respond to comments		SCDHEC-0073.1 UARG-0088.1 p1
65	Section 166 of the Act sets forth a measured, orderly, and scientifically-based means of implementing new PSD standards for regulated pollutants, starting with setting a NAAQS, and allows not exceptions. Short-circuiting the regulatory process will result in protracted litigation that will delay the important public policy decisions.	Basin Elec.-0017.1 p2	Basin Elec.-0017.1 pp 1-2
66	EPA is shifting from its historical stance that the BACT requirement is not applicable to secondary emissions , and encouraging states to consider numerous factors as part of the site-specific BACT analysis that historically have not been a part of traditional top-down BACT analyses. Encouraging states who will gain economic advantage by using this new approach to BACT will create regulatory regimes and practices that will discriminate against interstate commerce. These changes in interpretation are examples of EPA not encouraging uniform state laws as directed in CAA §102 , and not requiring states that are forming interstate compacts to get the consent of Congress required by CAA §102(c).		Southern Co.-0023.1 p2
67	EPA should commit (1) to issuing the GHG Permitting Guidance and Iron & Steel GHG Guidance as "Interim Guidance" upon their initial release ; and (2) to completing a comprehensive reissuance of both Guidances in 2011, after an opportunity to consult more widely with states, industry, and trade association to develop a more refined and realistic BACT approach, with a 45 to 60 day comment period at that time.		Nucor-0079.1 p2

		Extensive comments	Other commenters
68	EPA should avoid inserting itself into permitting decisions carried out by states with approved PSD and Title V programs/Scope of discretion and demonstrations to be made by the permitting authority	Gulf Coast Lignite Coalition-0078.1 pp5-6	Air Permitting Forum-0051.1 GE-0054.1 ANGA-0045.1
69	EPA is inappropriately attempting to constrain coal-based electric generation. EPA should not use this Guidance or rulemakings to circumvent the role of Congress and the free market to make energy policy and rule choices.	Gulf Coast Lignite Coalition-0078.1 p6	
70	EPA should recognize innovative State GHG programs as satisfying Federal GHG permitting requirements		CARB-0057.1
71	Permitting programs should apply to all permits that are not final on or before January 2, 2010	Center for Biological Diversity - 0058.1	
72	In the absence of being declared a criteria pollutant with the appropriate attainment area classifications made pursuant to 42 U.S.C. 7407, GHG gases must be treated like any other non-criteria regulated NSR pollutant. This includes, but is not limited to, requiring a Title V permit for GHG emissions only after a source is subject to PSD review (as provided in Step 1 of the Tailoring Rule). Steps 2 and 3 of the Tailoring Rule go beyond the authority that EPA has under the Clean Air Act.		KY DEP-0082/0091 p2
73	Stress that permitting authorities have the discretion not only to include more stringent requirements in permits, but also to decline to issue PSD permits in some circumstances.		
74	EPA should clarify that its review does not in itself create a Title V permit shield , but that a shield only arises where a permit complies with certain permit shield requirements laid out in the statute and EPA's regulations. Extensive discussion of <i>Sierra Club v. Otter Tail Power Co.</i>, 615 F.3d 1008, 1022-23 (8th Cir. 2010) , which applies much more broadly than to GHGs and this guidance.	Sierra Club-0090.2 pp9-11	
Biomass Comments			
75	EPA should provide a permanent applicability exemption of biogenic CO2 emissions from the CAA PSD and Title V Programs because the combustion of such material would cause no net increase in GHG emissions on a lifecycle basis.	Southern Co.-0023.1 p2 (att. CFI cmts) NAFO - 0036.1	NPRA-0033.1

		Extensive comments	Other commenters
76	EPA needs to Issue a Consistent Policy on the Carbon Neutrality of Biomass: in direct contradiction to the Tailoring Rule (which includes greenhouse gas emissions from biomass) the EPA contemplates allowing permitting authorities the "discretion to consider energy and environmental benefits that may accrue from certain types of biomass in step four of the BACT process." How can biomass, whose emissions are calculated as part of a source's greenhouse gas emissions profile, be considered BACT for the control of greenhouse gases?	MidAmerican-0037.1 p4-5	
77	Biogenic carbon should not be included in the threshold determinations, particularly when the biogenic carbon is from forest-derived biomass	Plum Creek Timber Company-0080.1 pp1-5 (+ 2 att. Papers)	Weyerhaeuser Company - 0046.1 AF&PA-0069.1 AWC-0072.1
78	Additional EPA Guidance on the Treatment of Biomass Fuels in the BACT Analysis Must Address Whether and How Biomass Fuels Can Be Considered "Clean Fuels" at Step 1 of the BACT Analysis – not their Collateral Impacts at Step 4. EPA's offer to issue guidance about Step 4 collateral impacts of biomass fuels is actually two steps in the wrong direction – away from a cogent biomass policy, and away from the use of the top-down BACT analysis to determine GHG BACT. [Also discussion of Step 3 analysis.]	CATF-0077.1 pp8-12 CATF, et al.-0085.1 pp1-6, 10-11	
79	The designation of biomass energy as BACT at this stage conflicts with EPA's acknowledgment of "the unique GHG attributes of biomass as fuel" because it comes before the agency issues additional guidance that will specifically address biomass and even before EPA has acted on its July 15, 2010 Call for Information on how to account for biogenic GHG emissions.	Blue Ridge Env Defense-0076.1 pp1-2	Economics, Sound Resource Management Group, Inc - 0034.1
80	Provides recommendations for guidance document on biogenic CO2 emissions	NSWMA-0049.1	
81	More study is required on the lifecycle impacts of burning biomass fuels to ensure that state and federal policies only favor those approaches that will result in net greenhouse gas emission reductions within the foreseeable future (i.e. a timeframe of 20-30 years)/Provides evidence for concern over the impacts of burning biomass fuels	CATF, et al.-0085.1 pp6-10	NYPIRG-0048 Center for Biological Diversity-0058.1 MA Environmental Energy Alliance-0060.1 Buckeye Forest Council-0087.1
82	Future guidance on addressing biogenic GHG emissions in PSD permitting should eliminate the need for permitting authorities to evaluate controls of biogenic CO2 which results from the treatment of methane in collection and combustion devices or in landfill cover systems.	Waste Mgt-0075.1 p9	

		Extensive comments	Other commenters
83	Provides support for an exemption of biogenic CO2 emissions	National Assoc. of Forest Owners - 0029.1	IRFA-0053.1 AF&PA-0069.1 AWC-0072.1
84	EPA should proceed expeditiously to provide credit for biomass in the PSD applicability analysis.	RFA-0050.1	
85	Switching from fossil fuel to biomass is not mentioned in initial statements		FL Sugar Industry-0052.1
86	Appropriate for permitting authorities to consider the benefits of using biomass as an energy source when conducting BACT for GHGs		IRFA-0053.1
87	Encourages EPA to issue a supplemental rule on PSD applicability with regards to biogenic emissions	IRFA-0053.1	
<i>RACT/BACT/LAER Clearinghouse and Guidance</i>			
88	Requests that offset projects and case studies be explicitly included in both the Clearinghouse and Guidance		Carbon Offset Providers Coalition - 0018.1
89	Suggest that EPA publish qualifications to the November Guidance on its GHG Permitting Website and that it qualify the use of the BACT/LAER/RACT Clearinghouse and “energy efficiency benchmarking” resources on the GHG Permitting website , while it further investigates these resources.	NEDA/CAP-0035.1	
90	Source needs to demonstrate it can meet standards under real operating conditions before becoming part of the Clearinghouse		CIBO-0059.1
91	NMA believes that EPA has missed a significant opportunity to promote efficiency in the electric generation sector. NMA attaches a paper it authored showing the path to 35 percent reductions in GHG emissions from the coal-fired electric generation fleet through replacement of existing older capital stock with new facilities. If EPA would at least clarify BACT requirements for new coal plants, the needed investment could proceed, and utilities could replace older less efficient plants with newer more efficient plants.	NMA-0062.1	
<i>Vendor Inputs</i>			
92	Calera is currently demonstrating a technology that converts manmade GHG emissions into two of the world’s most traded commodities (water and cement). By the definition included in the BACT Guidance, the Calera process must also be categorized as an “available” technology that must be considered in Step 1 of the top down BACT analysis.	Calera-0056.1/0089.1	

		Extensive comments	Other commenters
93	(51 pgs) - In these comments Eco Power is providing EPA with its COMPLY 2000® system. The data was obtained at its state of the art demonstration facility data on NOx and CO2 reduction in in Louisville, Kentucky on emissions from a coal-fired boiler. The demonstration, which took place on November 16, 2010, was observed by a representative of EPA's Office of Air Quality Planning and Standards. The NOx and CO2 reduction graphs are Attachments 1 and 2 to these comments.	EcoPower Solutions-0065.1	
94	Turbine Inlet Cooling represents a suite of BACT technologies for increasing electric energy generation capacity at higher energy efficiencies and helps reduce GHG emissions by preventing or minimizing the necessity to operate less efficient power plants to meet the power demand during hot weather. (0074.2 is a 17 pg. White Paper on these technologies)	Turbine Inlet Cooling Association-0074.1 TAS Energy-0084.1 pp1-2	
95	Waste Heat - Organic Rankine Cycle units can generate zero emission electricity from low temperature heat including industrial waste heat.		TAS Energy-0084.1 p2