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STRENGTHS AND WEAKNESSES OF REGULATING GREENHOUSE GAS EMISSIONS USING EXISTING CLEAN AIR ACT AUTHORITIES

HEARING

BEFORE THE

SUBCOMMITTEE ON ENERGY AND AIR QUALITY

OF THE

COMMITTEE ON ENERGY AND COMMERCE
HOUSE OF REPRESENTATIVES

ONE HUNDRED TENTH CONGRESS

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CONTENTS

	Page
Hon. G.K. Butterfield, a Representative in Congress from the State of North Carolina, opening statement	1
Prepared statement	2
Hon. Fred Upton, a Representative in Congress from the State of Michigan, opening statement	3
Hon. Jane Harman, a Representative in Congress from the State of California, opening statement	4
Hon. John Shimkus, a Representative in Congress from the State of Illinois, opening statement	5
Hon. Tammy Baldwin, a Representative in Congress from the State of Wisconsin, opening statement	5
Prepared statement	6
Hon. Marsha Blackburn, a Representative in Congress from the State of Tennessee, opening statement	7
Hon. John D. Dingell, a Representative in Congress from the State of Michigan, opening statement	7
Prepared statement	9
Hon. Joe Barton, a Representative in Congress from the State of Texas, opening statement	10
Hon. Jay Inslee, a Representative in Congress from the State of Washington, opening statement	12
Hon. Edward J. Markey, a Representative in Congress from the Commonwealth of Massachusetts, opening statement	13
Prepared statement	14

WITNESSES

Robert J. Meyers, Principal Deputy Assistant Administrator, Office for Air and Radiation, Environmental Protection Agency	16
Prepared statement	18
Answers to submitted questions	132
David Doniger, Policy Director, Climate Center, Natural Resources Defense Council	57
Prepared statement	60
Answers to submitted questions	130
Raymond Ludwiszewski, Partner, Gibson, Dunn & Crutcher LLP	82
Prepared statement	83
Lisa Heinzerling, Professor of Law, Georgetown University Law Center	87
Prepared statement	88
Answers to submitted questions	167
Peter Glaser, Partner, Troutman Sanders LLP	93
Prepared statement	96

SUBMITTED MATERIAL

Hon. Henry A. Waxman, letter of March 12, 2008, to U.S. Environmental Protection Agency	120

STRENGTHS AND WEAKNESSES OF REGULATING GREENHOUSE GAS EMISSIONS USING EXISTING CLEAN AIR ACT AUTHORITIES

THURSDAY, APRIL 10, 2008

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON ENERGY AND AIR QUALITY,
COMMITTEE ON ENERGY AND COMMERCE,
Washington, DC.

The subcommittee met, pursuant to call, at 10:09 a.m., in room 2123 of the Rayburn House Office Building, Hon. G.K. Butterfield (vice chairman of the subcommittee) presiding.

Members present: Representatives Butterfield, Melancon, Barrow, Waxman, Markey, Harman, Gonzalez, Inslee, Baldwin, Matheson, Dingell (ex officio), Upton, Whitfield, Shimkus, Walden, Rogers, Blackburn, Burgess, and Barton (ex officio).

Staff present: Lorie Schmidt, Laura Vaught, Sue Sheridan, Bruce Harris, Chris Treanor, Alex Haurek, Rachel Bleshman, David McCarthy, and Garrett Golding.

OPENING STATEMENT OF HON. G.K. BUTTERFIELD, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NORTH CAROLINA

Mr. BUTTERFIELD. The Committee will come to order.

Let me start by saying good morning to all of you and to welcome our panelists and thank all of you for coming today. I would like to also express my appreciation to Chairman Boucher, who is not here at this moment but will be here around 11:00 this morning. I want to thank the chairman in his absence for all that he does. I also want to thank the chairman of the full committee, Mr. Dingell, for the thoughtful and methodical way that both of them have approached the development of climate change legislation.

We want to be clear here today that we share the same sense of urgency on climate change as every other member of this committee, but we must continue to approach this as thoughtfully as possible. We have serious concerns about how low-income communities, for example, will be impacted by a climate change bill that is not carefully crafted. But having these hearings to discuss the many issues we must consider will certainly pay great dividends.

The Energy and Air Quality Subcommittee convenes today to discuss the issue of the Environmental Protection Agency regulation of greenhouse gases. This authority was granted by the Supreme Court's recent ruling on Massachusetts v. EPA in the early part of

last year that defined carbon dioxide as a pollutant under the Clean Air Act and therefore eligible, I repeat, eligible to be regulated under that statute. Based upon that landmark ruling, it could be possible for the EPA to take action to regulate greenhouse gas emissions before this subcommittee or even Congress can construct a roadmap for regulating the gases that contribute to global warming.

And so the issue ultimately becomes one of action or inaction, because there are some that want to delay this subcommittee from moving forward with climate change legislation such as cap and trade. However, the Massachusetts v. EPA decision should serve as a wakeup call to every member of this body and to the public at large that delay is no longer a viable option, and so I would like to welcome all of our witnesses today and begin by introducing the only witness that will appear on the first panel, Mr. Bob Meyers, who is the Principal Deputy Assistant Administrator of Air and Radiation in the Environmental Protection Agency, and so I thank all of you for coming.

[The prepared statement of Mr. Butterfield follows:]

STATEMENT OF HON. G.K. BUTTERFIELD

Good morning. Welcome to all of our panelists and thank you for coming to testify today. I'd like to start by expressing my appreciation to Chairman Boucher and Chairman Dingell for the thoughtful and methodical way they have approached the development of climate change legislation. I want to be clear, I share the same sense of urgency on climate change as every other Member of this Committee, but we must continue to approach this as thoughtfully as possible. I have serious concerns about how low-income communities will be impacted by a climate change bill that is not carefully crafted, but having these hearings to discuss the many issues we must consider will pay great dividends.

The Energy and Air Quality Subcommittee convenes today to discuss the issue of the Environmental Protection Agency regulation of greenhouse gases. This authority was granted by the Supreme Court's recent ruling on Massachusetts vs. EPA in early 2007 that defined carbon dioxide as a pollutant under the Clean Air Act, and therefore eligible to be regulated under that statute. Based upon that landmark ruling, it could be possible for the EPA to take action to regulate greenhouse gas emissions before this subcommittee, or Congress, can construct a roadmap for regulating the gases that contribute to global warming. And so the issue ultimately becomes one of action, or inaction, because there are some that want to delay this subcommittee from moving forward with climate change legislation, such as cap and trade. However, the Massachusetts vs. EPA ruling should serve as a wake-up call to every Member of Congress and to the public at large, that delay is no longer a viable option.

I'd like to welcome all of our witnesses and begin by introducing the only witness from our first panel, Mr. Bob Meyers, Principal Deputy Assistant Administrator for Air and Radiation in the Environmental Protection Agency. Thank you for coming.

We also have four witnesses testifying for the second panel, starting off with Mr. David Doniger with the Natural Resources Defense Council, Raymond Ludwiszewski, partner at Gibson, Dunn, and Crutcher, Ms. Lisa Heinzerling, Professor of Law at Georgetown University, and Mr. Paul Glaser, a partner at Troutman Sanders LLP here in Washington, with a background in environmental law. Again, I appreciate you all for providing such a diverse array of knowledge and experience to assist this subcommittee to understand how best to move forward. Thank you.

Mr. BUTTERFIELD. At this time we will have opening statements from the members if they choose to make opening statements. I guess we will start with the ranking member of the subcommittee, Mr. Upton.

OPENING STATEMENT OF HON. FRED UPTON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MICHIGAN

Mr. UPTON. Well, thank you, and I want to thank our Chairman Boucher for holding this important hearing today on the strengths and weaknesses of regulating greenhouse gas emissions using existing Clean Air Act authorities.

The way I see it, we will mostly be looking at the weaknesses of the Clean Air Act as a means to regulate greenhouse gas emissions. Now, some members of this committee are perhaps happy with the U.S. Supreme Court decision of Massachusetts v. EPA. However, I must say that many of us are not. But as the committee of jurisdiction, I think that we all know that the EPA and the Clean Air Act are not necessarily the most effective means to regulate greenhouse gas emissions.

As I have said a number of times, yes, I do support reducing greenhouse gas emissions, and if there was a way to cut emissions as part of a global agreement that includes India and China and without harming our economy or domestic jobs, certainly I would like to see it. But regardless of the path that this Congress takes to deal with the global issue of climate change, we must indeed correct Massachusetts v. EPA.

Our economy is going through a very rough patch and certainly coming from Michigan, I know firsthand how difficult things are for folks at home. Rising energy prices only exacerbate the economic problems that we are facing, and by law, the EPA is prevented from taking economic consideration into account. We need to address climate change but we must take a responsible, pragmatic approach that does not further depress our economy and cost our country jobs.

The unfortunate reality is that if we leave this task to the EPA, the consequences will be severe. Gas prices will skyrocket. Electricity costs will spike. Jobs will rush overseas and the environment probably won't be any better off. The Clean Air Act was not designed to and does not properly equip the EPA to deal with the global environmental issue. The air pollution in southern California that puts them in nonattainment with EPA regs does not impact southwest Michigan. We can fix our air pollution regardless of what they do. The Clean Air Act works fine for cleaning up the air in specific geographical areas, but with CO_2, there is no environmental distinction between CO_2 emitted in southwest Michigan and the CO_2 emitted in southwest Asia or anywhere else in the world. This is an issue that must be examined through a global spectrum in search of global solutions.

The communities in my district are working hard to achieve attainment under the Clean Air Act and we can test the air to see exactly how many parts per million we have of criteria pollutants and we can address those sources directly, but with CO_2, Michigan's reductions and the U.S. reductions are lost in the global mix. To make a concerted effort to achieve real results, all members of the world community must be actively involved. The domestic response under inflexible EPA command and control regs does not help and will not help the environment, will not compel or require other countries to act and will not even have a negligible impact on global levels of greenhouse gases. If the goal is to improve

human health and welfare, EPA regs under the Clean Air Act will not achieve that goal. There are substantial differences between CO_2 and pollutants that the Clean Air Act was intended to regulate. From the standpoint of both sound science and health risk, CO_2 does not belong in the same category with carbon monoxide, chlorofluorocarbons, lead, nitrogen oxides, ozone, particulate matter and sulfur dioxide. They simply are not the same.

It is one thing to pay lip service to an issue and it is another to actually pursue policies that we all know will not work but we do have a unique opportunity to make a difference in cutting greenhouse gas emissions at the global level. Cap and trade or other congressionally mandated climate change schemes without reversing Massachusetts v. EPA could indeed be a real disaster.

I look forward to the testimony today and yield back the balance of my time.

Mr. BUTTERFIELD. The gentleman yields back. Thank you.

At this time the chair recognizes the gentleman from Georgia, Mr. Barrow.

Mr. BARROW. I thank the chairman. I will waive.

Mr. BUTTERFIELD. The gentleman from California is recognized, Mr. Waxman.

Mr. WAXMAN. Mr. Chairman, I will waive.

Mr. BUTTERFIELD. The gentlelady from California.

OPENING STATEMENT OF HON. JANE HARMAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Ms. HARMAN. Thank you, Mr. Chairman. I thank you for holding the hearing.

It is discouraging enough that in the year since the Supreme Court's Massachusetts v. EPA decision, the Administration has dragged its heels on regulating greenhouse gas emissions. But even more troubling is that EPA has also denied States like Mr. Waxman's and my State of California our right to act where the EPA in violation of the law refuses. EPA's denial of California's waiver under the Clean Air Act is tantamount to taking the ball and going home. EPA has no national tailpipe emissions plan. It has written no groundbreaking standards to defend the first denial of a waiver in the history of the Clean Air Act, in the history of the Clean Air Act. If I can't play, EPA has told California, then neither can you.

But canceling the game isn't EPA's call, so says the Supreme Court. And legal arguments aside, the EPA's dereliction of its authority is just bad policy. The Energy Independence and Security Act showed that state preemption is a carrot that can bring industries to the legislative bargaining table. That is how, by the way, Mr. Upton and I negotiated strong lighting efficiency language to our bill. This committee will depend on industry cooperation to write successful climate change legislation, and it seems to me that California's foresight on cap and trade and vehicle emissions are sticks the Federal Government can use to drive consensus on a good climate policy.

Thank you, Mr. Chairman. I yield back.

Mr. BUTTERFIELD. I thank the gentlelady.

The chair recognizes—I forgot what State you are from.

OPENING STATEMENT OF HON. JOHN SHIMKUS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS

Mr. SHIMKUS. Well, just remember coal, Mr. Chairman, and you will know that it is in the coal capital of the country, the only coal basin, and I know folks on this committee know that quite well.

I used to think that this was the Clean Air Act but times have changed. Massachusetts v. the EPA is now the new Clean Air Act. I am glad you are here today, Bob. I want to welcome you. I think this ruling does what many of us continue to be concerned about, judicial activism in the legislation, and what this will allow the proponents of global climate change to do is use the regulatory venue to increase costs on the average citizen without having the accountability of casting the votes to raise those costs themselves. Now, we continue to have numerous debates on climate change, as we should. Climate change is going to incur great costs on our country. We ought to at least have guts enough to pay for those with an up or down vote on the taxes that they will incur. At least Chairman Dingell has proposed a carbon tax, which is the only intellectually honest way to move forward on global climate change. Let us tax the CO_2 emissions, let us put that money into an account and let us use that money to start addressing how we are going to comply with all these international agreements. So I commend Chairman Dingell for that proposal, and I wish he would use his time in office to push that so that we can have real accountability because only through the legislative venue, as was stated by my ranking member, will the economic aspect of this debate be addressed. EPA will not address the economic dislocations caused by their compliance and their move should they decide to do so on global climate change.

I will end with this part of the opening statement. It is my understanding that EPA has authority to regulate greenhouse gases including carbon dioxide and that it must explicitly ground his reason for regulatory action or inaction. I would still think commonsense can prevail and we would move to inaction versus action, and I yield back the balance of my time.

Mr. BUTTERFIELD. I thank the gentleman.

At this time the chair recognizes the gentleman from Texas, Mr. Gonzalez.

Mr. GONZALEZ. I waive my opening statement.

Mr. BUTTERFIELD. The gentleman waives. Would you like to add that to your other time?

Mr. GONZALEZ. Yes.

Mr. BUTTERFIELD. The gentlelady from Wisconsin, Ms. Baldwin.

OPENING STATEMENT OF HON. TAMMY BALDWIN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WISCONSIN

Ms. BALDWIN. Thank you, Mr. Chairman. I am going to submit most of my opening statement for the record but I do want to appreciate the fact that we are holding this hearing today because for years scientists and environmentalists in the international community and our very own constituents have been calling on the United States to be a leader in addressing climate change, and as we well know, for most of his administration President Bush has really re-

fused to address this issue, let alone acknowledge that climate change was occurring, and it was really only just 2 years ago, in the State of the Union address, that President Bush first told the Nation that global warming must be taken seriously.

I view this set of hearings that we have been having, this one included, as our opportunity to prepare to bring forth, I hope, a bold set of programs for the United States to begin taking a leadership role, and I appreciate the opportunity to look more deeply into the EPA's role in all that today.

I would submit the rest of my statement for the record. Thank you.

[The prepared statement of Ms. Baldwin follows:]

STATEMENT OF HON. TAMMY BALDWIN

Thank you Mr. Chairman. I appreciate you holding this hearing today.

For years, scientists, environmentalists, the international community, and our very own constituents have called on the United States to be a leader in addressing climate change. And, as we well know, for most of his administration, President Bush has refused to address the issue, let alone acknowledge that it is occurring. It was just 2 years ago, in President Bush's State of the Union, that he first told the Nation that global warming must be taken seriously.

Yet, even with President Bush's one-line snippit in his address to the Nation in 2007 (and the few lines of attention the issue received in 2008), his Administration fails to demonstrate a commitment to this issue. And the EPA has certainly been one of the major roadblocks. This Agency not only has refused to use its authority to regulate greenhouse gas emissions, but for years even denied that it had the authority under the Clean Air Act.

However, what we know is that the Clean Air Act was designed to protect human health and the environment from emissions that pollute our air. It is a critical instrument in reducing air pollutants from stationary and mobile sources. And, although it may not be the best way to regulate greenhouse gases, it certainly can be used.

Fortunately, last April the Supreme Court agreed, and in a landmark decision ruled that EPA has the authority to regulate emissions under the Clean Air Act.

Yet, even with the knowledge and legal authority to act on this critical issue of our day, EPA continues to delay its action. It has been more than a year since the Supreme Court decision and EPA seems to still be waffling. Now it may be true that Congress is better equipped than EPA to find an effective path for regulating greenhouse gases. After all, the Clean Air Act was designed to handle regional pollutants, not global pollutants. But, at the same time, the Clean Air Act also was left open—to address specific air pollutants known at the time of enactment and those that may emerge from future science.

As such, it is time for us to examine whether there are strengths or weaknesses to regulation under the Clean Air Act. And, I believe part of the answer depends on the details encapsulated in EPA's proposed regulations.

I am hopeful that today's hearing will shine some light on how EPA believes the regulations can be most effective—by explaining what sections of the Clean Air Act might provide the authority for regulating greenhouse gases, by detailing the action that could trigger EPA's regulation, and by examining the types of sources that can be regulated under their authority. And through this information, I hope to determine whether EPA's action will be enough to address climate change in a bold and effective manner.

Thank you Mr. Chairman. I look forward to hearing from the witnesses.

Mr. BUTTERFIELD. I thank the gentlelady.

At this time the chair recognizes the gentlelady from Tennessee, Ms. Blackburn.

OPENING STATEMENT OF HON. MARSHA BLACKBURN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TENNESSEE

Ms. BLACKBURN. Thank you, Mr. Chairman. I do thank you for holding the hearing today and I want to thank all of our witnesses that are going to come before us and talk about the impact of regulating CO_2 emissions through the Clean Air Act. Just for the purpose of debate, let us assume that global warming is happening and that CO_2 may contribute to public health dangers as predicated by the IPCC, the EPA and the CDC. New climate change policies will still not prevent these dangers, and in many cases will have the potential to make them worse, and in many cases the cost, as we have heard several times this morning, that cost is going to be borne by consumers, decreasing the citizens' ability to use their own resources to adapt to climate change. If EPA finds an endangerment finding for CO_2 under Title I of the Clean Air Act, practically every business and large facility will be subject to heavy regulations, permitting procedures and control technology requirements and any new facility would need to obtain an environmental permit before it could be built. Even if CO_2 causes global warming, cutting emissions through costly carbon reductions and regulations under the Clean Air Act will make very little difference for the climate and for society. Other nations, such as China and India, are not going to restrict their development, and, if we assume that global warming is a global warming, our actions will be negligible due to other noncompliance nations and their CO_2 output. EPA requirements will not change that result.

Mr. Chairman, there are no short-term fixes to this unconfirmed or undefined problem. It is our responsibility to take reasonable actions to protect the environment, but closing coal plants and imposing massive energy costs on consumers is possibly not the best way to go. New EPA regulations will only make Americans end up with less money in their pockets. It will make them more reliant on foreign energy sources and will have negligible effect on global environmental improvement.

Thank you, and I yield back.

Mr. BUTTERFIELD. The gentlelady yields back. Thank you very much.

At this time the chair is pleased to recognize the distinguished chairman of the full committee, Mr. Dingell, for such time as he may consume, not to exceed 5 minutes.

Mr. DINGELL. Mr. Chairman, I thank you for your courtesy.

Mr. BUTTERFIELD. But extensions are possible for the chairman.

OPENING STATEMENT OF HON. JOHN D. DINGELL, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MICHIGAN

Mr. DINGELL. I thank you, Mr. Chairman, for your recognition.

Mr. Chairman, the Committee is meeting today to address a most important question and one which is not understood. We are also looking at the possibility of a glorious mess being visited upon this country. The questions before us and questions that are going to be considered today are what greenhouse gas regulations can we expect if the Congress fails to pass comprehensive climate change

legislation, and we need to understand that that is something at which we are looking very directly.

In previous meetings and hearings of this subcommittee, there were members on both sides of the aisle who seemed to assume that if we fail to enact comprehensive climate change legislation, greenhouse gases will go unregulated, at least at the Federal level. Not so. Today's hearing is going to cause us to ask if this is a false assumption, and I believe it is. In last year's Supreme Court decision in Massachusetts v. EPA, the court stated that it believed that greenhouse gases are air pollutants under the Clean Air Act. This is not what was intended by the Congress and by those of who wrote that legislation. Nonetheless, that is the law of the land, and it is something with which we are going to have to live. As a result of this decision, it is clear that under the Clean Air Act the Environmental Protection Agency can regulate greenhouse gases from both stationary and mobile sources. Even if the next Administration does not want to issue such regulations, environmental groups and perhaps some of those who will be witnesses before us today would undoubtedly go to court to force EPA to act.

I urge my colleagues to listen very closely to the types of greenhouse gas regulations that EPA could impose under its existing authority and to which it will be driven by the potential for lawsuits to compel that kind of action. I ask my colleagues and everybody else to ask yourself whether they are likely to impose greater hardships on U.S. industry than would be created by carefully crafted legislation that achieves the same or greater greenhouse gas reductions, and I would point out that this can be done in a more expeditious fashion by careful consideration of this matter by the Congress.

On the mobile source side, I have repeatedly expressed my concern that we have multiple agencies with regulatory authorities to limit greenhouse gas emissions from motor vehicles, and I want to stress again, we are not talking about just having these kinds of regulations imposed upon the automobile industry or upon transportation. It is going to affect potentially every industry and every emitter and every person in this country. The National Highway Traffic Safety Administration, NHTSA, must issue CAFE fuel efficiency standards based on the energy bill we enacted last December. EPA also has the authority under Title II of the Clean Air Act to impose additional limits that may differ from CAFE. This is only a part of the wonderful complexity into which this nation is being thrust. California and other States are also trying to regulate greenhouse gas emissions from motor vehicles, again, more new, wonderful, fresh complications and complexity.

EPA also has the authority to regulate greenhouse gases from stationary sources such as power plants and industrial facilities. Understand that these same regulations are not only going to affect those stationary sources but also mobile sources. So we are beginning to look at a wonderfully complex world which has the potential for shutting down or slowing down virtually all industry and all economic activity and growth.

Now I ask my friends here to think about whether State implementation plans, New Source Review permitting, and source-specific performance standards are the best way to regulate green-

house gas emissions. There seems to be a developing consensus that what is needed is a cap-and-trade program by this Nation to do what other countries in Europe and elsewhere are doing to see to it that this matter is addressed in a comprehensive, exhaustive, thoughtful, and intelligent way, but I do not see that coming from the situation if we rely upon existing law, and that is something upon which I think we had better focus very carefully.

Mr. Chairman, I believe that a cap-and-trade program should be the cornerstone of a comprehensive climate change program. EPA may not have the authority to adopt an economy-wide cap-and-trade program under the existing Clean Air Act, and if it tries to do so, it is not improbable that we will have a fine array of lawsuits to bless us all with huge amounts of litigation. Now, I am certain that the legal profession will enjoy this mightily and I am satisfied that this will be a full employment situation for lawyers, of whom I happen to be one, and maybe if I leave the Congress I will return to the practice of law so that I can enjoy this kind of luxurious emolument for creating complexity for our society and a significant downturn in economic activity.

I will observe that if these events occur as I fear, or some of them, that EPA will have to make decisions such as who gets how many allowances and other things that are inherently political decisions that should be made by the Congress, and I ask everybody to think about whether we want EPA to make those decisions and whether EPA wants to do so, because I have a feeling that if they try to do so, they will probably get ridden out of this town on a rail and perhaps be tarred and feathered or wind up on the end of a rope.

Now, having said these things, these are matters that we must explore this morning and finally begin to address the question about what we are going to do, because as a matter of national policy, it seems to me to be insane that we would be talking about leaving this kind of judgment, which everybody tells us has to be addressed with great immediacy, to a long and complex process of regulatory action, litigation upon litigation, and a lack of any kind of speedy resolution to the concerns we have about the issue of global warming. Structuring a comprehensive climate change program is a responsibility for the Congress. It is more so a responsibility for the Congress because of the complexity of it and the fact that there is absolutely no certainty of what, when, or how these matters will be resolved by the process that would take place under the existing law. We have the State Implementation Plan, the New Source Review provisions which can be applied in two different ways, and I would call upon all to observe that this has the rich potential for as many as over 100 different rulemakings and rulemakers to cause a fine economic mess and a splendid manufacturing and industrial shutdown.

Mr. Chairman, I thank you for your kindness in recognizing me.

[The prepared statement of Mr. Dingell follows:]

STATEMENT OF HON. JOHN D. DINGELL

The Subcommittee is meeting today to address a most important question: What greenhouse gas regulations can we expect if Congress fails to pass comprehensive climate change legislation?

In previous Subcommittee hearings, there were Members on both sides of the aisle who seemed to assume that if we fail to enact comprehensive climate change legislation, greenhouse gases will go unregulated—at least at the Federal level. Today's hearing will cause us to ask if this is a false assumption.

In last year's Supreme Court decision in Massachusetts v. EPA, the Court stated that it believed that greenhouse gases are "air pollutants" under the Clean Air Act. This is not what some of us intended, but it is the law of the land and must be followed. As a result of this decision, it is clear that under the Clean Air Act, the Environmental Protection Agency (EPA) can regulate greenhouse gases from both stationary and mobile sources. Even if the next Administration did not want to issue such regulations, environmental groups, perhaps even one or two of today's witnesses would undoubtedly go to Court to force EPA to act.

I urge my colleagues to listen closely to the types of greenhouse gas regulations that EPA could impose under its existing authority. Ask yourself whether they are likely to impose greater hardship on U.S. industry than would carefully crafted legislation that achieves the same or greater greenhouse gas reductions.

On the mobile source side, I have repeatedly expressed my concern that we have multiple agencies with regulatory authority to limit greenhouse gas emissions from motor vehicles. The National Highway Traffic Safety Administration (NHTSA) must issue CAFE fuel efficiency standards based on the Energy bill that we enacted in December. EPA also has authority under Title II of the Clean Air Act to impose additional limits that may differ from CAFE. California and other States are also trying to regulate greenhouse gas emissions from motor vehicles.

EPA also has authority to regulate greenhouse gases from stationary sources such as power plants and industrial facilities. Think about whether state implementation plans, new source review permitting, and source-specific performance standards are the best way to regulate greenhouse gas emissions.

I believe that a cap-and-trade program should be the cornerstone of a comprehensive climate change program. EPA may not have authority to adopt an economy-wide cap-and-trade program under the existing Clean Air Act. If it does, EPA will have to make decisions—such as who gets how many allowances—that are inherently political decisions that should be made by an elected and accountable Congress.

Structuring a comprehensive climate change program is our responsibility. It should not fall to EPA by default.

Mr. BUTTERFIELD. I thank the chairman for his opening statement.

At this time the chair is pleased to recognize the distinguished ranking member of the full committee, the gentleman from Texas, Mr. Barton.

OPENING STATEMENT OF HON. JOE BARTON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TEXAS

Mr. BARTON. Thank you, Mr. Chairman.

I want to commend Subcommittee Chairman Boucher and Full Committee Chairman Dingell for holding this hearing. I want to welcome our first witness, Bob Meyers. He used to be a staff member of the committee. We are glad to have you back. I think this is one of the more important hearings that we are going to have in this Congress on the issue of climate change and global warming.

The Supreme Court decision in Massachusetts v. EPA, in my opinion, was wrong. I was a member of this committee in 1990 and 1991 when we last addressed the issue of air quality and amended the Clean Air Act. It wasn't an oversight that we didn't list carbon dioxide as a pollutant or, for that matter, any of the other greenhouse gases. We didn't list them because they are not pollutants in the sense of health issues that we regulate under the Clean Air Act, so I was disappointed and surprised when the Supreme Court ruled like they did. My basic understanding of the Clean Air Act

is that it is designed to protect the quality of the air we breathe. It is not to regulate what we exhale, and we all know, when we have respiration, we create carbon dioxide, so each and every person in this room is a mobile point source polluter, I guess, under one definition of the Clean Air Act. There is a big difference between CO_2 and CO, which is carbon monoxide, or SO_2, sulfur dioxide, NO_x and particulate matter. Carbon dioxide exists where life exists, that is a fact, and where prosperity exists. CO_2 from fossil fuels will never be present in significant concentrations to affect air quality as I understand it under the Clean Air Act.

It is my opinion, but it is an informed opinion—I have been on this committee for 23 years—that the Clean Air Act is not designed to regulate carbon dioxide concentrations in any way that is economically or practically possible, as some of our witnesses I hope will acknowledge today. The main reason is that carbon dioxide is global. Anything we do here is completely meaningless unless the entire world is also doing the same thing at the same time. The last time I looked, the EPA doesn't have authority in Beijing, China, or New Delhi, India, or Jakarta, Indonesia.

I am also cognizant of the fact that if you want to regulate something and try to reduce the particular concentration of that item, you have to have the technology to do that. Congress has never authorized the EPA to regulate an emission when the technology did not exist to meet that particular challenge. When we last amended the Clean Air Act in 1990, we knew that utilities could buy flue gas desulfurization equipment—it was already on the shelf—or switch to low-sulfur fuel. When the EPA clamped down on NO_x, we knew that low-NO_x burners and even selective catalytic reduction technology was readily available. This equipment was expensive and still is but at least it afforded a rational path to emission control without disrupting energy supply. It is not the case with CO_2. There are a lot of promising ideas out there right now on how to deal with carbon dioxide but there is not anything that is commercially available at a competitive price that our industries can afford to pay. It just doesn't exist.

Lastly, I would like to talk a little bit about the science of global warming. There are many people that say the science is settled and we shouldn't even debate it. I am not one of those people. Just last week an eminent scientist in Hungary resigned from his position as a consultant, I believe, with NASA because he has a new theory about climate change that much more fits what has actually happened. The current models that are used for climate change, the basic theory was established about 80 years ago and those theories keep predicting more and more temperature rise as CO_2 concentrations slightly increase in the atmosphere. Unfortunately, for that particular theory, it can't predict the past, much less the future, even half correctly over half the time. This gentleman has a different model and different mathematical theory that much more closely tracks what is actually happening on the planet, as least as we know it in the past. Officials wouldn't accept his theory so he resigned. My point is that it is a fact that the climate is warming. It has been slightly warming for the last 150 years and it is expected to continue to slightly increase for the next 100 to 150 years, so far as we know, so I don't dispute that. It is not a fact,

it hasn't been scientifically proven, to my satisfaction, that it is automatic that we are going to undergo extreme temperature discomfort in the next 100 years or 200 or 300 years. So I think we need to spend more money to get the science right before we go through with some of the proposals that are on the table today.

The last thing is that we all accept that if we do something to significantly reduce CO_2 and greenhouse gases, it is going to be very, very expensive. Nobody disputes that on either side of the debate. I am not sure that given where our economy is today, where the world economy is right now, that we can afford to implement, at least in the short term, any of these ideas.

So Mr. Chairman, I really am very appreciative that we are holding this hearing on Massachusetts v. EPA. I have got great respect for the Supreme Court but as we used to say down in Texas, they put their pants on one leg at a time too, even the gentlelady, who I am sure on occasion doesn't wear skirts and wears pantsuits. So just keep that in mind. We are all human. We all have opinions. The Supreme Court is a group of nine men and women, some of the most eminent legal experts in our country, but they are just people like us.

With that, Mr. Chairman, I yield back.

Mr. BUTTERFIELD. I thank the ranking member.

At this time the chair recognizes the gentleman from the State of Washington, Mr. Inslee.

OPENING STATEMENT OF HON. JAY INSLEE, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WASHINGTON

Mr. INSLEE. Thank you. I am sure the time will come when you can hear that gurgling sound of the last climate change skeptic drowned out by the rising waters and you can just hear that gurgling sound happening. I don't know when that will happen. I know the day will come.

I would suggest there are three laws we should think about here: the law of science, the law of democracy, and the law of supply and demand. The first law, science, I wish all of my colleagues had been at the global warming hearing yesterday when true experts about the public health aspects of global warming testified before us. Dr. George Benjamin, Donna Best, Jonathan Patz, Mark Jacobson, Howard Frumpkin, leaders of the CDC, leaders from Stanford, leaders from the various associations, and every single one of them told us unequivocally that the health of the citizens of the United States of America is in jeopardy as a result of global warming. They told us that our children will have more frequent asthma as a result of ozone increasing, as a result of CO_2 increasing. They told us that there will be more West Nile virus that Americans will be subjected to and perhaps Lyme disease and perhaps malaria. They told us that there will be more heat-related deaths in America and they told us this unequivocally and to the person, and anyone who thinks this is expensive to deal with, the solution, they ought to see the expense of not dealing with the problem. Our kids getting sick due to asthma because Congress sits here like the ostrich with our head in the sand and our tail feathers in the air is very disquieting, and every single one of them told us that global warming is a cause or contributing factor to endan-

gering Americans' public health. That is the law of science. There is not a realistic debate about that issue.

Second is the law of democracy. It seems to me with all due respect to all concerns about the EPA acting that we ought to follow the laws of democracy and the law of democracy says the EPA, according to law, should have acted a long time ago. And it would be one thing, frankly, if the Administration wanted to defer action until we had a reasoned debate to get a cap-and-trade system, but that is not what this Administration is interested in. We had the Secretary of Energy sitting at this table 2 months ago. We asked him if he had read the IPCC report. Our Secretary of Energy never even read the report. I asked him if he talked to the President of the United States, our Secretary of Energy, about adopting a cap-and-trade system. He said no, I have never talked to the President of the United States about a cap-and-trade system. Who in this room thinks that we are deferring action in the EPA while George Bush thinks with his cabinet member about how to design a cap-and-trade system that will work in this country? I don't see any hands going up. Because that is not what is going on here. It is simply a delaying tactic to try to delay action so that this President will leave office without having done anything about a global warming problem.

And third is the law of supply and demand. I respect that we need new technologies but the law of supply and demand says you have to have the demand to drive the supply. We have to create a demand for these clean technologies. If we build that demand, they will come, and that is what we need to get done. Thank you.

Mr. BUTTERFIELD. At this time the chair recognizes the gentleman from Michigan, Mr. Rogers.

Mr. ROGERS. I yield.

Mr. BUTTERFIELD. The gentleman yields. Would you like to add that time to your time later?

Mr. ROGERS. Yes.

Mr. BUTTERFIELD. Any other member on the minority side wish to give an opening statement?

The chair recognizes the gentleman from Utah, Mr. Matheson.

Mr. MATHESON. I will waive.

Mr. BUTTERFIELD. The gentleman has waived. Thank you.

Well, I believe this concludes the opening statements by the—yes, there is one. All right. The gentleman from Massachusetts is recognized.

OPENING STATEMENT OF HON. EDWARD J. MARKEY, A REPRESENTATIVE IN CONGRESS FROM THE COMMONWEALTH OF MASSACHUSETTS

Mr. MARKEY. Thank you, Mr. Chairman, very much, and thank you for calling this hearing.

In 1998, in response to an inquiry by then-Representative Tom DeLay, the Clinton Administration's EPA said that it believed it had the authority to regulate carbon dioxide under the Clean Air Act. One year later, a group of environmental and other advocacy organizations petitioned the EPA to use its authority to set greenhouse gas standards for cars but it wasn't until 2003, when the Bush Administration had already embarked on a course of denial,

delay, and dismissal of the risks of climate change and the need to address it that the EPA repudiated the Clinton Administration's conclusions that carbon dioxide was a pollutant that could be regulated and denied the petition. That petition became the case known as Massachusetts v. EPA.

Until April of 2007, more than 6 years after taking office, the Bush Administration continued to assert that it lacked the authority to regulate carbon dioxide. It continued to assert that the science was uncertain, that voluntary programs to reduce emissions would be sufficient and that rhetorical policy goals should take the place of binding regulatory language. It continued to fight the States, who were pushing it to move ahead, and continued to stall Federal action. But all that had to change in April of 2007, when the Supreme Court ruled that carbon dioxide is a Clean Air Act pollutant and that EPA could not hide behind its smokescreen any longer. The Supreme Court also said that EPA must determine whether these emissions endanger public health or welfare, a determination often referred to as an endangerment finding. And finally, if the EPA does make a positive endangerment finding, it must regulate greenhouse gas emissions from motor vehicles.

In May of last year, the President directed EPA, along with other agencies, to prepare a regulatory response to the Supreme Court decision. EPA testified to Congress and repeatedly promised that both the endangerment finding and the proposed regulations would be finished by the end of 1997. That did not happen. Instead, what we have learned from a steady stream of press reports and congressional hearings is that EPA in fact concluded that greenhouse gas emissions endanger public welfare, and submitted its findings to OMB in December of last year. EPA in fact drafted greenhouse gas regulations for motor vehicles and submitted its draft to other agencies in December, and then, according to numerous reports, EPA stopped all of its work in this area except for its work to deny California, Massachusetts, and more than a dozen other States the right to move forward with their own motor vehicle emissions standards. About 2 weeks ago, EPA finally responded by announcing that more than 7 years after President Bush first took office that it needed to think about this issue some more. So this advance notice of proposed rulemaking really is nothing more than taking aspirational goals and turning them into procrastinational goals for the Bush Administration so that they can walk out of the White House on January 20, 2009, without ever having done anything. That is why this hearing is so important.

I thank you, Mr. Chairman.

[The prepared statement of Mr. Markey follows:]

STATEMENT OF HON. EDWARD J. MARKEY

Thank you very much for calling this important hearing on the role of the Clean Air Act in the regulation of greenhouse gas emissions.

In 1998, in response to an inquiry by then-Representative Tom Delay, the Clinton Administration's EPA said that it believed that it had the authority to regulate carbon dioxide under the Clean Air Act. One year later, a group of environmental and other advocacy organizations petitioned the EPA to use this authority to set greenhouse gas standards for cars.

But it wasn't until 2003, when the Bush Administration had already embarked on a course of denial, delay, and dismissal of the risks of climate change and the

need to address it, that the EPA repudiated the Clinton Administration's conclusion that carbon dioxide was a pollutant that could be regulated, and denied the petition. That petition became the case known as Massachusetts vs EPA.

Until April of 2007, more than 6 years after taking office, the Bush Administration continued to assert that it lacked the authority to regulate carbon dioxide. It continued to assert that the science was uncertain, that voluntary programs to reduce emissions would be sufficient, and that rhetorical policy goals should take the place of binding regulatory language. It continued to fight the States, who were pushing it to move ahead, and continued to stall Federal action.

But all that had to change in April of last year when the Supreme Court ruled that carbon dioxide IS a Clean Air Act pollutant, and that EPA could not hide behind its smokescreen any longer. The Supreme Court also said that EPA must determine whether these emissions endanger public health or welfare, a determination often referred to as an 'endangerment finding.' And finally, if the EPA does make a positive endangerment finding, it must regulate greenhouse gas emissions from motor vehicles.

In May of last year, the President directed EPA, along with other agencies, to prepare a regulatory response to the Supreme Court decision. EPA testified to Congress and repeatedly promised that both the 'endangerment finding' and the proposed regulations would be finished by the end of 2007.

Well, that didn't happen. Instead, what we've learned from a steady stream of press reports and congressional hearings is that:

- EPA in fact concluded that greenhouse gas emissions endanger public welfare, and submitted its finding to OMB in December of last year.
- EPA in fact drafted greenhouse gas regulations for motor vehicles and submitted its draft to other agencies in December.
- And then, according to numerous reports, EPA stopped all of its work in this area—except for its work to deny California, Massachusetts, and more than a dozen other States the right to move forward with their own motor vehicle emissions standards.

About 2 weeks ago, EPA finally responded—by announcing, more than 7 years after President Bush first took office, that it needed to think about the issue some more.

Instead of issuing the endangerment finding and proposed regulations required by the Supreme Court, it announced that in May or June, it would announce an "Advanced Notice of Proposed Rulemaking" on using the Clean Air Act to regulate greenhouse gas emissions. They've said there probably wouldn't be any regulatory proposals contained in whatever it is they release—rather, they would just lay out the issues and give everyone else 60 to 90 days to tell EPA what THEY thought. Then it seems that they will spend the fall thinking about what everyone else thinks, and then, well, they will run out of time and will leave office, without having done a thing.

There are no doubt complexities and ramifications to moving forward with the regulation of greenhouse gases under the Clean Air Act, complexities that a committed President could and should have dedicated time and attention to before the 11th hour of his term. The Clean Air Act has been a highly successful pollution control weapon for decades, and we should be using all the weapons in our arsenal to combat the threat of global warming. However, many experts have also said that best way to deal with global warming is for Congress to pass an economy-wide cap and trade program, something I hope we can do this year. But Members of this Subcommittee should not lose sight of the fact that this Administration has said unequivocally that it doesn't support a cap and trade program for greenhouse gases either.

Instead of using its authority to take regulatory action in the face of scientific consensus that greenhouse gas emissions are placing the earth in peril, and instead of working with Congress cooperatively to craft a legislative approach, the EPA instead made a cynical move to announce what more accurately could be called an "Aspirational Notice of Procrastinational Rulemaking'," designed to run out the clock on the entire 8-year Bush Administration.

Mr. BUTTERFIELD. I thank the gentleman for his opening statement.

That concludes the opening statements by members of the subcommittee. At this time we are going to turn to the one witness who is seated at the table now. I want to thank the witness again for coming forward today. He is no stranger to many on this com-

mittee. He is the honorable Bob Meyers, Principal Deputy Assistant Administrator for Air and Radiation at the Environmental Protection Agency. Prior to serving at EPA, Mr. Meyers was counsel to this committee and so therefore we welcome him back. You have 5 minutes. Thank you.

STATEMENT OF ROBERT J. MEYERS, PRINCIPAL DEPUTY ASSISTANT ADMINISTRATOR, OFFICE FOR AIR AND RADIATION, ENVIRONMENTAL PROTECTION AGENCY

Mr. MEYERS. Thank you, Mr. Chairman and members of the subcommittee.

As this committee well knows, the Clean Air Act has evolved over several decades through a series of legislative enactments. What began in 1955 as the Air Pollution Control Act underwent a series of extensions and amendments before it became the modern Clean Air Act in 1970 and most recently when it was substantially transformed by the 1990 Clean Air Act amendments. This committee, indeed this very room, has been the location of many debates and negotiations over the scope and purpose of various individual provisions. Thus, there is probably no better place to discuss issues involving the strengths and weaknesses of various Clean Air Act authorities.

This hearing is also timely. As has been noted, Administrator Johnson informed the full committee in a recent letter that he has decided to issue an Advance Notice of Proposed Rulemaking that will present and request and comment on the best available science and examine ways in which the regulation of GHG emissions under one provision of the Clean Air Act interacts with or could lead to regulation of GHG emissions under other provisions of the Act and allows presentation of questions about and the implications of possible regulation of stationary and mobile sources.

In the broader context, the ANPR led to the substantial work already undertaken on climate change. Since 2001, under the leadership of President Bush, the Administration has devoted over $45 billion in resources to addressing climate change science and technology. The Administration has also implemented and is in the process of implementing mandatory programs that will potentially prevent 5 to 6 billion metric tons of GHG emissions through 2030. Overall, the Bush Administration is implementing over 60 Federal programs that are directed at developing and deploying cleaner, more efficient energy technologies, conservation, biological sequestration, geological sequestration and adaptation.

As the members of this subcommittee well know, however, the individual provisions of the Clean Air Act can be complex. So I will attempt the art of the feasible in about 5 minutes. As my written testimony more fully explains, in addition to the mobile source provisions at issue in the Massachusetts case, the Clean Air Act provides three main pathways for potential regulation of stationary sources. Sections 108 and 109 provide the EPA with authority to establish pollutant-specific National Ambient Air Quality Standards to protect public health and welfare. To meet the standards, States develop enforceable State plans under section 110, aided by emission standards issued under other sections of the Act. There are also detailed implementation language provisions contained in

part D of subchapter 1. Section 111 authorizes the EPA to establish emission performance standards for categories of new stationary sources. This section also calls for States to issue performance standards for existing sources in the same categories for which EPA regulates new sources but only when the pollutant in question is neither listed as a pollutant to be regulated through the National Ambient Air Quality Standards under section 109 or regulated from source categories under section 112. Section 112, the third prong, provides EPA with authority to list and issue national emission standards for hazardous air pollutants, or HAPs. As substantially amended in 1990, this section contains low thresholds for regulation of 10 tons for individual HAP and 25 tons for multiple HAPs. Pollutants regulated under section 112, however, are not subject to the Prevention of Significant Deterioration program, or PSD program.

Regarding the PSD program, this is required by section 165 and other sections, and under the program, new major stationary sources and modifications of existing major stationary sources undergo a pre-construction permitting process and install Best Available Control Technology for each regulated pollutant. These basic requirements apply regardless of whether a national ambient air quality standard exists for the pollutant. With regard to mobile sources, Title II of the Act provides the EPA with authority to promulgate standards for a wide variety of on-road and off-road vehicles as well as marine sources and aircraft. EPA has used the Title to achieve deep emission reductions in pollutants such as lead, hydrocarbons, nitrogen oxide, particulate matter and carbon monoxide. The Title literally covers hundreds of millions of individual sources including cars, trucks, construction equipment, off-road vehicles, lawn and garden equipment, ships, and locomotives.

To try and sum up, I would offer the following points. The overall complexity and interconnections of the Clean Air Act provisions require careful evaluation before any final action involving GHGs is taken. Clean Air Act authorities may be available to address GHG emissions for many sources of mobile and stationary emissions and some authorities may trigger or even preclude the use of other authorities. Some authorities provide substantially more flexibility for EPA to tailor requirements because they provide the EPA with discretion regarding what types and sizes of sources to regulate, how to regulate them, and authority to fully weigh costs in setting emissions standards. Other authorities, however, can preclude technology choices or the consideration of costs. The Clean Air Act authorities vary in complexity and they allow for setting standards and providing compliance time periods and they may not—I am sorry—allow for setting standards or providing compliance time that would be optimal. And just to sum up, the Clean Air Act authorities vary in whether they are subject to statutory review periods and during the statutory review periods, what additional assessment of the regulatory levels and actions previously undertaken can take place.

I realize that trying to do this is about stuffing 20 pounds of potatoes in a 1-pound sack, so I will try to stop at this moment and move on to questions from the committee. Thank you.

[The prepared statement of Mr. Meyers follows:]

TESTIMONY OF
ROBERT J. MEYERS
PRINCIPAL DEPUTY ASSISTANT ADMINISTRATOR
OFFICE OF AIR AND RADIATION
U.S. ENVIRONMENTAL PROTECTION AGENCY
BEFORE THE
SUBCOMMITTEE ON ENERGY AND AIR QUALITY
COMMITTEE ON ENERGY AND COMMERCE
U.S. HOUSE OF REPRESENTATIVES

April 10, 2008

Mr. Chairman and Members of the Subcommittee, thank you for the opportunity to discuss with you today the potential for regulation of greenhouse gases (GHGs) under the Clean Air Act.

This hearing is timely. EPA Administrator Stephen L. Johnson is in the process of deciding how best to respond to the Supreme Court's decision in *Massachusetts v. EPA*. As he informed you in a recent letter, he has decided to issue an Advanced Notice of Proposed Rulemaking (ANPR) that will examine the ways in which regulation of GHG emissions under one provision of the Clean Air Act interacts with, and could lead to, regulation of GHG emissions under other provisions of the Act. The Administrator believes that the ANPR approach gives appropriate care and attention to the complexities involved, and that it is critically important to understand and address the implications of regulating GHGs under the Act in deciding how to proceed. The ANPR will present and request comment on the best available science relevant to making an endangerment finding. It will also examine and seek information on the implications of an

endangerment finding on the regulation of vehicles and stationary sources under the Clean Air Act in light of the interconnections among various provisions of the Act.

In a broader context, President Bush has pointed out that climate change is a serious global challenge. Since 2001 the Administration has devoted over $45 billion in resources to addressing climate change science and technology and has implemented mandatory programs in some of the most significant sectors that will potentially prevent 5 to 6 billion metric tons of GHG emissions through 2030. The Administration is implementing over 60 federal programs that are directed at developing and deploying cleaner, more efficient energy technologies, conservation, biological sequestration, geological sequestration, and adaptation. Internationally, the President launched the Major Economies Process, which brings together the world's largest users of energy and largest producers of GHG emissions, including both developed and developing nations, to develop a new approach that can slow, stop, and eventually reverse the growth of GHG emissions. It is in this broader context that we are here to discuss the Clean Air Act as one of many tools available to policy makers in addressing greenhouse gas emissions.

Through his "Twenty in Ten" initiative, the President last year committed the United States to reducing gasoline demand and greenhouse gas emissions from motor vehicles and fuels as part of a national approach for addressing the nation's dependence on petroleum and global climate change. Congress answered the President's call to increase vehicle fuel economy standards and the use of renewable fuels through enactment of Titles I and II of the Energy Independence and Security Act (EISA). Work is now proceeding at EPA and other agencies to implement the new law.

The Clean Air Act, as enacted in 1970 and substantially amended in 1977 and 1990, provides broad authority to address air pollutants that are emitted by mobile and stationary sources. Cars, trucks, construction equipment, airplanes, ships as well as a broad range of electric generation, industrial, commercial and other facilities may be subject to various Clean Air Act programs.

In the *Massachusetts* case, the Supreme Court held that the Administrator of EPA must decide whether or not greenhouse gas emissions from motor vehicles cause or contribute to air pollution that is reasonably anticipated to endanger public health or welfare, or to explain why scientific uncertainty is so profound that it prevents making a reasoned judgment on such an endangerment determination. If the Administrator ultimately finds that motor vehicle GHG emissions meet that two-part "endangerment" test, section 202(a) of the Clean Air Act requires him to set motor vehicle GHG emissions standards.

Through the ANPR, the Administrator is considering whether that endangerment test has been met and, if so, what vehicle standards would be appropriate. The ANPR is also designed to address and seek public comment and information on a range of mobile and stationary source issues that could relate to and arise from a decision to regulate GHG emissions under the authority of the Clean Air Act. In developing a response to the Supreme Court's decision, EPA has come to fully appreciate that Clean Air Act regulation of GHGs would not stop at vehicle standards issued under section 202(a) of the Act. Recognizing similarities in statutory language as well as regulatory "triggers" embedded in the Act, we have evaluated the broader ramifications of the Court's decision for potential Clean Air Act regulation. This review has made clear that regulation of

mobile or other sources of GHGs under the Clean Air Act could potentially affect many stationary sources going well beyond the typical power plant or factory to include large commercial facilities, schools, hospitals, and residential apartment buildings or complexes.

As I will describe below, there are several provisions in the Clean Air Act that contain endangerment language similar to that found in section 202(a). A finding of endangerment for GHGs under one provision of the Act could thus have ramifications for findings of endangerment under other provisions of the Act. In addition, vehicle or other Clean Air Act GHG emissions standards could trigger preconstruction permit requirements for facilities that were not the subject of the promulgated standards. How we define a term in one part of the Act could also affect other provisions using the same term.

In brief, the Clean Air Act provides an integrated and interrelated set of authorities for reducing pollution. This system of regulation has resulted in our nation making substantial gains in the reduction of criteria pollutants, like smog and particulate matter, as well as air toxics. Utilization of existing Clean Air Act provisions to address GHGs, which tend to be well-mixed in the global atmosphere, however, may present different challenges. Therefore, it is prudent to fully consider how existing Clean Air Act authorities would or could work together if an endangerment finding were made under any provision of the Act and any subsequent GHG controls were established under the authority of the Act.

Pending petitions, lawsuits, and deadlines are also affected by the potential implications of the Court's decision. Over the past several months, EPA has received

seven petitions from states, localities, and environmental groups to set emission standards for other types of mobile sources, including non-road vehicles such as construction and farm equipment, ships and aircraft. By the end of this month, the Agency must also address public comments seeking the addition of GHGs to the pollutants covered by the new source performance standard (NSPS) applicable to petroleum refineries under section 111 of the Clean Air Act. Additionally, in response to a remand by a federal court, EPA must decide whether the NSPS for utility and industrial boilers should be expanded to cover GHGs. Legal challenges have also been brought seeking controls for GHG emissions in preconstruction permits for several coal-fired power plants.

In light of the broad array of pending and potential Clean Air Act actions concerning GHGs, we have decided to inform and consult with the public. Through the ANPR, we will discuss our work to date in response to the Supreme Court's decision, including issues and questions related to endangerment and vehicle standards, and our examination of the potential effects of using various authorities under the Clean Air Act. Thus, the ANPR will provide the public with a timely opportunity to help shape an overall approach for potentially addressing GHG emissions under the Clean Air Act. EPA also notes that the Clean Air Act is not the only tool available for addressing GHG emissions at the Federal level and that actions taken through Clean Air Act regulations are part of broader regulatory, policy, and programmatic actions to address GHG emissions taken by EPA, other Federal departments and agencies, state and local governments, the private sector, and the international community.

Individual provisions of the Clean Air Act can be complex. There are also several decades' worth of Clean Air Act interpretations embodied in regulatory activity and

various court decisions. A full explanation of these provisions and their historical interpretation could easily fill a text book. Today, I would like to provide you with something more feasible -- a general overview of several Clean Air Act provisions that might be applied to GHG emissions. As the Subcommittee has requested, I will briefly describe:

- the finding or action that could lead to regulation under a section,
- the types of sources potentially regulated,
- the factors EPA could consider in standard-setting, and
- the flexibility that EPA could provide sources (e.g., whether emissions trading would be permissible).

But I must first offer an important caveat: The following discussion of authorities should not be interpreted to mean that EPA has reached any conclusions regarding whether particular authorities would be mandatory or discretionary, or suitable or unsuitable, for use in reducing GHG emissions. Although we discuss some issues with regard to their potential use, this testimony does not present conclusions. Many stakeholders have raised significant issues and ideas with regard to the potential application of the Clean Air Act to GHG emissions. EPA is still in the process of evaluating the various Clean Air Act authorities, and we will be seeking public input on use of those authorities in the ANPR, where we anticipate a more expansive discussion of the issues, challenges and opportunities these authorities raise.

Stationary Source Authorities

The Clean Air Act includes a number of stationary source authorities that together have successfully reduced air pollution at the same time the nation's economy has grown.

These authorities provide three main pathways for potentially regulating stationary sources of GHG emissions. They include, in their order of appearance in the Act, national ambient air quality standards (NAAQS) and state plans for implementing those standards; performance standards for new and existing stationary sources; and hazardous air pollutant standards for stationary sources. I will describe each of these Clean Air Act programs in turn, followed by a discussion of issues related to the Prevention of Significant Deterioration (PSD) program.

National ambient air quality standards: Section 108 of the Act requires EPA to list pollutants: 1) which, in the Administrator's judgment, cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare; 2) which result from numerous or diverse mobile or stationary sources; and 3) for which the Administrator plans to issue air quality criteria. For listed pollutants (so-called "criteria pollutants"), section 109 of the Act requires that EPA set and periodically revise national primary and secondary ambient air quality standards. Primary standards are standards which, in the judgment of the Administrator, are requisite to protect public health with an adequate margin of safety. Secondary standards are standards judged by the Administrator to be requisite to protect the public welfare from any known or anticipated adverse effects. Under established Supreme Court precedent, both primary and secondary standards are set without consideration of costs or ease of implementation.

Once standards are established under section 109, section 110 of the Act sets forth detailed requirements for state plans to attain and maintain the primary and secondary standards. Costs and feasibility may be considered in the development of these state

plans and the federal rules that aid in achieving air quality standards. Additional requirements for nonattainment areas are contained in Part D of Title I of the Act.

An important issue that has been raised is whether making an endangerment finding under section 202 or other sections of the Act would compel the Agency to list GHGs under section 108 in view of the other listing criteria. We are evaluating, and will seek comment on in the ANPR, the extent of the Agency's latitude in deciding whether or not to list a new pollutant under section 108 for the purpose of setting a NAAQS under section 109.

Another issue to consider is the length of time it would take to develop a NAAQS and to implement controls on GHG emission sources through the SIP process. The Clean Air Act provides a statutory framework for the designation of areas (either attainment, nonattainment or unclassifiable) as well as statutory deadlines for the submission of state implementation plans and deadlines for attainment of various standards. Based on past experience, we might expect that it would take a decade or more to complete the NAAQS process: several years to list the pollutant(s) under section 108 and promulgate a NAAQS for the pollutant(s); two years to make attainment and nonattainment area designations; three additional years for states to submit to EPA state plans and rules to implement the standards; and typically additional time for regulated sources to comply. Litigation has at least once contributed to delaying implementation of a NAAQS.

It is also important to consider that all NAAQS are subject to a statutory review period. Every five years, the Administrator is required to review and determine, based on the latest scientific information, and with consultation and consideration of the recommendations of the Clean Air Act Scientific Advisory Committee, whether to revise

existing NAAQS. Revision of a NAAQS results in another round of area designations and state plans.

More fundamental are the questions raised by the potential application of NAAQS and SIP requirements to global air pollutants like GHGs. Regardless of where in the world they are emitted, GHGs like CO2 are long-lived, and thus mix and distribute in the atmosphere in a way that results in relatively uniform concentrations around the globe. Under a hypothetical NAAQS for the longer-lived GHGs, depending on the level of the standard, the entire country would be either in attainment or in nonattainment with the standard. As there would be no basis for differentiation among the states based on atmospheric concentrations, EPA may have to consider some sort of burden-sharing allocation of responsibility among the states with respect to their relative contribution to attainment of a national standard

If the country were in attainment, states would be required to submit enforceable state plans to maintain the standard and to apply the prevention of significant deterioration (PSD) program to the GHGs covered by the NAAQS. State plans could include limits on stationary sources and mobile source measures not preempted by the Act. As explained in more detail below, PSD requires new source permitting, best available control technology, and emission limits that avoid significant degradation of air quality.

If the country were in nonattainment, states would be required to submit plans that demonstrate attainment of the primary NAAQS within a 10-year maximum time frame. Because controls implemented by a single state, or even by the entire U.S., could not alone ensure stabilization or reductions in global GHG concentrations, this requirement

would be problematic. This is true despite the fact that there may be some flexibility for some nonattainment requirements. Required elements of a nonattainment plan include a reasonable further progress demonstration, reasonably available control measures, transportation conformity, and nonattainment new source review for new and modified major sources. Each of these elements can impose substantial duties on states and localities.

Under either an attainment or nonattainment scenario, state plans could also be required under section 110(a) (2) (D) to prohibit significant contribution to nonattainment or interference with maintenance of the NAAQS in other states. Under section 110(a) (2) (D), EPA has established interstate cap-and-trade programs for nitrogen oxides and sulfur dioxide (e.g., the Clean Air Interstate Rule). EPA has not determined whether or not such provisions would necessarily be "triggered" or applicable to a GHG NAAQS. However, these provisions have been part of past NAAQS implementation.

New source performance standards (NSPS): Section 111(b) of the Act requires EPA to establish emissions standards for any category of new and modified stationary sources that the Administrator, in his judgment, finds "causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare." EPA has previously made endangerment findings for 74 source categories that are now subject to NSPS. An endangerment finding would be a prerequisite for listing additional source categories for NSPS.

NSPS for new and modified sources can be issued regardless of whether there is a NAAQS for the pollutant being regulated. NSPS emission limits are to reflect "the best system of emission reduction," taking into account cost and any non-air-quality health

and environment impacts and energy requirements. EPA has significant discretion in selecting the categories and sizes of facilities to be covered and the level of the standards to be set. Emissions limits can be written for equipment within a facility or for an entire facility. EPA believes section 111 allows some form of emissions trading among facilities.

Section 111(d) calls for states to issue performance standards for existing sources in the same categories for which EPA regulates new sources, but only when the pollutant in question is neither listed as a criteria pollutant to be regulated through a NAAQS under section 109, nor regulated from the source category under section 112. Historically, EPA has issued model standards for existing sources by rule that could then be adopted by states. Altogether, section 111 provisions for new and modified and existing sources allow significant flexibility in regulation that may not be available under other Clean Air Act provisions.

Section 111 also requires EPA to review and, if appropriate revise, existing NSPS every eight years unless the Administrator determines that "such review is not appropriate in light of readily available information on the efficacy of such standard." EPA is currently in the process of reviewing NSPS for a number of source categories, and in the context of some of those reviews, commenters are urging the Agency to add GHG limits to the section 111 standards.

Standards for hazardous air pollutants: Section 112 provides for regulation of hazardous air pollutants from stationary sources. Congress initially listed more than 180 hazardous air pollutants in the statute, but provided a mechanism whereby EPA may add a pollutant which is "known to cause or may reasonably be anticipated to cause ...

adverse effects to human health or adverse environmental effects." Once EPA lists a pollutant, the Agency must set technology-based "maximum achievable control technology" (MACT) standards for all categories of major sources of the listed pollutant. Eight years after a MACT standard is set, EPA is required to consider whether to set tighter MACT standards or, if needed to protect health and the environment, residual risk standards. Section 112 also authorizes EPA to address smaller sources of listed pollutants through potentially less stringent emissions limits.

Under section 112, major sources are defined as those that have the potential to emit 10 tons per year of any one hazardous air pollutant or 25 tons per year of multiple hazardous air pollutants. These low thresholds reflect the fact that these authorities were originally established by Congress for regulation of toxic air pollutants which are emitted and can contribute to adverse effects at relatively low volumes. Since CO2 is typically emitted in much higher quantities than currently listed hazardous air pollutants (or even NAAQS pollutants), application of these thresholds to GHG emission sources could result in a massive increase in the number of sources subject to section 112 standards.

Unlike NSPS, section 112 establishes minimum stringency requirements for MACT standards based on levels of performance achieved by similar facilities, restricting EPA's ability to consider cost. EPA has interpreted section 112 to allow emissions averaging within a source, but not to allow emissions trading among different major sources. Pollutants that are regulated under section 112 are not subject to preconstruction review under the prevention of significant deterioration (PSD) program.

Prevention of Significant Deterioration (PSD): Once EPA controls a GHG under any section of the Clean Air Act -- except for sections 112 and 211(o) – new or modified

major stationary sources of that pollutant would become subject to the requirements of the PSD program. As a general matter, new major stationary sources and modifications at existing major stationary sources constructed in attainment areas must undergo the PSD permitting process and install best available control technology for each pollutant subject to regulation under Act. These requirements apply regardless of whether a NAAQS for the pollutant exists.

For PSD purposes, major stationary sources are those with the potential to emit 100 tons per year of a regulated air pollutant in the case of certain statutorily-listed source categories, and 250 tons per year in the case of all other source categories. New large schools, nursing homes, and hospitals could be considered a "major source" under this section of the Clean Air Act. For modifications, only those that increase emissions above a tonnage threshold established by EPA for each regulated pollutant through rulemaking triggers PSD. Until EPA establishes this so-called "significance" level, however, <u>any</u> increase in a regulated pollutant at a major stationary source undergoing a modification would trigger PSD permitting.

As noted previously, PSD sources are required to install best available control technology (BACT). BACT must be at least as stringent as any applicable NSPS, and is to reflect the maximum degree of emissions reduction achievable for such a facility, taking into account energy, environment and economic impacts and other costs.

Controlling GHG emissions under any section of the Clean Air Act could significantly increase the number of stationary sources subject to PSD permitting. Because CO2 is typically emitted in larger quantities than criteria and other traditional air pollutants from combustion sources, facilities not previously subject to Clean Air Act

permitting -- such as large commercial and residential buildings heated by natural gas boilers -- could qualify as major stationary sources for PSD purposes. In addition, some small industrial sources not now covered by PSD could be expected to become subject to PSD due to their GHG emissions.

Currently, our best estimate of the potential impact of including GHGs in the PSD program is that the number of PSD permits issued annually nationwide could rise by an order of magnitude above the current 200-300 a year. Such estimates are subject to significant uncertainty. At present, we do not have comprehensive information on GHG emissions from the many categories of stationary sources of such emissions; instead we have relied on available information and general engineering estimates.

Such a broadening of the PSD program could pose significant implementation issues for covered facilities (particularly newly covered facilities) and permitting agencies. EPA is examining the scope of these potential difficulties and whether, for GHGs, the program could be limited to larger sources, at least temporarily, in view of the very substantial increase in administrative burden that might otherwise occur. However, at present it is unclear as to whether EPA has the legal discretion to exempt sources above the statutory thresholds. In addition, EPA is exploring concepts for streamlining implementation of the PSD program for smaller sources, such as guidance on general permits or source definitions for BACT determinations and model permits for use by permitting agencies. EPA will address permitting issues in greater detail in the planned ANPR.

Mobile Source and Transportation Fuel Authorities

Title II of the Clean Air Act provides extensive authority for addressing emissions from the transportation sector in a comprehensive way. Under Title II, EPA has the authority to address all mobile sources and develop a holistic approach to regulation, taking into account the unique aspects of each category, including passenger vehicles, trucks and nonroad vehicles, as well as the fuels that power them. For example, EPA has used Title II authorities to achieve deep emission reductions in such pollutants as lead, hydrocarbons, nitrogen oxides, particulate matter, and carbon monoxide from all categories of motor vehicles. These mobile source authorities work in tandem with the Act's stationary source authorities to enable EPA to help states attain and maintain the NAAQS and otherwise protect public health and the environment from air pollution.

Section 202(a), the section at issue in the *Massachusetts* case, authorizes EPA to set emissions standards for new motor vehicles or new motor vehicle engines. This provision states that "the Administrator shall by regulation prescribe … standards applicable to the emission of any air pollutant from any class or classes of new motor vehicles … which in his judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare." Section 202(a) covers all vehicles commonly described as on-highway or on-road vehicles, including passenger cars, light trucks, heavy-duty trucks, buses and motorcycles. Section 202(a) emissions standards only apply to new vehicles and engines, although EPA does have authority to set requirements for rebuilding practices of heavy-duty vehicles, including emission standards.

In setting standards under section 202(a), EPA may consider the need for emissions standards, technological feasibility and other factors such as cost, lead time,

safety and energy impacts. Emission standards may be technology forcing where determined to be appropriate, so long as they take effect "after such period as the Administrator finds necessary for the development and application of the requisite technology, giving appropriate consideration to the cost of compliance within such period." EPA also has discretion to establish standards that allow the use of averaging, banking and trading of emission credits, which allows EPA to set standards that achieve greater emission reductions while providing flexibility to manufacturers in meeting the standards.

In this context, it is important to note that in EISA, Congress called on the Department of Transportation to tighten vehicle fuel economy standards, which will achieve significant GHG emission reductions. We recognize that if we were ultimately to use Clean Air Act authorities to establish GHG emission standards for motor vehicles, we would need to take care to meet the Supreme Court's expectation that emission standards can be crafted so as to avoid inconsistency with the fuel economy program issued under the new energy law. To that end we intend to seek comment on this issue in the ANPRM.

Other Clean Air Act Title II provisions provide EPA with authority for emission standards for nonroad engines and vehicles (section 213), aircraft (section 231), and fuels (section 211). Each of these provisions (with the exception of section 211(o)) contains a variation of the "endangerment" test found elsewhere in the Act.

Nonroad engines and vehicles cover a wide variety of engines and equipment that are typically mobile or transportable. They include lawn and garden equipment, off-road vehicles, portable generators, farm and construction equipment, ships and locomotives.

EPA may set emissions standards for these engines and equipment if the appropriate endangerment determination is made. Like the standards for motor vehicles, the emission standards for these engines and equipment would only apply to new engines or equipment. In general, EPA may consider the same factors and provide the same kinds of flexibility compliance mechanisms (e.g., averaging, trading and banking) as apply to standard-setting for new motor vehicles.

For aircraft, EPA is required to set emissions standards if the appropriate endangerment determination is made under section 231. EPA's authority is not limited to setting standards for new aircraft. As with the other categories of mobile sources, EPA has significant discretion in the factors it considers in setting standards for aircraft and the ability to develop flexible compliance mechanisms.

In the case of fuels, under section 211(c), EPA may establish controls related to fuels or fuel additives where the emissions products of the fuel or fuel additive cause or contribute to air pollution that, in the judgment of the Administrator, may reasonably be anticipated to endanger public health or welfare. This authority extends to fuels or fuel additives for use in motor vehicle or nonroad engines; it does not extend to jet fuel or fuel used in stationary sources. In setting standards or requirements for fuels, EPA can consider all of the same factors discussed above for motor vehicles.

In the past, the Agency has used a systems approach for considering fuels and vehicles together. We have also allowed emissions averaging and flexible banking and trading with market incentives for early introduction of clean technologies and phase-ins to provide more time to address technical challenges.

Section 211(o) establishes the renewable fuels standard and, as recently amended by EISA, requires significant quantities of renewable fuel, including renewable fuel meeting various GHG "lifecycle" emissions thresholds. As amended by EISA, section 211(o) requirements for GHG emission reductions do not trigger any further regulation of GHGs under the Clean Air Act, nor is regulation under section 211(o) contingent on an endangerment finding.

I should also mention, without going into detail at this point, section 615 which contains endangerment language related to effects on the stratosphere. This section is mentioned in the interest of providing a comprehensive indication of possible Clean Air Act authorities and not for the purpose of identifying specific interactions with other Clean Air Action sections.

At this point in our examination of the Clean Air Act authorities potentially applicable to GHGs, I offer the following points, which the Agency will further explore in the ANPR:

- Interconnections among Clean Air Act provisions call for careful evaluation before any final action involving GHGs is taken under the Act.
- A variety of Clean Air Act authorities may be available to address GHG emissions from many types of mobile and stationary sources.
- Some of the authorities are better designed for local/regional pollutants than for global pollutants.
- Some authorities provide substantially more flexibility for EPA to tailor requirements to the unique circumstances presented by GHGs, because they provide EPA with discretion regarding what types and sizes of sources to

regulate and how to regulate them (e.g., through a trading program), and the authority to fully weigh costs in setting emissions standards.

- Clean Air Act authorities vary in the flexibility they allow for setting standards and providing compliance time periods that would be optimal for development of advanced technologies.
- Clean Air Act authorities also vary in whether they are subject to statutory review periods that could result in additional assessment of regulatory levels and actions previously established.
- Controlling GHG emissions under most provisions of the Clean Air Act could substantially expand the number of sources required to obtain PSD permits in the absence of administrative or other efforts to tailor those requirements to GHG emission sources.

We look forward to exploring these important issues further with Congress and the public. Thank you again for the opportunity to testify.

Mr. BUTTERFIELD. I want to thank the gentleman for his testimony. His written testimony will certainly be included in the record. This concludes the opening statement of this witness and we are now going to proceed with questions from the members.

I will recognize the gentleman from Michigan, the chairman of the full committee, Mr. Dingell, for questions. Would the chairman like to ask questions of the witness?

Mr. DINGELL. Mr. Chairman, I thank you for your courtesy.

I want to begin by welcoming Mr. Meyers back to the Committee. Welcome, Mr. Meyers. You served here with distinction and we are pleased that you are continuing to have success.

I would like to address first New Source Performance Standards. One source of regulatory authority is section 111, which establishes a New Source Performance Standard program. Despite its name, it covers both new and existing stationary sources, including power plants, refineries, large industrial facilities of all kinds. I am aware of two options for regulating under these provisions, neither of which seems to be optimal. Am I correct, and just yes or no to this, that EPA regulates approximately 75 source categories under section 111 and that if CO_2 is regulated under the section, EPA would eventually need to determine whether CO_2 limits are appropriate for each of these 75 source categories and EPA might add more categories to the list, yes or no?

Mr. MEYERS. You are correct. There are 74 source categories and the question of regulation would be before the agency.

Mr. DINGELL. Thank you. Now, first of all, there will be lots of sources in these existing source categories. Isn't that so?

Mr. MEYERS. Yes.

Mr. DINGELL. Can you submit to us, then, an approximate number of those which might be a matter of concern to EPA? You can submit that for the record.

Mr. MEYERS. Yes, we———

Mr. DINGELL. Now, am I correct that the traditional way of regulating under section 111 is for EPA and the States to issue standards for specific types of new and existing stationary sources and require each affected source to meet the standard without the use of cap and trade, yes or no?

Mr. MEYERS. We have done that. We also use section 111, however, within our Clean Air Act Mercury Rule for a cap-and-trade program.

Mr. DINGELL. All right. Now, let us take a look at the authorities that EPA can use or can be forced through litigation to use. First of all, New Source Review; second, State Implementation Plans; third, New Source Performance Standards; fourth, the authority that EPA has over automobiles, trucks, non-road engines, aircraft, and fuel. Is that correct?

Mr. MEYERS. Yes, all the authorities you mentioned would cover mobile and stationary sources regulated under the Act.

Mr. DINGELL. Now, your testimony raises the possibility that EPA might use section 111 to set up a cap-and-trade program. I am going to ask you to submit for the record what that will be and how that would be done, but I am going to ask you at this time, that appears to be what the agency attempted to do when it adopted its mercury rule for power plants. Is that correct?

Mr. MEYERS. My testimony discusses some ideas that we will advance through the ANPR process, but you are correct that in implementing or in promulgating those regulations we used 111 for cap and trade.

Mr. DINGELL. Thank you. Now, under the mercury rule, EPA had to act in cooperation with the States to set up a cap-and-trade program, and many of the States did not cooperate. Industry was then faced with a patchwork of programs instead of one national cap-and-trade program. Then the court vacated EPA's rule. Industry still now has to meet requirements in some States but not others, and eventually we assume that they will have to meet some kind of Federal requirement. Is this statement true?

Mr. MEYERS. The court vacated our rule that——

Mr. DINGELL. Just yes or no.

Mr. MEYERS. Yes. There will be——

Mr. DINGELL. Thank you. Now we confront a new problem. Once the New Source Review is triggered with respect to greenhouse gas emissions, does that mean that before a company could build a new coal-fired power plant or make a major modification to an existing coal-fired power plant, the permitting authority could add CO_2 and would probably have to add CO_2 emission requirements to the permitting process? Is that true, yes or no?

Mr. MEYERS. If there was a determination with regard to endangerment, which is the subject of our ANPRM and the comment we are seeking now and the 111 program became applicable, it would be applicable to air pollutants under the Act.

Mr. DINGELL. Now, Mr. Meyers, I would appreciate an estimate from you as to how many sources would be subject to NSR if the threshold were 5,000 to 10,000 tons per year, and I will submit that in writing and ask unanimous consent, Mr. Chairman, that that be inserted into the record.

Now, Mr. Meyers, I believe that if an industrial facility had been a minor source for sulfur dioxide but is a major source for carbon dioxide, the permitting process then would treat this as a major source for both pollutants. Is that correct?

Mr. MEYERS. Yes.

Mr. DINGELL. Now, I assume that from a policy perspective, you do not believe that it would be a good idea to apply NSR to all stationary sources that emit more than 250 tons of greenhouse gases per year. Is that correct or false?

Mr. MEYERS. We haven't made any determinations as to what applicable thresholds might be. The 250 is the tonnage limit for some sources under the PSD program and 100 tons is another threshold in the PSD program.

Mr. DINGELL. Now, Mr. Meyers, if you would, please, submit for the record how EPA could limit NSR so that it does not apply to all of these small sources. Can you do that? Can you limit it so it would not apply to all of these small sources?

Mr. MEYERS. This is one of the issues that we would be looking toward the ANPRM for further public notice and comment.

Mr. DINGELL. Now, the matter would certainly be litigated, would it not?

Mr. MEYERS. A lot of—most everything that the Clean Air Act——

Mr. DINGELL. And it would be difficult, if not impossible, for us to predict the consequences of that litigation and that a bunch of goodhearted, overenthusiastic judges might decide what should be done. Is that correct?

Mr. MEYERS. Yes.

Mr. DINGELL. Thank you.

Mr. Chairman, I thank you for your courtesy.

Mr. BUTTERFIELD. Does the chairman yield back?

Mr. DINGELL. Yes.

Mr. BUTTERFIELD. At this time the chair recognizes the ranking member of the subcommittee, Mr. Upton.

Mr. UPTON. Thank you, Mr. Chairman, and I just want to say in response to Mr. Dingell's opening statement and his questions and the opening statement by my good friend and current ranking member and former chairman Barton, I think that there is a way that we can get bipartisan cooperation to fix this problem that is before us if we put those two in a room and allow them to address this issue.

As I said in my opening statement, I am one that believes that it was not Congress's intent for the EPA to regulate carbon-based on the legislation that was passed in the very early 1990s. As I look to the future, Mr. Meyers, I certainly appreciate your friendship and work in this committee before but we have heard statistic that our energy needs are going to grow by 50 percent by the year 2030, and if you maintain the current mix of power, electricity, power to our country, and we maintain the current levels, whether it be nuclear, coal, natural gas, et cetera, we use a little more than 50 percent of our energy comes from coal. About 20 percent comes from nuclear. So as we grow by 50 percent, that means that we are going to have to build 750 new coal plants. We are going to have to have them online by the year 2030. We are going to need 52 new nuclear plants by that same time to maintain 20 percent. What is particularly troubling is that in the last year, 23 States have blocked 30 new coal plants coming online. The most recent one that has had a lot of attention of course is the situation in Kansas that was heralded just this last week.

I guess the question that is burning in my mind as we think about the future is, under the Massachusetts v. EPA ruling, will the EPA have the authority to also then weigh in on the permitting process as it relates to CO_2 for any of these 750 new coal plants that American consumers and businesses are going to have to use for coal energy in the future? Do you envision the EPA being very involved in the application process for those new plants, yes or no?

Mr. MEYERS. Well, I think the fact of the matter is, we are involved in a sense currently. We have comments that pertain to these permits that raise CO_2 issues so currently the issue arises and we respond to the comments and the permitting already.

Mr. UPTON. But without carbon sequestration, which of course that technology is not quite with us yet, can you envision not only having a major role in the new application or permitting of these but also in the current operation of those plants that are producing electricity across the country?

Mr. MEYERS. I think a good frame of reference would be the analysis that we have done for various legislation that Congress is con-

sidering, and when you look at that analysis, it contemplates both heavy penetration of carbon capture and sequestration as well as a ramp-up in nuclear power as possible strategies to meet the thresholds that are placed on the power sector under legislative provisions of the Act.

Mr. UPTON. Would that mean—would you have a role then in perhaps the early retirement of some of these different plants across the country if they are not using carbon sequestration?

Mr. MEYERS. The role that EPA will have in the future under the Clean Air Act is one of the main reasons we are going with the ANPRM, because of the complexity of all the interconnections between regulating the pollutant under one program and application of both the PSD in construction and modifications, as well as Title V operating permits. These are major questions that would occur and so these are the types of questions we think are very complex and needing of public input.

Mr. UPTON. Let me ask this last question before my time expires. Can Title I of the Act effectively implement emission reductions for an emission when the control technology does not exist or is not commercially demonstrated or available?

Mr. MEYERS. Title I includes all the provisions I cited in my testimony so it is fairly broad. If the cases are that the—the existence or non-existence of technology would not matter in certain provisions of Title I like NAAQS. It would matter in other provisions of Title I, such as the section 111 program, which looks to best demonstrated technology. So it depends on the provision under Title I.

Mr. UPTON. Thank you.

Mr. BUTTERFIELD. All right. The gentleman has completed his questions, and it looks like we may have three votes on the House Floor at this moment. How does the Committee wish to proceed?

Mr. UPTON. Why don't we go on your side and then come back?

Mr. BUTTERFIELD. All right. Let us try one set of questions and then we will proceed to the Floor.

At this time the chair recognizes the gentleman from Georgia, my friend, John Barrow.

Mr. BARROW. I thank the chair. Mr. Chairman, I should like to yield my time to my friend on the Committee, the gentleman from California, Mr. Waxman.

Mr. BUTTERFIELD. The gentleman from California is recognized. Now, is that permissible under the rules?

Mr. UPTON. Yes.

Mr. WAXMAN. Thank you, Mr. Chairman and Mr. Barrow, for being so gracious to yield me your time.

I know some members are concerned about the potential complications of regulating greenhouse gases under the Clean Air Act, especially for small sources. Our distinguished chairman has even referred to the prospect of a glorious mess. I disagree. We can deal with global warming under the Clean Air Act, and the sooner we do it, the easier and less expensive it will be. One reason we need immediate EPA action is simple. When you are in a hole, the first thing to do is stop digging. In global warming, that means putting a moratorium on building huge new sources of CO_2 emissions. The permits pending before EPA and the States to build massive new power plants across the country will add hundreds of millions of

tons of CO_2 emissions to the atmosphere, but EPA claims it can't do anything about these emissions until it commits to regulating CO_2. At our Oversight Committee hearing, we asked EPA Administrator Johnson about this issue and he said it would be premature to require any global warming pollution controls on new power plants because EPA hadn't yet decided how to regulate CO_2. Mr. Meyers, is this still the EPA position? Do you think it is premature to require new power plants to use state-of-the art controls to limit CO_2 emissions?

Mr. MEYERS. The Administrator had indicated at the hearing that he would be taking a case-by-case approach to the individual power plant permits that were under consideration by the agency and that is still the position of the agency.

Mr. WAXMAN. So, in a case-by-case analysis for permitting these power plants, would EPA use its discretionary authority to require state-of-the-art technology to reduce CO_2 emissions under some of these permits?

Mr. MEYERS. We have received in some cases fairly extensive comments with regard to the CO_2 issue in individual permit actions, so we would respond to the comments that we have received in the permitting process.

Mr. WAXMAN. So you would decide a permitting process not uniformly, but case-by-case. Why case-by-case and not uniformly if there is going to be additional CO_2 emissions?

Mr. MEYERS. Case-by-case is essentially the nature of the permit program so that would be a consistent practice of the agency over the last decades.

Mr. WAXMAN. If this means that you are not going to make any decision to give a signal to all the permitees that will come in requesting the authority to go ahead and build a new power plant, that might mean that nothing will happen, if you are trying to wait to decide how you are going to deal with CO_2 emissions overall. Is that right?

Mr. MEYERS. I think we will be taking a case-by-case approach in looking at the individual CO_2 emissions and the comments. We have not contemplated a more holistic approach at this point in time. I think the ANPRM is also a facility and vehicle that we can receive comments on some of the pending agency issues such as those you referenced.

Mr. WAXMAN. Well, I worry about EPA doing nothing and allowing these 27 new coal-fired power plants to get their permits. None of these plants will have the state-of-the-art control technology for global warming. They are projected to emit about 400 million tons of greenhouse gases each year. That is more CO_2 emissions than are currently emitted by entire States. The approval of just one plant that EPA is considering, the Desert Rock Plant in New Mexico, would negate the emission reductions currently being implemented by eight northeastern States in the first regional greenhouse gas cap-and-trade program. Mr. Meyers, if EPA acknowledges the obvious, that greenhouse gases may endanger health or the environment, would EPA then agree it has the authority to regulate the CO_2 emissions from these new power plants?

Mr. MEYERS. In the endangerment determination there is statutory language that is contained in several provisions of the Act. In the permitting issue of PSD, we would be looking essentially——

Mr. WAXMAN. Now, you are not answering my question. My question is, if EPA came to the conclusion that there is an endangerment, that greenhouse gases may endanger health or the environment, then EPA would clearly have the power and authority to regulate CO_2 emissions from these power plants. Isn't that correct?

Mr. MEYERS. There are two—there are essentially two steps. There is the endangerment determination and then the second step I think you are referencing would be the decision to regulate, and those would be separate steps in the process contemplated by Massachusetts v. EPA.

Mr. WAXMAN. The fact is, there are multiple ways EPA could prevent these new plants from being built without state-of-the-art controls and there are strong arguments that EPA must or may set protective permit terms before finding endangerment, and EPA clearly can issue national New Source Performance Standards for power plants and other sources under section 111 of the Act. Isn't that correct?

Mr. MEYERS. Power plants are currently a listed category under section 111.

Mr. WAXMAN. Okay, but none of this will happen if EPA is sitting on its hands. The decision not to control emissions from these new power plants is really a decision to allow the CO_2 emissions from these power plants. That is why I think the EPA position is so untenable.

Now, I understand there are concerns about EPA taking action, that once EPA regulates, smaller new or modified sources that have never previously had to obtain permits might have to get them, but I think this is a red herring. Mr. Meyers, has anyone petitioned or urged EPA to require these smaller sources to get permits?

Mr. MEYERS. I am not aware of a current petition, no.

Mr. WAXMAN. EPA has a long history of implementing the Clean Air Act in a practical and workable way, and if it turns out that the statute doesn't provide sufficient flexibility, Congress could easily give EPA that flexibility. A one-line change in the Act would give EPA temporary flexibility to increase the threshold for regulating small sources of CO_2 emissions. This would win widespread support if combined with genuine efforts by EPA to regulate new power plants.

Mr. Meyers, this Administration has spent the past 7 years doing everything possible to deny and delay action on global warming. I think it is a shame, and the longer we wait, the greater the risk from global warming and the more costly it will be to reduce these emissions, and that will hurt all of us.

Mr. BUTTERFIELD. The gentleman's time has expired.

All right. As you can see, Mr. Meyers, you know what we have to do right now. We will reconvene 10 minutes after the last vote, which should be about 25 minutes from now. The Committee is in recess.

[Recess.]

Mr. BUTTERFIELD. Let the Committee be back in session. Thank you for your patience. We are ready to resume.

At this time the chair recognizes the distinguished ranking member of the full committee, Mr. Barton.

Mr. BARTON. Thank you, Mr. Chairman, and thank you for reconvening the hearing expeditiously. I appreciate that.

Mr. Meyers, you were a member of the committee staff on this committee for a number of years. Isn't that true?

Mr. MEYERS. Yes, that is true.

Mr. BARTON. What years were you a member of the committee staff?

Mr. MEYERS. From early 1995 until 2004.

Mr. BARTON. From 1995 to 2004. So you were not here in 1990 when we last amended the Clean Air Act?

Mr. MEYERS. I was chief of staff to another member on the committee who was on the conference committee for the 1990 amendments so——

Mr. BARTON. So you were a personal staff member of a member of the Committee?

Mr. MEYERS. That is correct.

Mr. BARTON. Okay. Well, I was on the Committee in 1990, and I looked at the roster of the current membership of the Committee and my count is that there are 11 members of the committee today that were members of the Committee in 1990 including the distinguished chairman of the full committee, Mr. Dingell. I do not remember even an amendment that would have made CO_2 a criteria pollutant under the Clean Air Act. I don't even remember a debate about it. And I participated in all the public hearings and was a participant in many of the private meetings on a bipartisan basis. Since you were a chief of staff for a member of the Committee at the time, do you recall any amendments that would have regulated CO_2 as a criteria pollutant under the Clean Air Act amendments of 1990?

Mr. MEYERS. I don't remember any amendments, sir. The 1990 amendments themselves included section 821, which is a reporting provision for power plants, and then within the context of Title VI, the direction is for the agency to evaluate global warming potential of ozone-depleting gases. I can't speak comprehensively if there was any amendment to criteria pollutants. I certainly don't remember one.

Mr. BARTON. It is a true statement that CO_2 is not listed as a criteria pollutant under the Clean Air Act. Is that not correct?

Mr. MEYERS. That is correct.

Mr. BARTON. Okay. Do you have an opinion whether Congress intended to confer authority upon the EPA to regulate CO_2 emissions under either Title I, the stationary sources title of the Act, or Title II, mobile sources of the Clean Air Act?

Mr. MEYERS. Sir, that touches on some of the issues that were in litigation in the Massachusetts v. EPA case and the position of the agency prior to the Supreme Court's case. So I would defer to the opinion of the Supreme Court in that matter.

Mr. BARTON. Well, that is the whole point of this hearing, Mr. Meyers. The Congress doesn't have to defer to the Supreme Court. As I pointed out in my opening statement, we appreciate those

paragons of legal knowledge at the court but they are human beings and their opinions are just that, opinions, and my recollection is, it was a 5-to-4 decision, which means a very close call. My understanding, and you can correct me if I am wrong, is that under the majority opinion of Massachusetts v. EPA, what the court ruled is that the EPA has to decide whether to regulate CO_2 or not. It didn't say that the EPA had to. Is that not correct?

Mr. MEYERS. No, that is correct. I was referring to arguments that were raised in litigation on behalf of the U.S. Government during the litigation on Massachusetts v. EPA.

Mr. BARTON. Let me ask you another question. Is there any evidence about specific levels of CO_2 causing individual health problems?

Mr. MEYERS. At ambient concentrations, that would not be the case. There is an exposure standard that is used for OSHA, which is approximately, I think, around 3,000 parts per million.

Mr. BARTON. Three thousand parts per million. Million or billion?

Mr. MEYERS. PPM.

Mr. BARTON. PPM, parts per million. But the current ambient CO_2 concentration in the atmosphere is around 350. Is that correct?

Mr. MEYERS. Approximately, yes.

Mr. BARTON. So you have got to go 10 times——

Mr. MEYERS. It is either 3,000 or it could be as much as——

Mr. BARTON. But there aren't any cases right now of children going into emergency rooms because of CO_2 inhalation or there is no evidence that CO_2 causes cancer, there is no evidence that CO_2 causes brain damage. In other words, under what we normally regulate pollutants under the Clean Air Act and the Safe Drinking Water Act, there is no evidence that CO_2 is harmful to health. Is that not correct?

Mr. MEYERS. Under the Clean Air Act, the ambient standards, if you are talking here—this question goes to whether direct health impacts from inhalation——

Mr. BARTON. Well, isn't the standard we use in the Clean Air Act right now that it has to be directly harmful to individual health?

Mr. MEYERS. The——

Mr. BARTON. SO_2 and NO_x and all that?

Mr. MEYERS. There are different health-based standards. In the NAAQS context, it is adverse effect on public health or the environment, and so I guess—we do have U.S. standards that deal with confined exposure to CO_2, and certainly in that situation CO_2 would be a direct physical effect for health. The issue with respect to CO_2 in the environment or the health-related issue is the question of endangerment. That is before the agency.

Mr. BARTON. Okay. My last question, Mr. Chairman. I appreciate the courtesy.

When Mr. Waxman was here, he was somewhat chagrined that EPA is not categorically rejecting new permit applications for coal plants because of their CO_2 emissions. As I understand the law, under the current law, there is no requirement that you even consider CO_2 as a pollutant for an air quality permit. Is that not correct?

Mr. MEYERS. It is not a regulated pollutant under the Act right now and I think the reference is probably to the Deseret Bonanza decision of last year in which we——

Mr. BARTON. But under the current law, if I present to you a permit request for a coal plant, it is not required by Federal law that you even have to list the CO_2 emissions, is it?

Mr. MEYERS. No, it is not directly required.

Mr. BARTON. Because it is not a criteria pollutant. Thank you, Mr. Chairman.

Mr. BUTTERFIELD. At this time the chair recognizes the gentleman from Utah, Mr. Matheson.

Mr. MATHESON. Thank you, Mr. Chairman.

Mr. Meyers, thanks for coming to the committee today. I was going to ask you a question about something I saw in your testimony. I believe you mentioned in your testimony that there are several sections in the Clean Air Act that EPA believes would give the EPA authority to implement a cap-and-trade system as a way to regulate greenhouse gas emissions. Did I read that correctly?

Mr. MEYERS. Yes. We have implemented cap and trade in different contexts, primarily under section 110 with regard to state implementation plans and then within section 111, as I mentioned earlier, it was part of our Clean Air Mercury Rule.

Mr. MATHESON. What options would EPA have in determining how to distribute allowances under a cap-and-trade program?

Mr. MEYERS. That is a good question. I would like to give a fuller response for the record, but in terms of the way we have implemented cap and trade, we actually did not distribute the allowances, since it was a State-implemented plan. We gave the States a budget and the States were in a position to decide among their sources their obligations to meet the budget.

Mr. MATHESON. I am assuming you have the flexibility to implement a program where, if you were distributing allowances, you could auction some of them. Does the EPA have—what is your understanding of what EPA regulations or rules would guide you in how you would use the revenues from auctioning those allowances? Could EPA help make the decision about how those revenues would be distributed?

Mr. MEYERS. I think there are other statutes that would go to the question of what the disposition of any revenues that the EPA might collect through sale or auction of the allowances. I mean, the main program we have obviously is in Title IV of the Act and, you know, in that we do have an auction, a small auction provision that Congress authorized for Title IV allowances.

Mr. MATHESON. It just seems to me that the two biggest issues, and there are a lot more complexities, and I don't want to oversimplify, but on cap and trade is where you set the cap year by year and how you deal with the allowances. I am just—let me not to repeat, but do you think you have sufficient guidance, authority or rules in place to take on that level of complexity in terms of setting up a cap-and-trade program or would you need direction from Congress in how you do that?

Mr. MEYERS. I think EPA generally has great experience with cap-and-trade programs through the 18 years it has been operating the acid rain program and in other contexts, so I think we have

technical expertise. We have been asked similar questions with respect to what we would need in terms of staff and money for a potential carbon cap and trade and I think we can provide the responses that we provided to Congress in that respect.

Mr. MATHESON. Let me ask you if you were to implement a program to try to reduce greenhouse gas emissions by a certain date and time, how could or how would the EPA go about determining the appropriate level and schedule of emission reduction that its regulations should achieve?

Mr. MEYERS. These are some of the very broad and complex issues that I think the ANPRM process is designed to solicit public input. We do not have an opinion as an agency right now with respect to those issues.

Mr. MATHESON. But you do think the agency has the authority or the ability to come up with that through that process, a schedule of reductions over time or a target?

Mr. MEYERS. My remarks, I think, were with regard to our technical ability in the cap-and-trade area. The authority implies legal authority, which is a separate issue.

Mr. MATHESON. And do you think you have that legal authority to do that?

Mr. MEYERS. The issue in front of us, Massachusetts v. the EPA, and the remand from the district court, is the issue of endangerment, which is inherent in the authority under the Act on that particular litigation.

Mr. MATHESON. Would you have the flexibility when you are setting up regulations to maybe take a look at different types of sources, and there may be some sources that are more applicable for reductions early on, whereas other sources may not be applicable and you would extend time for that? Instead of a general cap and trade, would you want to divide sources up into different categories for scheduled emissions?

Mr. MEYERS. I think as my testimony reflects, the agency has done some work and thinking with regard to stationary sources. With respect to ability or categorization of larger sources versus smaller sources, that is something that we have given some thought to, and again, would like to solicit public input but again, the major threshold issue that has not been decided and needs to be addressed through the ANPRM is the endangerment issue and the remand from Massachusetts v. EPA.

Mr. MATHESON. Thank you.

Mr. Chairman, I will yield back.

Mr. BUTTERFIELD. The gentleman yields back.

At this time the chair recognizes my friend from Illinois, Mr. Shimkus.

Mr. SHIMKUS. Thank you, Mr. Chairman.

Bob, welcome back. You heard my opening statement. It is good to see you. I held up—you understand part of my concern is that we have the Clean Air Act, we have a Supreme Court ruling. I do believe it is legislating. I think the best aspect we could do to move forward is to legislate. You cannot by current authority consider the economic pain or gain in any aspect of this deliberation. Is that correct?

Mr. MEYERS. That is correct with respect to NAAQS standards. We have Supreme Court opinion that says that we cannot consider cost. It is also correct with regard to the face of the section 112 authority over hazardous air pollutants.

Mr. SHIMKUS. So if there is huge job dislocation caused by the process which you may rule, you can't make any statement on that?

Mr. MEYERS. Well, in the NAAQS area, no. I mean——

Mr. SHIMKUS. Okay. That means that if there is price escalation to the tune of doubling the cost of electricity, you can't mention that in your process?

Mr. MEYERS. Well, these are some of the issues that I think are important to get the widest range of opinion. They go to the complexity of the Act and the constraints that different provisions provide and so it makes it very important that we have the type of reasoned public debate that we want to have through the ANPRM because of——

Mr. SHIMKUS. But let me—I mean, that is the public debate and you use an acronym. Can you explain——

Mr. MEYERS. Oh, I am sorry. Advanced Notice of Proposed——

Mr. SHIMKUS. So you are talking about the public debate held within the agency for this rulemaking process, correct?

Mr. MEYERS. Well——

Mr. SHIMKUS. Or the whatever process?

Mr. MEYERS. The ANPRM that we are developing will be put out in the Federal Register and then we will——

Mr. SHIMKUS. This is versus a public debate that we would have on the Floor if we would move legislation that would be able to address economic dislocation of climate change legislation?

Mr. MEYERS. Congress has the ability to draft new legislation in the way it sees fit. Our duty is to interpret the Clean Air Act under the law and the precedents that have been established by the courts.

Mr. SHIMKUS. Which means no economic calculations involved in this process?

Mr. MEYERS. In certain programs, that is true. In other programs under the Clean Air Act, for example, under section 111, we can look at economic and technical feasibility factors. It depends, sir, on where you end up within the Clean Air Act.

Mr. SHIMKUS. And that brings a big debate, because my friends talk about the cap and trade, which is a house of cards. It worked with SO_x because technology was available. What current technology is available today that can capture carbon on the vast majority of coal-fired plants that would be pulverized coal?

Mr. MEYERS. Carbon capture and sequestration technology is now the subject of research and development actions.

Mr. SHIMKUS. So there is no current technology to do this on current coal-fired plants?

Mr. MEYERS. People are exploring and——

Mr. SHIMKUS. That produces 50 percent of the electricity consumed in this country today.

Mr. MEYERS. No. As an agency we are trying to address that issue also in terms of storage issues on——

Mr. SHIMKUS. But my debate is, for people who want to compare this carbon dioxide to the Clean Air Act and the cap-and-trade paradigm, they are wrong to assume that technology is currently available to do this for the vast majority of electricity-generating plants fueled by coal. Am I correct?

Mr. MEYERS. Yes, sir. In 1990, when Title IV was enacted, flue gas desulfurization technology did exist. It wasn't as widely deployed as it became under Title IV. It did exist. Today, carbon capture and sequestration technology exists but it has not been demonstrated on a commercial scale yet. I think there are efforts to do that but right now——

Mr. SHIMKUS. That is a big issue, commercial scale, which is multitudinally larger than desktop or even a micro facility.

Mr. MEYERS. Absolutely, and I think most projections would say that it would be some time before it is available.

Mr. SHIMKUS. Mr. Chairman, I will yield back. My time is expired. I would just say beware, America, the costs of climate change will be enormous. I yield back my time.

Mr. BUTTERFIELD. Thank you.

The chair recognizes the gentleman from the State of Washington, Mr. Inslee.

Mr. INSLEE. Mr. Meyers, I am Jay Inslee from the North Seattle area. Thanks for being here. Are you engaged in the effort to develop an administration cap-and-trade system?

Mr. MEYERS. No.

Mr. INSLEE. Or have you spoken to the President about that?

Mr. MEYERS. Have I spoken to the President? No.

Mr. INSLEE. Have you spoken with Mr. Johnson about that?

Mr. MEYERS. We have spoken to Mr. Johnson in briefings about many issues under the Clean Air Act, including available authorities that I think, as referenced earlier, have some cap-and-trade authority, but we are proceeding in the context of an ANPRM to make use of some of that work and get public comment on it.

Mr. INSLEE. Has Mr. Johnson said something like, well, this is a suboptimal way to do it, what we really need to do is do a statutory cap-and-trade system and so let us go that route? Has he said anything like that?

Mr. MEYERS. I wouldn't recall a direct quote along those lines. I mean, we obviously have many conversations with the Administrator on a daily basis so I don't—I couldn't state what his personal preferences would be.

Mr. INSLEE. Well, what I am trying to get at is, is the agency playing the four corners offense here, just not moving on the rule because you really want to go through a statutory cap-and-trade system because you think that is a better way to handle this problem, or you are just doing the four corners stall because you just don't want to do something?

Mr. MEYERS. Well, the agency, which is part of the Administration, has not taken a position on cap-and-trade legislation. I think where we see the next step of moving the ball forward is to get the ANPR out that will show the appropriate deference to the complex issue.

Mr. INSLEE. Right, and then that is my concern. You know, to me, there is a big difference between the EPA playing the North

Carolina four corners, you know, Bush to Cheney to Johnson to somebody else and nothing ever happens because you want to do a cap-and-trade system and do it statutorily, because you might think that is a better way to go, or what is happening, which is you are stalling both proposals, one a statutory cap-and-trade system, which numerous Cabinet officials have sat in your chair right there and said they are not working on it, they are not taking a position on it, nor are you acting on the rulemaking, and that is simply the fact that is going on here, and I think the public is very disenchanted with this, the Supreme Court is disenchanted about it, I am disenchanted about it.

Let me ask you about the endangerment decision. Let me ask you, do you believe that carbon dioxide causes or may contribute to air pollution which may reasonably be anticipated to endanger public health or welfare?

Mr. MEYERS. That is a legal question before the agency in terms of endangerment.

Mr. INSLEE. Right, so what is the answer?

Mr. MEYERS. Well, since this is a question in front of the agency, a question that is the subject of ongoing litigation, I am not in a position to give a——

Mr. INSLEE. Well, it was subject to ongoing litigation. It is no longer subject to ongoing litigation. You have been ordered to make that decision——

Mr. MEYERS. It is——

Mr. INSLEE. —and that jury—let me finish my question—that jury is in. This jury is in. Every single public health official of any credibility in this country has concluded that CO_2 can cause or contribute to air pollution which may be reasonably anticipated to endanger public health or welfare. Now, there may be an issue what to do about that, but wouldn't you agree that everyone who has looked at this issue from a health perspective would answer that question "yes"? Wouldn't you agree with that?

Mr. MEYERS. Actually, no, I would not agree with that. I think the question that the Supreme Court presented to us was whether endangerment existed. That is the question that we are dealing with.

Mr. INSLEE. Right. And who is the medical professional who tells us we shouldn't worry about carbon dioxide changing the climate? Who is that person?

Mr. MEYERS. I am not trying to refer to any particular person. I am just saying that is an issue before the agency.

Mr. INSLEE. Well, why is it an issue, because every single person who has given you input on this has told you that we are going to have more asthma, more vector-borne illnesses, more heat stroke. You go right down the line. And isn't it true that virtually every single public health official who has examined this has told you that that is going to happen? Isn't that true?

Mr. MEYERS. When you referenced "told you," I am not sure if you are talking about rulemaking of the agency or——

Mr. INSLEE. I am talking about told you. Hasn't everybody told you—it is your job to decide on this question and everybody in America who knows their hat from a hole in the ground knows that this is happening and they have told you that, haven't they?

Mr. MEYERS. The Supreme Court has told us that we need to decide this issue.

Mr. INSLEE. So why don't you do it?

Mr. MEYERS. We are proceeding along that path.

Mr. INSLEE. No, you aren't. You haven't made an endangerment decision, and you can do that. You have got health information, you know, from here to kingdom come on this issue. Now, there is a question of what you do about it, but the first question you have to answer is the endangerment decision and you have adequate information to make that today because there is unanimity on this subject. Isn't that true?

Mr. MEYERS. No, I cannot agree with that statement.

Mr. INSLEE. Then who is not unanimous about it? Tell me, the doctor that says you shouldn't worry about increased asthma, malaria, and Lyme disease. Tell me who that doctor is and what day they got their license pulled, will you?

Mr. MEYERS. The administrator is charged with making that decision under the Clean Air Act.

Mr. INSLEE. I understand that, but why don't you answer my question? Tell me the doctor who has told you this is not a public health concern in America.

Mr. MEYERS. Our public process and the process that we have to use under the Administrative Procedure Act to solicit public comment on various issues will be used, and that will be the context in which we will receive the——

Mr. INSLEE. Well, just one more question. I assume what you are telling me is, you can't think of one, right?

Mr. MEYERS. I am not saying that at all. I just cannot respond to a question that asks me to say who told me. I am a person. I am an appointee of this Administration.

Mr. INSLEE. Who told the agency?

Mr. BUTTERFIELD. The gentleman's time is expired.

At this time the chair recognizes the gentleman from Kentucky, Mr. Whitfield.

Mr. WHITFIELD. Thank you, Mr. Chairman, and Mr. Meyers, we are delighted that you are here with us today. I might add that I don't think the evidence is quite as strong as some people would say. I remember when Albert Gore was here testifying and Bjorn Lomborg testified with him that day, and he wrote the book "The Skeptical Environmentalist" and was one of the strongest environmentalists in Europe, but in that book and in his testimony, he talked about how they went around and they had a meeting with Nobel laureates from around the world and they looked at issues facing the world and they prioritized them from 1 to 10, and global warming was nine on the list, or maybe even 10 on the list. And the issue was, with finite resources, what are some of the most important issues that we could address, and 1 or 2 on that list was AIDS and so forth. But I point that out simply to say that I don't get the impression that EPA is dragging their feet. I mean, this Supreme Court decision was rendered about 1 year ago. Is that correct?

Mr. MEYERS. That is correct, April 2 of last year.

Mr. WHITFIELD. And I know that the ramifications of that decision are quite complex and you are trying to go through the process

of determining this endangerment issue and I suspect that a lot of other petitions have been filed by States. I am assuming other lawsuits have been filed on similar issues. Is that correct?

Mr. MEYERS. Yes. We have a total of seven rulemaking petitions on mobile sources. There are also—we are also involved in litigation, including a mandamus action that was recently filed.

Mr. WHITFIELD. So, I mean, I think the point that I would like to make, that this is not quite as clear-cut and easy to resolve as some people might lead us to believe, and it is understandable that if you feel strongly that this should be rendered, how people would be upset about it but it has been my experience in the government, I don't care if you support an issue or you don't support an issue, there is a regulatory process that you go through and sometimes it takes a lot longer than we like, and that is precisely what you all are doing now. You have a proposed rulemaking. Is that correct?

Mr. MEYERS. We are proceeding to put together an Advance Notice of Proposed Rulemaking, which would be scheduled to be done with that late spring of this year. I think it does reflect the fact that these are complicated issues. There are a lot of interactions within the Clean Air Act and the administrator thinks this is the responsible course of action.

Mr. WHITFIELD. And do you have any idea, what would the comment period be on this proposed rulemaking?

Mr. MEYERS. Giving recognition to both the need to proceed quickly, as well as the need to give a sufficient period of contemplation would be a period normally of at least 60 days, 60 to 90 days.

Mr. WHITFIELD. I have no further questions.

Mr. BUTTERFIELD. The gentleman yields back.

All right. My friend from California, Mr. Waxman.

Mr. WAXMAN. Thank you, Mr. Chairman.

Mr. Meyers, I want to follow up on my earlier questions. I raised the Desert Rock plant in New Mexico, and I want to ask you, do you know what the projected CO_2 emissions would be from that plant?

Mr. MEYERS. I believe there are some calculations that were done on the order of 12 million.

Mr. WAXMAN. It is 12.7 million tons of greenhouse gases every year. Do you know the cumulative reductions the northeastern States are expected to get under their cap-and-trade proposal?

Mr. MEYERS. No, I do not have that figure.

Mr. WAXMAN. Well, my understanding is that they will get approximately 12 million tons of reductions annually, so what you have is, eight States taking us one significant step forward and then EPA, if it approves just one plant without the state-of-the-art controls, moves us even a bigger step backwards, and that is what is troubling to me. It doesn't make any sense. Does it make any sense to you?

Mr. MEYERS. I think I tried to indicate that under the Clean Air Act, a case-by-case determination of the available control technology——

Mr. WAXMAN. Put that aside. Does it make any sense to allow one power plant to go forward that is going to emit as much CO_2 emissions as will get reduced in eight States as they work hard to

put in place a cap-and-trade program? Does it make sense, without all the gobbledygook or permitting of that or the——

Mr. MEYERS. Well——

Mr. WAXMAN. If you wanted to do something about CO_2 emissions, does it make any sense?

Mr. MEYERS. Sir, I think as an administration, we have tried to do a lot of things with respect to this issue. We think there is a heavy technology component which we are investing in. We are moving forward in the international arena so I think we are taking a broad approach to the problem. In the instant case, I think our duty, as I said, is to implement the Clean Air Act with respect to the law and the current regulatory situation, so in that sense, I think we need to consider this on a case-by-case basis.

Mr. WAXMAN. Well, the main justification EPA gives us for delaying their action is that the issue is too complex and EPA needs more time to think through possible approaches but we have looked at this in the Oversight Committee, and what we learned was that EPA has actually invested enormous resources into thinking through the implications of regulating CO_2 and how to do this, and Mr. Chairman, I would like to make part of the record a letter I sent to the EPA administrator on March 12, 2008. This letter describes the work that has already occurred at EPA.

Mr. BUTTERFIELD. Without objection.

[The information appears at the conclusion of the hearing.]

Mr. WAXMAN. The EPA process was so thorough that in December the EPA administrator concluded that CO_2 endangers the environment and sent a proposed endangerment finding to the White House. He also sent proposed motor vehicle regulations to the Department of Transportation for comment. Four months ago, EPA had enough information to recommend immediate action. Nothing has changed since then that justifies the continued delay.

Mr. Meyers, when the Supreme Court announced its decision, didn't EPA almost immediately realize it had significant implications for stationary sources?

Mr. MEYERS. I think we recognized that within a short time that it was a very important decision and we looked at the implications across a lot of different areas of the Clean Air Act, yes.

Mr. WAXMAN. And in fact, hadn't EPA identified the relevant statutory authorities that EPA could use to regulate CO_2 under the Clean Air Act as far back as 1998?

Mr. MEYERS. I was not at the agency at that point in time. I believe reference was—you are referring to the Cannon memo. If that is the case, I believe that does cite authorities under the Act.

Mr. WAXMAN. So EPA has had a lot of time to think about this. In fact, as I mentioned, investigations by the Oversight Committee reveal that EPA actually made a lot of progress last year. Mr. Meyers, were you briefed on these issues last summer and didn't the agency's political appointees identify new source standards under section 111 as preferable to other authorities as a way to address global warming from stationary sources?

Mr. MEYERS. There were a number of briefings that were held. I believe I was briefed directly and part of other briefings that occurred. We did look at the New Source Performance Standard program as part of those briefings.

Mr. WAXMAN. And didn't the briefings identify it as preferable to act in this way rather than use other authorities you might have?

Mr. MEYERS. I think some of these documents may be the subject of ongoing actions for the procurement but I would state that the agency did look very broadly at the Act and looked at different provisions and different provisions have different strengths and weaknesses.

Mr. WAXMAN. The administrator wants to delay the action on global warming until EPA completes the advance notice process, but EPA has already analyzed these issues and made a determination to go forward with an endangerment finding and motor vehicle regulations. The world isn't standing still while EPA ponders. People are making plans and investments and companies are building new sources of global warming pollution. We need to start taking global warming into account in all of these decisions. EPA can be part of the solution or it can try to make finding a solution more difficult and complicated. We need you to be proactive and to work with us to deal with these urgent problems. I know there is only a short period of time left while the President's EPA political appointees are in the positions you have, but I would say to you and to others, we need you to work with us in this time frame because as time goes by, the problems are going to be more expensive, the results are going to make our efforts even more complicated, and I really don't have a question there, but I make that request to you.

Mr. Chairman, I yield back the balance of my time.

Mr. BUTTERFIELD. I thank the gentleman.

At this time the chair recognizes Mr. Walden from Oregon.

Mr. WALDEN. Thank you, Mr. Chairman.

Mr. Meyers, I am not an attorney but I am curious, this Cannon memo that has been referenced, when did that get written?

Mr. MEYERS. I believe it was late 1990s, I think 1998.

Mr. WALDEN. And that was under the Clinton Administration then?

Mr. MEYERS. Yes, it was under a previous administration.

Mr. WALDEN. And that is the one that I am hearing said the EPA has the authority to regulate carbon dioxide under the Clean Air Act. Is that right?

Mr. MEYERS. That was the opinion of the former general counsel of the Environmental Protection Agency.

Mr. WALDEN. I am trying to figure out, on January 23, 2001, which would have been in the Federal Register on a Tuesday which would have been right after the Clinton Administration left office but would have been placed in the Congressional Record before they left office, the EPA sought public comment on a petition trying to determine if it had that authority, which leads me to think maybe somebody else at the EPA in the Clinton Administration didn't think they had the authority. Otherwise why would they go out and seek public comment to determine if they had that authority?

Mr. MEYERS. I think that action was taken in response to the petition filed by ICTA, the organization that requested EPA exert authority to address mobile source pollution.

Mr. WALDEN. Why couldn't they have just done it based on the Cannon memo? Why did they have to go out and seek comment?

Mr. MEYERS. I wasn't at the agency at that point in time so I don't know why they make the particular decision.

Mr. WALDEN. Doesn't it leave the question of maybe they were uncertain whether they had that authority, or am I misreading this?

Mr. MEYERS. I would not want to speculate as to events I did not participate in.

Mr. WALDEN. Then let us move on to some other issues, because on this—let us say you do determine an issue of finding that there is a problem. What does that trigger?

Mr. MEYERS. Is your question with reference to endangerment?

Mr. WALDEN. Yes.

Mr. MEYERS. Well, under the Supreme Court decision, it would trigger—in the context of the petition under section 202——

Mr. WALDEN. Then you have to start regulating carbon dioxide, right?

Mr. MEYERS. From motor vehicles under 202 was the subject matter of the petition.

Mr. WALDEN. All right. Then let me ask you this. If you start doing that, I want to know as a practical application, what does that mean? I have got two hybrid vehicles, I have got—my wife drives one that isn't. What is that going to mean to the consumer? How do you regulate it?

Mr. MEYERS. Well, that is a decision obviously we haven't made. The petition involved four greenhouse gases enumerated from vehicles, primarily carbon dioxide. Over 90 percent of the emissions are a product of combustion. So effectively it is addressed through efficiency measures similar to CAFE standards established by the Department of Transportation. Other emissions from air conditioning systems or other byproducts of combustion are methane and nitrous——

Mr. WALDEN. What about soot? Could you regulate soot?

Mr. MEYERS. We currently do regulate particulate matter.

Mr. WALDEN. In the Select Committee hearing yesterday on this issue of climate change versus public health, a professor from Stanford University when asked said soot, methane and then carbon dioxide are the three ways you could address global climate change, and he said soot would be the quickest because it breaks down in a year-and-a-half to 2 years. Methane is faster and then CO_2 takes 30 to 50 years to get out of the atmosphere. So I am wondering, are there other options out there, other than just CO_2, that might actually deal with greenhouse gases or the warming climate faster?

Mr. MEYERS. Well——

Mr. WALDEN. Because all we ever hear about here is CO_2.

Mr. MEYERS. Well, there are, you know, six generally recognized greenhouse gases under the international framework, although there are other gases that have a global warming potential.

Mr. WALDEN. Right.

Mr. MEYERS. So they have different atmospheric lifetimes and they have different effects on the radiant forcing of the planet, so there are different approaches but CO_2 is focused on, I think because of——

Mr. WALDEN. Let me ask you a different question then. Let us say that the polar bears were listed under the Endangered Species

Act, and the issue is that they are losing their habitat because of diminishing ice on the polar icecaps. Wouldn't that listing then trigger EPA to write rules affecting carbon, but it would affect every activity in the United States, correct, potentially?

Mr. MEYERS. Sir, I am not an expert on the Endangered Species Act so I would not want to venture an opinion on what it would trigger under the Clean Air Act.

Mr. WALDEN. My understanding is that it would, that if, for example, the polar bear were listed, then anything that contributed to a diminution of their habitat would have to be regulated under the Clean Air Act and that would affect carbon emissions from any change in new construction, everything, because in theory it affects the habitat.

Mr. MEYERS. Well, actions that would involve the Endangered Species Act would involve a review of the effects on endangered species so it would be in that context.

Mr. BUTTERFIELD. The gentleman's time is expired.

Mr. WALDEN. Thank you, Mr. Chairman, for your indulgence.

Thank you, Mr. Meyers.

Mr. BUTTERFIELD. All right. The gentleman from southern Louisiana, Mr. Melancon.

Mr. MELANCON. Thank you, Mr. Chairman.

Mr. Meyers, thank you for being here today. The nonattainment areas that are out there in the country, is that an EPA designation or what does that come from?

Mr. MEYERS. Yes, that is, sir. Effectively, the States nominate those areas after standards are established but the administrator promulgates the designations for the areas.

Mr. MELANCON. What triggers the nonattainment designation? I know it is air quality but what are the elements that are——

Mr. MEYERS. Whether they exceed the design value for the various pollutants that we regulate under NAAQS, so essentially if the monitoring data is above the standard.

Mr. MELANCON. Is CO_2 included in part of the——

Mr. MEYERS. No, it is not currently a regulated pollutant, a regulated NAAQS pollutant.

Mr. MELANCON. So if automobiles are considered or, as occurred in Baton Rouge, expressed as being a large portion of the problem, isn't CO_2 emissions in autos the problem, and if that is the case, then they shouldn't be in a nonattainment area. Is that a correct—did I get that confused for you? In other words, if it is autos that are doing CO_2 and they are saying that this is a nonattainment area and they are going to have to go in there and do additional emission controls on the vehicles in the nonattainment areas, why would they do that if CO_2 is not part of the equation?

Mr. MEYERS. Well, currently there would be no obligation for the State or locality to place controls on mobile sources and there are certain restraints which I won't address in terms of their ability to do so, but essentially the obligation falls on the State to create a State Implementation Plan that will demonstrate attainment with whatever standards are promulgated as NAAQS.

Mr. MELANCON. It falls upon the State but the feds hold the hammer.

Mr. MEYERS. That is correct. The Federal Government, the administrator establishes the level of the standard but the States effectively implement it through their State Implementation Plan.

Mr. MELANCON. So if the attainment problem, even though it is from automobiles, is CO_2, which is claimed to be a large portion of the problem, then doesn't that say that CO_2 is one of these things that you should be regulating, one of these gases, one of these elements?

Mr. MEYERS. In a hypothetical situation in which CO_2 became a NAAQS pollutant, there would be many results of that, including the duty to have State implementation plans for CO_2 as a regulated NAAQS pollutant, then one would necessarily have to look at the sources. There are some obvious complications with that in terms of the program that has been essentially focused on local and regional pollutants.

Mr. MELANCON. Well, as I understand in Baton Rouge, the CO_2 is the real problem, but plants are not allowed to come in there and site because of the concern for emitting more CO_2, and if plants fixed sites are in your jurisdiction and automobiles aren't, then you just got that into your jurisdiction.

Mr. MEYERS. There are provisions which affect new stationary sources in nonattainment areas and those provisions would require, in addition to technology, depending on how anything would be implemented, the possibility of offsetting emissions.

Mr. MELANCON. That didn't really answer the question.

Mr. MEYERS. I am sorry, sir. I wasn't trying to duck.

Mr. MELANCON. We talked about earlier and some of my colleagues talked about the carbon sequestration and how it is not—the technology is not there at this point in time. However, correct me if I am wrong, the President, in part of what he did in the energy bill, said we are going to do cellulosic ethanol and we are going to demand that by a date certain we are going to have so many million gallons of cellulosic ethanol. Well, the technology is not here either. So, you know, if we are going to play semantics, let us just throw that out the window and forget about the sequestration and whether it is not perfected. You know, why can't we go in there and start implementing and set some dates by rules that we start trying to take care of the CO_2 emissions?

Mr. MEYERS. Essentially, sir, the issue we have before us is that of the threshold question presented by the petition of endangerment and that is an issue that we are seeking comment on now and that would be associated with standards under the Act in various provisions, but the particular issue is with respect to mobile sources so that is still a pending issue before the agency.

Mr. BUTTERFIELD. The gentleman's time is expired. Thank you, Mr. Melancon.

Well, it looks like that concludes all of the questions for Mr. Meyers. We want to thank Mr. Meyers for his testimony today and thank him for what he does for our country. Thank you very much.

The next panel will please come forward and take their respective seats. I would like to welcome the four witnesses who have just come forward and thank each of you for your extreme patience today. We are now ready to begin with the second panel. The four participants on the second panel are David Doniger. David is the

Policy Director of the Natural Resources Defense Council's Climate Center. He served for 8 years in various positions with the Clinton Administration, including Director of Climate Change Policy at EPA and counsel to the Assistant Administrator for Air and Radiation. Welcome to the hearing today, Mr. Doniger.

The next witness, I am told, is referred to at the agency as Ray L. Thank you, Ray, for coming forward today. Ray is a partner at Gibson, Dunn & Crutcher. He served for 4 years in various positions with the Reagan and Bush Administrations, including general counsel and assistant administrator for enforcement. Thank you very much for coming today.

The third witness is Professor Lisa Heinzerling. She is a professor of law at Georgetown University School of Law. She was the primary author of the Supreme Court briefs for Massachusetts and other petitioners in the case of Massachusetts v. EPA, which we will be discussing today as we have throughout the morning. Thank you, Professor, for coming to be with us today.

Finally, Peter Glaser. Peter is a partner at Troutman Sanders LLP. He represented Washington Legal Foundation in filing an amicus brief in Massachusetts v. EPA. Thank you very much, Mr. Glaser, for coming forward.

At this time the chair is going to recognize—all right. We are going to do it in order. Mr. Doniger, you are recognized for 5 minutes.

STATEMENT OF DAVID DONIGER, POLICY DIRECTOR, CLIMATE CENTER, NATURAL RESOURCES DEFENSE COUNCIL

Mr. DONIGER. Thank you very much, Mr. Butterfield and other members, for the chance to talk about this important problem. We appreciate the Committee's commitment to producing global warming legislation and to reducing CO_2 and other pollutants by as much as 80 percent by mid-century. We urge you to do that without delay because we have catastrophic impacts in front of us if we don't act soon.

But this hearing is about what the executive branch should be doing with the laws that you have already passed. The Clean Air Act is a powerful tool that should be used to begin reducing the vast majority of U.S. emissions of these heat-trapping pollutants. With the Supreme Court's landmark decision last year, Massachusetts v. EPA, it is now settled that greenhouse gases are subject to Clean Air Act regulation. For most of this Administration, EPA has done nothing except try to close the door on the Clean Air Act, and in the 1 year since the Supreme Court's rebuke, the Administration has done nothing except have EPA develop a plan for further procrastination.

I want to emphasize that the strategy the Administration is now following, which is to seek more comment before making the endangerment decision, was already rejected by the Supreme Court in the decision a year ago, because that was EPA's justification for the original refusal to make the endangerment determination. It was EPA's position that many things besides that science question had to be settled first. The Supreme Court said no, the endangerment decision turns on the science. You have three options. You can determine that there is a danger to public health

and welfare, you can determine that the science shows there is not such a danger, or you can explain why you can't tell, why the science is so confusing.

Well, as of now the Administrator has already declared his hand on the science. He did so in his decision in March denying California the authority to implement its vehicle emissions standards. What he did in this document is very revealing, because the Administrator's primary justification for denying California the waiver was his finding that global warming is happening all across the country, that it is being caused by emissions all across the country, and that the effects are occurring all across the country. From this he deduced that California and the other States should not be allowed to go ahead. But I would like to read one passage from this decision, which is written in the first person and signed by the Administrator. He said, "Severe heat waves are projected to intensify in magnitude and duration over portions of the United States where these events already occur, with likely increases in mortality and morbidity, especially among the elderly, young, and frail." That sounds to me like a conclusion that global warming exacerbated by these pollutants is going to cause death and serious illness. That should lead directly to an endangerment determination. But no, now he says we have to take more time to study that question before confirming what the Administrator said in his own voice a month and a half ago.

It is completely practical to implement most of the Clean Air Act provisions that have been discussed here today. Section 111 of the Clean Air Act addresses stationary sources such as power plants and big industrial facilities. It calls for the setting of technology-based standards that take into account costs and lead time and the availability of technology. So do the mobile source provisions. So it is completely feasible to use those provisions to take a significant bite out of the global warming pollution from our cars, our fuels and our major industrial facilities. While we support new legislation, we want to see the existing legislation implemented.

Now, there has been a lot of talk about the use of the National Ambient Air Quality Standards. NRDC does not recommend the use of the National Ambient Air Quality Standards system. We don't think that it is the most appropriate part of the Clean Air Act to use. It is focused on reducing concentrations in the atmosphere, which for CO_2, as others here have noted, are not readily subject to local control. What are subject to State and local and Federal control, are the emissions going into the atmosphere. That is why we recommend using the other parts of the Clean Air Act that deal with major sources directly and require technological controls to reduce those emissions.

Further, there are provisions in the Clean Air Act we think could be used by the EPA to justify a decision not to set a National Ambient Air Quality Standard even as it goes ahead under these other practical provisions of the law. We said so in the Massachusetts briefing and I am sure Professor Heinzerling will say more about this.

And finally, the New Source Review issue. Much is being said about the possibility of dragging in a lot of small sources. But that, I think, is being used as a dodge against the perfectly practicable

application of Best Available Control Technology for big sources. We think the EPA has the authority to deal in a practical, non-burdensome way with the smaller sources. We support the EPA in working that out and we look forward to working with them. But we will not countenance continued delay, and that is why we have gone back to the Court to try to enforce the Massachusetts decision and get that endangerment decision made. Thank you.

[The prepared statement of Mr. Doniger follows:]

Summary of Testimony of David D. Doniger
Policy Director, Climate Center
Natural Resources Defense Council

- NRDC appreciates the Committee's commitment to producing global warming legislation to reduce CO_2 and other global warming pollution by as much as 80 percent by mid-century. We urge you to act without delay. We can avoid catastrophic impacts if we start reducing emissions now, but every year of delay and continued emissions growth makes the job much harder, locking us into the choice of making ever steeper emission reductions or suffering ever more severe impacts.

- The Clean Air Act is a powerful tool that should be used to begin reducing the vast majority of U.S. emissions of these heat-trapping pollutants. The Clean Air Act was designed to address not only the specific air pollutants known at the time of enactment, but also new threats that science identifies over time. With the Supreme Court's landmark decision in *Massachusetts v. EPA* one year ago, it is now settled that greenhouse gas emissions are subject to regulation under the Clean Air Act.

- For most of this administration EPA has done nothing except try to close the door on the Clean Air Act. And in the one year since the Supreme Court rebuked the administration for ignoring its authority, EPA has done nothing except develop a plan for further procrastination.

- The strategy that EPA is now following to avoid making an endangerment determination has already been rejected by the Supreme Court, which told EPA that it must make the endangerment decision for vehicle emissions considering only the science. The Supreme Court already rejected EPA's argument that it should not act on vehicles without a comprehensive strategy for addressing all greenhouse gas sources.

- It is completely practical to regulate greenhouse gas pollutants through a variety of Clean Air Act authorities pertaining to mobile and stationary sources. Through these authorities, EPA could set performance standards for global warming pollution from the vast majority of U.S. emissions sources. Electric power plants, for example, represent 40 percent of U.S. CO2 emissions and could be regulated under Section 111. Other major industrial sources subject to Section 111 account for another 20 percent or so of these emissions. Motor vehicles and their fuels represent another 20 percent of U.S. CO2 emissions and could be regulated under Sections 202 and 211.

- NRDC does not recommend setting of a National Ambient Air Quality Standard for greenhouse gases and believes EPA has the discretion not to invoke this provision for pollutants ill-suited to control through ambient standards and state implementation plans.

- New Source Review should be applied to large sources of CO_2 and other greenhouse gases, such as proposed new coal-fired power plants. NRDC understands that EPA is exploring practical solutions to the application of these requirements to smaller sources.

Testimony of David D. Doniger
Policy Director, Climate Center
Natural Resources Defense Council

Strengths and Weaknesses of Regulating Greenhouse Gas Emissions Using Existing Clean Air Act Authorities

Committee on Energy and Commerce
Subcommittee on Energy and Air Quality
United States House of Representatives

April 10, 2008

Thank you, Chairman Boucher, for the opportunity to testify today on using the Clean Air Act to curb the greenhouse gas emissions that contribute to global warming. My name is David Doniger and I am a senior attorney at the Natural Resources Defense Council (NRDC) and the policy director of our Climate Center. NRDC is a national, nonprofit organization of scientists, lawyers and environmental specialists founded in 1970, dedicated to protecting public health and the environment, with more than 1.2 million members and online activists nationwide and offices in New York, Washington, Los Angeles, San Francisco, Chicago, and Beijing. During the 1990s, I served as counsel to the head of air program at the Environmental Protection Agency focusing on climate issues, and as member of the U.S. delegation to global warming treaty negotiations.

I am especially pleased to testify today because I have represented NRDC in a number of court cases and regulatory matters concerning EPA's authority to curb global warming pollution under the Clean Air Act, including the landmark Supreme Court case, *Massachusetts v. EPA*,[1] and the cases regarding California's clean car standards.

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[1] 127 S.Ct. 1438 (2007).

Mr. Chairman, NRDC appreciates the Committee's commitment to producing global warming legislation. The committee's first White Paper very constructively outlined the major features of national cap-and-trade legislation and acknowledged the need to reduce CO_2 and other global warming pollution by as much as 80 percent by mid-century. We urge you to act without delay. Scientists tell us it is imperative not to let global average temperatures rise by more than another 2 degrees Fahrenheit. We can do this if we start reducing emissions now, but every year of delay and continued emissions growth makes the job much harder, locking us into a Hobson's choice of making ever steeper emission reductions or suffering ever more severe impacts.

This hearing, however, is about what the Executive Branch should be doing with the powerful legal tools that Congress has already provided in the Clean Air Act, our nation's comprehensive air pollution law. From the beginning four decades ago, the Clean Air Act was designed to adapt and respond to our changing understanding of the public health and environmental threats from air pollution – to address not only the specific air pollutants known at the time of each enactment, but also new threats to public health or the environment that science identifies over time. With the Supreme Court's landmark decision in *Massachusetts v. EPA* one year ago, it is now settled that greenhouse gas emissions are subject to regulation under the Clean Air Act. The Clean Air Act could be used to begin reducing the vast majority of U.S. emissions of these heat-trapping pollutants.

Yet for most of this administration EPA has done nothing except try to close the door on the Clean Air Act. And in the one year since the Supreme Court rebuked the

administration for ignoring its authority, EPA has done nothing except develop a plan for further procrastination.

EPA's Defiance of the Supreme Court

Mr. Chairman, today I will review the direct and broader implications of the *Massachusetts* decision, as the Committee has requested. But one thing needs to be emphasized at the outset. In that case, the Supreme Court already rejected the very same stratagem that EPA is following today. EPA says that before making the "endangerment" decision for motor vehicle emissions, it wants to mull over how greenhouse gases should be treated under all parts of the Clean Air Act. The Court has already ruled, however, that EPA may *not* delay the endangerment decision under Section 202 on that basis, and that EPA must make that decision on the science alone. Yet that is exactly what EPA is doing today.

It did not have to be this way. Indeed, it did not start out to be this way. Last May, the President responded to the Supreme Court decision by setting forth a laudable plan for EPA to make the endangerment determination by the end of December 2007, and simultaneously to propose standards for motor vehicles and their fuels under Sections 202 and 211 of the Act. We know from an investigation by the Oversight and Government Reform Committee that EPA devoted dozens of staff and millions of dollars to the effort and in fact completed all the work related to the endangerment decision last fall. The Administrator signed off on an affirmative decision and sent it to the White House. But then nothing happened.

The Administrator's actual judgment on the science of global warming is no longer a mystery. Just last month, in attempting to justify denial of the California waiver,

the Administrator published his formal conclusions that global warming poses serious dangers to public health and welfare all across the United States. For example, he found that "[s]evere heat waves are projected to intensify in magnitude and duration over portions of the U.S. where these events already occur, with likely increases in mortality and morbidity, especially among the elderly, young, and frail."[2] The core premise for denying the California waiver is that vehicle emissions from all across the country are contributing to global warming impacts all across the country. Because this is not a valid reason to deny California the waiver under Section 209, NRDC has joined California, other states, and other environmental organizations in a lawsuit challenging the waiver denial. But at least the Administrator was candid about the science when explaining his decision *against* regulation.

Apparently, we cannot expect the same candor about the science *in favor of* regulation. Instead of issuing an affirmative endangerment decision as was planned last year, the Administrator has announced that his new plan is to issue an Advanced Notice of Proposed Rulemaking ("ANPRM") sometime "later this spring" in order to invite further public comment on the science and on "the broader ramifications" of regulating greenhouse gases in relation to "the many relevant sections of the Clean Air Act." Only at an unspecified time after the public comment period does the agency intend to "consider how to best respond to the Supreme Court decision."[3]

EPA's posture has left the state, local, and environmental petitioners in the *Massachusetts* case with no choice other than to go back to court to end the

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[2] 73 Fed. Reg. 12,156, 12,167 (March 6, 2008).
[3] Letter from Administrator Stephen L. Johnson to Chairman John Dingell and Ranking Member Joe Barton (March 27, 2008).

Administrator's defiance of the law. We are asking the Court of Appeals in Washington (the court now responsible for supervising EPA's compliance with the Supreme Court decision) to order EPA to issue the endangerment decision now being held hostage.

Applying the Clean Air Act to Greenhouse Gases

I turn now to this Committee's request for views on the application of various parts of the Clean Air Act to other heat-trapping pollutants. As I will show, regulation of these pollutants from a variety of mobile and stationary sources poses no special issues. And through these authorities, EPA could begin to reduce global warming pollution from the vast majority of U.S. emissions sources. Electric power plants, for example, represent 40 percent of U.S. CO_2 emissions and could be regulated under Section 111. Other major industrial sources subject to Section 111 account for another 20 percent or so of these emissions. Motor vehicles and their fuels represent another 20 percent of U.S. CO_2 emissions and their fuels and could be regulated under Sections 202 and 211.

In the few places where applying the Act to these pollutants raises more complex issues, NRDC believes it is possible for EPA to develop reasonable administrative solutions. We look forward to working with EPA on these issues. But we will not countenance further delay where action is both straightforward and overdue.

1. "Air Pollutant," "Public Health or Welfare," and "Endangerment"

To start, I would like to review three cross-cutting provisions: the definition of "air pollutant," the terms "public health or welfare," and the threshold criterion of "endangerment." The definitions apply across the entire Act, and the endangerment criterion is found in a large number of sections authorizing regulation of particular types of sources. The Supreme Court interpreted all three provisions in *Massachusetts*.

"Air Pollutant." Section 302(g) provides a broad definition of air pollutant applicable across the Act. "Air pollutant" means:

> any air pollution agent or combination of such agents, including any physical, chemical, biological, radioactive (including source material, special nuclear material, and byproduct material) substance or matter which is emitted into or otherwise enters the ambient air.

The Supreme Court held that greenhouse gas emissions "unambiguous[ly]" meet that definition:

> On its face, the definition embraces all airborne compounds of whatever stripe, and underscores that intent through the repeated use of the word "any." Carbon dioxide, methane, nitrous oxide, and hydrofluorocarbons are without a doubt "physical [and] chemical ... substance[s] which [are] emitted into ... the ambient air." The statute is unambiguous.
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> * * *
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> Because greenhouse gases fit well within the Clean Air Act's capacious definition of "air pollutant," we hold that EPA has the statutory authority to regulate the emission of such gases from new motor vehicles.[4]

"Public Health or Welfare." Being largely self-explanatory, the term "public health" is not specifically defined in the statute, but the 1970 Senate Report explains the intent of Congress that EPA extend protection to sensitive groups within the general population, such as children and the elderly. So it should be apparent from the Administrator's finding that global warming will lead to "likely increases in mortality and morbidity, especially among the elderly, young, and frail"[5] that greenhouse gas emissions are contributing to decidedly adverse effects on public health.

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[4] 127 S.Ct. at 1460, 1462.

[5] 73 Fed. Reg. 12,156, 12,167 (March 6, 2008).

Section 302(h) states that all language referring to "effects on welfare" includes effects on a comprehensive list of environmental attributes and values. The Supreme Court noted that the definition specifically includes effects on "weather" and "climate."[6] The inclusion of "weather" and "climate" in the 1970 Act reflects consideration of a report that year to Congress by the Council on Environmental Quality (CEQ). In a chapter on "Man's Inadvertent Modification of Weather and Climate," the CEQ report found that "Man can change the average atmospheric temperature slightly and thus significantly affect climate in at least seven ways: . . . He can increase the carbon dioxide content of the atmosphere by burning fossil fuels." The CEQ report also noted scientific predictions even at that time that a rise of 2 to 3 degrees Fahrenheit "could lead to the start of substantial melting of ice caps and flooding of coastal regions."[7]

Endangerment. In 1977 Congress adopted a uniform formulation for the threshold determination whether to regulate a new pollutant. Typically, the sections pertaining to regulation of particular types of sources state that EPA "shall" (sometimes "may") prescribe standards for emissions of any air pollutants "which in his judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger

public health or welfare." This highly precautionary standard reflects Congress' intent that EPA proceed with regulation when the agency has evidence of significant danger to public health or welfare, notwithstanding the existence of some remaining scientific uncertainty.

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[6] 127 S.Ct. at 1447.

[7] *Environmental Quality: The First Annual Report of the Council on Environmental Quality* (Aug. 1970), at 95.

The endangerment language was drafted in 1977 by this Committee, which explained its intention "to support the views expressed" in the landmark case upholding EPA's regulation of lead in gasoline, *Ethyl Corp. v. EPA*.[8] The Committee report stated "In order to emphasize the precautionary or preventive purpose of the act (and, therefore, the Administrator's duty to assess risks rather than wait for proof of actual harm), the committee not only retained the concept of endangerment to health; the committee also added the words 'may reasonably be anticipated.'"[9]

The Committee retained the statutory reference to the Administrator's "judgment," emphasizing that the language was designed to "to affirm th[e] view" of court decisions that "have held that a substantial element of judgment, including making comparative assessment of risks, projections of future possibilities, establishing margins of safety and margins of error, extrapolating from limited data, etc., are necessary and permissible under the act." The committee noted that it had "expressly rejected an amendment which would have deleted the[] words ["in his judgment"] and required a finding by the Administrator instead."[10]

The question of endangerment is at the heart of the Supreme Court's decision in *Massachusetts v. EPA*. That case concerned EPA's denial of a petition asking for regulation of motor vehicles and motor vehicle engines. After deciding that EPA has authority to regulate greenhouse gases and that EPA had denied the petition for legally impermissible reasons, the Court ordered EPA to decide, on the basis of the science only,

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[8] 541 F.2d 1 (D.C. Cir. 1976). *See* H.R. Rep. No. 95-294, at 49.
[9] *Id.* at 51.
[10] *Id.* at 50-51.

whether greenhouse gases "in [the Administrator's] judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare."

The Court made clear that EPA has only three options on remand: (1) to make an affirmative endangerment determination and commence the standard-setting process, (2) to make a negative endangerment determination by "determin[ing] that greenhouse gases do not contribute to climate change," or (3) to provide "a reasoned justification for declining to form a scientific judgment." Regarding the third option, the Court emphasized that any such justification would have to be grounded in the science only: "The statutory question is whether sufficient information exists to make an endangerment finding." "If the scientific uncertainty is so profound that it precludes EPA from making a reasoned judgment as to whether greenhouse gases contribute to global warming, EPA must say so." Otherwise, it must make an affirmative or negative endangerment determination.[11]

Given Administrator's recent on the findings that global warming will lead to "likely increases in mortality and morbidity, especially among the elderly, young, and frail,"[12] it is hard to see how EPA could make any decision other than an affirmative endangerment determination.

2. Mobile Source Standards

The Committee has asked which sections of the Clean Air Act authorize greenhouse gas emission regulation. I will start with Title II, on mobile sources.

Section 202 – New Motor Vehicles and Engines. Section 202(a)(1) states as follows:

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[11] 127 S.Ct. at 1462-63.
[12] 73 Fed. Reg. 12,156, 12,167 (March 6, 2008).

> The Administrator shall by regulation prescribe (and from time to time revise) in accordance with the provisions of this section, 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 his judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare.

"New motor vehicles" and "new motor vehicle engines" are terms covering essentially all vehicles intended for road use, including automobiles, light trucks, heavy-duty truck and bus engines, and motorcycles. The 1999 rulemaking petition at issue in *Massachusetts* asked for regulation of all categories of motor vehicles and motor vehicle engines. So the regulatory decision that EPA must make on remand spans this range of vehicles and engines.

The Committee has asked what factors EPA may consider when setting standards under this provision. For cars and light trucks, Section 202(a)(2) provides that: "Any regulation prescribed under paragraph (1) of this subsection (and any revision thereof) shall take effect after such period as the Administrator finds necessary to permit the development and application of the requisite technology, giving appropriate consideration to the cost of compliance within such period." For heavy-duty engines, Section 202(a)(3)(A) provides that standards shall "reflect the greatest degree of emission reduction achievable through the application of technology which the Administrator determines will be available for the model year to which such standards apply, giving appropriate consideration to cost, energy, and safety factors associated with the application of such technology." Section 202(a)(4) also gives EPA authority to assure that the means used to comply with emission standards do not create "an unreasonable risk to public health, welfare, or safety in its operation or function."

These direct EPA to set "technology-forcing" performance standards that reflect the reductions achievable by technology that can be incorporated into new vehicles or engines, taking into account lead-time needs and cost considerations.[13] Applying this language poses no different issues for greenhouse gas emissions or conventional pollutants such as hydrocarbons or particulate matter. The process of assessing what is technologically achievable and at what cost are identical. One difference is that greenhouse gas standards will yield a substantial economic benefit to vehicle owners due to fuel savings, especially when gas prices are high. Because these cleaner, more efficient vehicles will be more attractive to consumers, they will be more profitable to the automakers.[14]

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[13] *See, e.g.*, *NRDC v. USEPA*, 655 F.2d 318 (D.C. Cir. 1981).

[14] The Supreme Court in *Massachusetts* resolved a special issue pertaining to Section 202, but not to other parts of the Clean Air Act. EPA argued that Section 202 did not extend to carbon dioxide (CO_2) emissions from automobiles and light trucks because this was supposedly the sole province of the Transportation Department under the fuel economy provisions of the Energy Policy and Conservation Act. The Court, however, ruled that the Administrator's mandate to control emissions under the Clean Air Act is "wholly independent" from the mandate of the Transportation Department to set fuel economy standards under the Energy Policy and Conservation Act (EPCA): "[T]hat DOT sets mileage standards in no way licenses EPA to shirk its environmental responsibilities." 127 S.Ct. at 1462. The Court continued:

> EPA no doubt has significant latitude as to the manner, timing, content, and coordination of its regulations with those of other agencies. *But once EPA has responded to a petition for rulemaking, its reasons for action or inaction must conform to the authorizing statute.* Under the clear terms of the Clean Air Act, EPA can avoid taking further action only if it determines that greenhouse gases do not contribute to climate change or if it provides some reasonable explanation as to why it cannot or will not exercise its discretion to determine whether they do. To the extent that this constrains agency discretion to pursue other priorities of the Administrator or the President, this is the congressional design.

127 S.Ct. at 1462 (emphasis added, citation omitted). This ruling undercuts EPA's current argument that it should consider the impact of the Energy Independence and Security Act (EISA) adopted last December before making an endangerment decision.

Section 211 – Regulation of Fuels. Section 211(c)(1) provides that:

> The Administrator may, from time to time . . . by regulation, control or prohibit the manufacture, introduction into commerce, offering for sale, or sale of any fuel or fuel additive for use in a motor vehicle, motor vehicle engine, or nonroad engine or nonroad vehicle (A) if in the judgment of the Administrator any emission product of such fuel or fuel additive causes, or contributes, to air pollution which may reasonably be anticipated to endanger the public health or welfare . . . .

This section allows the Administrator to adopt standards that reduce the carbon dioxide emissions from the combustion of fuel by reducing the fossil carbon content of fuels. A low-carbon fuel standard could be met by mixing into the fuel supply renewable sources of carbon. A low-carbon fuel standard under Section 211(c) would differ from the renewable fuel standard (RFS) set under Section 211(o) in that it would address the emissions of the entire fuel supply, not just the component of the fuel supply affected by the RFS.

Section 211(c)(2)(A) provides that when setting a low-carbon fuel standard, EPA would have to consider "all relevant medical and scientific evidence available to him, including consideration of other technologically or economically feasible means of achieving emission standards under section 202." The Administrator would also have to find under Section 211(c)(2)(C) that the "in his judgment" the regulation "will not cause the use of any other fuel or fuel additive which will produce emissions which will

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EISA did not change the "wholly independent" status of the Clean Air Act and EPCA. Section 3 of EISA says: "Except to the extent expressly provided in this Act, or an amendment made by this Act, nothing in this Act or an amendment made by this Act supersedes, limits the authority provided or responsibility conferred by, or authorizes any violation of any provision of law (including a regulation), including any energy or environmental law or regulation." Nothing in EISA expressly changes Section 202 or the *Massachusetts* decision and remand. Thus, whatever discretion EPA may have to coordinate with other agencies does *not* extend to withholding the overdue threshold determination of endangerment.

endanger the public health or welfare to the same or greater degree than the use of the fuel or fuel additive proposed to be prohibited."

Section 213 – Nonroad Engines and Vehicles. Section 213(a)(4) authorizes the Administrator to regulate greenhouse gases from nonroad engines and vehicles. It states:

> If the Administrator determines that any emissions not referred to in paragraph (2) [which lists several conventional pollutants] from new nonroad engines or vehicles significantly contribute to air pollution which may reasonably be anticipated to endanger public health or welfare, the Administrator may promulgate (and from time to time revise) such regulations as the Administrator deems appropriate containing standards applicable to emissions from those classes or categories of new nonroad engines and new nonroad vehicles (other than locomotives or engines used in locomotives) which in the Administrator's judgment cause, or contribute to, such air pollution, taking into account costs, noise, safety, and energy factors associated with the application of technology which the Administrator determines will be available for the engines and vehicles to which such standards apply.

The standard-setting factors enumerated here are similar to those applicable under Section 202.

Section 231 – Aircraft Emission Standards. Section 231(a)(2) provides:

> The Administrator shall, from time to time, issue proposed emission standards applicable to the emission of any air pollutant from any class or classes of aircraft engines which in his judgment causes, or contributes to, air pollution which may reasonably be anticipated to endanger public health or welfare.

Section 231(b) provides that "Any regulation prescribed under this section (and any revision thereof) shall take effect after such period as the Administrator finds necessary (after consultation with the Secretary of Transportation) to permit the development and application of the requisite technology, giving appropriate consideration to the cost of compliance within such period." With the addition of the consultation requirement, the criteria for standards resemble those in Section 202.

3. Stationary Sources

Section 111 – Standards of Performance for New Sources. Section 111 actually provides authority to regulate both new and existing stationary sources.

Section 111(b) (1)(A) requires the Administrator to publish, and from time to time revise, a list of categories of stationary sources and states: "He shall include a category of sources in such list if in his judgment it causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare." The Administrator is required by Section 111(b)(1)(B) set standards of performance for the new and modified sources in each category, and to review, and if appropriate, revise standards for each category at least every eight years.

Under Section 111(a)(1), a "standard of performance" means "a standard for emissions of air pollutants reflects the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction and any nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated."

Section 111(d)(1) also directs EPA to establish regulations under which states submit a plan for establishing standards of performance for *existing* sources: "standards of performance for any existing source for any air pollutant (i) [not subject to a national ambient air quality standard] but (ii) to which a standard of performance under this section would apply if such existing source were a new source." The state is permitted "to take into consideration the remaining useful life of the existing source to which such standard applies."

EPA published a long list of source categories and initial round of standards for various pollutants in the early years of the program, but fell behind on conducting the required eight-year review. A number of parties demanded that EPA revise the standard for power plants by including emission standards for carbon dioxide, because power plants' CO_2 emissions – accounting for nearly 40 percent of total U.S. CO_2 emissions – may reasonably be anticipated to endanger public health and welfare. In 2003, EPA settled litigation over the overdue review of the power plant standard by agreeing to decide whether to include CO_2 emission standards in the revised standards. However, when EPA completed the review in 2004, the agency took the position – as it had with regard to motor vehicles – that it lacked any authority to regulate CO_2 emissions. States and environmental organizations challenged that decision in a case called *New York v. EPA*. After the Supreme Court's decision in *Massachusetts,* the Court of Appeals for the District of Columbia Circuit remanded the power plant standards back to EPA for a new decision on whether to add CO_2 emission limits to the power plant standards. To date, EPA has taken no action, and the petitioners are considering going back to the Court over the unreasonable delay.

EPA has also committed to decide on the inclusion of greenhouse gas emission standards in its review of the new source performance standard for petroleum refineries. The final decision on that review is due under a court ordered deadline later this month. The expectation is that EPA once again will decline to regulate these emissions, and this is likely to lead to another court challenge.

The Committee has asked whether EPA could establish a cap and trade standard for CO_2 and other greenhouse gases under Section 111. On this question, the legal

opinion issued by EPA general counsel Jon Cannon in 1998 (which ultimately prevailed in Massachusetts) also noted that none of the Clean Air Act provisions related to greenhouse gases "easily lends itself" to establishing a cap and trade program, and this is another reason why new cap and trade legislation is essential.[15] Section 111, for example, provides for performance standards applicable to individual stationary sources. I understand that EPA may be reviewing the option of allowing sources subject to such performance standards to engage in trading, effectively raising the performance standard for some sources while lowering it for others.

From a policy perspective, this proposal does not pose the same dangers as earlier proposals to allow trading in mercury emissions. Mercury is highly toxic and a significant portion of mercury emissions are deposited locally in the immediate vicinity of each source. This makes emissions trading in mercury absolutely inappropriate. The U.S. Court of Appeals for the D.C. Circuit recently struck down EPA's effort to remove mercury from regulation as a hazardous air pollutant under Section 112.[16] Greenhouse gas emissions do not pose the same local toxicity concerns. From a legal standpoint, EPA has not yet made public its current analysis of legal issues regarding the potential use of trading for greenhouse gases under Section 111. We will look forward to evaluating the legal ramifications of EPA's potential approaches.

Sections 108-109 – National Ambient Air Quality Standards. Sections 108 and 109 provide for the setting of national ambient air quality standards (NAAQS) – atmospheric concentration limits that are deemed to protect public health with an

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[15] Memorandum from Jon Z. Cannon, General Counsel, to Carol Browner, Administrator, "EPA's Authority to Regulate Pollutants Emitted by Electric Power Generation Sources" at 4 (April 10, 1998).
[16] *New Jersey v. EPA*, 517 F.3d 574 (D.C. Cir. 2008).

adequate margin of safety (primary standards), and to protect welfare (secondary standards). In the *Massachusetts* case, EPA expressed concern that the NAAQS system is not suited for use to control greenhouse gases. The agency's principal policy concern was that because greenhouse gas emissions mix globally to a nearly uniform concentration, it is not feasible for an individual state, or even a group of states, to limit the concentration in the air above those states by curbing their own emissions. While local emission reductions contribute to reducing global concentrations – indeed, there is *no other way* to control global concentrations – they do not effectively control local concentrations.

NRDC supports the use of the Act's source-specific performance standards – e.g., standards for vehicles and fuels under Section 202 and 211 and standards for power plants and other large stationary sources under Section 111 – because those measures contribute to reducing global loadings of the heat-trapping pollutants. As a policy matter, however, NRDC has not advocated using the NAAQS system for the same reasons expressed by EPA. Indeed, while a lawsuit to press for action under Section 108 was initiated and withdrawn several years ago, we know of no environmental organization or state that presently supports use of the NAAQS system for greenhouse gases or intends to pursue future legal action toward that end under Sections 108 or 109.

The Supreme Court found it unnecessary to address EPA's NAAQS concerns in *Massachusetts* because the case turned on Section 202 and did not require interpretation of Sections 108 and 109. Nonetheless, it is worth noting that the petitioners in *Massachusetts* (including NRDC) had suggested a distinction between Section 108 and the other authorities I have reviewed which EPA could argue supports a different

treatment of greenhouse gases than under the other sections. To be sure, Section 108(a)(1) establishes the same endangerment criterion that is found elsewhere:

> For the purpose of establishing national primary and secondary ambient air quality standards, the Administrator shall within 30 days after December 31, 1970, publish, and shall from time to time thereafter revise, a list which includes each air pollutant--
>
> (A) emissions of which, in his judgment, cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare; ...

A second criterion – "(B) the presence of which in the ambient air results from numerous or diverse mobile or stationary sources" – is clearly met by greenhouse gases. There is a third criterion, however. The pollutant must be one "(C) for which air quality criteria had not been issued before December 31, 1970, *but for which he plans to issue air quality criteria under this section*" (emphasis added). In the Petitioners' brief in *Massachusetts* we said:

> The NAAQS program and the mobile source program are also initiated by different regulatory triggers. Regulation of mobile sources is triggered under section 202(a)(1) by a determination that air pollution from motor vehicles "may reasonably be anticipated to endanger public health or welfare." 42 U.S.C. 7521(a)(1). Although an endangerment decision of this kind is also a prerequisite to regulation under the NAAQS program, *see* 42 U.S.C. 7408(a)(1)(A), the NAAQS provision includes additional triggering language as well. *See, e.g.,* 42 U.S.C. 7408(a)(1) (requiring the Administrator to list new pollutants "for which he plans to issue air quality criteria"). This provision may allow more play in the joints than section 202(a)(1) permits. Of course, however, the extent to which such additional language gives EPA discretion to avoid listing pollutants that the agency believes are ill-suited to the NAAQS program is not before this Court.

This issue has not been addressed by EPA.

Sections 165 and 169 – New Source Review. A number of industries and lobbyists are pressing horror stories about the potential impact of regulating greenhouses gases due to the application of New Source Review (NSR). Under Section 165 and 169, new and modified "major stationary sources" are subject to a requirement to meet a

performance standard equivalent to the best available control technology (BACT). A "major stationary source" is any new source that emits or has the potential to emit more than 250 tons per year of a regulated pollutant. For modifications, EPA has the authority to define the triggering "significance" level by rule.

Some have expressed the concern that for CO_2 the 250-ton limit could result in coverage of a variety of sources whose conventional pollutant emissions fall below that limit. While there is some truth to this, this concern is being used as a smokescreen to draw attention away from dozens of proposed new large coal-fired power plants and other large industrial sources that are indisputably "major" and should be subject to NSR. These power plants and other large sources emit 5,000, 10,000, or more tons of CO_2 per year. NRDC considers that they are already subject to NSR for CO_2. The reason is that CO_2 is already a regulated pollutant under the Clean Air Act due to EPA's emissions monitoring regulations established under Title IV of the Act and Section 821 of the 1990 Clean Air Act amendments. Thus, EPA is already required, in our view, to establish BACT for CO_2 emissions for new coal-fired power plants, and we and other organizations are pursuing that issue in challenges to PSD permits for several coal-fired power plants.

As for smaller sources, such as new commercial buildings, we understand that EPA is exploring regulatory means of adjusting the threshold levels. For example, general counsel Roger Martella was recently quoted as suggesting that EPA was considering establishing CO_2 thresholds at a higher level reflecting the ratio of CO_2 emissions to emissions of sulfur dioxide or other conventional pollutants. Another idea, recently suggested by Professor Lisa Heinzerling, is to establish class permits or a pre-

determined definition of BACT for these smaller sources. As I understand it, BACT for commercial buildings, schools, or hospitals could be defined as compliance with building energy efficiency codes and use of energy-efficient heating and cooling equipment (e.g., EnergyStar equipment).

NRDC is prepared to work with EPA to evaluate proposed solutions to the issue of smaller source coverage. But we will not countenance ignoring the indisputably major sources of CO_2, such as new coal-fired power plants.

4. Title VI Ozone Protection

Section 612 – Safe Alternatives Policy. Under this provision, EPA reviews the safety of alternatives to ozone-depleting chemicals. Section 612(c) provides:

> Within 2 years after November 15, 1990, the Administrator shall promulgate rules under this section providing that it shall be unlawful to replace any class I or class II substance with any substitute substance which the Administrator determines may present adverse effects to human health or the environment, where the Administrator has identified an alternative to such replacement that--
>
> (1) reduces the overall risk to human health and the environment; and
>
> (2) is currently or potentially available.
>
> The Administrator shall publish a list of (A) the substitutes prohibited under this subsection for specific uses and (B) the safe alternatives identified under this subsection for specific uses.

EPA has determined the phrase "reduces overall risk to human health and the environment" authorizes the Agency to regulate alternatives that contribute to global warming.

Conclusion

The Supreme Court's decision in *Massachusetts v. EPA* has put to rest the question of EPA's authority to curb global warming pollutants under the Clean Air Act. As I have described, the *Massachusetts* decision requires EPA to decide, on the basis of

science considerations only, whether motor vehicle emissions of greenhouse gases may reasonably be anticipated to endanger public health or welfare. Based on the Administrator's own recent evaluation of global warming science published in the Federal Register in March, EPA has no reasonable basis to withhold the endangerment determination any longer. The agency's current posture of avoiding that determination while continuing to mull over every aspect of the potential use of the Clean Air Act is an intolerable act of defiance of the Supreme Court decision.

A range of Clean Air Act provisions authorize technology-based, source-specific performance standards for greenhouse gas emissions – covering motor vehicle emissions, fuels, and stationary source categories, among others. Using these authorities, which are completely practical, EPA could make a major reduction in sources of the vast majority of U.S. global warming pollution.

The ultimate answer to curbing our global warming pollution is for this Congress to establish new national legislation to cap and cut these emissions. Yet much could have been done – and much could still be done – under the existing Clean Air Act. We cannot let EPA fiddle while the world burns.

Mr. BUTTERFIELD. Thank you very much.

The next witness.

STATEMENT OF RAYMOND LUDWISZEWSKI, PARTNER, GIBSON, DUNN & CRUTCHER LLP

Mr. LUDWISZEWSKI. Mr. Chairman and members of the subcommittee, I want to thank you for the opportunity to be with you here today and the invitation to discuss the strengths and weaknesses of regulating greenhouse gases under existing Clean Air Act authorities. By way of very brief background, I have a national law practice specializing in environmental matters and have been involved in greenhouse gas litigation for several years. However, I do not appear here today before the subcommittee representing or advocating the position of any particular client or industry. I am not receiving any remuneration from anyone for my testimony today, and the views expressed of my testimony are my own and not necessarily those of any company or group that I currently represent or have represented.

With those preliminaries out of the way, allow me to focus briefly on the substance of my testimony. There are many sources of authority for regulating greenhouse gases under the existing Clean Air Act. I will focus, as I do in my written testimony, on the four most prominent: the Title I authority for National Ambient Air Quality Standards; the New Source Review provisions; the New Source Performance Standard provisions; and the mobile source provisions under Title II. While these existing authorities are available to EPA under the Clean Air Act as tools for regulating greenhouse gases, they are blunt instruments. They were plainly designed for a different task of regulating local emissions that were having local and regional effects. Accordingly, existing Clean Air Act authorities are, in my view, poorly suited to the challenges of regulating a global phenomenon such as climate change.

The National Ambient Air Quality Standards are the heart of the Clean Air Act. Those provisions are triggered when the Administrator makes an endangerment finding. We have already heard a lot about endangerment findings and we will hear a lot more over the months to come. Unfortunately, the program is not particularly well-suited to the regulation of greenhouse gases. Compliance with air quality standards is measured by concentrations in the ambient air, typically in parts per million. For traditional criteria pollutants, concentrations generally vary from place to place due to the differences in local and regional emission sources and the prevailing air patterns. By contrast, greenhouse gases disperse globally and they persist in the atmosphere for years. Thus, greenhouse gases have very different physical qualities than traditional air pollutants, the traditional air pollutants being what the National Ambient Air Quality Standards program and indeed much of the Clean Air Act were designed to combat.

As a result of these fundamental differences in physics, EPA would have great difficulty distinguishing attainment from nonattainment areas for any greenhouse gas ambient air quality standard. Accordingly, unless that standard was set at a level above current atmospheric concentrations, the EPA would be required to list all States as nonattainment areas. Moreover, the

States would have no power to change their status from nonattainment to attainment because in order to reduce air quality concentrations for a pollutant that is contributed to around the globe, they would be dependent upon the willingness of other States, and indeed of other nations around the globe, to reduce their greenhouse gas emissions. For these reasons and more, the existing Clean Air Act air quality standards program doesn't easily adapt to greenhouse gas regulation.

New Source Review has been offered as another opportunity to regulate greenhouse gases. New Source Review generally requires preconstruction review and permitting of major stationary sources. Ordinarily this program only requires permits from large stationary sources such as electrical utilities. The statutory threshold, and again, this is set by law, measured in tons of emissions per year, however, is much too low for the primary greenhouse gas, carbon dioxide. The application of the existing definition of major stationary source to greenhouse gases would greatly expand the universe of facilities regulated and include in it such items as schools, office buildings, and apartment buildings. That expanded universe of regulated sources would likewise vastly complicate both the State efforts in formulating State implementation plans and the ability of regulators at all levels to enforce those plans.

In sum, despite the shortcomings that I have very briefly outlined thus far, we have underway at this point a chain of events that could soon compel broad-based use of these existing Clean Air Act authorities to regulate greenhouse gases. As I have discussed, each of these authorities is triggered by an endangerment finding. As recently as last week, the litigants in Massachusetts v. EPA filed papers to seek to enforce the Supreme Court's mandate and to compel EPA to issue within 60 days a formal endangerment determination about carbon dioxide's public health effects. Such a finding could have a cascade effect covering both mobile and stationary sources and then triggering a non-discretionary duty on the part of the EPA Administrator to regulate utilizing current Clean Air Act authorities.

Mr. BUTTERFIELD. I am going to ask you to please close.

Mr. LUDWISZEWSKI. Thank you. I would be happy to answer any questions.

[The prepared statement of Mr. Ludwiszewski follows:]

STATEMENT OF RAYMOND LUDWISZEWSKI

Mr. Chairman and members of the subcommittee, I want to thank you for the gracious invitation to be with you here today, giving me an opportunity to discuss the strengths and weaknesses of regulating greenhouse gases using existing Clean Air Act authorities. My name is Raymond Ludwiszewski. I am a partner with the law firm of Gibson, Dunn & Crutcher LLP, and I served as General Counsel of the Environmental Protection Agency under Administrator William Reilly.

I have a national law practice specializing in environmental matters and have been involved in greenhouse gas litigation for several years. However, I do not appear before the subcommittee representing or advocating the position of any particular client or industry. I am not receiving remuneration from anyone for my testimony today, and the views expressed in my testimony are my own and not necessarily those of any company or group that I currently represent or have represented. I am not here to recommend any particular course of action by this subcommittee or Congress. Rather, I have been asked to offer my views as an experienced practicing attorney on the avenues available to the Environmental Protection Agency to address greenhouse gases under existing Clean Air Act authorities.

There are many sources of authority for regulating greenhouse gases under the current Clean Air Act, but I will focus on the four most prominent—and perhaps—problematic: the Title I provisions on national ambient air quality standards; new source review and new source performance standards; and the mobile source program under Title II. While these existing authorities under the Clean Air Act are available to EPA as tools for regulating greenhouse gases, they are blunt instruments, plainly designed for the different task of regulating local emissions causing local or regional effects. Accordingly, existing Clean Air Act authorities are poorly suited to the challenges of regulating this global phenomenon.

If EPA stretches the existing Clean Air Act regime to fit the needs of greenhouse gas regulation, it will enter uncharted legal territory. In my experience, new and creative interpretations of existing statutory authority often are viewed by industry or environmental groups as disrupting long-standing, well-settled expectations concerning the boundaries of agency authority. As such, they invite legal challenge. Moreover, courts are inherently suspicious of new, novel statutory or regulatory interpretations that are not obvious from the face of the law. These prolonged court challenges, in turn, delay protection of the environment and create uncertainty in business planning for the regulated community. Any evaluation of the strengths and weaknesses of using existing Clean Air Act authorities for regulation of greenhouse gases should consider these consequences.

NATIONAL AMBIENT AIR QUALITY STANDARDS

The "heart" of the Clean Air Act is the set of provisions governing the creation and attainment of national ambient air quality standards ("NAAQS").[1] These provisions are triggered when the Administrator makes an "endangerment finding"—that is, when the Agency determines that emissions of an air pollutant "cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare." 42 U.S.C. § 7408(a)(1)(A). This key endangerment finding, in turn, initiates the development of air quality criteria, id. § 7408(a)(2), and primary and secondary NAAQS, id. § 7409(b). The primary NAAQS set a limit on the concentration of the regulated pollutant in the ambient air at a level adequate to protect the public health (including an adequate margin of safety). Id. § 7409(b)(1). The secondary standards protect public welfare and are set at the same or stricter level than the primary standards. Id. § 7409(b)(2). These standards, or more stringent standards adopted by the states, are implemented through federally-approved state implementation plans ("SIPs").

Unfortunately, this program is not particularly well-suited to the regulation of greenhouse gases. State and regional compliance with NAAQS requirements is judged from the perspective of pollutant concentration in the ambient air. (That is, the units of measure for the standards governing current criteria pollutants are expressed in parts per million by volume, milligrams per cubic meter of air or micrograms per cubic meter of air). For traditional criteria pollutants, concentrations generally vary from place to place as a result of differences in local or regional emissions and prevailing air flow conditions. In contrast, greenhouse gases disperse globally and persist in the atmosphere for many years. These physical characteristics are very different from the physical qualities of the traditional pollutants that the Clean Air Act NAAQS program was designed to combat.

As a result of these fundamental differences, which distinguish greenhouse gases from traditional criteria pollutants, EPA would have great difficulty distinguishing "attainment" from "nonattainment" areas for any greenhouse gas NAAQS. Accordingly, unless the NAAQS standard for greenhouse gases is set at a level above the current atmospheric concentration, the EPA could be required to list all states as nonattainment areas. Under this scenario, a state could never achieve "attainment" status with its own efforts; rather, the ability of states to reach "attainment" would depend on the willingness not only of other states, but also of nations around the globe, to reduce their greenhouse gas emissions. Alternatively, if EPA set the greenhouse gas NAAQS standard at the current atmospheric concentrations, states essentially would have to offset all new emissions-both from their jurisdiction as well as other jurisdictions like India and China-in their SIPs.

Thus, to regulate greenhouse gases effectively under this provision, EPA either would need to set the NAAQS standard above current atmospheric levels for greenhouse gases or would need to revise the NAAQS concept, taking the focus away from concentration levels and moving towards emission limitations. As these choices demonstrate, the inability of states to reduce greenhouse gases in their environment by their own efforts creates tension with the fundamental premise of the NAAQS

[1] Train v. Natural Res. Def. Council, 421 U.S. 60, 66 (1975).

program- that states mainly reach compliance and, by extension, attainment via their own efforts.

NEW SOURCE REVIEW

The physical characteristics of greenhouse gases also impact another aspect of the NAAQS program—implementation through the New Source Review ("NSR") program. NSR requirements vary based on whether the source is located in an attainment or nonattainment area, but generally require preconstruction review and permitting for "major stationary sources." Sources in attainment areas are subject to the prevention of significant deterioration or PSD permit program. In these areas, "stationary sources," as defined below, are regulated as "major stationary sources" if they have the potential to emit at least 250 tons per year of a regulated pollutant or, if included on EPA's select list of source categories, at least 100 tons per year of a regulated pollutant. 42 U.S.C. § 7479(1)(defining "major emitting facility").

The term "stationary source" is very broad and includes "any building, structure, facility or installation" which emits or may emit a regulated pollutant. Id. § 7411(a)(3). Although the 100 tons per year or 250 tons per year trigger generally limits permit requirements to large stationary sources, like electric utilities, chemical plants, and refineries, the statutory threshold is not set high enough to limit "major stationary sources" of the primary greenhouse gas—carbon dioxide. Rather, the application of the definition of major stationary source to greenhouse gases will greatly expand the number of facilities regulated. Office and apartment buildings, hotels, enclosed malls, large retail stores and warehouses, college buildings, and hospitals could become subject to the Clean Air Act permitting process for the first time.[2] The expanded universe of regulated sources would greatly complicate both the state efforts in formulating state implementation plans and the ability of regulators at all levels to enforce those plans.

To combat this explosion of regulated sources, EPA will have limited flexibility. Due to the nature of the requirements—preconstruction review and permitting—the NSR program is source-specific by definition. Accordingly, utilizing cap and trade as a tool under this program would be very challenging.

NEW SOURCE PERFORMANCE STANDARDS

The New Source Performance Standards ("NSPS") offer another available avenue for regulation of greenhouse gases. Section 111 requires EPA to publish a list of industry categories and to adopt standards of performance reflecting "the degree of emission reduction achievable through application of the best system of emission reduction." 42 U.S.C. § 7411(a)(1).

Sources, not pollutants, are the trigger for these provisions. The Administrator must list "categories of stationary sources . . . if in his judgment [those sources cause, or contribute] significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare," id. § 7411(b)(1)(A), and must then publish federal standards of performance for such sources. Id. § 7411(b)(1)(B).

This NSPS authority might provide EPA more flexibility than the NAAQS program. For example, in setting NSPS, EPA can distinguish among different types of sources in setting standards. Also, unlike NAAQS, EPA can take into consideration cost, non-air impacts, and energy requirements in NSPS standards. Id. § 7411(a)(1). In implementation, EPA cannot require the use of a particular technology, but the Act does provide the flexibility to express the standards as design, equipment, operational or work practice requirements. Id. § 7411(h).

In promulgating programs like the Clean Air Interstate Rule and the Clean Air Mercury Rule, the EPA has interpreted the phrase "standards of performance" to include market solutions like cap-and-trade programs.[3] However, the use of cap-and-trade programs under Section 111 is recent, and new Section 111 rules have been challenged by some states. Most recently, the Clean Air Mercury Rule, one of the first cap-and-trade programs under this provision, was overturned in February 2008 by the D.C. Circuit—albeit for reasons independent of the use of cap-and-trade

[2] See Massachusetts v. U.S. EPA Part II: Implications of the Supreme Court Decision: Hearing Before the H. Select Comm. on Energy Independence and Global Warming, 110 Cong. (2008) (statement of Stephen L. Johnson, Adm'r, U.S. Envtl. Protect. Agency).

[3] Standards of Performance for New and Existing Stationary Sources: Electric Utility Steam Generating Units, 70 Fed. Reg. 28,606, 28,616 (May 18, 2005) ("The term 'standard of performance' is not explicitly defined to include or exclude an emissions cap and allowance trading program. In the final rule, EPA interprets the term 'standard of performance,' as applied to existing sources, to include a cap-and-trade program.").

under Section 111.[4] The Clean Air Interstate Rule also is the subject of a judicial challenge by some states.

Just as these creative solutions by EPA under Section 111 have invited litigation, we can expect that similar expansive uses of existing authorities to address greenhouse gases would generate lawsuits. Prolonged litigation is time consuming for agency staff, delays protection of the environment, and creates uncertainty for the regulated community.

MOBILE SOURCE REGULATION

Motor vehicles, motor vehicle engines, and fuels are regulated under Title II of the Clean Air Act. Section 202(a)(1) of the Act requires the Administrator to 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 his judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare." Id. § 7521. Under Section 202(a)(2), the Administrator must consider cost and technological feasibility in setting standards. Id. § 752(a)(2).[5]

As a matter of basic physics, the only practical means for reducing greenhouse gases emissions from gasoline-powered motor vehicles is to improve their fuel economy. Thus, regulation of greenhouse gas emissions under the Clean Air Act will inevitably intersect with fuel economy regulation under other federal statutes such as the Energy Policy and Conversation Act and the Energy Independence and Security Act. While the Supreme Court's decision in Massachusetts v. EPA clearly contemplated overlap between regulation of fuel economy and mobile source greenhouse gas emissions, an important aspect of that decision also recognized that regulation in this area can, and should be, the product of a coordinated inter-agency effort. Specifically, Massachusetts v. EPA envisioned a coordinated inter-agency approach to addressing the manner in which the federal government should enact motor vehicle emissions standards to address climate change. So, the use of existing Clean Air Act authorities to address mobile source greenhouse gas emissions must necessarily ensure that effect is given to the goals and purposes of each of the congressional enactments that are implicated.

CONCLUSION

Finally, it is worthy of note that a chain of events may be well underway that would soon compel broad-based use of these existing Clean Air Act authorities to regulate greenhouse gas emissions. As noted above, each of the authorities discussed-NAAQS, NSR, NSPS, and Title II mobile source regulation-are triggered by an "endangerment finding." Once that finding is made, the EPA Administrator's discretion to avoid regulating is often very limited or non-existent. Moreover, an endangerment finding concerning greenhouse gases in one context—regardless of whether it is made for mobile source emissions or for stationary source emissions—would have wide implications. For example, if EPA were to make an endangerment finding with respect to mobile sources, the Government believes that finding would also constitute an endangerment finding for stationary sources.[6] As recently as last week, the litigants in Massachusetts v. EPA filed papers to seek to enforce the Supreme Court's mandate and to compel EPA to issue a formal "endangerment" determination about carbon dioxide's public health effects within 60 days. Such a finding could have a cascade effect covering both mobile and stationary sources and triggering a non-discretionary duty on the EPA Administrator's part to regulate utilizing the current Clean Air Act. As noted earlier, however, the existing Clean Air Act authorities were not designed for and are not well-suited to addressing global pollution problems such as climate change.

Thank you for the opportunity to provide this testimony.

Mr. BUTTERFIELD. Thank you very much.

Professor.

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[4] State of New Jersey v. Envtl. Prot. Agency, 05-1097 (D.C. Cir. Feb. 8, 2008) (vacating Clean Air Mercury Rule).

[5] Section 202(a)(2) reads: "Any regulation prescribed under paragraph (1) of this subsection (and any revision thereof) shall take effect after such period as the Administrator finds necessary to permit the development and application of the requisite technology, giving appropriate consideration to the cost of compliance within such period."

[6] See Brief for the Federal Respondent at 32, Massachusetts v. EPA, 127 S. Ct. 1438 (2007) (No. 05-1120).

STATEMENT OF LISA HEINZERLING, PROFESSOR OF LAW, GEORGETOWN UNIVERSITY LAW CENTER

Ms. HEINZERLING. Thank you, Mr. Chairman and members of the committee. Thank you for having me here today to testify.

The Clean Air Act as written provides many opportunities for the regulation of greenhouse gases. I would first urge this subcommittee not to underestimate the wisdom of previous Congresses in crafting the Clean Air Act as it exists today. The Act has proved amenable to dealing with new problems as science identifies them and has proven remarkably flexible in developing responses to them. One example of particular relevance to today's hearing is EPA's exceptional creativity in confronting the reality of regional pollution problems such as ozone. It is simply not true that the Act is only serviceable with respect to strictly local problems.

In addition, I would cite the proud history of dialog and collaboration between Congress and the EPA in confronting air pollution problems under the Clean Air Act. From time to time over the years, up and through especially in 1990, EPA and the Congress have gone back and forth in a conversation about how best to deal with air pollution problems under this statute. I would hope and expect that dialog to continue if EPA did move forward with regulation under the Act. In that case, EPA could take a step, Congress could take another, and so on, just as we have seen for the last decade.

The problem today, as I see it, is that one side, that is, EPA, is no longer engaged in this conversation. Indeed, it has stopped talking altogether. It has, we are told by Mr. Meyers in his testimony this morning, spent $45 billion researching climate change. It has, we know from this morning's hearing, actually prepared and written an endangerment finding, and yet EPA will not release this finding to the American public. The American public has paid for the findings that have been made by EPA already, with respect to the effects of greenhouse gases on public health and welfare. EPA should let those findings be made public. Again, the American public has paid for them.

The only time it seems EPA actually does speak these days is to make sure that nothing is done with respect to climate change. This is true with respect to its denial of California's waiver and denial of permission to California to regulate greenhouse gases. It is also true of EPA's approval of the Bonanza plant in Utah, which has been referenced here already this morning. Mr. Meyers, in response to questions, said that the Agency was taking a case-by-case approach to the regulation of power plants under the Clean Air Act. This is not, strictly speaking, true. EPA has taken a legal position in that case that would mean that the case-by-case answer to approvals under the statute would be yes in every case. That is EPA's legal position as it exists today.

This morning we have also heard warnings that if EPA does become reengaged on this topic, we might see society as we know it collapsing. The fear is that the Clean Air Act as currently written is a recipe for catastrophe. I believe that is not so at all. Every provision of the Clean Air Act, every regulatory provision, save for the National Ambient Air Quality standards, puts costs front and center in the consideration of standard setting. Other considerations

mentioned here this morning are also important under various provisions of the Clean Air Act. Energy impacts, safety impacts, other environmental impacts and so forth are important under the regulatory provisions of the Clean Air Act. Previous Congresses, I think, indeed have been quite prescient in foreseeing the kinds of factors that are relevant in setting standards under this Act, and I would also observe that the National Ambient Air Quality Standards, which we have heard so much about today, do not themselves impose regulation on any source of pollution. You must use other provisions of the statute for that, and under those provisions, economic costs are front and center. In addition, the Clean Air Act contains numerous escape valves if the kinds of economic dislocations we have heard about this morning indeed happen. Those are written into the statute as it exists today.

Moreover, I would say EPA in recent years has shown considerable interpretative creativity in refusing to regulate or in justifying more lenient regulation under the Clean Air Act, indeed, such creativity that sometimes it has proved illegal, according to the courts. I think if the Agency put that same kind of creativity to work in actually trying to do something, in trying to regulate, I think that much would be possible under the Clean Air Act that would afford effective and affordable solutions to the problem we face. Thank you very much.

[The prepared statement of Ms. Heinzerling follows:]

STATEMENT OF LISA HEINZERLING

Thank you for the opportunity to testify before you today. My name is Lisa Heinzerling. I am a Professor of Law at the Georgetown University Law Center. My expertise is in environmental and administrative law. Perhaps most pertinent to today's hearing, I was the lead author of the winning briefs for Massachusetts and other petitioners in Massachusetts v. EPA, in which the Supreme Court held that Environmental Protection Agency has the authority to regulate greenhouse gases under the Clean Air Act.

In this testimony, I discuss provisions of the Clean Air Act, as it stands today, which provide authority to regulate greenhouse gases. I explore the following specific matters:

(1) the statutory triggers that obligate EPA to regulate under various statutory provisions;

(2) the criteria for setting and implementing standards under the Clean Air Act's regulatory provisions;

(3) EPA's flexibility to develop a cap-and-trade program under existing provisions of the Clean Air Act; and

(4) the strengths and weaknesses of relying on the Clean Air Act as currently constituted to address the problem of climate change.

Before turning to these issues, I begin with a brief description of the Supreme Court decision, Massachusetts v. EPA, which brought us to this point.

MASSACHUSETTS V. EPA

In Massachusetts v. EPA, 127 S.Ct. 1438 (2007), the Supreme Court held that greenhouse gases are "air pollutants" within the meaning of the Clean Air Act and that the Act gives EPA authority to regulate them. In addition, the Court held that EPA could not refuse to exercise this authority by citing policy considerations not enumerated in the statute or by referring generally to the scientific uncertainty remaining with respect to climate change.

The Court made several important observations about EPA's obligations on remand. First, it held that EPA must regulate greenhouse gases from motor vehicles if the agency finds that they may reasonably be anticipated to endanger public health or welfare. ("If EPA makes a finding of endangerment, the Clean Air Act requires the agency to regulate emissions of the deleterious pollutant from new motor vehicles." 127 S.Ct. at 1462.) Second, to avoid regulating greenhouse gases, EPA

must make one of two findings. Either the agency must find that greenhouse gases may not reasonably be anticipated to endanger public health or welfare or it must conclude that there is not enough information to make a decision on endangerment. ("EPA can avoid taking further action only if it determines that greenhouse gases do not contribute to climate change or if it provides some reasonable explanation as to why it cannot or will not exercise its discretion to determine whether they do.. If the scientific uncertainty is so profound that it precludes EPA from making a reasoned judgment as to whether greenhouse gases contribute to global warming, EPA must say so.. The statutory question is whether sufficient information exists to make an endangerment finding." 127 S.Ct. at 1462-63.) The Court's decision in Massachusetts v. EPA thus directs EPA to follow the scientific evidence on climate change wherever it leads and to regulate greenhouse gas emissions from motor vehicles if that scientific evidence shows endangerment.

Massachusetts v. EPA settles three issues of central relevance to today's hearing: (1) any Clean Air Act provisions that regulate "air pollutants" permit regulation of greenhouse gases; (2) a finding of "endangerment" triggers an obligate to regulate mobile sources under section 202 of the Clean Air Act, which, as we shall see, is strikingly similar to other regulatory provisions of the Act; and (3) EPA may not sweep aside its obligations under the Clean Air Act by citing policy concerns not embodied in the statute itself. The latter course is exactly the one EPA, for now, has chosen. Rather than dwelling on EPA's current failings, however, I will discuss the actions a willing EPA could take under the Clean Air Act, right now, to address climate change.

REGULATORY TRIGGERS

The most common trigger for regulation under the Clean Air Act is a finding of endangerment. However, some important regulatory provisions have different triggers. The exact contours of the latter provisions have not yet been resolved. Cars, fuels, power plants, factories, aircraft, and more are subject to the provisions triggered by the findings and events described below.

The Clean Air Act directs EPA Administrator to regulate numerous sources of air pollution once he has found that an air pollutant emitted by them may reasonably be anticipated to endanger public health or welfare. In Massachusetts v. EPA, the Supreme Court explicitly held that regulation of motor vehicles under section 202 of the Clean Air Act must follow once the EPA Administrator makes such an endangerment finding. 127 S.Ct. at 1462. The same is true for many other sources of air pollution.

Section 111(b)(1)(A) of the Clean Air Act, for example, provides that EPA "shall" include on a list a category of stationary sources "if in his judgment it causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare." 42 U.S.C. 7411(b)(1)(A). Section 111(b)(1)(B) requires the Administrator to regulate new sources included on this list. 42 U.S.C. 7411(b)(1)(B). Section 111(d) requires the Administrator, acting in concert with the States, to regulate existing sources included on this list. 42 U.S.C. 7411(d). There is little doubt that many categories of stationary sources—including, for example, power plants—emit greenhouse gases and thus "cause[]" air pollution which the Administrator has concluded endangers public health and welfare. Under section 111, the Administrator "shall" include these sources on a list and then "shall" regulate them. 42 U.S.C. 7411(b)(1)(A), 7411(b)(1)(B), 7411(d).

Regarding power plants specifically, in 2006, EPA refused to regulate greenhouse gases from electric utility and several other steam generating units under section 111 because, the agency explained, "it does not presently have the authority to regulate CO2 or other greenhouse gases that contribute to global climate change." 71 Fed. Reg. 9866, 9869. After Massachusetts v. EPA, this reasoning is no longer legally valid. The D.C. Circuit has remanded a challenge to EPA's decision to the agency.

Similarly, section 231(a)(2)(A) provides that the Administrator "shall" issue proposed standards for "the emission of any air pollutant from any class or classes of aircraft engines which in his judgment causes, or contributes to, air pollution which may reasonably be anticipated to endanger public health or welfare." 42 U.S.C. 7571(a)(2)(A). Currently pending before EPA are two petitions asking EPA to regulate greenhouse gas emissions from aircraft. (California filed one petition, which is available at http://cdn.sfgate.com/gate/pictures/2007/12/05/ga—aircraftpet6.pdf. Environmental groups filed another, available at http://cdn.sfgate.com/gate/pictures/2007/12/05/ga—aircraftghgpet.pdf.)

Provisions regarding the regulation of fuels (42 U.S.C. 7545(c)(1)(A)) and nonroad engines (42 U.S.C. 7547(a)(4)) provide somewhat more discretion to the Adminis-

trator because they state that he "may" rather than "shall" regulate after a finding of endangerment. Nevertheless, the Administrator will need to take into account a finding of endangerment in explaining his course of action under these provisions. Here, too, a petition to regulate greenhouse gases (in this case, from nonroad engines) awaits a response from EPA. (The petition is available at http://ag.ca.gov/cms—pdfs/press/N1474—Petition.pdf.) As the Supreme Court said in Massachusetts v. EPA, in responding to a petition for rulemaking, the agency's "reasons for action or inaction must conform to the authorizing statute," and EPA must offer a "reasoned explanation" for its decisions. 127 S.Ct. at 1462, 1463. Thus, the mere existence of some discretion on the part of EPA, suggested by the inclusion of the word "may" with respect to regulation of fuels and nonroad engines, does not dilute the agency's general obligation to follow statutory criteria and explain its decisions in reasoned terms.

A judgment that an air pollutant may reasonably be anticipated to endanger public health or welfare is also a prerequisite to setting a National Ambient Air Quality Standard (NAAQS) for that pollutant under sections 108 and 109 of the Act. Two other triggering provisions also apply to the NAAQS: the pollutant must be emitted by "numerous or diverse mobile or stationary sources" (42 U.S.C. § 7408(a)(1)(B)), and the pollutant must be one either for which air quality criteria (the scientific documents on which EPA relies in setting the NAAQS) had been issued when the Clean Air Act was passed on 1970 or for which the Administrator "plans to issue" air quality criteria under section 108. 42 U.S.C. § 7408(a)(1)(C). The latter provision, in particular, may provide the Administrator somewhat more wiggle room in deciding whether to issue a NAAQS for a greenhouse gas, even after an endangerment finding.

Another provision that provides a different trigger for regulation—a trigger, that is, other than an endangerment finding—is section 169, concerning the Act's Prevention of Significant Deterioration (PSD) program. Section 169 requires, for certain enumerated sources, that "each pollutant subject to regulation under this chapter" be controlled by the "best available control technology." 42 U.S.C. 7479(3) (emphasis added). EPA has stated that once greenhouse gases are regulated under provisions of the Act requiring emissions reductions, section 169 is triggered and the covered sources must be regulated. In a case pending before EPA's Environmental Appeals Board (In the matter of: Deseret Power Electric Cooperative (Bonanza), PSD Appeal No. 07-03), groups challenging an EPA decision granting a PSD permit to a coal-fired facility in Utah argue that greenhouse gases are already "subject to regulation" under the Clean Air Act because section 821 requires the monitoring and reporting of carbon dioxide emissions. Thus the exact trigger for regulation under section 169 remains unresolved.

CRITERIA FOR SETTING AND IMPLEMENTING REGULATORY STANDARDS

Each of the provisions discussed above also describes the criteria EPA must use in setting regulatory standards under these provisions and/or implementing such standards. These provisions differ slightly in their particulars, but all save one share a common element: they all direct EPA's attention to economic costs. See 42 U.S.C. § 7478(3) (sources regulated under PSD program); 42 U.S.C. § 7521(a)(2) (mobile sources); 42 U.S.C. § 7521(a)(3)(A) (heavy-duty engines); 42 U.S.C. § 7545(c)(2)(B) (fuel additives); 42 U.S.C. § 7411(a)(1), (b)(1) (new stationary sources); 42 U.S.C. § 7547(a)(3) (nonroad vehicles); 42 U.S.C. § 7571(b) (aircraft). Only the NAAQS are to be set without reference to the costs of regulation. See Whitman v. American Trucking Ass'ns, 531 U.S. 457 (2001).

Other factors relevant to setting and/or implementing regulatory standards under the Act include the availability of control technology (42 U.S.C. § 7521(a)(3)(A)(i) (mobile sources), 42 U.S.C. § 7523(a)(4) (nonroad engines and vehicles)); energy impacts (see, e.g., 42 U.S.C. § 7521(a)(3)(A) (heavy-duty engines)); the health and welfare effects of product substitutes (42 U.S.C. § 7545(c)(2)(C) (fuels and fuel additives)); effects on safety (42 U.S.C. § 7521(a)(4) (mobile sources), 42 U.S.C. § 7547(a)(4) (nonroad engines and vehicles)); and noise (42 U.S.C. § 7547(a)(4) (nonroad engines and vehicles)). The exact mix of the factors that EPA must consider in setting or implementing standards differs, obviously, from source to source.

EPA'S FLEXIBILITY IN SETTING AND IMPLEMENTING STANDARDS

Especially pertinent to today's hearing is the question of how much flexibility EPA is afforded in setting and implementing standards under the Clean Air Act. In particular, could EPA regulate greenhouse gases through a cap-and-trade program set up under the current Act? The answer is not straightforward; it depends on the specific text and structure of the relevant provision. From the outset, however, one gen-

eralization is possible: the regulatory provisions of the Clean Air Act appear, for the most part, not to have been written with a cap-and-trade program in mind. Developing a cap-and-trade program under these provisions would thus, at the very least, require a good bit of interpretive creativity.

I will start by discussing the mobile source program at issue in Massachusetts v. EPA. Section 202 of the Act directs the Administrator, upon a finding of endangerment, to "prescribe . standards applicable to the emission of any air pollutant from any class or classes of new motor vehicles or new motor vehicle engines." 42 U.S.C. § 7521(a)(1). On its own, this directive does not appear to limit EPA's authority to regulate automobiles through use of a cap-and-trade program, whether applicable only to the automobile industry or to a more general category of sources. However, section 202 goes on to state that the mobile source standards "shall be applicable to such vehicles and engines for their useful life . whether such vehicles and engines are designed as complete systems or incorporate devices to prevent or control such pollution." 42 U.S.C. § 7521(a)(1). This requirement appears to imply that the pollution from each individual vehicle or engine must be separately controlled, either through a "complete system" or through a "device." A cap-and-trade system does not ensure this result.

Turning to fuels, section 211 of the Act gives EPA the authority to "control or prohibit" a fuel or fuel additive under certain conditions. 42 U.S.C. § 7545(c). This provision does not appear to curtail EPA's authority to "control" fuels or fuel additives through a trading program.

For nonroad engines and vehicles, Congress has given EPA the authority to issue "such regulations as the Administrator deems appropriate containing standards applicable to emissions from those classes or categories of new nonroad engines and new nonroad vehicles" meeting the endangerment threshold. 42 U.S.C. § 7547(a)(4). Congress premised these standards on the existence of pollution control technology, instructing EPA to consider certain factors "associated with the application of technology which the Administrator determines will be available for the engines and vehicles to which such standards apply." 42 U.S.C. 7547(a)(4). Yet Congress did not expressly instruct EPA to require the use of any particular technology in its standards for nonroad engines and vehicles. Nor did Congress strongly imply, as it did with respect to mobile sources under section 202, that the pollution from each individual source (each nonroad engine or vehicle) must be controlled. Congress did require (as it had with respect to mobile sources) that the standards for new nonroad engines and vehicles apply "to the useful life of the engines or vehicles," 42 U.S.C. § 7547(a)(4), which might be taken to suggest that Congress had in mind standards that would apply separately to each engine or vehicle, and not an overarching cap-and-trade program that might leave some individual engines or vehicles unchanged by the regulatory framework.

For the specific class of nonroad engines and vehicles that includes locomotives and engines used in locomotives, Congress directed that EPA issue regulations reflecting "the greatest degree of emission reduction achievable through the application of technology which the Administrator determines will be available for the locomotives and engines to which such standards apply," taking into account several factors including cost. 42 U.S.C. § 7547(a)(5). Here, if EPA wanted to bring these sources into a cap-and-trade program, it would be required, at the very least, to ensure that the program's cap reflected "the greatest degree of emission reduction achievable" from available control technology for these sources. Showing that a cap-and-trade program applicable to a broad category of sources, beyond only locomotives, satisfied this stringent criterion might be difficult.

As to standards for aircraft, the Act speaks in terms of "emission standards" applicable to "any class or classes of aircraft engines." 42 U.S.C. § 7571(a)(2)(A). While EPA must study the "technological feasibility" of controlling aircraft emissions, 42 U.S.C. § 7571(a)(1)(B), the Act does not expressly require EPA to impose specific technological requirements on each individual airplane. Nevertheless, the use of the term "emission standards" in this section invites reference to the definition of this phrase in section 302 of the Act. There, the Act defines "emission standards" as "a requirement established by . the Administrator which limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis, including any requirement relating to the operation or maintenance of a source to assure continuous emission reduction, and any design, equipment, work practice or operational standard promulgated under this chapter." 42 U.S.C. § 7601(k). The cap set by a cap-and-trade program, and the requirement that individual sources hold allowances that reflect their own emissions, fits awkwardly, at best, into this provision. Perhaps such requirements could be viewed as "operational standards," but to the extent this latter term is given meaning by the words around it—"design, equipment, work prac-

tice" standard—it does not appear naturally to refer to the kinds of strictures imposed by a cap-and-trade program.

The possibility of using a cap-and-trade program to regulate stationary sources under section 111 is even shakier. Although EPA asserted the power to create a cap-and-trade program for mercury under section 111, see 70 Fed. Reg. 28606, EPA's entire mercury rule was recently invalidated by the D.C. Circuit due to EPA's failure to follow the proper procedures in delisting mercury as a hazardous air pollutant under section 112 of the Act. New Jersey v. EPA, 2008 U.S. App. LEXIS 2797 (2008). The court did not decide whether EPA had lawfully interpreted section 111(d) to permit the creation of a cap-and-trade scheme for existing electricity generating units. EPA had argued that section 111(d)(1) authorized the agency to issue rules creating a state-initiated framework under which each state would submit to EPA a plan that "establishes standards of performance for any existing source" for certain air pollutants. 42 U.S.C. 7411(d)(1). Section 111(a) defines, "(f)or purposes of . section (111)," the term "standard of performance" to mean "a standard for emissions of air pollutants which reflects the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction and any non-air quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated." 42 U.S.C. 7411(a)(1). In creating a cap-and-trade scheme for mercury under section 111, EPA argued as follows:

A cap-and-trade program reduces the overall amount of emissions by requiring sources to hold allowances to cover their emissions on a one-for-one basis; by limiting overall allowances so that they cannot exceed specified levels (the "cap"); and by reducing the cap to less than the amount of emissions actually emitted, or allowed to be emitted, at the start of the program.. Authorizing the allowances to be traded maximizes the cost-effectiveness of the emissions reductions in accordance with market forces. Sources have an incentive to endeavor to reduce their emissions cost-effectively; if they can reduce emissions below the number of allowances they receive, they may then sell their excess allowances on the open market.

The term "standard of performance" is not explicitly defined to include or exclude an emissions cap and allowance trading program. EPA interprets the term "standard of performance," as applied to existing sources, to include a cap-and-trade program. This interpretation is supported by a careful reading of the section 111(a) definition of the term, quoted above: A requirement for a cap-and-trade program (i) constitutes a "standard for emissions of air pollutants" (i.e., a rule for air emissions), (ii) "which reflects the degree of emission limitation achievable" (i.e., which requires an amount of emissions reductions that can be achieved), (iii) "through application of (a) . system of emission reduction" (i.e., in this case, a cap-and-trade program that caps allowances at a level lower than current emissions).

Numerous parties have argued that section 111 does not authorize the creation of a cap-and-trade program. Among other things, section 111(h) provides a contingency plan in the event performance standards are "not feasible" to implement. In that case, section 111(h) gives EPA the authority to "promulgate a design, equipment, work practice, or operational standard, or combination thereof, which reflects the best technological system of continuous emissions reduction which . the Administrator determines has been adequately demonstrated." 42 U.S.C. § 7411(h)(1). One of the ways a performance standard might prove "not feasible" is if "a pollutant or pollutants cannot be emitted through a conveyance designed and constructed to emit or capture such pollutants." 42 U.S.C. § 7411(h)(2)(A). Clearly, Congress thought the most likely scenario under section 111 was for pollutants to be "emitted through a conveyance designed and constructed to emit or capture such pollutant[s]"—an assumption at odds with the operation of a trading program. Other aspects of section 111 also point away from the creation of a trading program under this provision. (For more details, see Lisa Heinzerling and Rena I. Steinzor, A Perfect Storm: Mercury and the Bush Administration, 34 ENVTL. L. REP. 10297, 10309 (April 2004).)

Creating a cap-and-trade program for stationary sources subject to the PSD program might prove even trickier. Section 165(a)(4) requires that each facility covered by PSD requirements be "subject to the best available control technology for each pollutant subject to regulation under this chapter emitted from, or which results from, such facility." 42 U.S.C. § 7475(a)(4). This provision appears to require individual, technology-based requirements for each individual facility, a requirement in considerable tension with a cap-and-trade scheme.

Developing a cap-and-trade scheme under any one of the provisions discussed above is also complicated by the explicit approval, in some Clean Air Act provisions, of a trading scheme. The best-known of these is the national cap-and-trade scheme

created by Subchapter IV to deal with acid deposition. Less well known is the explicit approval of trading regimes for state programs aimed at achieving the NAAQS. 42 U.S.C. § 7410(a)(2)(A). Both provisions might suggest a negative inference with respect to trading under other parts of the Act: because these provisions explicitly permit emissions trading, it might be argued that the provisions that do not mention trading do not allow it.

Cutting in the other direction, administrative agencies, including EPA, have considerable discretion not only in interpreting less than crystalline statutory mandates, but also in deciding how they will enforce them. One possibility, offered in California's petition to EPA asking the agency to regulate greenhouse gas emissions from aircraft, would be to adopt a trading regime as part of an overall enforcement strategy for greenhouse gas emissions.

Given that EPA has offered no program whatsoever to address greenhouse gases, much less a program with a fully developed cap-and-trade plan, these comments on the potential lawfulness of a trading program under various provisions of the Clean Air Act are necessarily hypothetical and preliminary. Nevertheless, they do suggest that EPA will face some tough interpretive choices in designing a regulatory program to address greenhouse gases under the Act as it currently exists.

STRENGTHS AND WEAKNESSES OF RELYING ON CLEAN AIR ACT TO ADDRESS CLIMATE CHANGE

As is evident by now, the Clean Air Act contains numerous provisions that might be used to regulate greenhouse gases. The advantages of using these provisions include: they can be deployed now; they use regulatory strategies that are familiar to, indeed are the bread and butter work of, the Environmental Protection Agency; they call for regulation of numerous and diverse sources and thus, taken as a group, they have an inherent fairness to them; they do not pose unusual enforcement difficulties or untoward administrative burdens.

There are also disadvantages to using existing Clean Air Act provisions to address climate change. Most of the provisions do not have statutory deadlines, which makes their implementation captive (as we are now seeing) to an unwilling executive agency. To the extent one favors cap-and-trade as a regulatory mechanism for addressing climate change, one might worry about the lack of clear authority for such a scheme under the existing statute. The NAAQS program is an ungainly framework for regulating globally harmful pollutants. PSD requirements are triggered for sources that are "large" when it comes to conventional pollution but "small" from the perspective of global pollutants.

Put simply, the Clean Air Act is an excellent off-the-rack garment for greenhouse gas regulation, but it may be that Congress wants a more tailored fit.

Mr. BUTTERFIELD. Thank you very much. We are on a tight leash so I am going to have to move right along.

Mr. Glaser, we are watching the Floor and we are getting close on votes so you have 5 minutes.

STATEMENT OF PETER GLASER, PARTNER, TROUTMAN SANDERS LLP

Mr. GLASER. Thank you. My name is Mr. Glaser and I appreciate the opportunity to present this testimony. Let me begin by stating that I am not here before the Committee representing or advocating the position of any particular company or industry, and the views expressed in my testimony are my own and not necessarily those of any company or group that I currently represent or have represented.

As requested by the Committee, my testimony today identifies the sections of the Clean Air Act that might be applied to regulate greenhouse gases and for each such section I describe the triggers for regulatory action, the types of sources that could be regulated, the factors that EPA could consider in regulation, and the amount of flexibility that EPA could provide sources. My testimony also de-

scribes the weaknesses of the Act as a vehicle for greenhouse gas regulation. I see no strengths.

First, the Clean Air Act has no global reach or interface. No opportunity exists within the statute to utilize international offsets or credits or to coordinate a domestic response with that of other countries. Yet greenhouse gases poses a global issue that must be addressed in a global context.

Second, the statute's central regulatory program, the NAAQS program, is untenable in controlling greenhouse gas emissions, as we have heard. Applying the NAAQS program to greenhouse gases, EPA would be required to develop greenhouse gas standards requisite to protect the public health and welfare without considering the cost of attainment, and States would be required to adopt measures to attain or maintain the NAAQS, yet the States would be essentially powerless to affect greenhouse gas concentrations within their borders. Could EPA elect not to do a NAAQS program for greenhouse gases if it regulates greenhouse gases, as Mr. Doniger says? I hope so, but Massachusetts and two other States several years ago brought a lawsuit to compel EPA to establish NAAQS for greenhouse gases, arguing that EPA had a mandatory duty to do so, and that lawsuit was only withdrawn after EPA denied the ICTA petition that led to the Massachusetts v. EPA litigation.

The third weakness I see in the Clean Air Act is that cap-and-trade opportunities are limited under the statute. Section 111, NSPS, was mentioned as one possible source of authority. Unfortunately, the environmental parties in the context of the Clean Air Mercury Rule argued in court that no such authority existed.

Fourth, we are likely to end up with inflexible command-and-control regulation under the statute. Most of the Clean Air Act provisions discussed in all the witnesses' testimony set forth command-and-control regulation. Opportunities to be more flexible are going to be limited.

Fifth, greenhouse gas regulation under the Clean Air Act would produce uncertain results because many Clean Air Act regulatory standards such as BACT or NSPS require consideration of technical feasibility. Clean Air Act regulation may not result in significant near-term greenhouse gas emissions reductions. Some may argue that at the present time zero controls represent the most appropriate BACT and NSPS level for certain source categories.

Sixth, Clean Air Act regulation will cause a disaster under the Prevention of Significant Deterioration program. Likely several hundred thousand small, previously unregulated sources will be subjected to the program, disincenting investment and clogging the regulatory process. This is not a question of what Mr. Doniger's clients or any other environmental organizations want or don't want to see enforced. Unfortunately, the law says if you emit more than 250 tons per year of a regulated pollutant, you must get a permit.

Seventh and last, the Clean Air Act will lead to years, if not decades, of regulatory agony. For instance, courts have ruled that establishment of New Source Performance Standards require the functional equivalent of an environmental impact statement. Attempting to set performance standards for all greenhouse gas-emitting sources under section 111 and under other Clean Air Act pro-

grams will lead to a series of source-by-source, hugely cost-ineffective, time-consuming, controversial, difficult, and ultimately litigated rulemaking proceedings.

Finally, my friend, Professor Heinzerling, states that while greenhouse gas regulation under the Act may not be a tailored fit but it is a good enough off-the-rack solution. I would say that the better sartorial analogy is that greenhouse gas regulation under the Act would be a regulatory straitjacket. I appreciate Mr. Doniger's statement that his clients are only after the big emitters, but Clean Air Act regulation would tie up within its grasp hundreds of thousands of little sources. It may very well trigger untenable NAAQS regulation and it is unlikely to lead to inflexible and not market-based solutions.

Thank you.

[The prepared statement of Mr. Glaser follows:]

TESTIMONY OF PETER GLASER
ON STRENGTHS AND WEAKNESSES OF REGULATING GREENHOUSE GAS EMISSIONS UNDER EXISTING CLEAN AIR ACT AUTHORITIES

SUBCOMMITTEE ON ENERGY AND AIR QUALITY OF
THE HOUSE COMMITTEE ON ENERGY AND COMMERCE
April 10, 2008

INTRODUCTION

My name is Peter Glaser. I am a partner in the Washington, D.C., office of Troutman Sanders LLP. I received a B.A. from Middlebury College in 1975 and a J.D. from the George Washington University National Law Center in 1980. I practice in the areas of environmental and energy law. I have an active Clean Air Act (CAA) practice and have been involved in greenhouse gas (GHG) legal issues for more than a decade. I filed an amicus brief before the Supreme Court and the U.S. Court of Appeals for the D.C. Circuit in the *Massachusetts v. EPA* litigation.

Let me begin by stating that I am not here before the committee representing or advocating the position of any particular company or industry. I am not receiving remuneration from anyone for my testimony, and the views expressed in my testimony are my own and not necessarily those of any company or group that I currently represent or have represented.

In addition, I am not here to recommend any particular course of action by this Committee or Congress. I have been asked to offer my views as a practicing attorney on three issues pertaining to potential regulation by the U.S. Environmental Protection Agency (EPA) of greenhouse gases (GHGs) under the Clean Air Act (CAA).

By way of introduction, let me say that I believe that the CAA is a complete misfit for regulation of GHGs. While the statute may, as the Supreme Court found in the *Massachusetts v.*

EPA case,[1] have literal application to GHGs, that does not mean that the CAA is an appropriate GHG regulatory vehicle. In fact, if one were to design a statutory system uniquely unsuited for cost-effective GHG regulation, that statute would be the CAA. As discussed in more detail below:

- The CAA has no global reach and presents no opportunity to coordinate a domestic response with other country actions. Yet global warming is by nature an international issue that requires an international response.

- The CAA's National Ambient Air Quality Standards (NAAQS) program – the program the courts refer to as "central"[2] to and the "centerpiece"[3] of the CAA's regulatory scheme, and as "the engine that drives nearly all of Title I of the CAA,"[4] – is wholly unsuited for GHG regulation. NAAQS regulation will be a hugely expensive exercise in futility.

- Cap-and-trade opportunities under the statute are limited. For instance, EPA tried to utilize cap-and-trade to control powerplant mercury emissions in its Clean Air Mercury Rule (CAMR) under the Section 111 New Source Performance Standards (NSPS) program, but environmental parties maintained in court that EPA had no such authority. CAMR was overturned without the court reaching this issue.[5]

- Inflexible command and control mechanisms are the mot likely form of GHG regulation under the CAA. Yet most agree that some form of flexible market-based approach is preferable.

- CAA regulation will not necessarily lead to the types of emissions cuts that advocates seek. Regulatory standards such as NSPS and Best Available Control Technology

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[1] *Massachusetts v. EPA*, 127 S. Ct. 1438 (2007).
[2] *NRDC v. Gorsuch*, 685 F.2d 718 (D.C. Cir. 1982).
[3] *Sierra Club v. Costle*, 657 F.2d 298, 315 (D.C. Cir. 1981).
[4] *Whitman v. American Trucking Assns*, 531 U.S. 457, 468 (2001).
[5] *See New Jersey v. EPA*, No. 05-1097, *slip op* (D.C. Cir. Feb. 8, 2008).

(BACT) require balancing of environmental, cost and technology factors. Some will argue that, under current technology, the appropriate NSPS and BACT level for many sources is zero. Ultimately, society cannot significantly reduce GHG emissions without significant technological advances. Pushing regulation before technology is available may not produce the desired results.

- Regulation of GHGs under the CAA will create a disaster under the Prevention of Significant Deterioration (PSD) permitting program. Hundreds of thousands of small, previously unregulated sources across the economy will become subject to PSD permitting, creating a substantial drag on new investment activity and a huge backlog in the permitting process.

- The country will experience years, if not decades, of regulatory agony, as EPA will be required to undertake numerous, controversial, time-consuming, expensive, and difficult regulatory proceedings, all of which ultimately will be litigated.

Despite these problems with CAA regulation of GHGs, the country may be on the path to CAA regulation at the current time. In *Massachusetts v. EPA*, the Court found that GHGs are CAA "pollutants;" that EPA must determine whether GHGs emitted from new motor vehicles do or do not endanger public health or welfare, or supply a reason for not making this determination; and that, if EPA makes an "endangerment finding," it must issue regulations. Although the Court decision is technically limited to new motor vehicles, the precedent obviously extends throughout the CAA. Controversy now exists over EPA's announcement that it will shortly issue an Advance Notice of Proposed Rulemaking in response to *Massachusetts* and to other petitions it has received to regulate GHG emissions from other mobile and stationary sources. But the controversy only concerns the timing of EPA's response to *Massachusetts*. Ultimately, as EPA recognizes, it will need to make a full and final response to

the Supreme Court's decision. If its response is that GHGs endanger public health or welfare, CAA regulatory mechanisms will be triggered.

Congress has before it proposed legislation for a cap-and-trade program to address GHG emissions. I am not here to endorse or oppose such legislation. Given the concerns I have identified, however, I do urge that, if Congress adopts GHG legislation, it should do so as the exclusive means of regulating GHGs, to the exclusion of the CAA.

RESPONSE TO SUBCOMMITTEE'S QUESTIONS

1. What sections of the existing Clean Air Act might arguably provide authority to regulate greenhouse gas emissions?

In March 13, 2008 testimony before the House Select Committee on Energy Independence and Global Warming, EPA Administrator Stephen L. Johnson stated that the agency was "continuing to collect information to evaluate the availability and potential use of various CAA authorities for GHG mitigation," given "the complexity and interrelationship of potential approaches to GHG regulation under the Clean Air Act." Given the length and density of the statute and EPA's implementing regulations, along with nearly four decades of interpretive case law, Mr. Johnson may have understated the difficulty of reaching firm conclusions as to available regulatory mechanisms. Accordingly, my testimony here only identifies what I believe are the most significant potential avenues of GHG regulation under the statute. Other avenues may exist.[6]

The following sections are potential sources of GHG regulation: (a) New Source Performance Standards (NSPS), CAA § 111; (b) New Source Review (NSR), specifically the Prevention of Significant Deterioration (PSD) program, CAA, Title I, Part C; (c) National

[6] Additionally, given space limitations here, my discussion necessarily condenses and summarizes complex provisions and omits much of the detail. I do not endorse any of these provisions as appropriate or lawful methods of GHG regulation. My purpose is only to identify potentially applicable provisions.

Ambient Air Quality Standards (NAAQS), CAA §§ 107-110, *et al.*; (d) interstate air pollution, CAA § 126; (e) international air pollution, CAA § 115; (f) Hazardous Air Pollutants (HAPs), CAA § 112; (g) new motor vehicles and new motor vehicle engines, CAA § 202; (h) nonroad engines, CAA § 213; and (i) aircraft, CAA § 231.

2. For each such section, please describe how this section might be applied to greenhouse gases, including a description of:

a. The finding or other action that could trigger, allow or obligate the Environmental Protection Agency (EPA) to regulate under this section;

b. The types of sources that could be regulated;

c. The factors that EPA could consider (e.g., cost, technological feasibility); and

d. The amount of flexibility that EPA could provide sources (e.g., whether EPA could use a cap-and-trade approach, or would have to set standards that each regulated source would have to meet).

A. <u>New Source Performance Standards (NSPS)</u>

GHG regulation under the CAA will almost inevitably include NSPS regulation under CAA § 111. EPA has already specifically been asked to regulate GHG regulations under the NSPS program in at least two proceedings.[7]

Section 111 of the CAA requires EPA to establish and periodically revise a list of categories of stationary sources. Under Section 111, EPA is required to include a source category on the list "if in his judgment it causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare."

EPA is also required to promulgate federal "standards of performance" for new and modified sources within such category. A "standard of performance" is defined under Section

[7] *See New York v. EPA*, No. 06-1322 (D.C. Cir. 2006) (remand from Court case seeking to review EPA's refusal to set new source performance standards for electric generating units and other large stationary sources); *Standards of Performance for Petroleum Refineries; Proposed Rule*, 72 Fed. Reg. 27178 (May 14, 2007), Comment by Environmental Integrity Project and the Sierra Club (August 7, 2007).

111(a)(1) as "a standard for emissions of air pollutants which reflects the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction and any nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated." This standard has come to be known as "best demonstrated technology" or BDT.

Once EPA has established standards of performance, states are required to submit to the agency a procedure for implementing and enforcing such standards for *new or modified* sources located in the state. If EPA finds that the state procedure is adequate, it will delegate to the state implementation and enforcement authority.

Additionally, EPA is required to prescribe regulations setting forth procedures for state establishment of standards of performance for *existing* sources. The procedures are required to be similar to the procedures used under CAA § 110 whereby states submit state implementation plans for EPA approval. The standards of performance will apply to any existing source not regulated under the NAAQS or HAPs programs, both of which are described below.

Under the BDT standard for establishing standards of performance, both the availability and cost of technology must be considered. Although the standard can be set to be "technology-forcing," the standard cannot be based on results achieved short-term at a small-scale "pilot" plant. EPA must show that the standard is "achievable" in the real world, that is, it "must be 'adequately demonstrated' that there will be 'available technology.'"[8]

Court precedent emphasizes the breadth of inquiry that must be undertaken to establish standards of performance. According to the U.S. Court of Appeals for the D.C. Circuit, "[t]he

[8] *Portland Cement Ass'n v. Ruckelshaus*, 486 F.2d 375, 391 (D.C. Cir. 1973), *cert. denied*, 417 U.S. 921 (1974), quoting the statutory text. EPA has the burden to make this demonstration; it cannot be passed off to industry. *National Lime Ass'n v. EPA*, 627 F.2d 416, 432 (D.C. Cir. 1980).

language of section 111 . . . gives EPA authority . . . to weigh cost, energy, and environmental impacts in the broadest sense at the national and regional levels and over time as opposed to simply at the plant level in the immediate present."[9] The Court stated that "'section 111 of the Clean Air Act, properly construed, requires the functional equivalent of a NEPA impact statement.'"[10]

Whether EPA could use a cap-and-trade program under Section 111 in lieu of plant-by-plant standards of performance is open to debate. As stated, EPA's authority to use Section 111 as a vehicle for a cap-and-trade program was challenged in court in the CAMR case, but the court decision reversing CAMR did not reach the issue.[11]

B. NAAQS

Under CAA § 108, EPA is required to publish and periodically revise a list of each air pollutant: "(A) the emissions of which, in his judgment, cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare; (B) the presence of which in the ambient air results from numerous or diverse mobile or stationary sources; and (C) for which air quality criteria had not been issued before December 31, 1970 but for which he plans to issue air quality criteria under this section." For each air pollutant included on this list, EPA is required to issue air quality criteria reflecting the "latest scientific knowledge useful in indicating the kind and extent of all identifiable effects on public health or welfare which may be expected from the presence of such pollutant in the ambient air, in varying quantities." Under CAA § 109, EPA is required to simultaneously establish primary and secondary NAAQS for each pollutant for which air quality criteria are issued. Primary standards must be set at a level "which in the judgment of the Administrator, based on such criteria and allowing an adequate

[9] *Sierra Club v. Costle*, 657 F.2d 298, 330 (D.C. Cir. 1981).
[10] *Id.* at 331, quoting *Portland Cement*, 486 F.2d at 384.
[11] *See New Jersey v. EPA*, No. 05-1097, *slip op* (D.C. Cir. Feb. 8, 2008).

margin of safety, are requisite to protect the public health." Secondary standards must be set at a level "which in the judgment of the Administrator, based on such criteria, is requisite to protect the public welfare." The cost of attaining the NAAQS cannot be considered in setting the standards.[12]

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

Cap-and-trade is a potential control mechanism under the NAAQS program to address interstate pollution transport. EPA has implemented a nitrogen oxide cap-and-trade program in a number of eastern states under the so-called NOX SIP Call, and it is implementing a nitrogen oxide and sulfur dioxide cap-and-trade program under its Clean Air Interstate Rule (CAIR). EPA's authority to use cap-and-trade in the NAAQS program, however, is not entirely free from doubt. The CAIR rule is currently under judicial review, and it is not known whether the court's decision will address the ability of EPA to provide a cap-and-trade system to address interstate air pollution.

It is hard to imagine how NAAQS regulation would work for a GHG. As stated, the establishment of a NAAQS triggers a process whereby attainment and nonattainment areas are

[12] *Whitman v. American Trucking Assns*, 531 U.S. 457, 464 (2001).

designated, states are required to submit implementation plans to attain or maintain the NAAQS, and severe sanctions are mandated for non-compliance. This process cannot work for GHGs, however, given that GHGs circulate and are well-mixed in the global atmosphere. As a result, a ton of GHG emitted in, for instance, Maryland has the same impact on GHG concentrations over Maryland as a ton emitted in China. Given this fact and given the large and rapidly increasing foreign GHG emissions, Maryland can do nothing about attaining or maintaining a GHG NAAQS. Maryland could literally cease emitting any GHGs tomorrow and it would have no discernable impact on GHG concentrations over the state. Yet Maryland would nevertheless be subject to severe sanctions for failing to attain or maintain the GHG NAAQS.

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

Debate exists as to whether EPA has discretion to refuse to adopt a NAAQS for a GHG given the futility of the program in the GHG context. In recent testimony before the House Select Committee on Energy Independence and Global Warming, David Bookbinder, Chief Climate Counsel for the Sierra Club, suggested that EPA might have discretion not to establish a NAAQS for carbon dioxide even though, in his view, carbon dioxide may reasonably be anticipated to endanger public health and welfare. As noted, under CAA §§ 108 and 109, EPA must establish a NAAQS for each pollutant that meets three tests. Mr. Bookbinder would undoubtedly maintain that GHGs meet the first two tests: they endanger public health and welfare and their presence "in the ambient air results from numerous or diverse mobile or

stationary sources." Mr. Bookbinder suggested that the third Section 108(a)(1) factor for issuance of air quality criteria – the pollutant is one for which air quality criteria had not been issued before December 31, 1970 but is one for which the Administrator plans to issue air quality criteria under this section – might provide authority not to regulate under the NAAQS program. Mr. Bookbinder suggests that EPA could simply not plan to issue air quality criteria for a GHG, even one that endangers public health or welfare.

While I hope Mr. Bookbinder is right, his argument is directly contradicted by the holding of a case cited on a separate point in supporting testimony in the same hearing by Georgetown University Law Center Professor Lisa Heinzerling. *See Natural Resources Defense Council v. Train*, 545 F.2d 320 (2d Cir. 1976). Moreover, before EPA acted on the petition that led to the *Massachusetts v. EPA* case, Massachusetts and two other states brought an action in federal district court to compel EPA to establish a NAAQS for carbon dioxide, alleging that EPA had a non-discretionary duty to do so. *See Massachusetts v. Whitman*, Civil Action No. 03-CV-984 (D. Conn. 2003). This lawsuit was withdrawn when EPA denied the petition to regulate that led to the *Massachusetts v. EPA* case. Thus, the lead petitioner in the *Massachusetts v. EPA* case apparently does not share the view that EPA has discretion not to adopt a NAAQS for GHGs.

C. NSR/PSD

The New Source Review (NSR) program requires new and modified sources emitting more than defined levels of air pollutants to obtain an air quality permit prior to commencing construction. There are two types of programs – non-attainment NSR for sources located in non-attainment areas and attainment NSR implemented through the Prevention of Significant Deterioration (PSD) program. The PSD program was adopted by Congress in 1977 and applies in all areas of the country where existing ambient air quality is better than the NAAQS.

Although the NAAQS set maximum allowable levels of pollutants in the ambient air, Congress decided that in existing clean air areas the air should stay cleaner than the NAAQS, and for that purpose adopted the PSD program.[13] The PSD program also applies to air pollutants for which NAAQS are not issued, so long as they are not regulated under the Section 112 HAPs program described below. Thus, the PSD program would apply to GHGs whether or not EPA establishes a NAAQS for GHGs, so long as it does not regulate such emissions through the HAPs program.

Under the PSD program, permits must be obtained before construction may begin on "major" new stationary sources of CAA-regulated air pollutants.[14] The CAA lists 28 specific types of stationary sources, such as power plants, refineries, steel mills, chemical plants, etc., that are "major," and subject to the PSD program, if they can emit at least 100 tons per year (tpy) of any regulated air pollutant.[15] Other, unlisted types of stationary sources do not trigger PSD permitting as "major" sources unless they can emit at least 250 tpy of any air pollutant.[16] The term "stationary source" is very broad. It includes "any building, structure, facility or installation" which emits or may emit a regulated pollutant.[17]

Also, once a facility is "major," a change to that facility is subject to preconstruction PSD permitting if the change causes a "significant" emissions increase. EPA's regulations numerically define a "significant" emission increase for a number of pollutants. For instance, an increase of particulate matter emissions of 25 tpy, or of sulfur dioxide or nitrogen oxides emissions of 40 tpy, is considered a "significant" increase. For pollutants for which EPA has not

[13] *See* generally Clean Air Act, Title I, Part C, Subpart I, 42 U.S.C. §§ 7470-7479.
[14] 42 U.S.C. § 7475(a).
[15] 42 U.S.C. § 7479(1).
[16] *Id.*
[17] 40 C.F.R. § 52.21(b)(6).

provided a numerical "significance" definition, such as CO_2, *any* emission increase is considered to be a "significant" increase.[18]

In order to obtain a PSD permit, a source, among other requirements, must install Best Available Control Technology (BACT) for each pollutant which is "subject to regulation" under the Act.[19] BACT is determined on a case-by-case basis as the maximum emission reduction achievable, taking into account energy, environmental, and economic impacts and other costs.[20]

The PSD program is largely implemented through a state-administered permitting system. Seven states administer the program through "delegated" authority from EPA; they essentially act as EPA's agent in administering EPA's PSD permit requirements. On the other hand, forty-three states administer their own PSD programs for which EPA regulations prescribe the minimum CAA requirements. These states promulgate their own PSD regulations in their State Implementation Plans (SIPs). Those SIPs are submitted to EPA for approval. In a few instances, such as a project being located on Native American lands, EPA itself directly administers the PSD permit system.

The 100/250 tpy threshold for PSD applicability was established by Congress based on emission levels of traditional pollutants, such as particulate matter, nitrogen oxides and sulfur dioxide. Emissions above this threshold were considered to be significant enough to trigger a need to regulate these pollutants. The PSD-triggering threshold was not set based on the premise that 100/250 tpy is a significant enough level of CO_2 emissions to justify regulation. CO_2 is not like traditional pollutants for a number of reasons, one of which is that 100 or 250 tpy are not a great deal of CO_2. Although the 100/250 tpy level for traditional pollutants generally limits PSD permit requirements to large stationary sources like coal-fired electric generators, chemical

[18] 40 C.F.R. §§ 52.21(b)(1)(ii), 52.21(b)(2), 52.21(b)(23).
[19] 42 U.S.C. § 7475(a)(4).
[20] 42 U.S.C. § 7479(3).

plants, refineries and the like, a 100/250 tpy threshold for CO_2 will subject a massive number of previously unregulated small facilities to PSD requirements, as discussed more fully in response to question 3 below.

PSD regulation is not discretionary on EPA's part. It applies to any pollutant which is regulated under the CAA. Thus, if EPA regulates a GHG under *any* CAA program (other than the Section 112 HAPs program), it must also regulate that GHG under PSD. For instance, if on remand of the *Massachusetts v. EPA* case, EPA were to regulate GHG emissions from new motor vehicles, EPA would also be required to regulate GHGs under the PSD program. In other words, the new motor vehicle GHG regulation sought in the *Massachusetts v. EPA* case would also subject numerous small stationary sources to difficult PSD permitting requirements.

D. Interstate Air Pollution

Section 110(a)(2)(D)(i) requires state SIPs to contain measures prohibiting in-state sources from emitting pollutants which contribute significantly to NAAQS non-attainment or to the prevention of NAAQS maintenance by a downwind state. Section 126 authorizes EPA to receive and act on petitions from states alleging violations by an upwind state of this requirement. Both the NOX SIP Call and CAIR rule were adopted by EPA under these provisions to address interstate pollutant transport. Since these provisions are essentially NAAQS enforcement mechanisms, the NAAQS discussion set forth in part B above is applicable here and need not be repeated.

E. International Air Pollution

Section 115 of the CAA provides for regulation "[w]henever the Administrator, upon receipt of reports, surveys or studies from any duly constituted international agency has reason to believe that any air pollutant or pollutants emitted in the United States cause or contribute to air

pollution which may reasonably be anticipated to endanger public health or welfare in a foreign country or whenever the Secretary of State requests him to do so with respect to such pollution which the Secretary of State alleges is of such a nature...." In such event, the Administrator is required to notify the state in which such air pollutant originates, and the state in turn is required to adopt SIP provisions eliminating such endangerment. Again, since this provision is essentially a NAAQS enforcement mechanism, the NAAQS discussion set forth in part B above is applicable here and need not be repeated.

F. Hazardous Air Pollutants (HAPs)

Under CAA § 112(b), the Administrator is required to compile a list of HAPs, defined to include the 190 substances specifically listed in such subsection as well as:

> . . . pollutants which present, or may present, through inhalation or other routes of exposure, a threat of adverse human health effects (including, but not limited to, substances which are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, neurotoxic, which cause reproductive dysfunction, or which are acutely or chronically toxic) or adverse environmental effects whether through ambient concentrations, bioaccumulation, deposition, or otherwise . . .

Under CAA § 112(c), the Administrator is required to compile a list of categories of major sources and area sources of each listed HAP. Under CAA Section 112(d), the Administrator is required to promulgate regulations establishing national emissions standards for HAPs (NESHAPs) applicable to both new and existing sources. Such NESHAPs must require the use of maximum available control technology (MACT) in controlling sources of HAPs. Under Section 112(d)(2), MACT standards are set taking into consideration the cost of achieving emissions reductions and any non-air quality health and environmental impacts and energy requirements. However, Section 112(d)(3), "[t]he maximum degree of reduction in emissions that is deemed achievable for each new sources in a category or subcategory shall not be less

stringent than the emission control that is achieved by the best controlled similar source, as determined by the Administrator." For existing sources, MACT standards may not be less stringent (and may be more stringent) than (a) the average emission limitation achieved by the best performing 12 percent of existing sources (subject to certain exceptions) or (b) the average emission limitation achieved by the best performing 5 sources in a category or subcategory with fewer than 30 sources.

I do not believe that GHGs qualify for regulation under Section 112 because I do not think that GHGs are, in nature or effect, HAPs within the meaning of the section. Each of the 190 substances originally listed by Congress as HAPs under CAA Section 112 is a poison, producing toxic effects in small dosages. By any stretch of the imagination, GHG are not poisons, at least not in the quantities that cause concern as to climate effects. Nevertheless, in an April 10, 1998 memorandum, former EPA General Counsel Jonathan Z. Cannon suggested, without discussion, that section 112 is "potentially applicable" to GHG regulation.

G. New Motor Vehicles and New Motor Vehicle Engines

Section 202(a)(1) of the CAA provides that:

> The Administrator shall by regulation prescribe (and from time to time revise) in accordance with the provisions of this section, 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 his judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare.

In general, under CAA § 302(k), an emission standard means "a requirement established by the State or the Administrator which limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis, including any requirement relating to the operation or maintenance of a source to assure continuous emission reduction, and any design, equipment, work practice or operational standard promulgated under this Act." Section 202(a)(1) standards

are required to be set considering technology and cost factors. Under Section 202(a)(2), such standards "shall take effect after such period as the Administrator finds necessary to permit the development and application of the requisite technology, giving appropriate consideration to the cost of compliance within such period." The *Massachusetts v. EPA* case was brought to review a petition to establish new motor vehicle standards under Section 202(a).

H. Nonroad Engines

Section 213(a)(5) provides that if EPA determines that emissions from new nonroad engines or vehicles:

> significantly contribute to air pollution which may reasonably be anticipated to endanger public health or welfare, the Administrator may promulgate (and from time to time revise) such regulations as the Administrator deems appropriate containing standards applicable to emissions from those classes or categories of new nonroad engines and new nonroad vehicles (other than locomotives or engines used in locomotives) which in the Administrator's judgment cause, or contribute to, such air pollution, taking into account costs, noise, safety, and energy factors associated with the application of technology which the Administrator determines will be available for the engines and vehicles to which such standards apply.

EPA currently has before it petitions under this section to regulate GHG emissions from marine vessels and from land-based nonroad vehicles and engines.[21]

I. Aircraft

Under CAA § 231(a)(2), EPA "shall, from time to time, issue proposed emission standards applicable to the emission of any air pollutant from any class or classes of aircraft engines which in his judgment causes, or contributes to, air pollution which may reasonably be

[21] *Petition for Rulemaking under the Clean Air Act to Reduce the Emission of Air Pollutants from Marine Shipping Vessels that Contribute to Global Climate Change* (Oct. 3, 2007), brought by Oceana, Friends of the Earth, Center for Biological Diversity and Earth Justice, and *Petition for Rulemaking Seeking the Regulation of Greenhouse Gas Emissions from Ocean-Going Vessels* (Oct. 3, 2007), brought by the State of California; *Petition for Rulemaking Seeking the Regulation of Greenhouse Gas Emissions from Nonroad Vehicles and Engines* (Jan. 29, 2008), brought by the States of California, Connecticut, Massachusetts, New Jersey and Oregon.

anticipated to endanger public health or welfare." At least one petition to regulate GHG emissions from aircraft is currently pending before EPA.[22]

3. What are the potential strengths and weaknesses of regulating greenhouse gas emissions under the Clean Air Act?

I see only weaknesses, and no strengths. I summarize the key weaknesses below:

1. No global reach or interface. Greenhouse gas emissions pose a global issue that must be addressed in a global context. The CAA is limited to domestic emissions. No opportunity exists within the statute to utilize international offsets or credits or to coordinate a domestic response with that of other countries.

2. Central regulatory program untenable. As discussed, the central CAA regulatory program is the NAAQS program. Yet that program cannot rationally be applied to control GHGs. EPA would be required to develop GHG standards requisite to protect the public health and welfare without considering the cost of attainment, and states would be required to adopt measures to attain or maintain the NAAQS, again regardless of cost. Yet the states will be essentially powerless to affect GHG concentrations within their borders.

3. Cap-and-trade opportunities limited. As discussed, environmental parties contest EPA's ability to utilize cap-and-trade under the Section 111 program. Cap-and-trade seems more likely (although not definitively so) under Section 110 as a NAAQS attainment mechanism. Yet the NAAQS program in and of itself as applied to GHGs is irrational.

4. Inflexible command and control the most likely option. Most of the CAA provisions discussed above set forth command and control mechanisms, including the Section 111 NSPS program, the Section 112 MACT standards for HAPs, the Title I, Part C PSD

[22] *Petition for Rulemaking under the Clean Air Act to reduce the Emission of Air Pollutants from Aircraft that Contribute to Global Climate Change* (Dec. 31, 2007), brought by Friends of the Earth, Oceana, NRDC and Earth Justice.

permitting requirements, including BACT standards, and the emission standards for new motor vehicles and engines in Section 202(a), for nonroad engines in Section 213, and for aircraft in Section 231. In all of these sections, EPA is required to establish minimum standards that every regulated source must meet. The use of flexible, market-based solutions under these provisions would likely generate controversy.

5. Uncertain results. Because many CAA regulatory standards, such as BACT and NSPS, require consideration of technological feasibility, CAA regulation may not result in any near term GHG emission reductions. Many will argue that, at the present time, zero controls represent the most appropriate BACT and NSPS levels. Plainly, technological breakthroughs are needed to significantly reduce GHG emissions. Attempting to impose regulation before technology is available will not produce the desired results.

6. PSD disaster.

The PSD burden caused by the 100/250 tpy applicability threshold for GHGs could be overwhelming for small and large businesses alike. New sources emitting more than 100/250 tpy of GHGs could not be built without first obtaining a PSD permit after undergoing the BACT process. Existing sources that emit more than 100/250 tpy of GHGs that wish to expand or modify their facilities in a way that would increase GHGs emissions by *any* amount would likewise first have to obtain a PSD permit after undergoing the BACT process.

The 100/250 tpy threshold, while appropriate for traditional types of air pollutants, is an extremely low threshold for carbon dioxide. The threshold is so low that hundreds of thousands of relatively small GHG-emitters will be swept into the PSD program if GHGs are regulated under the CAA. Buildings of about 100,000 square feet, if they are heated by oil or natural gas, would likely become subject to the program because of their carbon dioxide emissions, as would

relatively small users of natural gas such as commercial kitchens that use natural gas for cooking and businesses that use CO_2 naturally as a component of their operations. A very large number and variety of buildings and facilities could therefore become subject to the program – including many office and apartment buildings; hotels; enclosed malls; large retail stores and warehouses; college buildings, hospitals and large assisted living facilities;[23] large houses of worship; product pipelines; food processing facilities; large heated agricultural facilities; indoor sports arenas and other large public assembly buildings; restaurants; soda manufacturers; bakers, breweries and wineries; and many others. None of these types of sources has ever been subject to PSD permitting requirements before because they emit so little traditional air pollution; but they would be now if GHGs are regulated under the CAA.

PSD permitting is complicated, time-consuming and expensive. No small business requiring a moderate-sized building or facility heated with fossil fuel could operate subject to the PSD permit administrative burden.

The requirement that sources emitting more than 100/250 tpy of carbon dioxide apply BACT as a condition to permitting would also inject considerable, and perhaps fatal, uncertainty for businesses. No one can say at this time what BACT is for CO_2 because there is no precedent or guidance. BACT is determined through a case-by-case evaluation of control technology alternatives and involves a complicated weighing of economic, environmental, energy and other factors. BACT can even be no control measure if the weighing process fails to identify a technically and economically feasible technology for controlling the pollutant in question. But since BACT determinations for carbon dioxide have no regulatory history at this time, and can

[23] States may exempt non-profit health or education institutions from the PSD program. Absent such exemption, even non-profit hospitals, nursing homes, assisted living facilities and school buildings of more than about 100,000 square feet would be subject to PSD regulation if CO2 is deemed to be a regulated CAA pollutant.

vary by type of facility and from state-to-state, businesses wishing to construct new sources or modify existing ones would have no basis for planning what the regulatory requirements will be.

The consequences of GHGs becoming CAA-regulated pollutants would also be experienced by state PSD-permitting agencies and by EPA. These agencies are wholly unprepared for the flood of PSD permit applications that would ensue. These agencies would either have to reassign scarce resources from other environmental programs to handle the permitting burden, resulting in a decline in environmental regulation in these other areas, or PSD permitting would becomes so backlogged as to effectively create a permitting moratorium.

PSD regulation is not discretionary. The consequences I describe will occur if EPA regulates GHGs under any CAA program.

7. Regulatory agony.

GHG regulation under the CAA will result in years, if not decades, of costly, time-consuming, controversial, and hugely difficult regulatory proceedings and litigation. Standard-setting will not happen quickly.

Consider the difficulty of setting GHG standards just under the Section 111 NSPS program, given the fact that NSPS process "requires the functional equivalent of a NEPA impact statement.'"[24] In 1980, in a case involving the limestone industry, the Court stated that the "sheer massiveness of impact of the urgent regulations," considered in that and other cases had "prompted the courts to require the agencies to develop a more complete record and a more clearly articulated rationale to facilitate review for arbitrariness and caprice" than had been applied in previous cases.[25] If massiveness of regulatory impact was a concern in a limestone industry case, that concern would be magnified many times in promulgating GHG standards of

[24] *Sierra Club v. Costle*, 657 F.2d at 331, quoting *Portland Cement*, 486 F.2d at 384.
[25] *National Lime*, 627 F.2d at 451 n.126.

performance not just in the limestone industry but in all of the many industries that emit GHGs. A plethora of issues would be relevant in setting GHG standards, with EPA weighing the cost, energy, and environmental impacts of GHG regulation "in the broadest sense at the national and regional levels and over time" as if it were preparing an Environmental Impact Statement. A large number of parties would be interested given the overwhelming importance of the issues. Thus, an EPA rulemaking to establish NSPS for utility units would be highly complex, controversial and time-consuming.

The daunting nature of the task of establishing NSPS for GHGs is illustrated by another case, *Sierra Club v. Costle*, 657 F.2d 298 (D.C. Cir. 1981). In 1976, a number of parties petitioned EPA to revise the sulfur dioxide NSPS for coal-burning powerplants. It took three years for EPA to conclude the proceedings and another two years for the court to review the case. The court noted "[t]he importance of the challenged standards [that] arises not only from the magnitude of the environmental and health interests involved, but also from the critical implications the new pollution controls have for the economy at the local and national levels."[26] The court further noted that "the volume and technical complexity of the material necessary for our review is daunting."[27] According to the Court, the record before EPA included more than 2,520 submissions; EPA's statement accompanying the rule took up 43 triple columns of single-spaced type; EPA had performed or obtained from contractors 120 studies and collected more than 400 items of reference literature; and EPA had received almost 1400 comments, written 650 letters and 2000 interagency memos, held over 50 public meetings and substantive telephone

[26] *Sierra Club v. Costle*, 657 F.2d. at 313.
[27] *Id.* at 314.

conversations with the public, and conducted four days of public hearings.[28] Briefs submitted to the Court ran to 670 pages, and the Court's decision was more than 100 pages in length.

As with the limestone industry case examined in *National Lime*, the powerplant proceeding in *Sierra Club v. Costle* pertained to a single industry. If EPA is required to set standards for *all* GHG emitting industries, not just under Section 111 NSPS but under all of the CAA provisions discussed above, the result will be a regulatory nightmare.

In sum, if the goal is to set rational GHG policy in a timely fashion, the CAA should not be the vehicle of choice.

CONCLUSION

Congress should not allow for GHG regulation under the CAA. I appreciate the opportunity to submit these comments.

[28] *Id.*, n. 22.

Mr. BUTTERFIELD. Thank you very much.

We are going to have a few minutes for questions. Mr. Shimkus, would you like to ask any questions of the witnesses?

Mr. SHIMKUS. Yes, I would, Mr. Chairman.

Mr. BUTTERFIELD. All right. You may proceed, 5 minutes.

Mr. SHIMKUS. Let me ask just the basic original question to the panel. Will regulating carbon dioxide cost more to the consumer, yes or no? Mr. Doniger?

Mr. DONIGER. In some cases, yes, and in some cases, it will save money.

Mr. SHIMKUS. I don't believe you. I don't.

Mr. Ludwiszewski?

Mr. LUDWISZEWSKI. I would say almost certainly it will cost more.

Mr. SHIMKUS. I would agree.

Ms. Heinzerling?

Ms. HEINZERLING. I agree with Mr. Doniger.

Mr. SHIMKUS. And Mr. Glaser?

Mr. GLASER. The answer is definitely yes.

Mr. SHIMKUS. The answer is definitely yes. Thank you very much.

Mr. DONIGER. Mr. Shimkus, may I——

Mr. SHIMKUS. No, it is my time.

Mr. DONIGER. For the record——

Mr. SHIMKUS. No, sir. Sir, it is my time.

Mr. DONIGER. A study——

Mr. SHIMKUS. Sir, it is my time. But I will ask the NRDC position on nuclear power, being that it is known to be not a carbon emission. The reality is this. We are going to increase electricity demand by 30 percent in this country in the next 30 years. Does everybody agree with that? That is the Energy Information Agency analysis. You don't agree with that?

Mr. DONIGER. No.

Mr. SHIMKUS. Okay.

Mr. DONIGER. Energy service demand but not energy demand.

Mr. SHIMKUS. I have a son who is 15 years old and who I love dearly. I went downstairs—I told this story many times. He is working on a laptop, he is watching cable TV and listening to iPod music all at the same time, tripling the use of electricity in one individual and dealing his neurons a blow that I can't even imagine. Most of us believe electricity demand is increasing and will continue to increase 30 percent by 2030. Fifty percent of the electricity that we produce today is by coal, 20 percent by nuclear, 19 percent by hydroelectric, and so a lot of us are frustrated with the fact that no one wants to consider the possibility of increased costs.

Ms. Heinzerling, you addressed that the Clean Air Act had no economic catastrophic occurrences and that the economy was considered in this. Well, I will invite you to southern Illinois, where the coal mining industry was destroyed, where small towns shut their doors, where family restaurants closed, and I went to the rallies, save the mines, save the mine workers' jobs. The mine in Kincaid, Illinois, closed. The United Mine Workers a week later had a rally in the Christian County Fairground, save our jobs. So don't come and tell me that our approach to climate change is not

going to cost jobs in this country. It is going to cost a tremendous amount of jobs, and that is okay. The only one who is intellectually honest in this debate, as I said in my opening statement, is John Dingell. John Dingell says it is going to cost us money, we have to pay for it, so consumers who are driving, we need to put a 50-cent tax on motor fuels, mobile source of emissions, whatever gimmick we use for the consumer not to understand that costs are going to incur by climate change. Cap and trade is a gimmick. It is a gimmick to protect politicians from the real debate of what we need to address.

If we are going to address, Mr. Chairman, climate change, it is going to cost money, and that money has to come from somewhere. And so let us be up front with it. Your position ought to be carbon tax, let us tax the single source polluter, let us tax the mobile emitter, let us take that revenue, let us do CCS, carbon capture sequestration. That is clear, easy, understandable, but no, we are going to go on this paradigm of some type of cap-and-trade system that has failed in Europe and we are not going to be able to bring—we are going to have all pain and no gain, because I sat and the chairman of this committee was in the meeting with Chinese officials and they laughed at us when we asked them if they were going to go until some international climate change accord, and their answer was, you all had 200 years to develop your middle class using fossil fuels, it is our turn now. It doesn't sound like they are going to be great stewards of climate change debate so the public needs to understand, if we are going to do it, let us do it, let us put the tax down, let us let people know what they are going to pay for and then let us move the country forward.

Thank you, Mr. Chairman. I yield back my time.

Mr. BUTTERFIELD. Thank you. That is perfect timing. That is not my buzzer. That is the Speaker's buzzer.

All right. I am going to seek unanimous consent to have 5 legislative days for all members to submit written questions to the witnesses. We are going to have to go to the Floor and I am told that this is going to be a disjointed afternoon and so likely we will not be able to return. So members will have 5 legislative days to submit written questions.

I thank each one of you for your testimony today. This is an active debate that is ongoing and we look forward to your participation in the future.

The committee is in recess.

[Whereupon, at 1:26 p.m., the subcommittee was adjourned.]

[Material submitted for inclusion in the record follows:]

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March 12, 2008

The Honorable Stephen L. Johnson
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Administrator Johnson:

Since December, the Committee has been examining the Administration's decision to reject California's effort to regulate greenhouse gas emissions from motor vehicles. During this investigation, the Committee has received new information on a related issue: it appears that EPA's own efforts to regulate greenhouse gas emissions from motor vehicles have also been stymied.

Multiple senior EPA officials have told the Committee on the record that after the Supreme Court's landmark decision in *Massachusetts v. EPA*, you assembled a team of 60 to 70 EPA officials to determine whether carbon dioxide emissions endanger health and welfare and, if so, to develop regulations reducing CO_2 emissions from motor vehicles. According to these officials, you agreed with your staff's proposal that CO_2 emissions from motor vehicles should be reduced and in December forwarded an endangerment finding to the White House and a proposed motor vehicle regulation to the Department of Transportation. The proposed regulation would have produced significantly more CO_2 reductions than the revised fuel economy standards enacted last year.

The senior EPA officials who spoke with the Committee did not know what transpired inside the White House or the Department of Transportation or what directions the White House may have given you. They do know, however, that since you sent the endangerment finding to the White House, "the work on the vehicle efforts has stopped." They reported to the Committee that the career officials assigned to the issue have ceased their efforts and have been "awaiting direction" since December.

These accounts raise serious questions. It appears that EPA's efforts to regulate CO_2 emissions have been effectively halted, which would appear to be a violation of the Supreme

Court's directive and an abdication of your responsibility to protect health and the environment from dangerous emissions of CO_2.

I hope you will cooperate with the Committee's investigation of this matter.

Background

In August 2003, the Bush Administration denied a petition to regulate CO_2 emissions from motor vehicles by deciding that CO_2 was not a pollutant under the Clean Air Act.[1] In April 2007, the U.S. Supreme Court overruled that determination in *Massachusetts v. EPA*. The Court wrote:

> Because greenhouse gases fit well within the Clean Air Act's capacious definition of "air pollutant," we hold that EPA has the statutory authority to regulate the emission of such gases from new motor vehicles.[2]

Under the Clean Air Act, whether EPA is required to regulate CO_2 turns on whether CO_2 causes, or contributes to, air pollution that "may reasonably be anticipated to endanger public health or welfare."[3] The Court remanded this question to EPA, explaining:

> If EPA makes a finding of endangerment, the Clean Air Act requires the agency to regulate emissions of the deleterious pollutant from new motor vehicles. ... Under the clear terms of the Clean Air Act, EPA can avoid taking further action only if it determines that greenhouse gases do not contribute to climate change or if it provides some reasonable explanation as to why it cannot or will not exercise its discretion to determine whether they do.[4]

In May 2007, the President signed an executive order directing EPA and other federal agencies to develop regulations to address greenhouse gas emissions from motor vehicles.[5] The

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[1] U.S. Environmental Protection Agency, EPA Denies Petition to Regulate Greenhouse Gas Emissions from Motor Vehicles (Aug. 28, 2003) (online at http://yosemite.epa.gov/opa/admpress.nsf/fb36d84bf0a1390c8525701c005e4918/694c8f3b7c16ff6085256d900065fdad!OpenDocument).

[2] U.S. Supreme Court, *Massachusetts et al v. Environmental Protection Agency et al.* (Apr. 2, 2007) (online at http://www.supremecourtus.gov/opinions/06pdf/05-1120.pdf).

[3] *Id.*

[4] *Id.*

[5] White House Office of the Press Secretary, *Executive Order: Cooperation Among Agencies in Protecting the Environment with Respect to Greenhouse Gas Emissions From Motor*

President explicitly stated that this order was in response to *Massachusetts v. EPA*. President Bush said:

> Last month, the Supreme Court ruled that the EPA must take action under the Clean Air Act regarding greenhouse gas emissions from motor vehicles. So today, I'm directing the EPA and the Departments of Transportation, Energy, and Agriculture to take the first steps toward regulations that would cut gasoline consumption and greenhouse gas emissions from motor vehicles.[6]

You testified before the House Oversight and Government Reform Committee on November 8, 2007. At that hearing, you said EPA would release proposed regulations by the end of the year, stating:

> While the Supreme Court's decision in *Massachusetts v. EPA* makes clear that carbon dioxide and other greenhouse gases are pollutants under the Clean Air Act, it also makes clear that the agency must take certain steps and make certain findings before a pollutant becomes subject to regulation under the law. Those steps include making a finding that a pollutant endangers public health or welfare, and developing the regulations themselves. The EPA plans to address the issue of endangerment when we propose regulations on greenhouse gas emissions for motor vehicles and fuels later this year.[7]

You went on to state: "I have committed to members of Congress and to the President that we will have that proposed regulation out for public notice and comment beginning by the end of this year and to work toward a final rule by the end of next year."[8]

The Recommendations of EPA's Career Staff

After the President's May 2007 executive order, EPA assembled a large team of experienced career officials to work on the endangerment finding and the regulation of CO_2. Karl Simon, the Director of the Compliance and Innovative Strategies Division in EPA's Office of Transportation and Air Quality, was asked by Committee staff how many EPA officials were assigned to these tasks. He answered: "Sum total for the endangerment finding, the vehicle

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Vehicles, Nonroad Vehicles, and Nonroad Engines (May 14, 2007) (online at http://www.whitehouse.gov/news/releases/2007/05/20070514-1.html).

[6] White House Office of the Press Secretary, *President Bush Discusses CAFE and Alternative Fuel Standards* (May 14, 2007).

[7] House Oversight and Government Reform Committee, Testimony of Stephen Johnson, Administrator, *EPA Approval of New Power Plants: Failure to Address Global Warming Pollutants*, 110th Cong. (Nov. 8, 2008).

[8] *Id.*

portion and the fuel portion is somewhere on the order of 60 or 70."[9] In the Office of Transportation and Air Quality alone, 53 officials worked full-time on the effort from May through December 2007, according to Margo Oge, the Director of the Office of Transportation and Air Quality.[10] These staff resources were supplemented by outside contractor resources with a $5.3 million budget in FY 2007.[11]

The process the staff followed was exhaustive. To assess whether CO_2 endangers health and welfare, the Office of Atmospheric Programs prepared multiple drafts of a technical support document that generated "about 500 comments" from "internal EPA review, external Federal expert review and ... other interagency comments."[12] The agencies that reviewed this document included the National Oceanic and Atmospheric Administration, the National Aeronautics and Space Administration, the Department of Energy, and the White House Office of Science and Technology Policy.[13]

The career staff concluded that CO_2 emissions endanger both human health and welfare. According to Benjamin DeAngelo, EPA's Senior Analyst for Climate Change, the career staff reached this conclusion because "we thought that was most consistent with the underlying science."[14] On the issue of whether CO_2 emissions harm health, Brian McLean, the Director of the Office of Atmospheric Programs, told the Committee: "ultimately climate change can cause, through various direct and indirect effects — mostly indirect effects — consequences for public health."[15]

According to EPA staff, the proposal to regulate CO_2 emissions from motor vehicles was "about 300 pages" and had "extensive analysis about ... the costs and benefits."[16] This proposal was developed with close consultation with the National Highway Traffic Safety Administration. According to one EPA staff involved, it was a "collaborative effort" and "we worked quite

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[9] Transcript of Interview of Karl Simon, 155 (Jan. 30, 2008).

[10] Transcript of Interview of Karl Simon (Jan. 30, 2008); Transcript of Interview of Margo Oge (Feb. 7, 2008).

[11] Letter from Stephen Johnson, Administrator, U.S. EPA, to Chairman Henry A. Waxman, House Oversight and Government Reform Committee (Mar. 3, 2008).

[12] Transcript of Interview of Benjamin DeAngelo, 97 (Feb. 12, 2008).

[13] Transcript of Interview of Benjamin DeAngelo, 97 (Feb. 12, 2008).

[14] Transcript of Interview of Benjamin DeAngelo, 106 (Feb. 12, 2008).

[15] Transcript of Interview of Brian McLean, 50 (Feb. 5, 2008).

[16] Transcript of Interview of Margo Oge, 17 (Feb. 7, 2008).

extensively together on the tools we would use, the time frame under which we would operate, how we would construct the rulemaking."[17]

Ms. Oge, the Director of the Office of Transportation and Air Quality, told the Committee that there were also "2, 3 meetings a week" between "EPA political people, OMB, DOE, Ag, DOT on an ongoing basis."[18] Mr. McLean, the Director of the Office of Atmospheric Programs, confirmed this point, stating:

> I'm not aware of the content of any communication, but I'm aware that there were numerous meetings between people at EPA and people in other agencies. ... I believe OMB chaired a lot of those meetings.[19]

The proposal developed by the career EPA staff called for significant reductions in CO_2 emissions from motor vehicles. According to EPA officials, the agency's analysis showed that motor vehicles could achieve CO_2 emission reductions equal to a fleet fuel economy standard of 35 miles per gallon by 2018.[20] This nationwide standard is not as stringent as the California proposal, which called for achieving the equivalent of 35 miles per gallon by 2017 and achieving over 40 miles per gallon in 2020.[21] But it is significantly more stringent than the corporate average fuel economy (CAFE) standards in the recently passed Energy Independence and Security Act of 2007 (EISA), which do not require new motor vehicles to meet that 35 miles per gallon standard until 2020.[22]

Consideration by the EPA Administrator

Internal EPA documents indicate that you were scheduled to make decisions on the endangerment finding and the vehicle greenhouse gas rule as early as October 4, 2007. A

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[17] Transcript of Interview of Maureen Delaney (Feb. 11, 2008).

[18] Transcript of Interview of Margo Oge, 116 (Feb. 7, 2008).

[19] Transcript of Interview of Brian McLean, 15 (Feb. 5, 2008).

[20] Transcript of Interview of Karl Simon, 119-120 (Jan. 30, 2008).

[21] California Air Resources Board, Comparison of Greenhouse Gas Reductions Under CAFE Standards and ARB Regulations Adopted Pursuant to AB 1493, 7 (Jan. 2, 2008) (online at http://www.arb.ca.gov/cc/ccms/ab1493_v_cafe_study.pdf).

[22] Energy Independence and Security Act of 2007, Pub. L. No. 110-140, section 102.

"predecision GHG" meeting was scheduled with you on October 2, 2007.[23] A "decision GHG" meeting was scheduled with you on October 4, 2007.[24]

According to the EPA staff who spoke with the Committee, you were personally involved in the decisionmaking. One official said you asked for three briefings on the endangerment finding and read the technical support document "cover to cover."[25] Another official told the Committee that you may have participated in "five, maybe more" briefings.[26]

According to your staff, you supported their recommendations on two key points: (1) you agreed that CO_2 emissions endanger welfare and (2) you backed their proposal to reduce CO_2 emissions from motor vehicles. The main staff recommendation you rejected was the staff finding that CO_2 emissions also endangered human health. Five separate EPA officials told the Committee that you personally made the decision to exclude public health from the endangerment finding.[27]

After you endorsed the finding that CO_2 emissions endanger welfare, the proposed determination was submitted to the White House Office of Management and Budget. Dina Kruger, the Director of the Climate Change Division, told the Committee that the endangerment finding was transmitted to OMB "right around December 7 or 8."[28] Other EPA staff similarly recollected that the finding was sent to the White House "around December 6th"[29] or "around December 5th."[30] The transmittal of the endangerment finding to the White House was confirmed by the Director of the Office of Atmospheric Programs,[31] the Director of the Office of Policy Analysis and Review,[32] and the Director of the Office of Transportation and Air Quality.[33]

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[23] E-mail from Barbara Morris to Jim Ketcham Colwill et al. (Aug. 30, 2007) (bate stamped EPA 522).

[24] *Id.*

[25] Transcript of Interview of Benjamin DeAngelo, 94, 103 (Feb. 12, 2008).

[26] Transcript of Interview of Dina Washburn Kruger, 92 (Jan. 31, 2008).

[27] *See*, Transcript of Interview of Brian McLean, 68-69 (Feb. 5, 2008); Transcript of Interview of Robert David Brenner, 76 (Feb. 6, 2008); Transcript of Interview of Margo Oge, 120 (Feb. 7, 2008); Transcript of Interview of Maureen Delaney, 45-46 (Feb. 11, 2008); Transcript of Interview of Benjamin DeAngelo, 104 (Feb. 12, 2008).

[28] Transcript of Interview of Dina Washburn Kruger, 37 (Jan. 31, 2008).

[29] Transcript of Interview of Maureen Delaney, 88 (Feb. 11, 2008).

[30] Transcript of Interview of Benjamin DeAngelo, 108 (Feb. 12, 2008).

[31] Transcript of Interview of Brian McLean, 44-45 (Feb. 5, 2008).

[32] Transcript of Interview of Robert David Brenner, 74 (Feb. 6, 2008).

Around the same time, the proposal to reduce CO_2 emissions was transmitted to the Department of Transportation for review.[34] Ms. Oge, the Director of the Office of Transportation and Air Quality stated that the draft rule was sent to NHTSA "maybe the second week of December."[35]

Suspension of the EPA Regulatory Effort

The career EPA staff who the Committee interviewed did not know what communications you or other political appointees in the agency may have had with White House officials. But they did tell the Committee that after the White House received the endangerment finding and the Department of Transportation received the proposed motor vehicle regulation, work on the finding and regulation was stopped.

According to Mr. McLean, the Director of the Office of Atmospheric Programs, OMB has not engaged EPA in reviewing the endangerment finding.[36] This was confirmed by Ms. Kruger, the Director of the Climate Change Division, who stated that the agency has not worked on the endangerment finding "since coming back from the holidays."[37]

Ms. Oge, the Director of the Office of Transportation and Air Quality, provided a similar report regarding the proposal to reduce CO_2 emissions from motor vehicles. She told the Committee that the work on the vehicle CO_2 rule "stopped when we sent the document to the Department of Transportation."[38]

According to EPA staff, they have been informed that work has been discontinued so that EPA's activities can be reassessed in light of enactment of the Energy Independence and Security Act of 2007. One staffer stated that he believed there was a "desire to take a step back and to look at the rulemaking in light of the energy bill that had passed ... from the political level of EPA."[39] Another staffer stated that work discontinued on December 19, the day the Energy Independence and Security Act was signed, and that it was unclear "what would go forward following the new legislation."[40]

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[33] Transcript of Interview of Margo Oge, 105 (Feb. 7, 2008).

[34] Transcript of Interview of Karl Simon, 120 (Jan. 30, 2008).

[35] Transcript of Interview of Margo Oge, 105 (Feb. 7, 2008).

[36] Transcript of Interview of Brian McLean, 70 (Feb. 5, 2008).

[37] Transcript of Interview of Dina Washburn Kruger, 35 (Jan. 31, 2008).

[38] Transcript of Interview of Margo Oge, 105 (Feb. 7, 2008).

[39] Transcript of Interview of Benjamin DeAngelo, 89 (Feb. 12, 2008).

[40] Transcript of Interview of Maureen Delaney, 39-40 (Feb. 11, 2008).

There has, however, been no request to EPA staff to analyze whether passage of the law changes the analysis of the costs and benefits of the proposed EPA regulation. EPA staff informed the Committee that there was currently no "leadership direction"[41] and that staff "are awaiting direction."[42] According to Robert Brenner, the Director of the Office of Policy Analysis and Review:

> I have been in meetings where questions have been asked about what the likely schedule would be for the rules. But I have not heard any decisions on what a likely schedule would be, and I have not heard any specifics of work being done at this point on the rulemakings.[43]

As a legal matter, the passage of provisions in the Energy Independence and Security Act requiring the Department of Transportation to strengthen federal CAFE standards does not affect EPA's legal obligation to regulate CO_2 emissions. The Act included language to ensure that a change in CAFE requirements did not affect the Clean Air Act's provisions.[44] Moreover, the Supreme Court held in *Massachusetts v. EPA*:

> The fact that DOT's mandate to promote energy efficiency by setting mileage standards may overlap with EPA's environmental responsibilities in no way licenses EPA to shirk its duty to protect the public "health" and "welfare."[45]

Indeed, you have personally acknowledged that enactment of the Energy Independence and Security Act does not change the mandatory nature of EPA's responsibility. In January, you

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[41] Transcript of Interview of Maureen Delaney, 40 (Feb. 11, 2008).

[42] Transcript of Interview of Karl Simon, 121 (Jan. 30, 2008).

[43] Transcript of Interview of Robert David Brenner, 82 (Feb. 6, 2008).

[44] The Energy Independence and Security Act of 2007 states:

> SEC. 3. RELATIONSHIP TO OTHER LAW.
>
> Except to the extent expressly provided in this Act or an amendment made by this Act, nothing in this Act or an amendment made by this Act supersedes, limits the authority provided or responsibility conferred by, or authorizes any violation of any provision of law (including a regulation), including any energy or environmental law or regulation.

Pub. L. No. 110-140 (2007), Sec. 3.

[45] U.S. Supreme Court, *Massachusetts et al v. Environmental Protection Agency et al.* (Apr. 2, 2007) (online at http://www.supremecourtus.gov/opinions/06pdf/05-1120.pdf).

testified before the Senate that the Act does not "relieve me or the agency of its responsibilities under the Clean Air Act and under *Massachusetts v. EPA*."[46]

Conclusion

With your support, EPA made progress last year in responding to the Supreme Court decision in *Massachusetts v. EPA*. According to the statements of multiple career EPA officials, you approved a finding that CO_2 emissions endanger welfare and supported a proposal that would significantly curtail CO_2 emissions from motor vehicles. This proposal would apparently require CO_2 emission reductions equivalent to achieving a 35 miles per gallon CAFE standard by 2018.

It appears, however, that this effort was halted after the White House and the Department of Transportation received copies of your proposals. The Committee is seeking additional information regarding the circumstances that caused this delay.

To assist the Committee's investigation into this matter, I request that you provide the Committee with copies of the documents relating to the endangerment finding and the greenhouse gas vehicle rule, including copies of any communications with the White House and other federal agencies about these proposals.

As an initial step, I ask that you provide the following documents to the Committee by March 14, 2008:

- The technical support document prepared by the Office of Atmospheric Programs;
- The proposed endangerment finding that was transmitted to the White House Office of Management and Budget in December 2007; and
- The proposed vehicle greenhouse gas rule that was transmitted to NHTSA in December 2007.

The other responsive documents should be provided to the Committee by March 28, 2008.

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[46] Senate Committee on Environment and Public Works, *Oversight of EPA's Decision to Deny the California Waiver*, 110th Cong. (Jan. 24, 2008).

The Honorable Stephen L. Johnson
March 12, 2008
Page 10

The Committee on Oversight and Government Reform is the principal oversight committee in the House of Representatives and has broad oversight jurisdiction as set forth in House Rule X. An attachment to this letter provides additional information about how to respond to the Committee's request.

If you have any questions concerning this request, please have your staff contact Greg Dotson or Jeff Baran of the Committee staff at (202) 225-4407.

Sincerely,

Henry A. Waxman
Chairman

Enclosure

cc: Tom Davis
Ranking Minority Member

DAVID D. DONIGER, RESPONSES TO SUBMITTED QUESTIONS FROM MR. BUTTERFIELD

1. Mr. Doniger, you raise the issue of EPA avoiding to make an endangerment determination to rule CO_2 emissions from automobiles as a pollutant. Can you describe the "stalling tactics" used by the Administration in further detail?

The principal stalling tactic being used by the administration to delay action under the Clean Air Act is the announced plan for EPA to issue an "advance notice of proposed rulemaking" (ANPR). We understand that the ANPR may appear on June 21st. The issuance of an ANPR, instead of an endangerment determination or a proposed rulemaking, is a deliberate tactic to avoid complying with the Supreme Court decision in Massachusetts v. EPA, 127 S.Ct. 1438 (2007).

The high court's decision requires EPA to determine whether the greenhouse gas air pollutants emitted by motor vehicles "may reasonably be anticipated to endanger public health or welfare." (As I explained in my testimony, under the Clean Air Act the term "welfare" expressly includes adverse effects on the "climate.") The Supreme Court precisely delineated the range of EPA's options on remand. EPA must decide "whether an air pollutant 'cause[s], or contribute[s] to, air pollution which may reasonably be anticipated to endanger public health or welfare,'" 127 S. Ct. at 1462. Thus, "[t]he statutory question is whether sufficient information exists to make an endangerment finding." The Court limited EPA to three possible answers to that question: yes, no, or insufficient information. EPA's answer, the Court made clear, must be based solely on the science. Id. at 1462-63.

An investigation conducted by the House Committee on Oversight and Government Reform has established that EPA had in fact completed the drafting an affirmative endangerment determination during fall 2007. See Letter from Chairman Henry A. Waxman to EPA Administrator Stephen L. Johnson dated March 12, 2008, at 3-6, available at http://oversight.house.gov/documents/20080312110250.pdf. The Oversight Committee investigation established that the Administrator himself approved the affirmative determination and that in early December 2007 EPA transmitted a fully-drafted Federal Register notice announcing the affirmative endangerment determination to the White House Office of Management and Budget, where it apparently still sits. Id. at 5-6. In addition, EPA had completed an extensive scientific review document in support of the endangerment determination. Id., at 3-5. The Oversight Committee investigation found that work regarding the endangerment determination stopped once the proposed determination was sent to the White House. Id. at 7.

Acting on the White House's instructions, the Administrator abandoned work on the endangerment determination and subsequently announced plans for the ANPR. The ANPR will only duck the determination required under Massachusetts. It will ask for yet another round of comment on science issues and on other "policy" issues that the Supreme Court has determined have no relevance to the science-based endangerment decision required under the Clean Air Act.

Administrator Stephen Johnson has been more than plain that he does not intend to make the endangerment determination required by the Supreme Court during his tenure. On May 19, 2008, Administrator Johnson "told reporters at a meeting at Platts Energy Podium, a McGraw-Hill-sponsored presentation for reporters on energy issues, that 'as a practical matter' it will be up to the next administration to determine whether carbon dioxide endangers public health because of its contribution to global warming." See J. Eilperin, "White House Role Cited in EPA Reversal on Emissions," Washington Post, p. A06 (May 20, 2008).

The Administrator's solicitation of more scientific comment is completely at odds with his own published decision earlier this year stating his affirmative conclusions regarding the adverse effects of greenhouse gas emissions. In a Federal Register notice published on March 6, 2008 (73 Fed. Reg. 12,156 (March 6, 2008)), the Administrator endorsed the conclusion of the International Panel on Climate Change (IPCC) that global warming "is unequivocal and is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global sea level." 73 Fed. Reg. 12,165, citing the IPCC Summary for Policymakers (2007). He also said: "It is widely recognized that greenhouse gases have a climatic warming effect.. Most of the observed increase in global average temperatures since the mid-20th century is very likely [an IPCC term of art meaning 90-99% likely] due to the observed increase in anthropogenic GHG concentrations." Id. at 12,165. The Administrator also catalogued the diverse dangers that such warming will pose to public health and welfare. For example, the Administrator specifically found that "[s]evere heat waves are projected to intensify in mag-

nitude and duration over portions of the U.S. where these events already occur, with likely increases in mortality and morbidity, especially among the elderly, young, and frail." Id. at 12,167.

The State and environmental petitioners in Massachusetts v. EPA have no choice but to return to court to seek judicial enforcement of the Supreme Court's decision. We filed a petition for a writ of mandamus on April 2, 2008, the anniversary of the Supreme Court's decision. The U.S. Court of Appeals for the District of Columbia Circuit (the court with current responsibility for the case) ordered the EPA to respond and explain its delay. We subsequently submitted a reply, and we await the court's ruling. If the D.C. Circuit orders EPA to make the endangerment determination in conformity with the Supreme Court's decision, EPA may finally be held to account.

2. Secondly, how quickly could the next Administration (in January 2009) move past the EPA soliciting public input via ANPRs?

The new administration could act immediately under the Clean Air Act to issue the endangerment determination. Such action could be taken immediately because, as explained in my testimony and in the answer to the previous question, all the work on the endangerment issue has already been completed. A fully-drafted EPA endangerment determination sits at the Office of Management and Budget. A complete scientific support document has also been prepared.

The new administration could also issue almost immediately proposed emission standards for new vehicles (which EPA also had drafted before work was stopped last year) and with proposed new source performance standards for new power plants and other major industries that emit carbon dioxide and other greenhouse gases.

As I explained in my testimony, it is completely practical to regulate greenhouse gas pollutants from these sources through a variety of Clean Air Act authorities pertaining to mobile and stationary sources. Through these authorities, EPA could set performance standards for global warming pollution from the vast majority of U.S. emissions sources. Electric power plants, for example, represent 40 percent of U.S. CO2 emissions and could be regulated under Section 111. Other major industrial sources subject to Section 111 account for another 20 percent or so of these emissions. Motor vehicles and their fuels represent another 20 percent of U.S. CO2 emissions and could be regulated under Sections 202 and 211.

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

DEC 19 2008

OFFICE OF
AIR AND RADIATION

The Honorable John Dingell
Chairman
Committee on Energy and Commerce
U.S. House of Representatives
Washington, D.C. 20515

Dear Chairman Dingell:

Thank you for the opportunity to respond to questions following the April 10, 2008, hearing entitled, "Strengths and Weaknesses of Regulating Greenhouse Gas Emissions Using Existing Clean Air Act Authorities." I hope this information will be useful to you and the other members of the Committee.

If you have any further questions, please contact me or your staff may contact Diann Frantz in EPA's Office of Congressional and Intergovernmental Relations at (202) 564-3668.

Sincerely,

Robert J. Meyers
Principal Deputy Assistant Administrator

Enclosure

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EPA Responses to Questions for the Record
"Strengths and Weaknesses of Regulating Greenhouse Gas Emissions Using Existing Clean Air Act Authorities" hearing
April 10, 2008

The Honorable John D. Dingell

1. Please evaluate how the following provisions of the Clean Air Act (the "Act"), if used to limit greenhouse gas (GHG) emissions from different sources, would encourage or discourage the development of new GHG abatement technologies and processes. In your response, please discuss the strengths and weaknesses of each provision from a technology-forcing perspective, in light of historical experience and your understanding of the challenges in reducing GHG emissions.

Past efforts to reduce air pollution under the CAA provide examples of how implementation of the law's provisions can act to create private market incentives for technology development and deployment. As noted in a recent EPA regulatory analysis, the history of the CAA provides a number of examples in which technological innovation and "learning by doing" have made it possible to achieve greater emissions reductions than had been feasible earlier. In some cases, the reductions were achieved at costs less than original estimates by industry representatives or EPA.[1] Among the examples are motor vehicle emission controls, diesel fuel and engine standards to reduce NOx and particulate matter emissions, engine idle-reduction technologies, selective catalytic reduction and ultra-low NOx burners for NOx emissions, high-efficiency scrubbers for SO2 emissions from boilers, CFC-free air conditioners and refrigerators, low or zero VOC paints, and idle-reduction technologies for engines.[2]

One of the issues raised by potential CAA regulation of GHGs is whether the application of the CAA to these can help spur technological development for reducing GHG emissions and the related costs of those reductions. In this regard, the regulatory authorities in the CAA vary in their potential for encouraging new technology, and the extent to which they allow or require EPA to consider costs as a factor when setting standards. As discussed in the Advance Notice of Proposed Rulemaking (ANPR) on the potential use of the CAA to regulate GHGs (hereinafter GHG ANPR or ANPR),[3] some provisions offer little flexibility in standard-setting criteria, emission control methods, compliance deadlines and potential for market-oriented regulation. Other provisions offer

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[1] See section 5.4 of *Final Ozone NAAQS Regulatory Impact Analysis*, March 2008, EPA-HQ-OAR-2007-0225. The RIA is available at http://www.epa.gov/ttn/ecas/ria.html#ria2007.
[2] Ibid
[3] The GHG ANPR did not complete interagency review under EO 12866 for the reasons set forth by the Administrator of EPA in his preface to the ANPR and by Susan Dudley, the Administrator of OMB's Office of Information and Regulatory Affairs, in her July 7, 2008 letter to the EPA Administrator. Both documents were published as part of the ANPR. Since the ANPR did not complete EO review, it cannot be considered Administration policy or representative of the views of the Administration. In addition, as the Administrator stated in his preface to the ANPR, "[n]one of the views or alternatives raised in th[e] notice represents Agency decisions or policy recommendations."

more potential to encourage new technology through market incentives or to establish standards based on anticipated advances in technology. Several provisions (e.g., sections 111 and 112) require EPA to periodically review the standards EPA has set and to potentially tighten them if certain criteria are met, so that, over time, the standards may require more effective pollution control be installed or implemented.

Installing new GHG mitigation technologies in the power sector while continuing to deliver reliable electricity to consumers presents additional challenges. For many low carbon technologies such as wind, solar, and carbon capture and storage (CCS), siting and building the necessary infrastructure face significant hurdles. Many large-scale renewable energy installations are likely to be built in sparsely populated areas, and will therefore require advanced interstate transmission systems to deliver the power they create to major population centers. CCS, in particular, will require new pipelines, liability rules and possibly interstate transmission. As a result, large-scale deployment of clean power sector technologies, either under the CAA or through other means, will require an efficient and timely process for the deployment of supporting infrastructure. The necessity for related infrastructure can also affect the timeframe in which such mitigation technologies will be widely available.

In the ANPR, EPA requested comment on the extent to which various CAA provisions could be used to help spur technological development, and on the need for federally conducted or funded research to promote technological development. The comment period for the ANPR closed on November 28, 2008, and EPA is now in the process of reviewing the thousands of comments received. EPA will continue to post late-filed comments to the ANPR and may similarly rely on such information in any additional actions it undertakes.

a. New Source Performance Standards (NSPS), CAA § 111

Whatever path may be pursued with respect to the control of GHG through the CAA or other authority, it is likely that most early reductions in stationary GHG emissions may occur as the result of increased energy efficiency, process efficiency improvements, recovery and beneficial use of process gases, and certain raw material and product changes that could reduce inputs of carbon or other GHG-generating materials. Clearly, more fundamental technological changes will be needed to achieve deeper reductions in stationary source GHG emissions over time. In the ANPR, EPA requested comments on how more innovative approaches may be encouraged pursuant to section 111, or other CAA or non-CAA authority.

As referenced in the ANPR, waiver authority under section 111(j) might be useful as one element of broader policies to encourage development of innovative technologies. Section 111(j) authorizes the Administrator to waive the NSPS requirements applicable to a source if he determines that the innovative technology the source proposes to use will operate effectively and is likely to achieve greater emission reductions, or at least equivalent reductions but at lower cost. Also, the Administrator must determine that the proposed system has not yet been adequately demonstrated (i.e. it is still an innovative

technology), but that it will not cause or contribute to an unreasonable risk to public health, welfare, or safety in its operation, function, or malfunction. These waivers can be given for up to 7 years, or 4 years from the date that a source commences operation, whichever is earlier.

We believe that effective GHG reduction techniques for many source categories potentially subject to NSPS may at this time be limited and that more research and development will be necessary before additional controls are demonstrated to be effective. In the ANPR, we ask for comment on how the use of innovative technology waivers could conceivably be used to foster the development of additional approaches for GHG reductions.

b. New Source Review (NSR) Prevention of Significant Deterioration (PSD) Program, CAA, Title 1, Part C

A rationale for new source review (NSR) since its inception has been that it is generally more effective and less expensive to engineer and install controls at the time a new major source, or major modification of a major source, is being designed and built, rather than retrofitting controls absent other construction. Under the PSD program, the permitting authority establishes emissions limitations that reflect best available control technology (BACT) on a source-by-source basis. Thus, the BACT determination process requires iterative consideration of emissions reduction technologies. This process can provide an ongoing incentive to developers of these technologies. On the other hand, as discussed in the ANPR, some believe that applying stringent requirements to new sources may create incentives to keep older and inefficient sources in use longer than otherwise would occur, diminishing the incentive for technological innovation and diffusion and reducing the environmental effectiveness and cost effectiveness of the regulation. With respect to electricity generating units and petroleum refineries, EPA concluded in 2002 that while the NSPR program has not significantly impeded investment in new plants, as applied to existing powerplants and refineries, the program acted to discourage projects that would have provided needed capacity or efficiency improvements. Economic factors other than these regulatory differences may also drive business decisions on when to build new capacity.

EPA has not performed an analysis of the GHG emissions that might be avoided or reduced under PSD preconstruction permitting, nor of possible increases through unintended incentives. Such an analysis would necessarily involve new analysis of potential BACT technologies, considering costs and other factors, for GHGs emitted by numerous sectors. However, it is not possible at this time to estimate these effects in light of the uncertainty surrounding the future trends in construction at new and modified sources, demonstration of commercial availability of various GHG control technology options, their control effectiveness, costs, and the aforementioned incentives to keep existing sources in operation and avoid modifying them.[4] We nonetheless sought

[4] EPA notes that the BACT requirement does not require consideration of technologies that would fundamentally redefine a proposed source into a different type of source (e.g., BACT for a proposed coal-fired power plant need not reflect emission limitations based on building a gas-fired power plant

information on this issue in the ANPR and will carefully examine information we receive that might help us formulate such an estimate in the future.

c. National Ambient Air Quality Standards (NAAQS), CAA § 107-110

The NAAQS establish standards based on ambient concentrations that must be attained and maintained everywhere, and are implemented through state implementation plans (SIPs) that establish emissions budgets consistent with meeting the standards. The limited emissions budget encourages state and local areas and affected sources to work together to identify least-cost emissions controls to meet their SIP obligations and reduce ambient concentrations of the regulated pollutant(s). It is possible that NAAQS requirements could help create market demand for technologies that can assist in meeting air quality standards if a market system is appropriately crafted. As discussed in the ANPR, this process could encourage significant technological innovation. However, as the ANPR also notes, there are substantial questions as to what the level of any GHG NAAQS would be if EPA were to promulgate such a standard. Control obligations on sources flow from SIP requirements which are in turn driven by the level of a NAAQS and the degree to which any area may be considered in attainment or in nonattainment of the standard. It is thus not possible to predict a priori, what incentives might or might not be created under a NAAQS regime. In the ANPR, EPA requests comment on many issues regarding a possible GHG NAAQS, including the extent to which the NAAQS can be an effective mechanism for encouraging technological innovation and development of controls for GHG emissions.

The 10-year maximum timeline for attaining a primary NAAQS would allow some time for development and deployment of emerging technologies, but longer timelines available under other forms of the NAAQS would provide greater flexibility to provide continuous incentives over a longer time period for major technology advances, and more time to deploy new technologies that are developed. In the ANPR, EPA requests comment on the extent to which a GHG NAAQS could reasonably be expected to advance new control technologies, and on what timeframe.

It is important to note that due to the global nature of GHGs, it is likely that the US would be uniformly in or out of attainment with any GHG NAAQS, depending on the level at which the NAAQS were set. If the US were out of attainment with a GHG NAAQS, it would be unable to attain the standard by reducing US emissions alone.

d. Hazardous Air Pollutants (HAPs), CAA § 112

Because MACT standards are intended to ensure that all major sources of HAP emissions achieve the level of control already being achieved by the better controlled and lower emitting sources in each category, this provision of the CAA does not force new technology development. Rather, it forces existing technology deployment. This approach provides assurance to citizens that major sources of toxic air pollution will be

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instead). See, for example, In re: Prairie State Generating Company, PSD Appeal No. 05-05, slip op. at 19-37 (EAB 2006).

evaluated for control and that facilities that employ cleaner available technologies and processes will not be disadvantaged relative to other sources. However, the short compliance timetables – immediate for most new sources, and within 3-4 years for existing sources – appear to preclude setting longer compliance timeframes to allow for emerging GHG technologies to be further developed or commercialized.

2. For each of the Clean Air Act sections listed below, indicate the steps that the Environmental Protection Agency (EPA) would likely take if the Agency were to issue regulations for CO2 (or a combination of CO2 and other greenhouse gases) under that section. Please include the actions that would need to be taken, estimates of the length of time required for each, and approximate resources required to accomplish each task.

The July 11 ANPR[5] provides a detailed outline of various options that are potentially available for regulations of GHGs under various provisions of the CAA. At this time, the Agency has not conducted the necessary analysis to provide an estimate of the resources that would be required under any of these options. In order to address the committee's question, we provide below an overview of each section and direct the reader to relevant sections of the ANPR. Page references are based on the ANPR version available at http://www.epa.gov/climatechange/emissions/downloads/ANPRPreamble5.pdf

For each potential pathway of stationary source regulation, the ANPR discusses the following basic questions:

- What does the section require?
- What sources would be affected if GHGs were regulated under this authority?
- What would be the key milestones and implementation timeline?
- What are key considerations regarding use of this authority for GHGs and how could potential issues be addressed?
- What possible implications would use of this authority for GHGs have for other CAA programs?

a. New Source Performance Standards, CAA § 111

CAA section 111 provides EPA with authority to set national performance standards for stationary sources. The ANPR examined two hypothetical pathways for using section 111 to regulate GHGs – as part of an implementation program for a GHG NAAQS or as a freestanding program.

- In the event of a GHG NAAQS, section 111 authorizes EPA to set emissions performance standards for new and modified sources but not for unmodified existing sources.
- In the absence of a GHG NAAQS, section 111 offers the potential for an independent program for regulating most stationary sources of GHGs, except to the extent GHG emissions are regulated under section 112

[5] As the Administrator stated in his preface to the ANPR, "[n]one of the views or alternatives raised in th[e] notice represents Agency decisions or policy recommendations."

Section VII.B outlines in detail the steps that could potentially be taken, including key milestones, timelines and options for regulation under CAA section 111. The relevant ANPR section begins on page 422.

b. New Source Review (NSR) Prevention of Significant Deterioration (PSD) Program, CAA, Title 1, Part C

In light of the remand recently issued by the Environmental Appeals Board concerning the proposed Deseret power plant, Administrator Johnson signed a memorandum on December 18, 2008, that interprets the EPA rules that describe what air pollutants are subject to the PSD program. This interpretation states that pollutants that are subject only to monitoring or reporting requirements, but not control requirements, are not subject to the PSD permitting requirements. GHGs are not currently subject to any control requirements established under the CAA, so PSD permitting requirements under the Act do not apply to GHGs. However, if the PSD program requirements were applied to GHGs, EPA would be faced with the question of whether rulemaking is needed to tailor the program to address some of the serious challenges of running a PSD program for CO2, which are spelled out in pages 475 through 534 of the ANPR. These challenges would include the issue of whether major source thresholds defined within various provisions of the CAA would be the applicable thresholds for the regulations of GHGs. Depending on how EPA resolved such questions after consideration of public comments on this issue in response to the ANPR, EPA might undertake rulemaking to adopt one or more options.

c. National Ambient Air Quality Standards (NAAQS), CAA § 107-110

EPA is required to establish ambient air quality standards for pollutants that meet certain criteria, including the establishment of air quality criteria and a finding by the Agency that emissions of the pollutant cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare. Primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings.

Section VII.A of the ANPR identifies the issues that EPA would have to address to establish and implement a GHG NAAQS under CAA sections 107 through 110. In addition, other ANPR sections (e.g., those discussing PSD and new source performance standards) refer to requirements that may become effective if areas of the country were either in attainment or nonattainment with a GHG NAAQS. The ANPR outlines different attainment and nonattainment scenarios and discusses options for GHG regulation under each scenario. ANPR section VII.A begins on page 385.

d. Hazardous Air Pollutants (HAPs), CAA § 112

Along with the NAAQS system and section 111 standards, section 112 is one of the three main regulatory pathways under the CAA for stationary sources. Section 112 is the portion of the Act that Congress designed for controlling "hazardous air pollutants", including pollutants that are known or suspected to cause cancer or other particularly serious health effects and can have localized or more geographically widespread effects. This focus is reflected in the statutory provisions, which, for example, require EPA to regulate sources with relatively small amounts of emissions. In comparison to section 111, section 112 provides substantially less discretion to EPA concerning the size and types of sources to regulate. Section 112 is also specific about when EPA may and may not consider cost.

Section 112 contains a list of hazardous air pollutants (HAPs) for regulation. EPA can add or delete pollutants from the list consistent with certain criteria. EPA must list for regulation all categories of major sources that emit one or more of the HAPs listed in the statute or added to the list by EPA. A major source is defined as a source that emits or has the potential to emit 10 tons per year or more of any one HAP or 25 tons per year of any combination of HAPs.

Beginning on page 452, section VII.C of the ANPR discusses how pollutants and source categories are listed for regulation under Section 112, how maximum achievable control technologies are determined, and the role of the residual risk program. Similar to other section VII, the ANPR outlines key milestones and expected timelines, and how action under section 112 would impact action under other sections of the CAA.

3. **Your testimony states that "once EPA controls a GHG under any section of the Clean Air Act - except for Sections 112 and 211(o) - new or modified stationary sources of that pollutant would become subject to requirements of the PSD program."**
   a. **Please define what EPA means by the word "control" in the above statement. As part of your response, please list the criteria EPA uses to determine whether a pollutant is "controlled."**
   b. **If EPA were to make an endangerment finding for CO2 under Section 202 or any other relevant section of the Clean Air Act, would CO2 become subject to regulation for purposes of the PSD program simultaneously upon final promulgation of the endangerment finding? What, precisely, is triggered by an endangerment finding under either Section 202 or 108? In your response, please also list what actions would not be triggered, and discuss potential linkages about which ambiguity exists.**

   a. In light of the remand recently issued by the Environmental Appeals Board concerning the proposed Deseret power plant, Administrator Johnson signed a memorandum on December 18, 2008, that interprets the EPA rules that describe what air pollutants are subject to the PSD program. This interpretation states that pollutants that are subject only to monitoring or reporting requirements, but not control requirements, are not subject to the PSD permitting requirements. As reflected in existing EPA regulations, examples of control requirements include ambient air

quality standards, performance standards under section 111 of the CAA, and restriction on the production and import of ozone-depleting substances under Title VI of the CAA.

b. Since EPA believes that a promulgated control requirement is necessary to trigger the PSD program for particular pollutants, we would not consider the final promulgation of a positive endangerment finding for CO2 sufficient to make CO2 immediately subject to regulation for purposes of the PSD program. PSD would not apply to CO2 until EPA actually promulgates regulations limiting emissions of that pollutant under one of several provisions of the CAA. A positive endangerment finding for CO2 under section 202 would trigger an obligation for EPA to set emissions standards for CO2 from motor vehicles under that section. A positive endangerment finding for CO2 under section 108 would satisfy one of three criteria that must be met to trigger an obligation to set an ambient air quality standard for CO2 under section 109.

Similar endangerment language is found in numerous sections of the CAA, including sections 111, 112, 115, 211, 213, 231 and 615. While no two endangerment tests are precisely the same, they generally call on the Administrator of EPA to exercise his or her judgment regarding whether a particular air pollutant or source category causes or contributes to air pollution which may reasonably be anticipated to endanger public health or welfare. One important issue is whether a positive or negative endangerment finding under one section of the CAA (e.g., under section 202(a) in response to the ICTA petition remand) would necessarily or automatically lead to similar findings under other provisions of the Act containing similar language. Even though CAA endangerment tests vary to some extent, an endangerment finding under one provision could have some bearing on whether endangerment could be found under other CAA provisions, depending on their terms and the facts at issue. In the ANPR, EPA requests comment on the extent to which an endangerment finding under any section of the CAA would lead EPA to make a similar endangerment finding under another provision.

4. Please provide a list of the lawsuits, petitions, permit appeals before the Environmental Appeals Board, rulemakings, and any other legal proceedings in which EPA is involved and that relate to the regulation of greenhouse gases under the Clean Air Act. For each item on the list, please provide:

a. a summary of the key issues it raises;
b. its status;
c. the parties involved in it; and
d. all key upcoming dates (e.g., oral argument dates, briefing schedules, deadlines for action).

Attached is a chart responding to question four.

5. There is a developing consensus that the optimal way to regulate greenhouse gases would be through a cap-and-trade program. In testimony submitted for the hearing, different witnesses addressed the possibility of creating a cap-and-trade program for GHGs using currently existing Clean Air Act provisions. Please discuss what options EPA has for implementing a GHG cap-and-trade program under various provisions of the Clean Air Act, focusing on sections 111 and 110(a)(2)(D). In your response, please evaluate the strengths and weaknesses of the separate options, both from a legal and policy perspective, and discuss the roles States would play in any such program.

As EPA outlined in the ANPR, broad multi-sector trading programs may be possible among stationary source sectors under section 111.

Such strategies have been implemented under section 110(a)(2)(D) for nitrogen oxides. Under such a strategy, in addition to submitting plans providing for attainment and/or maintenance within the state, each state may be required to submit a state implementation plan, or SIP, under section 110(a)(2)(D) prohibiting emissions that would significantly contribute to nonattainment in another state.[6] In the ANPR, EPA also discussed the possibility that because GHGs are globally well-mixed, GHGs emitted from any state could be found to interfere with maintenance of a GHG NAAQS in every other state. In the case of GHGs, this authority could potentially support a nationwide cap-and-trade program for GHGs, adopted through state SIPs. If a state failed to submit its section 110(a)(2)(D) SIP, EPA would be required to develop and implement a federal implementation plan (FIP) for that state. EPA might be able to design the FIP to enable the state to participate voluntarily in a nationwide cap-and-trade system. In the ANPR, EPA requested comment on the suitability of adopting either of these approaches under section 110(a).

With respect to section 111, as EPA has interpreted the NSPS requirements in the past with respect to certain air pollutants, the NSPS program may be able to utilize regulatory mechanisms, such as cap-and-trade programs, to achieve GHG emission reductions. EPA believes such programs are consistent with the statutory requirements because they satisfy the three substantive components of the section 111(a)(1) definition of "standard of performance" – (1) a standard for emissions of air pollutants; that (2) reflects that degree of emission limitation available"; and (3) "constitutes the best system of emission reduction." A cap-and-trade program can constitute a "standard for emissions of air pollutants" because it is a system created by EPA for control of emissions. The use of emissions budgets does not make the system less of a "standard" since the budgets must be met regardless of the methodology used to allocate allowances to specific sources. Further, any such system would be based on the assessment EPA conducts for setting NSPS of the overall degree of emission reduction available for the source category and our analysis of the available systems of emission reductions.

[6] This example would presume that states or areas in a state would be found to be in nonattainment with a relevant GHG NAAQS.

It may be possible for EPA to select a market based mechanism as the "standard of performance" if these analyses (including cost analyses) indicate that the system would "reflect the degree of emission limitation achievable" and "constitute the best system of emission reduction." Trading among both new and existing sources may be permitted and could offer, at least in some cases, cost efficiencies. Because of the potential cost-savings, it might also be possible for the Agency to consider deeper reductions through a cap-and-trade program that allowed trading among sources in various source categories relative to other systems of emission reduction. In the ANPR we requested comment on the extent of EPA's available legal authority in this area as well as the attributes such a program must possess to qualify as a standard of performance under section 111.

6. In response to a question at the hearing, you stated that 74 source categories are currently regulated under the New Source Performance Standards (Section 111) of the Clean Air Act. You also responded affirmatively that EPA would be able to submit an estimate of the number of individual sources that would be affected if CO2 were to be regulated under Section 111. Please provide us with that estimate, broken down by source category.

Currently there are just under 26,000 individual sources or units regulated under an NSPS. Approximately 17,000 of the 26,000 units are utility-serving electricity generators, burners and industrial furnaces that create heat, steam, or both; stationary diesel-powered generators, or stationary turbines. The remaining 8,800 or so fall across the following list of categories.

Electric Utility Steam Generating Units	1209
Industrial, Commercial, Institutional Steam Generating Units	10,447
Stationary Combustion Turbines	1635
Stationary Compression Ignition Internal Combustion Engines	3867
Subtotal	17,158
Municipal Solid Waste Landfills	1800
Portland Cement	115
Basic Process Steelmaking Facilities	125
Coal Prep Plants/Mines	1424
Petroleum Refineries	150
Glass Manufacturing	376
Municipal Waste Combustors*	88
Kraft Pulp Mills	165
Nitric Acid Plants	62
Calciners and Dryers in Mineral Industries	1659
Lime Manufacturing	101
Primary Aluminum Reduction Plants	14
Onshore Natural Gas Processing Plants - Equipment Leaks	566
Ferroalloy Production Facilities	24
Phosphate Fertilizers - Wet-Process Phosphoric Acid Plants	15
Wool Fiberglass Insulation Manufacturing Plants	116

Primary Zinc Smelters		2
Secondary Lead Smelters		14
Primary Lead Smelters		25
Asphalt Concrete (Hot Mix Asphalt)		1065
Commercial/Industrial Solid Waste Incineration Units*		657
Synthetic Fibers		76
Primary Copper Smelters		3
Asphalt Processing and Roofing Manufacture		170
	Subtotal	8,812
	Total	25,970

*Regulated under section 129 of the Act

It is important to note that the number of sources currently regulated under an NSPS does not necessarily represent the number of sources that would be affected if CO_2 were to be regulated under section 111. To determine if regulation of CO_2 is appropriate for an existing 111 source category, EPA must evaluate whether it is reasonable to do so considering the magnitude of emissions from a source category, cost of control, the availability of information regarding the category's CO_2 emissions, and whether regulating CO_2 emissions from the source category would be beneficial. Even within categories, the relative size of sources can be an additional criterion in deciding for or against regulation. Consequently, EPA currently believes it is unlikely that all 26,000 sources would be affected if CO_2 were to be regulated under section 111.

7. Much has been made of the number of individual sources that would potentially be subject to PSD review if CO2 were regulated under the Clean Air Act. Please submit an estimate of the approximate number of sources, by category (residential/commercial/industrial/electricity generation) that would be subject to PSD review if a "major" source were to be legally defined as any source that emitted an amount equal to or more than:

a. 5,000 tons per year of CO2 ;
b. 10,000 tons per year of C02; and
c. 25,000 tons per year of CO2;

We do not have sufficient data to develop the requested estimates at this time. As noted in the ANPR, EPA estimates that EPA, state, and local permitting authorities issue approximately 200-300 PSD permits nationally each year for construction of new major sources and major modifications at existing major sources. Under existing major source thresholds, we estimate that if CO_2 becomes a regulated NSR pollutant (either as an individual GHG or as a group of GHGs), the number of PSD permits required to be issued each year would increase by more than a factor of 10 (i.e. more than 2000-3000 permits per year), unless action were taken to limit the scope of the PSD program under one or more of the legal theories described in the ANPR. The additional permits would generally be issued to smaller industrial sources, as well as large office and residential buildings, hotels, large retail establishments, and similar facilities. These facilities consist primarily of equipment that combusts fuels of various kinds and release their exhaust gases through a stack or vent. Few of these additional permits would be for source categories (such as agriculture) where emissions are "fugitive," because, as noted above,

fugitive emissions do not count toward determining if a source is a major source except in a limited number of categories of large sources specifically listed in the major NSR regulations. The basis for this estimate is explained in more detail in the document titled "EPA Staff - Estimates of Facilities that Emit CO2 in Excess of 100 and 250 tpy Thresholds" (document EPA-HQ-OAR-2008-0318-0077 in the ANPR Docket).

Because EPA and states have generally not collected emissions information on sources this small, our estimate of the number of additional permits relies on limited available information and engineering judgment, and is uncertain. Our estimate of the number of additional permits is also not comprehensive. First, it does not include permits that would be required for modifications to existing major GHG sources because the number of these is more difficult to estimate.[7] Nonetheless, we anticipate that the number of modifications subject to NSR coverage of GHGs would increase because the larger universe of major sources will bring in additional sources at which modifications could occur and because for "traditional" major sources, many more types of small modifications that were minor for traditional pollutants could become major if increases in GHG emissions were to exceed the significance levels. Second, EPA's estimate is uncertain because it is based on actual emissions, and thus excludes a potentially very large number of sources that would be major if they operated at their full potential-to-emit (PTE) (i.e. they emitted at a level that reflects the maximum capacity to emit under their physical and operational design), but which in practice do not. Such sources could be defined as major sources without an enforceable limitation on their PTE, but for the purposes of this estimate, we assume they have options for limiting their PTE and avoiding classification as a major source (although limiting PTE could itself be costly). Nonetheless, there are important considerations in creating such PTE limits, as discussed in the ANPR. Third, this estimate does not specifically account for CO_2 from sources other than combustion sources. While we know there are sources with significant non-combustion emissions of GHGs, there are relatively few of these compared to the sources with major amounts of combustion CO_2. EPA believes these non-combustion sources would likely be major for combustion CO_2 in any event, and many of these are likely already major for other pollutants. In addition, GHG regulation would likely mean increases in the number of major modifications at such sources.

In the ANPR, we request any available information that would allow us to better characterize the number and types of sources and modifications that would become subject to the PSD program if CO_2 becomes a regulated NSR pollutant. We are particularly interested in information that would allow us to analyze the effects of different major source thresholds and significance levels. Finally, the estimates in the ANPR are for CO_2 and there are implications to regulating additional GHGs as pollutants, or GHGs in the aggregate. Our estimates of PSD program impacts do not include consideration of GHGs other than CO_2 because we expect that at the vast majority of these sources CO_2 will be the dominant pollutant. In the ANPR, we ask for

[7] Among other things, any estimate of modifications must take into account the netting provisions of NSR, in which sources can avoid NSR if the increase of pollutant emissions from a project is below the significance level for that pollutant, after taking into account other increases and decreases of emissions that are contemporaneous with the project.

comment on whether there are large categories of potentially newly regulated PSD sources for individual GHGs besides CO_2. We also ask for comment on the effects of aggregating GHGs for PSD applicability. Aggregating GHGs could bring additional sources into PSD to the extent that other GHGs are present and would add enough to a source's PTE to make it a major source. On the other hand, under the netting provisions of the CAA, it may be easier to facilitate interpollutant netting if GHGs are aggregated (e.g., a source using netting to avoid PSD for a CO_2 increase based on methane decreases at the same source).

8. Title VI of the Clean Air Act authorizes EPA to regulate ozone-depleting substances.

a. Is it true that substitutes for ozone-depleting refrigerants using in the air-conditioning and refrigeration sectors have high global-warming potential, in some cases 3,000 times greater than an equivalent amount of CO2?

Yes. The most widely used substitutes for ozone-depleting substances (ODS) used as refrigerants in the refrigeration and air-conditioning sectors are non-ozone depleting hydrofluorocarbons (HFCs) or blends of HFCs. These HFCs and HFC blends have global warming potentials (GWPs) that range from 1300 to 3300. The GWPs for these HFCs are comparable to GWPs for the ozone-depleting refrigerants, which are also greenhouse gases. The most popular ozone-depleting refrigerants, some of which have been phased out of production under Title VI of the Clean Air Act, and all of which will be phased out under this authority, are R-11 (GWP=3800), R-12 (GWP=8100), R-22 (GWP=1500), R-123 (GWP=90) and R-502 (GWP=4400).

b. Is it true that Title VI of the Clean Air Act authorizes EPA to regulate the use and handling of these substitutes for ozone-depleting refrigerants used in the air-conditioning and refrigeration sectors?

Section 608 of Title VI of the Clean Air Act, as amended in 1990, gives EPA authority to promulgate regulations that reduce use and emissions of ODS to the lowest achievable level, and maximize the recapture and recycling of such substances. The Act also grants EPA authority to require or promote the use of substitutes for ODS. The Act also explicitly prohibits intentional release of ODS and substitutes during the maintenance, service, repair or disposal of refrigeration and air-conditioning equipment. In addition, it explicitly addresses or mandates a regulatory framework to expand upon the self-effectuating venting prohibition for ODS. However, it does not explicitly require such a framework for ODS substitutes.

c. If so, has EPA promulgated a consistent regulatory framework to reduce emissions and promote recycling of these high GWP gases during service and disposal of equipment? If yes, please describe the program. If no, please explain why EPA has not issued such regulations.

On June 11, 1998 (63 FR 32044), EPA proposed to amend the Section 608 rules on refrigerant recycling to clarify how the rule's requirements might extend to HFCs used as substitutes for ozone-depleting, chlorofluorocarbon (CFC) and hydrochlorofluorocarbon (HCFC) refrigerants, and to provide a consistent set of regulatory requirements to the air-conditioning and refrigeration sector. EPA later decided that the statutory authority provided to the Agency under Title VI of the Act was not sufficient to extend the requirements to non-ODS compounds; hence, the Agency did not finalize the proposal's provisions that did not deal with emissions reduction of an ODS.

d. Is it true that the common 30-lb variety of the so-called "DOT-39 cylinder" is the primary means of distributing refrigerant in the U.S. and that each of the thousands of cylinders sold or imported each year contains a remaining "heel" of refrigerant (some estimates as high as 2.5 lbs) that is vented to the atmosphere during cylinder disposal?

A popular means of refrigerant transport and distribution in the U.S. is the 30-pound Department of Transportation (DOT)-39 cylinder. DOT-39 cylinders are a one-time use cylinder with a one-way valve. They are not intended to be refilled or reused. The amount of the remaining refrigerant or "can heel" of DOT-39 cylinders is estimated to be less than 10 percent by mass. EPA service practices recommend the recovery of the heel by pulling a vacuum on the cylinder prior to disposal.

e. If so, what is the refrigerant in the heel, what is its global-warming potential, and how much refrigerant is released into the atmosphere as a result of cylinder disposal? The GWP of the heel varies according to the type of refrigerant contained in the cylinder.

The more common refrigerants used in the U.S. are ozone-depleting CFC-11 and -12, HCFC-22 and -123, R-502, and non-ozone depleting HFC-134a and HFC blends R-410A, R-404A, and R-507. The GWP of these substances range from approximately 90 to 8100.

f. Is it true that Australia, Canada, and Europe have banned the use of one-time disposable refrigerant cylinders?

Several Canadian provinces, Australia, and a few European countries have banned the sale of refrigerants in disposable refrigerant cylinders. These regulatory programs are typically linked to a deposit/bottle fee placed on the initial sale of a returnable/reusable cylinder.

g. Does EPA have authority under Title VI to ban the use of one-time disposable refrigerant cylinders, which could have both climate change benefits and potential for reduction in landfill usage? If so, why has EPA not

exercised this authority?

If EPA were to find that banning the use of one-time disposable cylinders would reduce emissions of ozone depleting substances subject to the requirements of Title VI, the Agency could propose such a restriction.

9. Under Section 611 of the Clean Air Act, EPA requires labeling for products containing CFCs.

a. Could EPA extend labeling requirements that already exist for CFCs to HCFCs, so that no product containing an HCFC could be introduced into interstate commerce unless it had a warning informing consumers that it harms public health and the environment by destroying ozone in the upper atmosphere?

The labeling requirements at Section 611 already extend to HCFCs. Containers of HCFCs or blends that contain HCFCs have been required to have warning labels since 1993. Thus under Section 611 bulk containers (regardless of size) must bear these labels. Products containing or manufactured with HCFCs (e.g., air-conditioning or refrigeration products, foams) will be required to be labeled by January 2015.

The labels must include the signal word "WARNING" which must be in capital letters. The warning statement that follows reads:
[Contains or Manufactured with] [insert name of substance], a substance which harms public health and environment by destroying ozone in the upper atmosphere.

b. If EPA could extend labeling requirements to HCFCs, which are not only ozone-depleting, but also have high GWPs, why has EPA not done so? Does EPA have any plans for doing so in the future?

As noted above, Section 611 already includes HCFCs in bulk containers today, and products containing or manufactured with HCFCs, albeit on a later timetable. The self-effectuating requirement for products containing or manufactured with HCFCs is effective January 1, 2015. EPA is developing an analysis of the impacts of accelerating the labeling requirements for products that contain or are manufactured with HCFCs earlier than January 1, 2015. EPA intends to complete the analysis and may issue a Notice of Data Availability (NODA) to provide an opportunity for comment.

<u>The Honorable Edward Markey</u>

1. In your testimony, you raise numerous potential concerns and consequences associated with the regulation of greenhouse gas emissions using the Clean Air Act. Many experts believe that the Clean Air Act is a very useful climate change tool.

Others believe that addressing the problem on an economy-wide scale might be least expensively done via a cap, auction and trade program.

a. Which do you think would be more costly - a market-driven cap, auction and trade program, or sector by sector regulation using Clean Air Act authority? Why?

b. Do you believe that Congress and/or the Executive Branch should quickly pursue the least expensive option to reduce dangerous emissions of greenhouse gases? Why or why not?

We are not currently in possession of sufficient information to be able to address theses questions or their factual predicates. To better understand the appropriate mechanisms for addressing GHG emissions and the costs associated with the options before us, EPA issued the ANPR.[8] This action took an important step forward by discussing our work to date in response to the Supreme Court's decision in Massachusetts v. EPA, including issues and questions related to endangerment and vehicle standards, and our examination of the potential effects of using various authorities under the Clean Air Act.

In the ANPR, EPA examines the ways in which regulation of GHG emissions under one provision of the Clean Air Act interacts with, and could lead to, regulation of GHG emissions under provisions of the Act. It also examines and seeks information on the implications of an endangerment finding on the regulation of vehicles and stationary sources in light of the interconnections among various provisions of the Act.

We believe the ANPR, by addressing the interconnectedness between various CAA sections and soliciting wide public input, will generate information useful not only to EPA as it moves forward, but also to the Congress as it considers legislation.

2. **EPA has completed an endangerment finding and a draft of greenhouse gas regulations for motor vehicles, but it is my understanding that there are no plans to include this completed work in your "Advanced Notice of Proposed Rulemaking".**
   a. **Will the Advanced Notice be issued in May or June, after which there will be 60-90 days for public comment?**
   b. **Your staff has indicated that after that there will be public hearings and an opportunity for EPA staff to digest all the public comments. Is it reasonable to expect the public hearing and analysis process to take at least another 60-90 days?**

[8] The GHG ANPR did not complete interagency review under EO 12866 for the reasons set forth by the Administrator of EPA in his preface to the ANPR and by Susan Dudley, the Administrator of OMB's Office of Information and Regulatory Affairs, in her July 7, 2008 letter to the EPA Administrator. Both documents were published as part of the ANPR. Since the ANPR did not complete EO review, it cannot be considered Administration policy or representative of the views of the Administrations. In addition, as the Administrator stated in his preface to the ANPR, "[n]one of the views or alternatives raised in th[e] notice represents Agency decisions or policy recommendations."

c. Given those time-frames, is it not likely that EPA will not have time to prepare draft regulations on greenhouse gas emissions from any sector regulated under the Clean Air Act before President Bush leaves office? Why or why not?

EPA issued the ANPR on July 11 and provided a 120-day comment period, which ended on November 28, 2008. We are now carefully reviewing and considering the comments and information provided, and have indicated that we will include in the docket late-filed comments. Until we complete that process, we do not want to prejudge what our next steps will be and the timeframe in which they could occur.

3. Administrator Johnson has indicated that after the Supreme Court decision in Massachusetts v. EPA, approximately 53 EPA employees were redirected to work on EPA's draft vehicles and fuels regulations. During that same timeframe, how many people were devoted to working on the implications of the Supreme Court's decision on stationary or other mobile sources that you plan to address in the Advanced Notice?

One of the many insights gained since the Supreme Court decision has been that the use of similar legislative language in various Clean Air Act provisions raises the prospect that regulation under one part of the Act could lead to regulation under other parts of the Act. In particular, regulation of GHGs from motor vehicles or stationary sources under one of several provisions of the CAA would trigger the applicability of certain permitting programs under the Act to GHGs. Approximately the same number of EPA employees examined these inter-relationships and assisted in the preparation of the ANPR. We would note, however, that EPA has not attempted to quantify the amount of time any individual spent with regard to the ANPR versus other regular and normal duties.

4. In your testimony, you differentiated between pollutants like smog and particulate matter, which have localized impacts, and greenhouse gases, which you say are more "global" or "mixed' in the atmosphere. You cited this difference as one of the potential challenges associated with using the Clean Air Act to regulate greenhouse gases. But peer-reviewed science funded by EPA [see Jacobson, M.Z. (2008) on the causal link between carbon dioxide and air pollution mortality, *Geophysical Research Letters, 35*, L03809, doi:10.1029/2007GL03110] has reached an entirely different conclusion, which is that higher levels of greenhouse gases, particularly in already-polluted urban areas, have an adverse impact on local pollution levels and actually can be shown to cause additional pollution-related deaths. Do you reject this scientific analysis, and if so, on what basis?

Unlike most traditional air pollutants, GHGs become well mixed throughout the global atmosphere so that the long-term distribution of GHG concentrations is not dependent on local emission sources. Instead, GHG concentrations tend to be relatively uniform around the world. As a result of this global mixing, GHGs emitted anywhere in the world affect climate everywhere in the world. U.S. GHG emissions have climatic effects not only in the United States but in all parts of the world, and GHG emissions from other countries

have climatic effects in the United States. Emissions of the major GHGs build up in the atmosphere so that past, present and future emissions ultimately contribute to total atmospheric concentrations. While concentrations of most traditional air pollutants can be reduced relatively quickly (over months to several years) once emission controls are applied, atmospheric concentrations of the major GHGs cannot be so quickly reversed. Once applied, GHG emission controls would first reduce the rate of build-up of GHGs in the atmosphere and, depending on the degree of controls over the longer term, would gradually result in stabilization of atmospheric GHG concentrations at some level. GHG emissions have long-term consequences. Once emitted, the major GHGs exert their climate changing effects for a long period of time. Past and current GHG emissions thus lead to some degree of commitment to climate change for decades or even centuries. The large temporal and spatial scales of the climate change challenge introduce regulatory issues beyond those typically presented for most traditional air pollutants. Decision makers are faced with many uncertainties over long time frames and across national boundaries that increase the complexity of designing an effective long-term regulatory strategy.

Jacobson (2008) presents some initial results from one of a series of research grants that EPA has issued to study the impact of climate change on air quality in the United States. Jacobson (2008) used a regional model nested within a global model to examine air pollution in the United States under preindustrial and present-day CO2 concentrations. He found that increased CO2, globally, resulted in higher ozone and fine particle matter concentrations locally, particularly in populated areas where ozone is already elevated. The ozone results are relatively consistent with the findings of other projects funded by EPA and other results in the literature.

In July 2008, EPA released a report for external peer review that summarizes the findings of 6 external grants and EPA's internal research on the impacts of climate change on U.S. air quality (EPA 2008). The draft of this report, which is currently being finalized, indicates that climate change is likely to increase ozone concentrations in many areas of the United States absent changes in ozone precursor emissions, with the largest increases expected to occur during peak pollution events. In other words, climate change is expected to exacerbate ozone pollution. The findings on particulate matter were not as clear, with modeling studies projecting both increases and decreases for various conditions. The impact of climate change on fine particle concentrations is a major focus of a current series of ongoing EPA research grants (FY07-10), of which Jacobson is one recipient.

Although Jacobson (2008) describes a number of physical and chemical processes that could explain how local greenhouse gas emissions may affect local meteorology and local air pollution, the increases in air pollution-related mortality that he ascribes to increased CO2 are a function of processes at the local, regional, and global scales. The question of whether local control of greenhouse gases, in the absence of changes at the national or global scale, would have a significant affect on local air pollution is a question that has not been directly addressed yet.

5. Under the PSD program, EPA issues regulations defining "significant" emission increases for various pollutants. If CO_2 was found to be subject to regulation under the Clean Air Act, EPA will then need to define a significance threshold for CO_2 in order to establish some level below which a preconstruction review is unnecessary.

a. What options does EPA have to establish significance thresholds?

The cost and potential broad applicability of PSD requirements raises questions about whether GHG regulation through PSD would be more effective in minimizing GHG increases if it operates as a broad program targeting numerous smaller sources and modifications, or as a narrow program targeting smaller numbers of large sources and modifications. We ask for comment on how these cost/benefit considerations for permitting small sources and modifications under PSD, as well as any other factors, should be considered in EPA's deliberations regarding the major source cutoffs and significance levels for GHGs as well as the existence and possible extent of EPA's available legal authority in this area.

As EPA discusses in the ANPR, if subjecting numerous small sources and modifications to PSD was determined to not constitute an effective way to address GHG emissions, one possible option for tailoring the program, if sufficient legal authority exists under the CAA, would be phase-in the program over time, starting with the largest emitters, and potentially developing streamlined means of addressing smaller sources once they became subject to the program according to the phase-in schedule. Another possible option would be to raise the major source cutoffs (e.g., raise the threshold only for GHGs as a class, or perhaps only for certain individual GHGs) and/or establish a significance level for GHGs at a level high enough to assure that the program applies to larger sources and modifications, but excludes smaller sources and modifications. Since the existing major source thresholds are set forth in the CAA itself, EPA asks for public comments on whether it could raise these thresholds above 250 and 100 tons per year based on several policy considerations and legal theories described in the ANPR. Again, it should be stressed that EPA has not arrived at legal conclusions regarding these matters, but rather that, in the ANPR, EPA provides a context for assessing such questions of authority.

b. Please evaluate the policy and legal ramifications of establishing a significance threshold using global warming potentials rather ton-per-year or other mass-based metrics.

A related issue to the establishment of the major source thresholds and significance levels for GHGs is the selection of the metric against which these levels are evaluated. Emissions of GHGs are typically expressed in a common metric, usually the metric called CO_2-equivalent, although the measure known as Carbon Equivalent (CE) is also used. The use of either metric allows the impact of emissions of different GHGs to be directly compared, as some gases have a higher global warming potential or GWP than others. Since both units are measured in weight – usually tons – either could be used for purposes of PSD applicability. The use of either metric has the advantage of linking emissions of a GHG directly to its ability to impact climate, appropriately regulating more potent GHGs more stringently. The use of CO_2-equivalent would solve the

problem of leaving unreviewed significant GHG emissions of some chemicals, such as hydrofluorocarbons, but it would leave many small CO_2 sources with less climate impact still subject to PSD. However, the use of Carbon Equivalent (CE) addresses both concerns. The attached table demonstrates the possible effect of using CE in making PSD applicability decisions:

	GWP	Emissions equal to 250 tons CE
Carbon dioxide (CO_2)	1	917 tons
Methane (CH_4)	21	44 tons
Nitrous oxide (N_2O)	310	3 tons
Hydrofluorocarbon (HFC)-134a	1300	1410 **lbs**

As the table shows, it would take more CO_2 emissions to reach the major source size for CE. However, it would take substantially less of several other GHGs. Such an approach would likely result in fewer sources being added to the PSD program for GHGs in total. While more sources for several non-CO2 GHGs would be considered major, GHG emissions from the major sources in general, as noted above, are dominated by CO_2, so there would be fewer sources classified as major overall since fewer CO2 sources would be major. This approach arguably would result in regulation of significant sources of potent GHG while also reducing the burden on relatively small sources of CO_2, focusing efforts on the sources with the most important climate impacts. In the ANPR, EPA seeks comments on the potential use of the CE measure as the means to determine PSD applicability. Specifically we ask for comment on the appropriateness of the metric (considering that CO_2, rather than carbon, is the air pollutant), data regarding its effect on PSD applicability, and views concerning whether such an approach fits within the language of the CAA.

6. Assuming C02 becomes a regulated pollutant under New Source Review, please discuss approaches to help streamline the regulatory burden that would face EPA, States and other permitting authorities with increased sources subject to regulation. In your response, please discuss the feasibility of pursuing a "presumptive" BACT approach for affected but smaller sources.

One of the most significant aspects of the PSD program for GHGs is the BACT requirement. While permitting authorities are accustomed to making BACT determinations on a case-by-case basis for major sources and modifications under the current PSD program, BACT for GHGs (particularly CO_2) presents significant additional permitting challenges. The primary challenge is the dramatic increase in the number of sources and modifications that, under the 100/250-ton thresholds, could be subject to BACT review and the new source categories that could be brought into the PSD program, which could exceed the capacity of the permitting system and have the kinds of negative effects described in section VII.D.4 of the ANPR. An additional challenge stems from

the fact that for some GHG-emitting activities, primarily CO_2 from combustion sources, permitting authorities will need to look at alternative approaches to determining BACT such as setting efficiency targets, if add-on controls are not viewed as adequately demonstrated. While there is much information available on efficiency for some of the various kinds of equipment that could be used by these newly covered sources, permit engineers would need to understand this information for a very wide range of source categories.

The ANPR seeks comment on approaches for streamlining the BACT process for many new smaller sources that could be brought into the PSD program based on their GHG emissions. Under PSD, BACT is a case-by-case decision that reflects the state-of-the-art demonstrated control technology at the time of the permit action. Thus, BACT changes over time and requires continual updating. Determining BACT is also a decision that affords permitting authorities flexibility to consider a range of case-specific factors such as cost, energy, and environmental impacts. However, full case-by-case consideration of those factors requires significant data and analysis in order for permitting authorities to arrive at a permitting decision that is appropriate for each individual source or modification.

EPA is interested in whether there would be ways to move from a PSD permit system in which BACT limits are set on an individual case-by-case basis to a system in which BACT determinations could be made for common types of equipment and sources, and those determinations could be applied to individual permits with little to no additional tailoring or analysis. EPA has previously introduced this concept, known as "presumptive BACT," as an aid to streamlining permitting for desulfurization projects at refineries as well as in other instances,[9] and some state permitting authorities have adopted similar approaches in their air permitting programs.[10] Based on our understanding of the types of sources that would become subject to PSD if GHGs are regulated with a major source size of 250 tpy of emissions, we believe the presumptive BACT process could offer significant streamlining benefits. These benefits arise because many of these smaller sources would likely have very similar emissions-producing equipment, and there would be little variation across sources with respect to the cost, energy, and environmental considerations in the BACT decision.

While the CAA states that PSD permits shall be issued with BACT determinations made for each pollutant on a "on case-by-case basis," the court in Alabama Power recognized that exceptions may be appropriate where "case-by-case determinations, would, as a practical matter, prevent the agency from carrying out the mission assigned to it by Congress." 636 F.2d at 358 (emphasis added). The court recognized that such

[9] See January 19, 2001 memo from John S. Seitz, Director, Office of Air Quality Planning and Standards to the Regional Air Division Directors entitled, "BACT and LAER for Emissions of Nitrogen Oxides and Volatile Organic Compounds at Tier 2/Gasoline Sulfur Refinery Projects.

[10] For example, Wyoming has a minor source permitting program that includes a BACT analysis, and they use a presumptive BACT process for issuing minor source permits to a particular source category – oil and gas production facilities. See Permitting Guidance for Oil and Gas Production Facilities, Wyoming Dept. of Environmental Quality, Air Quality Division (August 2007 revision).

streamlining measures may be needed when time or personnel constraints or other practical considerations "would make it impossible for the agency to carry out its mandate." Given the more-than-tenfold increase in new sources that would likely be brought into the PSD program if GHGs are regulated and the other challenges described above and in the ANPR, maintaining a traditional PSD permitting program with individual case-by-case BACT determinations may be impractical and may warrant streamlined regulatory approaches as allowed under the Act. A presumptive BACT permitting program would allow EPA, state and local permitting authorities to carry out the PSD program in a timely and efficient manner necessary to promote (rather than hinder) control of GHG emissions from the many new, small source categories that would be required to have PSD permits based on their GHG emissions, while still preserving opportunities for public participation.

In considering a change from case-by-case BACT determinations to a presumptive BACT process for some specific source categories within the PSD program, EPA is considering through the ANPR strategies for how such presumptive BACT limits may be able to be established and used, and what provisions in the CAA would set requirements or limits on their establishment and use. In particular, EPA recognizes the statutory requirement to set BACT limits on a case-by-case basis after taking into account site-specific energy, economic, and environmental impacts (otherwise known as collateral impacts). One option for which the Agency is seeking comment would be to allow permitting authorities to adjust any BACT limit that was based on presumptive BACT, as necessary, upon identifying significant collateral impacts applicable to a specific source. EPA also recognizes the requirement to subject proposed PSD permits, and the BACT limits contained within them, to public notice and comment before such permits become final. A presumptive BACT program might be able to be designed to establish presumptive emissions limits for a particular category of sources through guidance that would be issued only after public notice and comment procedures. These approaches are not necessarily mutually exclusive and might be combined as appropriate to best address the purposes of the BACT requirement.

In addition, while case-by-case BACT determinations allow for the continual evolution of BACT requirements over time (as controls applied in prior permits are considered in each subsequent case-by-case BACT determination), EPA recognizes that application of presumptive BACT to a category of sources over many permitting decisions may somewhat diminish PSD's incentives for improved technology. EPA is interested in options that would help maintain advances in control technologies, such as a requirement to update and/or strengthen the presumptive BACT at set intervals (such as after 3 years). In the ANPR, EPA seeks comment on all aspects of the use of presumptive BACT limits within the PSD program, including EPA's authority under the CAA to do so, whether there is need for and value to such an approach, and suggestions for how such limits could be established, updated, and used consistent with the requirements of the CAA.

The central component of a presumptive BACT approach would likely be a recurring technical determination, subject to notice and comment, of the presumptive BACT levels for various categories. Because of the limited data we currently have about the number

and types of sources that would become subject to the BACT requirement for GHGs, we cannot at this time predict how many or which source categories might benefit from such an approach if we opted to pursue it. In the ANPR, we seek comment on the basis we could use in setting the presumptive BACT level. Considerable work would be needed to determine what options exist for controlling GHG emissions from these categories of smaller sources and the various emitting equipment they use. Even if a determination is made that add-on controls for CO_2 from combustion sources are adequately demonstrated, it is unlikely that the application of these controls would be cost-effective at these small sources in the relatively near future. Thus EPA believes the focus of presumptive BACT for CO_2 would likely be on energy efficiency standards for the installed equipment.

While PSD permitting staff may not generally possess specialized knowledge in the area of energy efficiency for categories of small sources, there is experience within EPA and other agencies that could help inform the establishment of presumptive BACT. Both EPA and DOE, for example, have extensive experience in deploying cost effective technologies and practices to reduce greenhouse gases from a wide range of emissions sources in support of the President's GHG intensity goal. For example the Energy Star program promotes efficient technologies through a labeling program that establishes performance-based specifications for determining the most efficient products in a particular category, which then qualify for the Energy Star label. To develop these specifications, EPA and DOE use a systematic process that relies on rigorous market, engineering, and energy and pollution savings analyses as well as input from stakeholders. While Energy Star specifications generally cover electrical appliances or fuel combusting appliances that would be smaller than those triggering the BACT requirement, the types of analyses conducted for Energy Star could inform a presumptive BACT process. In addition, DOE's Energy Efficiency and Renewable Energy program sets standards for several types of equipment, some of which may be affected by the BACT requirement if GHGs are regulated, including furnaces, boilers, and water heaters. The DOE standards are similar to the concept of presumptive BACT in that they take cost into consideration and are updated over time.[11] They also take into account effects on competitiveness among equipment manufacturers, which could be a significant concern if left unaddressed in determining presumptive BACT. We ask for comment on whether these or other similar programs could serve as a basis for the setting of presumptive BACT where applicable.

As a final observation, while presumptive BACT or LAER may have the potential to help address the problem of numerous small but similar types of sources, it is likely of less value in making BACT or LAER determinations at the types of large sources that have generally been subject to PSD for traditional pollutants. This is because there is generally less similarity among these traditional sources. Nonetheless, as noted above, there may be numerous modifications that would be newly subject to PSD for GHGs at such sources, and there may also be issues unique to establishing control technology requirements for GHGs that do not presently exist for such sources. In the ANPR, we ask for comment on whether there are issues at traditional PSD major sources that arise for

[11] See, e.g., 42 U.S.C. 6295(o).

GHGs and that would not be addressed by a presumptive BACT approach. If so, we ask for comment on additional options for tailoring the BACT requirement to address these issues.

7. **The NSPS program offers one potential avenue through which emissions of GHGs from major sources could be regulated.**
   a. **To what extent does EPA have discretion under CAA § I 11 provisions to prioritize and sequence the establishment of New Source Performance Standards for different source categories?**

      EPA has broad discretion to prioritize and sequence NSPSs, as long as we meet the 8-year review requirement.

   b. **What criteria would EPA use to determine whether a source category's GHG emissions make it appropriate to regulate?**

      EPA has not identified any specific threshold for determining whether emissions of particular pollutants are appropriate for regulation under the NSPS program, since different pollutants have varying effects and are emitted in different locations with varying implications for public health and the environment that depend in part on the sensitivity of particular groups (e.g., asthmatics) and ecosystems.

   c. **If EPA conducts an NSPS review of a source category for C02/GHG emissions, is EPA able to confine that review to GHGs only?**

      It is conceivable that EPA could conduct an NSPS revision that only addressed GHGs as long as we meet the 8-year review requirement for the other pollutants.

   d. **Under what circumstances might work-practice standards, or efficiency-based standards, be appropriate to use in the NSPS context to regulate C02/GHG emissions?**

      Given our current state of knowledge and ability to "control" CO2 emissions, work practices and energy-efficiency standards may be appropriate for many source categories. Because the "capture" technologies are currently in development, early strategies may result mostly from energy-efficiency type improvements.

8. If a new pollutant is listed under CAA § 112(b), what process would EPA undertake to prioritize promulgation of National Emission Standards for Hazardous Air Pollutants (NESHAPs) for the various affected source categories? What legal requirements are there with regard to the rate at which EPA must issue those NESHAPs?

As EPA discusses in the ANPR, if GHGs were listed as HAP, EPA would be required to regulate a very large number of new and existing stationary sources, including smaller sources than if alternative CAA authorities were used to regulate GHG. This is the result of three key requirements. First, the section 112(a) major sources thresholds of 10 tons per year for a single HAP and 25 tons per year for any combination of HAPs would mean that very small GHG emitters would be considered major sources. Second, section 112(c) requires EPA to list all categories of major sources. Third, section 112(d) requires EPA to issue MACT standards for all listed categories.

We believe that most significant stationary source categories of GHG emissions have already been listed under section 112 (although the 10-ton threshold in the case of GHGs would be expected to bring in additional categories such as furnaces in buildings, as explained below). To date we have adopted standards for over 170 categories and subcategories of major and area sources. This is a significantly greater number than the categories for which we have adopted NSPS because under section 112 we must establish standards for all listed categories, whereas section 111 requires that we identify and regulate only those source categories that contribute "significantly" to air pollution endangering public health and welfare. EPA must require existing sources to comply within 3 years of a standard's promulgation, although states and EPA are authorized in certain circumstances to extend the period of compliance by one additional year. Most new sources must comply as soon as a section 112 standard is issued; however, there is an exception where the final rule is more stringent than the proposal.

Because of the more detailed requirements for identifying appropriate levels of control to establish a level for MACT, significantly more information on the best performing sources is needed under section 112 than under section 111, making the development of such standards within 2 years after listing a source category difficult. In the ANPR, we request comment on this and other approaches for addressing GHG under section 112, both for categories already listed for regulation and for any that might appropriately be added to the section 112 source category list if we were to elect to regulate GHGs under this section.

9. To what extent has EPA analyzed the possibility of using CAA 615 provisions to regulate greenhouse gas emissions? Please discuss how 615 might be utilized, along with the strengths and weaknesses involved in this approach.

Title VI of the CAA includes general authority in section 615 to protect the stratosphere, especially stratospheric ozone. Section 615 states:

> *If, in the Administrator's judgment, any substance, practice, process, or activity may reasonably be anticipated to affect the stratosphere, especially ozone in the stratosphere, and such effect may reasonably be anticipated to endanger public health or welfare, the Administrator shall promptly promulgate regulations respecting the control of such substance, practice, process or activity, and shall*

submit notice of the proposal and promulgation of such regulation to the Congress.

EPA has rarely relied on the authority in section 615 to support rulemaking activity, since the activities that the Agency regulates to protect stratospheric ozone have generally been addressed under the more specific Title VI authorities. However, in 1993 EPA did rely on section 615 to promulgate trade restrictions in order to conform EPA regulations to Montreal Protocol provisions on trade with countries that were not Parties to the Protocol. (March 18, 1993, 58 FR 15014, 15039 and December 10, 1993, 58 FR 65018, 65044). These trade restrictions prevented shipments of ozone-depleting substances (ODS) from the U.S. to countries with no regulatory infrastructure to control their use. Promulgating these restrictions reduced the release of ODS into the atmosphere, thereby reducing harmful effects on public health and welfare. The restrictions also resulted in eliminating the U.S. as a potential market for ODS produced in non-Parties, thereby discouraging shifts of production to non-Parties and limiting the potential for undermining the phaseout. Recently, EPA also relied on section 615 authority is proposing measures to control "pre-charged" units imported into the United States which contain HCFCs.

As described in EPA's most recent notice concerning HCFCs, section 615 authority remains available when other CAA authorities are not sufficient to address effects on the stratosphere, especially ozone in the stratosphere. For section 615 authority to be used, a two-part endangerment test unique to that section must be met. First, the Administrator must find, in his judgment, that "a substance, practice, process or activity may reasonably be anticipated to affect the stratosphere, especially ozone in the stratosphere." Second, he must determine that "such effect may reasonably be anticipated to endanger health or welfare." To determine the potential applicability of section 615 to major GHGs, EPA thus would have to consider whether available scientific information supports making the requisite findings.

While section 615 sets forth the authority and responsibility of the Administrator to address effects on the stratosphere in order to protect public health and welfare, EPA recognizes that this authority was intended to augment other authorities and responsibilities established by Title VI. EPA does not believe this authority is a basis for prohibiting practices, processes, or activities that Congress specifically exempted elsewhere. EPA has requested comment in the ANPR on possible regulatory approaches under section 615 and how those approaches would be affected by the particular endangerment finding that is a prerequisite to the use of section 615 authority.

Key Petitions, EAB Permit Appeals, Rulemakings and Litigation Involving Greenhouse Gas Emissions Under the Clean Air Act
(as of December 19, 2008)

Action	Description	Timing
Petitions		
Petition to regulate GHG emissions from motor vehicles (basis of Mass v. EPA) (International Center for Technology Assessment, Alliance for Sustainable Communities, Applied Power Technologies, Bio Fuels America, The California Solar Energy Industries Assn, Clements Environmental Corp., Environmental Associates, Environmental and Energy Study Inst., Friends of the Earth, Full Circle Energy Project, The Green Party of Rhode Island, Greenpeace USA, Network for Environmental and Economic Responsibility of the United Church of Christ, New Jersey Environmental Watch, New Mexico Solar Energy Assn, Oregon Environmental Council, Public Citizen, Solar Energy Industries Assn., The Sun Day Campaign).	Petition for EPA to regulate emissions of four greenhouse gases from new motor vehicles and new motor vehicle engines under CAA 202.	Was originally filed in 1999. Original denial vacated and remanded back to EPA by DC Circuit on September 14, 2007 in light of Supreme Court's April 2, 2007 decision in Mass. v. EPA. Also see Mass v. EPA litigation below.
Three petitions for rulemaking to set standards reducing GHG emissions from marine shipping vessels (EarthJustice on behalf of three environmental organizations: Oceana, Friends of the Earth and the Center for Biological Diversity; California; SCAQMD)	Request that EPA set GHG standards for marine vessels under CAA section 213(a)(4), and standards for fuels used by marine vessels under CAA section 211(c).	Submitted on October 3, 2007. Petitioners requested a substantive response within 180 days (e.g., about April 3, 2008). On July 31, 2008, certain petitioners and other parties sent a Notices of Intent to Sue for unreasonable delay – the 180-day "notice of intent to sue" period expires on January 29, 2009 (e.g., EPA may be sued for unreasonable delay in responding to petitions). Discussed in ANPR (see below).

Action	Description	Timing
Two petitions for rulemaking to set standards reducing GHG emissions from aircraft (California, Connecticut, New Jersey, New Mexico, Pennsylvania's Department of Environmental Protection, the City of New York, the District of Columbia, and the SCAQMD; Earthjustice on behalf of four environmental organizations: Friends of the Earth, Oceana, Center for Biological Diversity and NRDC).	Request that EPA set GHG standards for aircraft under CAA section 231.	Submitted on November 4 and December 5, 2007. Petitioners requested a substantive response within 180 days (e.g., about May 5, 2008). On July 31, 2008, certain petitioners sent a Notices of Intent to Sue for unreasonable delay – the 180-day "notice of intent to sue" period expires on January 29, 2009 (e.g., EPA may be sued for unreasonable delay in responding to petitions). Discussed in ANPR (see below).
Two petitions for rulemaking to set standards reducing GHG emissions for new nonroad vehicle and engines and rebuilt heavy duty engines (California, Connecticut, Massachusetts, New Jersey and Oregon and Pennsylvania's Department of Environmental Protection; Western Environmental Law Center on behalf of three nongovernmental organizations: the International Center for Technology Assessment, Center for Food Safety, and Friends of the Earth).	Request that EPA set GHG standards for nonroad vehicles and engines under CAA section 213 and for rebuilt heavy-duty highway engines under CAA section 202(a)(3)(D). Slightly different requests. ICTA et al request standards for new nonroad vehicles and engines, and rebuilt heavy-duty engines (except aircraft and vessels). The States request standards for new nonroad vehicles and engines (except aircraft, locomotives and vessels).	Submitted January 29, 2008. Petitioners request that EPA take action within 6 months of receiving the petitions (e.g., July 29, 2008).On July 31, 2008, certain petitioners and other parties sent a Notices of Intent to Sue for unreasonable delay – the 180-day "notice of intent to sue" period expires on January 29, 2009 (e.g., EPA may be sued for unreasonable delay in responding to petitions). Discussed in ANPR (see below).
Petition for rulemaking to address mobile and stationary sources under the CAA due to concerns regarding the Arctic. Entitled "As Goes the Arctic, So Goes the Planet." Filed by The Native Village of Shishmaref; the Mayors of the Cities of Juneau and Homer, Alaska, and San Francisco and Pacific Grove, California; and the nonprofit organizations Oceana, Ocean Conservancy, and Alaska Conservation Solutions .	Petitioners request that EPA regulate greenhouse gas emissions from mobile and stationary sources to protect the health and welfare of the Arctic and the world. Specifically, they request (1) a finding that emissions of greenhouse gases may reasonably be anticipated to endanger the public health and welfare and that mobile and stationary sources cause or contribute to this air pollution; and (2) comprehensive regulations to reduce greenhouse gas emissions from mobile and stationary sources pursuant to CAA sections 202(a), 213(a)(4), 231, and 111(b) .	Filed November 25, 2008. They request a substantive response within 180 days.

Action	Description	Timing
Petition to object to a CAA title V permit for LG&E Trimble County, Kentucky, dated April 29, 2008 (merged title V and PSD program). Petitioners are Save the Valley, Sierra Club and Valley Watch.	Among other things, the petitioners assert that EPA must object to a state-issued title V permit on the grounds that the State failed to require BACT for CO2. This is a merged program (e.g,. Title V and PSD permits are merged into one permit). This is the 2nd title V petition for this LG&E facility. The first petition, dated March 2, 2006, did not raise GHG issues.	Petition is dated April 29, 2008. Under CAA section 505(b)(2), EPA must grant or deny title V petitions within 60 days. Thus, the statutory deadline for response was approximately June 28, 2008. EPA received an NOI dated August 27, 2008. EPA represented to the court in the deadline suit on the first petition that EPA expects to a file a response to the 2nd petition by March 20, 2009.
Petitions to object to a CAA title V permit for Cash Creek Generating Station in Henderson County, Kentucky (merged program). Petitioners are Valley Watch and Sierra Club.	Among other things, the petitioners assert that EPA must object to a state-issued title V permit on the grounds that the State failed to require BACT for CO2. Petitioners also assert that KDAQ also failed to respond adequately to comments that CO2 must be considered in the analysis of alternatives. This is a merged program (i.e. Title V and PSD permits are merged into one permit).	Petitions are dated March 6, 2008. Under CAA section 505(b)(2), EPA must grant or deny title V petitions within 60 days. Thus, the statutory deadline for response was approximately May 5, 2008.
Petition to object to a CAA title V permit for BP Whiting Business Unit, Indiana. Petitioners are Environmental Law and Policy Center, Hoosier Environmental Council, Natural Resources Defense Council, Save the Dunes, Inc., Sierra Club, Susan Eleuterio and Tom Tsourlis.	Among other things, the petitioners assert that EPA must object to a state-issued title V permit on the grounds that the application omits emissions information for GHG and the state failed to require BACT for CO2.	Petition is dated August 14, 2008. Under CAA section 505(b)(2), EPA must grant or deny title V petitions within 60 days. Thus, statutory deadline for response is approximately October 13, 2008.
Document entitled "Supplement to Petition for Objection to Issuance of Operating Permit for Thoroughbred Generating Station"	This document claims that the PSD permit issued by Kentucky to this facility in 2002 is invalid because construction had not commenced with 18-months (and the extensions of this deadline by the State were improper). The supplement goes on to explain why, in petitioners' view, the State needs to do new analyses to grant the extensions, and among the several reasons cited is the need to do a BACT analysis for CO2.	Dated October 18, 2007. On December 4, 2008 Petitioners filed a complaint in DC district court alleging EPA failed to comply with its mandatory duty to respond to their veto petition within 60 days. They reference both their original 2002 petition and their 2008 "supplement" in the complaint. Expect Answer due in February (60 days from service).
Petition to object to a CAA title V permit issued by Arkansas to American Electric Power/Southwestern Electric Power Company for operation of the John W. Turk, Jr. Power Plant.	Among other things, the petition asserts that the State must perform a BACT analysis for CO2.	Petition is dated November 24, 2008. Under CAA section 505(b)(2), EPA must grant or deny title V petitions within 60 days. Thus, statutory deadline for response is approximately January 23, 2009.

Action	Description	Timing
Section 115 submission from Canadian environmental groups and municipalities	Submission requesting that the Administrator take action under section 115 of the Clean Air Act. The requested action is to notify 7 States to revise their SIPs to include (among other things) CO2 limits. The request is based on information that allegedly demonstrates that emissions from these 7 states may reasonably be anticipated to endanger public health and welfare in Canada.	Submitted in June 2005, and amended in November 2006. On February 29, 2008 EPA sent a letter to the requestor declining to take action. On July 30, 2008, EPA received a response to this letter challenging EPA's position on several issues.
EAB PSD Permit Appeals		
Deseret Bonanza PSD Permit (UT)	PSD permit issued by Region 8 for a 110 MW waste-coal-fired electric generating unit at Deseret's existing Bonanza power plant. Commenters raised issues regarding BACT limits for CO2, and consideration of GHG emissions in the collateral impacts analysis for BACT for other pollutants.	Deseret permit was issued August 30, 2007. After granting review on the issue regarding BACT for CO2, allowing all interested parties to file briefs, hearing oral argument and requesting supplemental briefing, the EAB issued its decision on November 13, 2008. The EAB denied review of the Region's alleged failure to adequately consider alternatives to the proposed facility. However, the EAB remanded the permit to the Region to reconsider whether to impose a CO2 BACT limit and to develop an adequate record for its decision. On December 18, 2008, the Administrator issued a memorandum that interprets the EPA rules that describe what air pollutants are subject to the PSD program. The interpretation states that pollutants that are subject only to monitoring or reporting requirements, but not control requirements, are not subject to PSD permitting requirements.
Desert Rock PSD permit (NM)	PSD permit issued by Region 9 for a proposed 1500 MW coal-fired electric generating facility on Navajo land in New Mexico. The Navajo Nation, through Dine Power Authority, has a financial stake in the project and is promoting it for economic development. Public comments argued that EPA should address GHG emissions in the permit.	Permit issued July 31, 2008. Four parties filed Petitions for Review of the permit with the EPA Environmental Appeals Board. Two parties obtained leave to file supplemental briefs on October 2, 2008. Responses to the Petitions and supplemental briefs are due January 8, 2008 – an extension was granted to allow for consideration of the November 13 decision in Deseret (see above).

Action	Description	Timing
Northern Michigan University PSD Permit (Michigan - delegated federal)	PSD permit for new 10 MW electric generating unit fueled by both biomass and coal. Commenters argued that permit requires BACT limits for CO2 and N20.	Permit was issued on May 12, 2008. The Sierra Club filed an appeal with the EAB on June 13, 2008; the State filed its response on August 6; SC filed a reply on August 21st. SC filed a reply to the State's response on August 21st. The permit applicant was granted the right to file a brief (due September 22) and SC filed a reply to this brief on October 3. The EAB heard oral argument in the case on October 22, 2008. The Board declined to hear argument on the greenhouse gas issued raised in the case at the oral argument, based on an Order dated October 2, 2008.
Seminole Electric Cooperative (FL)	On September 5, 2008, the Florida Department of Environmental Protection issued a permit for construction of a new 750-megawatt pulverized coal-fired electric generating unit at the existing Seminole Generating Unit in Palatka, Florida. Sierra Club filed a Petition for Review with the EAB on October 6, 2008 making substantially the same arguments as in the Deseret and Desert Rock cases for why it believes CO2 is a regulated pollutant subject to BACT.	On October 24, 2008, Sierra Club filed a motion to hold the EAB appeal in abeyance. The final permit was issued after Region IV approved Florida's PSD program for power plant permits and thus terminated the delegated program for these sources in the state, but the draft permit was issued when the delegated program applied to this type of source. Because of confusion over the applicable procedures and a dispute over the availability of an appeal of the permit in Florida courts, Sierra Club filed the EAB appeal as well as an appeal in state court. The Sierra Club has indicated that the EAB case should be dismissed if it obtains review in state court.
Rulemaking Actions		
ANPR re Regulating GHG Emissions under the Clean Air Act	Advance Notice of Proposed Rulemaking broadly soliciting comment on a variety of issues relevant to decisions on regulation of GHGs under the CAA. Will be relevant to many of the rulemaking entries below.	Signed July 11, 2008, published July 30, 2008. 73 FR 44354 (July 30, 2008). Comment period closed November 28, 2008.
Response to remand in Mass v. EPA	Section 202 endangerment determination, and potential standards, for GHG emissions from motor vehicles.	Discussed in ANPR (see above). Also see Mass v. EPA entry below re pending mandamus action.

Action	Description	Timing
Boiler NSPS	EPA's decision not to regulate CO2 as part of the 2006 revisions to the NSPS was remanded back to the Agency on September 24, 2007. During a narrow revision to the revised NSPS being completed pursuant to a settlement agreement, commenters again raised the CO2 issue. The response to comments noted that this issue was better addressed in the ANPR and remand efforts.	DC Circuit did not impose time line for responding to remand in its order. Original 2006 revisions were pursuant to Consent Decree deadline. Discussed in ANPR (see above). Also, see litigation entry below for State of NY et al v EPA, (DC Cir. 06-1322).
Petroleum refinery NSPS	EPA signed proposed revisions to the refinery NSPS April 30, 2007. We received detailed comments setting forth why we had to regulate CO2 and methane emissions.	Final rule published June 24, 2008. Contains explanation why EPA did not set NSPS for GHG as part of this rulemaking. Discussed in ANPR (see above). During June through August 2008 industry petitioners sought reconsideration of and a stay of certain portions of the final rule. On August 25, 2008, the Environmental Integrity Project, Sierra Club and Natural Resources Defense Council filed a Petition for Reconsideration with EPA regarding GHG and non-GHG issues. On September 26, 2008, EPA granted reconsideration on one of the non-GHG issues in the petition, and stayed the effective date of certain aspects of the rule until December 25, 2008.
Portland Cement NSPS	We received comments on the proposed rule regarding GHG emissions.	Consent Decree deadlines of May 31, 2008 for Proposed Rule; May 31, 2009 for Final Rule. May 31 proposal explained that for the reasons originally set forth in refinery NSPS, GHG emissions will not be considered as part of this revision, but will be discussed in ANPR (see above). The comment period closed September 30, 2008.
Renewable Fuels Standard (RFS2) revisions	Updates the RFS regulations to implement EISA 2007. EISA requires increased use of renewable fuels, with certain categories of renewable fuels defined in part by their life cycle GHG emisions compared to a baseline of 2005 highway and nonroad fuel. Statute established deadline of one year from enactment for final rule (December 19, 2008).	EPA sent a proposed rule to OMB on October 31, 2008.

Action	Description	Timing
Mandatory reporting of GHG emissions	The omnibus appropriations bill appropriated $3.5M to EPA to draft a rule requiring the mandatory reporting of GHG emissions above appropriate thresholds in all sectors of the U.S. economy. Legislative history provides that EPA is to use its existing authority under the CAA and propose a rule within 9 months of the date of enactment (Dec. 26, 2007) and issue a final rule within 18 months of enactment.	EPA sent a proposed rule to OMB on October 24, 2008.
Litigation		
Mass v. EPA mandamus action (DC Cir 03-1361)	On April 2, 208, Petitioners requested that the D.C. Circuit order EPA to issue its determination on endangerment in 60 days.	D.C. Circuit denied the petition for a writ of mandamus on June 26, 2008.
State of NY et al v EPA, (D.C. Cir. 06-1322)	Challenge to revisions to CAA section 111 new source performance standard (NSPS) for utility boilers. Commenters had argued EPA should regulate CO2 emissions. The CO2 issue was severed from the overall challenge to the NSPS and given a separate case name and number.	On September 24, 2007, the DC Circuit remanded the case back to EPA for further proceedings in light of Mass v. EPA. The court declined petitioners' request to summarily reverse and vacate EPA's decision. State Petitioners sent a letter to EPA on June 16, 2008 regarding status of remand and demanding that EPA issue a section 111 endangerment finding for power plants forthwith or explain why it lacks the information necessary to do so. EPA responded referencing the ANPR on August 19, 2008.
California v. EPA, (D.C. Cir. No. 08-1178 (consolidated with 08-1179, 1180))	Challenge to final decision denying CA GHG waiver request. 73 FR 12156 (March 6, 2008).	California brief was filed November 10, 2008. Amicus supporting California briefs were filed November 24, 2008. EPA brief due January 9, 2009. Amicus supporting EPA briefs due January 23, 2009. CA reply brief due February 6, 2009. Oral argument not yet scheduled.

Action	Description	Timing
API et. al. v. EPA (D.C. Cir. No. 08-1277; consolidated with 08-1279, 08-1280, 08-1281)	Challenge to decision in final rule (NSPS subpart Ja) denying commenters' request to promulgate New Source Performance Standards for carbon dioxide and methane emissions from petroleum refineries. 73 FR 35838 (June 24, 2008).	Lawsuits filed by Petitioners August 25, 2008. Petition for Reconsideration also filed with EPA (see above). On August 28, 2008, the court on its own motion consolidated the various pending cases (as API). On September 23, 2008, EPA filed a motion to hold the consolidated petitions in abeyance while EPA addresses issues raised by various petitioners in its administrative reconsideration process. On September 26, 2008, EPA granted the petitions for reconsideration in part, with decisions still pending. On September 29, 2008, the petitioners filed statements of issues in the case. On October 6, 2008, petitioner Hovensa opposed EPA's motion. On October 10, 2008, EPA filed a reply in support of the motion to hold in abeyance, asking the court to vacate all deadlines in the case for six months. Lion Oil Company also filed a Petition for Review, but they filed their Petition on August 27, which was two days after the filing deadline. On September 18, the Court issued an Order to Show Cause why their Petition should not be dismissed as untimely. Lion Oil responded to this request on September 22. EPA did not respond in any way to this situation. The Court has not yet ruled on Lion Oil's response. In the meantime, Lion Oil has filed its notice to join the case as an intervenor in support of Petitioners. EPA did not oppose this.

Action	Description	Timing
Notice of Intent to Sue regarding Oil & Gas NSPS (and NESHAP) Sent on behalf of Rocky Mountain Clean Air Action, the Environmental Integrity Project, Natural Resources Defense Council, Oil and Gas Accountability Project, a project of Earthworks, Powder River Basin Resource Council, and San Juan Citizens Alliance.	Notice of intent to sue (NOI) under section 304(b) regarding EPA's alleged failure to review and revise the NSPS for Crude Oil and Natural Gas Production (also alleged failure to review and revise National Emission Standards for Hazardous Air Pollutants and to promulgate residual risk standards for Crude Oil and Natural Gas Production and Natural Gas Transmission and Storage). Letter raises carbon dioxide and methane emissions in NSPS portion	Letter dated July 2, 2008. The 60-day "notice of intent to sue" period expired September 1, 2008 (e.g., EPA may be sued for failure to undertake a mandatory duty).
Notice of intent to sue regarding nitric acid NSPS Send on behalf of Environmental Integrity Project and Sierra Club	Notice of intent to sue (NOI) under section 304(b) regarding EPA's alleged failure to review and revise the NSPS for nitric acid plants. Letter raises issues of N_2O emissions.	Letter dated October 7, 2008. The 60-day "notice of intent to sue" period expired December 6, 2008 (e.g., EPA may be sued for failure to undertake a mandatory duty).
Notice of intent to sue regarding landfills NSPS Sent by the Environmental Defense Fund (EDF)	Notice of intent to sue (NOI) under section 304(b) regarding EPA's alleged failure to review and revise the new source NSPS for landfills, and to issue revised emissions guidelines for existing sources. Letter raises issue methane emissions.	Letter dated October 23, 2008. The 60-day "notice of intent to sue" period expires December 22, 2008 (e.g., EPA may be sued for failure to undertake a mandatory duty regarding NSPS for new sources). The 180-day "notice of intent to sue" period expires April 21, 2009 (e.g., EPA may be sued for unreasonable delay in responding to request regarding emissions guidelines for existing sources).

GEORGETOWN UNIVERSITY LAW CENTER

Lisa Heinzerling
Professor of Law

June 5, 2008

Re: Hearing before the Subcommittee on Energy and Air Quality, "Strengths and Weaknesses of Regulating Greenhouse Gas Emissions Using Existing Clean Air Act Authorities."

Dear Chairman Dingell:

Below you will find my answers to additional questions posed by Representative G.K. Butterfield regarding the above-captioned matter:

1. **Question**: If the EPA were to move forward with formally regulating CO_2 as a pollutant, what kind of scenario would we see with states like California that seek to set stringent tailpipe emission standards?

Answer: The Clean Air Act explicitly preserves states' authority, in most contexts, to enact emission standards more stringent than those set by EPA. Thus, even if EPA regulated CO_2 as a pollutant under the Act, most state standards should survive. With respect to automobiles, however, only California has the authority to set its own emission standards, and it must obtain permission from EPA in order to do so. As of this time, EPA has denied California's request to set its own standards for greenhouse gases. I believe EPA's conclusion on California's request is wrong as a matter of law, but it is not connected to whatever decision EPA may eventually make with respect to regulation of CO_2.

2. **Question**: Or in the case of my state North Carolina, would the EPA regulate emissions from livestock, sites like a hog farm, where methane from hog waste is twenty times more potent than CO_2?

Answer: Methane is one of the pollutants deemed an "air pollutant" subject to regulation under the Clean Air Act by the Supreme Court in *Massachusetts v. EPA*. Depending on their size and location, hog farms can be sources subject to regulation under the Act. It is possible that a hog farm emitting methane from hog waste could be subject to regulation under the Clean Air Act. EPA is now studying emissions from hog farms to determine whether they are subject to the requirements of the Act.

3. **Question**: Would any and all sites that emit CO_2 come under regulation from the EPA?

Answer: No. Only sources referenced in the Clean Air Act would be subject to regulation. Many sources are not included in the Clean Air Act, either because of their type or because of their size.

Sincerely,

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