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EPA APPROVAL OF NEW POWER PLANTS: FAILURE TO ADDRESS GLOBAL WARMING POLLUTANTS

HEARING

BEFORE THE

COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM

HOUSE OF REPRESENTATIVES

ONE HUNDRED TENTH CONGRESS

FIRST SESSION

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EPA APPROVAL OF NEW POWER PLANTS: FAILURE TO ADDRESS GLOBAL WARMING POLLUTANTS

THURSDAY, NOVEMBER 8, 2007

HOUSE OF REPRESENTATIVES,
COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM,
Washington, DC.

The committee met, pursuant to notice, at 10 a.m., in room 2154, Rayburn House Office Building, Hon. Henry A. Waxman (chairman of the committee) presiding.

Present: Representatives Waxman, Towns, Kucinich, Tierney, Watson, Yarmuth, McCollum, Hodes, Sarbanes, Davis of Virginia, Shays, Platts, Issa, and Sali.

Staff present: Karen Lightfoot, communications director and senior policy advisor; Greg Dotson, chief environmental counsel; Alexandra Teitz, senior environmental counsel; Erik Jones, counsel; Earley Green, chief clerk; Teresa Coufal, deputy clerk; Caren Auchman, press assistant; Zhongrui "JR" Deng, chief information officer; Leneal Scott, information systems manager; Kerry Gutknecht and William Ragland, staff assistants; Larry Halloran, minority deputy staff director; Ellen Brown, minority legislative director and senior policy counsel; A. Brooke Bennett, minority counsel; Howie Denis, minority senior professional staff member; Kristina Husar, minority counsel; John Cuaderes and Larry Brady, minority senior investigator and policy advisors; Patrick Lyden, minority parliamentarian and member services coordinator; Brian McNicoll, minority communications director; Benjamin Chance, minority clerk; Ali Ahmad, minority deputy press secretary; and John Ohly, minority staff assistant.

Chairman WAXMAN. The committee will please come to order.

Today's hearing will examine carbon dioxide emissions from new coal-fired power plants. Pending before the Environmental Protection Agency and State agencies are dozens of applications to build new coal-fired power plants. These power plants are huge and they are enormous sources of greenhouse gas emissions.

A single plant, the White Pine Plant proposed in Nevada, will emit over a billion tons of CO_2 over its lifetime. If approved without carbon controls, this one plant will emit as much carbon dioxide as all of the vehicles, factories and power plants in South Dakota.

Scientists say that we need to reduce CO_2 emissions by 80 percent from today's level to avoid catastrophic global warming. This is a big challenge. It will require all sectors of our economy to become more efficient and cut their emissions. But these changes are

absolutely necessary to prevent irreversible climate change. The very last thing we should be doing is making the problem worse by approving massive new sources of uncontrolled CO_2 emissions.

But that is exactly what the Bush administration is doing. The administration's policy is the climate equivalent of pouring gasoline on a fire. The approval of new power plants without carbon controls is irresponsible, it is indefensible, and it is illegal.

Our lead witness today is EPA Administrator Stephen Johnson. For most of his tenure, he has been able to avoid climate change issues by saying the EPA lacks the legal authority to regulate CO_2 emissions. This changed in April, when the Supreme Court ruled that Administrator Johnson does have the authority to regulate greenhouse gases under the Clean Air Act.

Two of the largest sources of greenhouse gases are motor vehicles and power plants. To date, public attention has been focused primarily on EPA's record on vehicles. It is not an encouraging record. Administrator Johnson has yet to take any action to control CO_2 emissions from cars and trucks, and he has been ignoring a request by California to regulate these emissions for almost 2 years.

Today we are going to look at EPA's policy on power plants. In August, EPA took its first regulatory action since the Supreme Court ruled. EPA granted a permit to a new coal-fired power plant, the Desert Plant in Utah. EPA didn't require any pollution controls for greenhouse gases, and it didn't consider other alternatives, such as renewable energy sources. It is as if the Supreme Court never ruled, and EPA never heard of global warming.

We will learn today that the potential consequences of this business as usual policy are enormous. The Desert Plant is a relatively small one, but there are dozens of applications for much larger power plants pending before EPA and State air pollution agencies. If these plants are approved without carbon controls, they will emit billions of tons of CO_2 emissions.

Let me put these emissions into context. Eight northeastern States have shown great leadership by adopting the first regional program in the United States to cap and reduce greenhouse gas emissions. But the approval of just one of the pending power plants would wipe out all of the gains these States are trying to achieve. These power plants can cost $1 billion to build. They last for 50 to 60 years, and we don't have the technology yet to retrofit them with carbon controls.

As a Nation, we will do irreversible damage to our climate change efforts if we follow this short-sighted policy. Addressing the threat of climate change poses many difficult and complex issues. But permitting the construction of massive new sources of uncontrolled CO_2 emissions should not be one of them.

While we struggle to develop the right policies for reducing our emissions, we should not be making our problems worse by approving a new generation of unregulated coal-fired power plants.

Before we move on, I want to recognize Mr. Davis for his opening statement.

[The prepared statement of Chairman Henry A. Waxman follows:]

Opening Statement of Rep. Henry A. Waxman
Chairman, Committee on Oversight and Government Reform
Hearing on EPA Approval of New Power Plants: Failure to Address Global Warming Pollutants
November 8, 2007

Today's hearing will examine carbon dioxide emissions from new coal-fired power plants.

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A single plant — the White Pine plant proposed in Nevada — will emit over a billion tons of CO_2 over its lifetime. If approved without carbon controls, this one plant will emit as much carbon dioxide as all of the vehicles, factories, and power plants in South Dakota.

Scientists say that we need to reduce CO_2 emissions by 80% from today's level to avoid catastrophic global warming.

This is a big challenge. It will require all sectors of our economy to become more efficient and cut their emissions. But these changes are absolutely essential to prevent irreversible climate change.

The very last thing we should be doing is making the problem worse by approving massive new sources of uncontrolled CO_2 emissions.

But that is exactly what the Bush Administration is doing.

The Administration's policy is the climate equivalent of pouring gasoline on a fire. The approval of new power plants without carbon controls is irresponsible; it is indefensible; and it is illegal.

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Today we are going to look at EPA's policy on power plants. In August, EPA took its first regulatory action since the Supreme Court ruled. EPA granted a permit to a new coal-fired power plant, the Deseret *[Deser-ette]* plant in Utah. EPA didn't require any pollution controls for greenhouse gases. And it didn't consider other alternatives, such as renewable energy sources.

It's as if the Supreme Court never ruled and EPA never heard of global warming.

As we will learn today, the potential consequences of this "business as usual" policy are enormous. The Deseret plant is relatively small. But there are dozens of applications for much larger power plants pending before EPA and state air pollution agencies. If these plants are approved without carbon controls, they will emit billions of tons of CO_2 emissions.

Let me put these emissions into context. Eight Northeastern states have shown great leadership by adopting the first regional program in the United States to cap and reduce greenhouse gas emissions. But the approval of just one of the pending power plants would wipe out all of the gains these states are trying to achieve.

These power plants can cost a billion dollars to build. They last for 50 to 60 years. And we don't have the technology yet to retrofit them with carbon controls. As a nation, we will do irreversible damage to our climate change efforts if we follow this short-sighted policy.

Addressing the threat of climate change poses many difficult and complex issues. But permitting the construction of massive new sources of uncontrolled CO_2 emissions should not be one of them. While we struggle to develop the right policies for reducing our emissions, we should not be making our problems worse by approving a new generation of unregulated coal-fired power plants.

Mr. DAVIS OF VIRGINIA. Thank you, Mr. Chairman.

Climate change is a critical and complex issue that poses profound global challenges. Chairman Waxman and I share similar views regarding the importance of mitigating the effects of carbon dioxide buildup in the atmosphere and reducing production of greenhouse gases. When I sat in his chair, our committee began the thoughtful, constructive inquiries into climate change issues that continue today.

But agreement on broad principles and goals doesn't mean we necessarily see eye to eye on every specific proposal to address climate change. Responsible policies will recognize that fragility and inter-dependence of environmental and economic ecosystems balance emission mitigation steps against the net effect on energy production and take account of downstream consequences and long-term implications.

The premise of this hearing, that the EPA should use a recent Supreme Court decision on regulation of mobile source carbon dioxide emissions as the basis for a broad new regulatory regime over stationary sources fails to meet those standards of responsible climate change strategy. And the focus on an ongoing energy facility permit decision inappropriately interjects Congress into judicial proceedings. Once again, the committee has opted for advocacy rather than oversight, choosing to litigate by show trial, rather than examining the issue in depth.

The call to apply current Clean Air Act regulatory and permitting standards to stationary source CO_2 emissions may be well-intentioned, but in my judgment, it is inapt. It would be a painfully uncomfortable fit to subject a huge swath of the American economy, including many small businesses, for the first time, to Clean Air rules and limitations designed to control well-understood pollutants, not a widely diffused, naturally occurring chemical compound.

Energy is the lifeblood of our economic vitality, and the onus of meeting climate change goals should not fall disproportionately or destructively on that group or any productive sector. Nor should current environmental protection tools be subverted or distorted to meet broader climate change objectives. If this hearing contributes anything constructive to the climate change debate, I hope it will begin to describe the sensible, workable and affordable restrictions on carbon dioxide emissions and other greenhouse gases not found in current law that Congress should move to enact.

Thank you.

[The prepared statement of Hon. Tom Davis follows:]

HENRY A. WAXMAN, CALIFORNIA
CHAIRMAN

TOM DAVIS, VIRGINIA
RANKING MINORITY MEMBER

ONE HUNDRED TENTH CONGRESS

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Statement of Rep. Tom Davis
Ranking Republican Member
Committee on Oversight and Government Reform
"EPA Approval of New Power Plants"
November 8, 2007

Climate change is a critical and complex issue that poses profound global challenges. Chairman Waxman and I share similar views regarding the importance of mitigating the effects of carbon dioxide build-up in the atmosphere and reducing production of greenhouse gasses. When I sat in his chair, this Committee began the thoughtful, constructive inquiries into climate change issues that continue today.

But agreement on broad principles and goals doesn't mean we necessarily see eye to eye on every specific proposal to address climate change. Responsible policies will recognize the fragility and interdependence of environmental and economic eco-systems, will balance emission mitigation steps against the net effect on energy production, and will take account of downstream consequences and long-term implications.

The premise of this hearing – that the Environmental Protection Agency should use a recent Supreme Court decision on regulation of mobile-source carbon dioxide emissions as the basis for a broad new regulatory regime over stationary sources – fails to meet those standards for responsible climate change strategy. And, the focus on an on-going energy facility permit decision inappropriately injects Congress into judicial proceedings. Once again, the Committee has opted for advocacy rather than oversight, choosing to litigate by show trial rather than examine issues in depth.

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Chairman WAXMAN. Thank you very much, Mr. Davis.

For our first witness today, we have Stephen Johnson. Mr. Johnson has served as Administrator of the Environmental Protection Agency since May 2005. He has been working for the EPA in different capacities for the past 27 years.

Mr. Johnson, we want to welcome you to our hearing today. It is a practice of this committee that all witnesses who testify do so under oath, so if you wouldn't mind standing and taking the oath.

[Witness sworn.]

Chairman WAXMAN. Let the record indicate you answered in the affirmative.

We are pleased to have you. Your full statement will be made part of the record. We would like to ask if you would limit your statement, if you could, to around 5 minutes. We will have a clock there to remind you. It will turn yellow, that will indicate a minute, then when it is red, the 5-minutes have concluded.

STATEMENT OF STEPHEN L. JOHNSON, ADMINISTRATOR, ENVIRONMENTAL PROTECTION AGENCY

Mr. JOHNSON. Good morning, Chairman Waxman and members of the committee. I am pleased to be here today to update you on EPA's response to the Supreme Court decision on greenhouse gases and to discuss our recent decision to issue a permit to the Desert Power Electric Cooperative in Utah.

On August 30th, EPA's regional office in Denver issued a final prevention of significant deterioration permit to allow Desert Power to add a 110 megawatt waste coal-fired boiler to its existing Bonanza Power Plant in northeastern Utah. Desert Power will used the increased generation capacity to supply electricity to several Utah municipalities. These include St. George, which the U.S. Census Bureau recently identified as the fastest-growing metropolitan area in the country.

EPA issued the Desert permit only after a comprehensive analysis and review which took more than 3 years to complete. This review included research to identify and evaluate available emissions control technology, discussions with Desert Power about applying that technology and the consideration of public comment. The permit enables Desert Power to move forward in providing a reliable and secure supply of electricity, while at the same time making use of a previously untapped reserve of waste coal.

The final permit includes stringent emission limits for regulated pollutants, such as particulate matter, nitrogen oxides and sulfur dioxide. It does not, however, include emission limits for carbon dioxide, which we believe is the proper decision for this permit. 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.

EPA is firmly committed to addressing the long-term challenge of global climate change. While we are directing substantial resources toward meeting President Bush's aggressive goal of finalizing regulations on greenhouse gas emissions for motor vehicles and fuels by the end of next year, we are also evaluating the potential effects of the Supreme Court decision on a variety of Clean Air Act programs, including stationary-source programs. We believe it is critical that we develop an approach to addressing greenhouse gases under the Clean Air Act as a whole, and not under individual clean air programs or through individual permitting decisions.

EPA is conducting this effort in an orderly and thoughtful fashion, so our policies will both achieve genuine environmental results and sustain the country's economic health. Thank you, Mr. Chairman. I would be happy to take any questions you have.

[The prepared statement of Mr. Johnson follows:]

TESTIMONY OF
STEPHEN L. JOHNSON
ADMINISTRATOR
U.S. ENVIRONMENTAL PROTECTION AGENCY
BEFORE THE
COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM
UNITED STATES HOUSE OF REPRESENTATIVES

November 8, 2007

Good morning, Chairman Waxman and members of the House Committee on Oversight and Government Reform. I appreciate the opportunity to come before this Committee to discuss EPA's response to the recent Supreme Court decision on greenhouse gases and the decision to permit an additional electric generating unit for the Deseret Power Electric Cooperative in Utah.

I. Administration Climate Strategy

Addressing the challenge of global climate change is not new for the Administration. Importantly, the efforts EPA and the rest of the Administration are undertaking to address the challenge of global climate change are broader than responding to the Supreme Court's *Massachusetts v. EPA* decision regarding EPA's authority to regulate greenhouse gas emissions from new motor vehicles under the Clean Air Act. First, we are constantly looking to improve our knowledge of the science of climate change, as reflected by the numerous reports of the Climate Change Science Program (CCSP) that have recently been completed, or are scheduled for completion over the next year or so. As we develop near- and long-term plans to address global climate change, we must continue to improve our knowledge of the science.

Second, the President recently convened a meeting of the world's major economies with the goal of establishing a new international approach on energy security and climate change in 2008. In turn, that international approach would contribute to a global agreement by 2009 under the UN Framework Convention on Climate Change. Under the President's approach, the U.S. and each nation would design its own strategy for making progress toward achieving the long-term goal of reducing greenhouse gas emissions. These strategies must be environmentally effective and measurable and reflect each country's different energy resources, different stages of development, and different economic needs. Like other countries, the United States relies on a mix of mandatory, voluntary, and market-based policy tools. Importantly, no country has all the answers because challenge of global climate change is exactly that: global. And the goal we are working towards is stabilization of greenhouse gas concentrations to prevent dangerous interference with the climate system.

Third, following the Supreme Court decision, EPA has been looking at the authority provided by the Clean Act Air as part of its efforts to achieve this global goal of reduced greenhouse gas emissions. Thus, while EPA has been implementing voluntary programs aimed at reducing greenhouse gases for years, in the past several months we have been exploring the additional tools provided by the Clean Air Act to help us expand on the solid foundation we have built.

Finally, EPA is actively evaluating how best to regulate technologies that may curb or otherwise address greenhouse gas emissions. For example, recent EPA analysis suggests that geologic sequestration, a process of injecting captured CO2, a greenhouse gas, in deep rock formations for long-term storage is one of the key enabling technologies for making this transition. Geologic sequestration technology could allow continued use of domestic coal, for example, and still cut the amount of greenhouse gases emitted into the atmosphere. This technology, which is covered by EPA's Underground Injection Control Program, is part of a portfolio of technical approaches under consideration to reduce greenhouse gas emissions. The Safe Drinking Water Act established the Underground Injection Control (UIC) program to allow the safe injection of fluids into the subsurface in a manner that does not endanger current or future underground sources of drinking water. Recently EPA announced plans to develop regulations to ensure that injection of CO2 does not contaminate underground sources of drinking water. EPA will invite the public and stakeholders including other federal agencies such as the Department of Energy and US Geological Survey to provide input throughout the rule development process. Once completed, the regulations will ensure a consistent, equitable and effective permit system under the Safe Drinking Water Act for commercial-scale geologic storage programs to help reduce greenhouse gases from a variety of sources including coal-fired power plants.

A. Progress toward the President's Goal

In 2002, President Bush committed to cut U.S. greenhouse gas intensity (the ratio of greenhouse gas emissions to economic output) by 18 percent through the year 2012, a

goal that we are on target to meet. This commitment was estimated to achieve about 100 million additional metric tons of reduced carbon-equivalent (MMTCE) emissions in 2012, with more than 500 MMTCE emissions in cumulative savings over the decade.

According to EPA data reported to the United Nations Framework Convention on Climate Change (UNFCCC), U.S. greenhouse gas intensity declined by 1.9 percent in 2003, by 2.4 percent in 2004, and by 2.4 percent in 2005. Put another way, from 2004 to 2005, the U.S. economy increased by 3.2 percent while greenhouse gas emissions increased by only 0.8 percent. According to the Energy Information Administration, U.S. energy-related CO2 emissions declined in absolute terms –from 5,955 million metric tons (MMTCO2) in 2005 to 5,877 MMTCO2 in 2006, a 1.3 percent decrease. Also according to EIA, from 2005 to 2006 energy intensity (energy consumed per $ real GDP) fell by over 4.0 percent, as total energy demand declined 0.9 percent while the economy grew by 3.3 percent.

B. President's Executive Order

On May 14, 2007, President Bush directed EPA and the Departments of Energy, Transportation, and Agriculture to take steps toward regulations that would cut gasoline consumption and reduce greenhouse gas emissions from motor vehicles, and through Executive Order 13432, he outlined a cooperative means of doing so. The President asked that, in undertaking this regulatory effort, we use as a starting point the "Twenty in Ten" plan announced in his State of the Union address to reduce U.S. gasoline consumption by 20 percent over the next ten years. The President's May 14

announcement represents the Administration's continued commitment to address climate change and energy security in a comprehensive and thoughtful manner. It both responds to the Supreme Court's *Massachusetts* ruling and provides a path forward for improving our energy security by reducing U.S dependence on oil.

Earlier this year, the Administration sent Congress legislative proposals to achieve the "Twenty in Ten" plan. The plan would increase the supply of renewable and other alternative fuels by setting a mandatory fuels standard to require the equivalent of 35 billion gallons of renewable and other alternative fuels in 2017, nearly five times the 2012 Renewable Fuels Standard (RFS) mandate established by the Energy Policy Act of 2005. The plan also would reform and modernize Corporate Average Fuel Economy (CAFE) standards for cars, and further increase the CAFE standards for light trucks.

While the President continues to believe that effective legislation is the best approach to implementing his "Twenty In Ten" plan, as directed by him on May 14, EPA and our federal partners are now working toward these goals via regulation. The President has directed us to complete this regulatory process by the end of 2008. This is a very aggressive timeframe, but one that I am confident that my staff, working with our federal partners, can achieve.

EPA meets regularly with the Departments of Transportation, Energy, and Agriculture to ensure coordination of our work efforts. In addition, we have ensured major stakeholder group involvement in the process from the very beginning. We also have begun the

analytical work necessary to establish standards that carefully consider science, available technologies, lead time, and vehicle safety while evaluating benefits and costs.

In addition, EPA continues to consider any implications of the Supreme Court decision on various sections of the Clean Air Act, while moving forward with a proposed mobile source rule later this year. We believe it is critically important to conduct this effort in a thoughtful fashion, so that any resulting policies would achieve genuine environmental results in a cost-effective fashion, while sustaining the country's economic health.

II. Background on the Proposed Deseret Power Plant

On August 30, 2007, EPA Region 8 in Denver issued a final federal Prevention of Significant Deterioration (PSD) air permit to Deseret Power Electric Cooperative to authorize the addition of a 110-megawatt waste-coal-fired generating unit to its existing Bonanza power plant, on the Uintah & Ouray Indian Reservation in northeastern Utah. Deseret Power will use the additional generation capacity to supply electricity to several municipalities in Utah, seven of which submitted letters to EPA expressing their need for additional electrical power and stating that they plan to participate in the project. Included among the municipalities to be served by Deseret Power's new capacity is St. George, Utah, one of the top five fastest-growing cities in the nation, and a city committed to including renewable resources and efficiency improvements in meeting its energy needs. Importantly, Deseret Power's new generating unit will utilize an existing waste coal stockpile at the company's nearby coal mine, estimated to be in excess of

eight million tons. Absent use as a fuel as proposed by Deseret Power, the waste coal stockpile would otherwise be a wasted energy resource.

Deseret Power applied for its preconstruction PSD permit on April 13, 2004. Over the next two years, EPA's Region 8 Office conducted independent research to identify and evaluate available emissions control technology options and discussed with the company the technical aspects of applying these controls. The Region proposed a permit that would require the company to meet stringent emission limitations to satisfy the PSD requirements of the Clean Air Act. EPA published public notices in five newspapers in the vicinity of the project at the start of public comment period on the proposed permit and submitted Public Service Announcements about the proposed permit action to several local radio stations in Utah. During the public comment period, a group of eight environmental organizations, including the Sierra Club, submitted a comment letter raising issues on eleven major topics, with more than fifty sub-issues. Key issues raised by commenters included the control of greenhouse gas emissions; the scope of control technology review (including collateral impacts considerations); and whether Integrated Gasification Combined Cycle technology should be required for the facility. The only other adverse comments were submitted by a Utah citizen, on relatively minor permit clarity issues.

The Region reviewed and responded to the various interested stakeholders' comments received on the proposal and, on August 30, 2007, issued a final PSD permit to Deseret Power. Consistent with applicable regulations, EPA's permit requires the new unit to

meet the lowest emissions rates that can be achieved for this type of source under the circumstances. However, the permit did not impose emissions limitations on CO2; found that it was not necessary to address CO2 emissions in application of the Best Available Control Technology to non-GHG pollutants; and found that requiring IGCC technology would amount, impermissibly, to redefining the source.

Sierra Club on October 1, 2007 filed a petition seeking review of the Region's permit decision by the Agency's Environmental Appeals Board. Pending this appeal, construction of the project cannot begin.

EPA is conducting the same level of careful analysis and review it applied to the Deseret Power application to the Desert Rock, White Pine, and Carlson permit applications that are currently pending before the Agency.

III. Control of Greenhouse Gases Under the Clean Air Act

As I stated earlier, EPA has not limited its consideration of greenhouse gas emissions simply to the remand of the Supreme Court's *Massachusetts v. EPA* decision. As an initial matter, I must note that the Supreme Court in *Massachusetts* only reached the question of whether greenhouse gases emitted from new motor vehicles are air pollutants under the Clean Air Act; according to the Court, they are. Importantly, the Court did not answer whether the Agency *must* regulate greenhouse gas emissions, and if it chooses to do so, how and when. The Supreme Court's decision did not automatically turn greenhouse gases into regulated pollutants. It is up to me, as EPA Administrator, to make

requisite findings, including an endangerment finding and issue regulations under the CAA before the greenhouse gas "air pollutants" are actually regulated pollutants. Later this year the Agency will address the question of an endangerment finding at the same time that it proposes regulatory action using the President's "Twenty in Ten" plan as a starting point.

This distinction between unregulated air pollutants – which greenhouse gases currently are – and regulated air pollutants (such as NOx, lead, and other pollutants currently subject to EPA regulation) is important. Specifically, the Clean Air Act and EPA's regulations require PSD permits to contain emissions limitations for "each pollutant subject to regulation" under the Act. For nearly 30 years, EPA has consistently interpreted the term "subject to regulation under the Act" to describe pollutants that are presently subject to a statutory or regulatory provision that requires actual control of emissions of that pollutant[1].

In 2002, EPA codified this interpretation in regulations by defining the term "regulated NSR pollutant." This definition references pollutants regulated in three principal program areas:

1. pollutants for which the Administrator has established National Ambient Air Quality Standards (NAAQS),
2. pollutants subject to New Source Performance Standards (NSPS), and
3. class I or II substances under title VI of the Act.

[1]. See 67 Fed. Reg. 80186, 80240 (Dec. 21, 2002) (listing pollutants regulated under the Act); 61 Fed. Reg. 38250, 38309-10 (July 23, 1996) (listing pollutants subject to PSD review); 43 Fed. Reg. 26388, 26397 (June 19, 1978) (describing pollutants subject to BACT requirements).

It also covers any pollutant "that otherwise is subject to regulation under the Act." Because EPA has not established a NAAQS or NSPS for CO2, classified CO2 as a title VI substance, or otherwise regulated CO2 under any other provision of the Act, CO2 is not currently a "regulated NSR pollutant" as defined by EPA regulations. We are aware that, if in response to the *Massachusetts* decision, the Agency ultimately regulates greenhouse gas emissions from mobile sources, such greenhouse gases will become "regulated pollutants." However, today greenhouse gases are not "regulated pollutants . Accordingly, in the meantime, and under the Agency's historic interpretation of the PSD permit program requirements, greenhouse gas emissions are not yet regulated pollutants and therefore are not subject to emissions limitations in PSD permits. EPA simply lacks the legal authority under the PSD program to impose emissions limitations for greenhouse gas emissions on power plants.

The Agency continues to evaluate the potential effects of the Supreme Court decision on the mobile and stationary source provisions of the Clean Air Act. This work includes an analysis of the implications of the interplay between a mobile source rule that regulates greenhouse gases and the PSD program. We are also looking more broadly at the various sections and titles of the Clean Air Act, and the interplay between them, as we develop a thoughtful approach to responding to *Massachusetts v. EPA*. Just as the challenge of global climate change requires a coordinated effort among many nations, it also requires that we avoid a piecemeal approach to regulation. Given the complexity of issues involved, it would be premature to attempt to address climate change in a single PSD permitting action, particularly when carbon dioxide is not yet a regulated pollutant.

IV. Balancing the Issue of Climate Change with the Need for Environmentally-Resourceful Energy Generation

Global climate change is an enormously complex issue that deserves thoughtful consideration and requires more than a one size fits all solution. Indeed, allow me to frame the challenge as follows: how do we stabilize global concentrations of greenhouse gases in the atmosphere, when annual emissions from energy demand are projected under some scenarios to double or triple by 2100? The answer is we must transform the way the world generates and uses energy. To do so, we need cost-effective advanced technologies and policies to incentivize those technologies. And this needs to be done on a massive scale.

Developing such technologies and policies is not something that can be accomplished overnight; rather it requires – and deserves – a deliberate process, one that involves a range of stakeholders. While we continue to grapple with how best to address the challenge of global climate change, the Agency also has a legal responsibility to continue processing PSD preconstruction permit applications, such as that submitted over three years ago by Deseret Power.

On a broad scale, I believe the environmental and energy security goals of the United States are best served by encouraging the development of all forms of clean coal technology and the development of alternative fuels, while also using existing energy supplies in an environmentally sound way. The Deseret Power project – by supplying a

new source of electricity and using a previously untapped reserve of waste coal as fuel in a plant with modern pollution controls – helps meet these goals. The August 30th PSD permit allows Deseret Power to move forward in providing a reliable and secure supply of electricity, while at the same time making use of a previously untapped reserve of waste coal.

IV. Conclusion

Today I have outlined EPA's response to the Supreme Court decision on *Massachusetts v. EPA*, and our recent decision to permit an additional electric generating unit for a power plant in Utah. I look forward to working with you and other members of the Committee on these issues, and would be pleased to answer any questions that you might have. Thank you for the opportunity to testify.

Chairman WAXMAN. Thank you very much. You certainly came within the 5-minute period, so I guess you are really expecting to answer questions.

Mr. ISSA. Mr. Chairman.

Chairman WAXMAN. Yes.

Mr. ISSA. I would ask unanimous consent that our opening statements be admitted into the record, as we were not able to deliver them.

Chairman WAXMAN. That is certainly reasonable. Without objection, all Members will have an opportunity to submit for the purposes of the record an opening statement. Without objection, that will be the order.

Administrator Johnson, there are really two questions here. One is whether global warming impacts of these massive new power plants are a concern or not; and second, what authority do you have to address these impacts? I would like to put the authority question to the side and focus on what the real world impacts of these plants will be if they are built without any controls on greenhouse gas emissions. The Desert Rock Plant pending in New Mexico will emit 12.7 million tons of CO_2 per year. To put that in context, I earlier pointed out that eight States in the northeast have come together, created a regional cap and trade program for CO_2 emissions. It is called the Regional Greenhouse Gas Initiative, RGGI. You are familiar with that program, aren't you?

Mr. JOHNSON. Yes.

Chairman WAXMAN. OK. Now, a decision to permit the Desert Rock Plant, without requiring CO_2 controls, will negate the entire annual reductions that will be achieved by the northeastern States through this initiative. While these States are making sacrifices to address the threat of global warming, you are making permit decisions that undo all the good they are accomplishing. The proposed White Pine Plant pending in Nevada would have even greater emissions: 20 million tons each year. And these types of plants are massive capital investments that can cost $1 billion and they will last 50 to 60 years. Over its lifetime, the White Pine Plant would emit over a billion tons of CO_2. That is a stunning amount.

Are you aware of this, Administrator Johnson?

Mr. JOHNSON. Mr. Chairman, I am aware the White Pine permit is currently pending in the State of Nevada. I am also——

Chairman WAXMAN. Are you aware of the emissions that are going to come from these power plants?

Mr. JOHNSON. I am aware that the permit is pending and that there are a number of issues that the State will work its way through with regard to that permit.

Chairman WAXMAN. OK. Let's compare this impact to the effect of the voluntary programs that you and President Bush repeatedly promote. You have strongly advocated using voluntary programs, such as EnergyStar, to reduce energy use and achieve greenhouse gas reductions. You have said these programs are one of the highlights of the administration's climate policy.

EPA's major voluntary initiatives are EnergyStar, the methane program, the green power partnerships, the combined heat and power partnership, and the high GWP gas programs. Together, all of these programs have avoided 1.3 billion tons of greenhouse gas

emissions since President Bush took office. Yet the lifetime emissions of just two new power plants, Desert Rock and White Pine, would more than wipe out the past decade of benefits from all of these voluntary programs. Can you understand why members of this committee would be so concerned about the impacts of your failure to require CO_2 reductions from these two new coal-fired power plants?

Mr. JOHNSON. Mr. Chairman, we share your concern. In fact, when we go back to April, as you mentioned in your opening remarks, indeed, the Supreme Court decision is historic, it is complex. We are working our way through and thoughtfully considering the impacts, first on mobile sources and then on stationary sources. I am very proud of the fact that our voluntary or partnership programs are achieving real environmental results.

Chairman WAXMAN. But they will be wiped out. Those results will be lost if these power plants are permitted without any requirements to reduce CO_2 emissions. I think the problem is that the administration has no reservoir of credibility left on this issue. Global warming is an enormous threat to public health and the environment, yet virtually every action the administration has taken has been designed, first of all, to sow seeds of doubt about the science, oppose mandatory controls and undermine the activities of States that are trying to deal with these issues. The President withdrew from the Kyoto Protocol. He declared that carbon dioxide is not a pollutant. His political advisors edited government scientific reports to instill uncertainty about scientific conclusions and you still have not regulated CO_2 emissions.

If you were serious about addressing climate change, you wouldn't allow these new power plants to be built with no CO_2 controls. You would understand what an enormous threat these plants are and require them to use state-of-the-art pollution controls like coal gasification and carbon capture. What do you say to that?

Mr. JOHNSON. Mr. Chairman, as a Nation we have devoted $37 billion to investment in science, technology and even tax incentives. That is more than any other country in the world. With regard to EPA, in addition to our partnership programs, just a few weeks ago I announced that we are drafting regulations to regulate, to set up a regulatory framework for carbon sequestration storage, particularly the storage, as part of our underground control program, which is a necessary step as we move forward with capture and storage of carbon dioxide.

In addition, since the Supreme Court decision, we have announced that we are developing a proposed regulation to regulate greenhouse gas emissions from mobile sources. That is the first time in our Nation's history, and 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.

Chairman WAXMAN. Well, I appreciate all of that.

Mr. JOHNSON. Which is a very aggressive pace, as you are well aware.

Chairman WAXMAN. Well, but you don't dispute my statistics of what will happen if these two power plants have no CO_2 emissions restrictions.

Mr. JOHNSON. Mr. Chairman, I have not personally looked at the statistics on those two power plants. But I am certainly well aware, and as I mentioned, that we are working very diligently to develop an overall approach, overall strategy, for addressing greenhouse gas emissions, given the Supreme Court decision under *Massachusetts* v. *EPA,* under the Clean Air Act. And that includes stationary sources.

Chairman WAXMAN. My time has expired, but I would hope that you, as the head of the EPA, would take a look at the amount of emissions that would come from those power plants if you approve them over a 50 or 60 year period. And if we can get these reductions, we ought to get them before we agree to have new sources of such magnitude.

Mr. Davis.

Mr. DAVIS OF VIRGINIA. I will yield to Mr. Issa.

Mr. ISSA. Thank you, Mr. Chairman, thank you, Ranking Member Davis.

Administrator, I want to make sure we get one thing understood in the record. If I read correctly the *Massachusetts* decision, not only did it only apply to mobile, but really all it says is that you have this authority to deal with a huge, naturally occurring, clearly essential part of our air. Without carbon dioxide life on Earth stops. So it is not an element that you can eliminate. It is an element that, if you have too much of it, might cause a very bad side effect. If you have none of it, life ends. Is that correct?

Mr. JOHNSON. That is correct.

Mr. ISSA. OK. So what they have said is simply that you have the authority, but of course you have the authority subject to sane, properly worked out science, is that correct?

Mr. JOHNSON. When the Supreme Court made the decision, they made the decision that said CO_2 and other greenhouse gases are pollutants as defined under the Clean Air Act. They did not make the determination whether or not it was necessary to regulate them. They merely called them, or I should say not merely, but they defined them as pollutants, and then left the decision to me as Administrator as to whether they should or should not be regulated under the Clean Air Act.

Mr. ISSA. So essentially, if we would ask the question about nitrogen, oxygen, any of the other elements on the entire table and combinations of molecules, the answer would have been the same, which is if it possibly could adversely affect air quality for life on Earth, then you have authority to regulate it. That is really what it said, very broad. It could be a pollutant, therefore you can regulate it.

Mr. JOHNSON. That is precisely my response to the chairman, why the Supreme Court's decision was not only historic, but complex. Not only in terms of mobile sources and what it means for mobile sources, but also what it may mean for other parts of the Clean Air Act.

Mr. ISSA. When Chairman Waxman sent you a letter on September 17th, quoting, and I won't go into every one of these, but "Yet despite the urgent need to act, your agency is ignoring the threat of climate change in approving new coal-fired plants. This is both

illegal under the Clean Air Act and an enormous missed opportunity." Is that accurate, his assertion that it is illegal?

Mr. JOHNSON. No, sir. I would beg to differ with the chairman's characterization. In fact, our decision on Desert Bonanza PSD permit certainly follows what the law is of today. And certainly that is my responsibility under the Clean Air Act. Certainly as a matter of record, it goes through and discusses issues such as advanced technology, such as IGCC, and other technologies. So I think that I would not agree with that characterization.

Mr. ISSA. Administrator, have you had the opportunity to look at the NRDC's testimony for today?

Mr. JOHNSON. I have not.

Mr. ISSA. Well, then, would it surprise you that NRDC's testimony states, for example, the Kansas decision to deny a permit because of carbon dioxide emissions highlights the lack of EPA leadership on this issue? Would that surprise you that they would make an assertion that there was somehow a lack of leadership by your administration?

Mr. JOHNSON. It would not surprise me, but I think it is important to look at the factual record on the Kansas Sunflower permit. In fact, the decision to deny the Kansas Sunflower, or to approve or deny was in fact, a decision to deny was made at the Kansas State authority level. In fact, when you read the staff recommendations, and I do have a copy.

The Kansas Department of Health and Environment Bureau of Air and Radiation and Air Permitting Section, "The Kansas Department of Health and Environment Bureau of Air and Radiation recommends the issuance of an air quality construction permit to Sunflower Electric Power Corporation for construction of two new 700 megawatt coal-fired steam generating units."

Mr. ISSA. Administrator, does it surprise you that the NRDC, which sues you practically every day, I mean, that is a regular relationship you have with them, is that they sue you, is being featured here in testimony in spite of the Fifth Circuit when it said, "When a Congressional investigation focuses directly and substantially on the mental decision process of a commission," like yourself, "in which a case is pending before it, Congress is no longer intervening in the agency's legislative function, but rather in its judicial function." Would it surprise you that in fact the combination of litigants who sue you regularly and their testimony and your testimony on this process and the Fifth Circuit's fairly unusual statement pushing back on what we are doing here today, does that surprise you that is all coming together here today to interfere with your legitimate execution during a time of pending decision?

Chairman WAXMAN. The gentleman's time has expired, but please answer the question.

Mr. JOHNSON. Thank you, Mr. Chairman.

My concern is that as Administrator of the EPA, I depend and in fact enjoy a highly qualified, in fact, I think the world's best, environmental protection staff. I depend upon them providing me candid comments without the fear of having a chilling effect on their ability to provide me candid advice, particularly when we are in a pre-decisional time of trying to sort through what is the best decision that I should make with regard to issues such as, what is

the impact of the Supreme Court decision, *Massachusetts* v. *EPA,* what that may or may not be on stationary sources.

So I am concerned, very concerned about the potential chilling effect of this proceeding as we are talking, and as I am trying to sort through a very complex but a very significant issue.

Chairman WAXMAN. Thank you, Mr. Issa.

Mr. ISSA. Hopefully we will stand up and do the right thing.

Chairman WAXMAN. Mr. Johnson, you were asked to respond to my quote that said it was illegal and a lost opportunity. You said you didn't think it was illegal. Do you see it as a lost opportunity?

Mr. JOHNSON. Mr. Chairman, what I tried to say is, certainly, under the Clean Air Act, right as it stands now, it is not a regulated pollutant under the act. That is certainly the case. So as we sort through what the impact of the Supreme Court decision with mobile sources——

Chairman WAXMAN. That is a question of whether you have the legal authority. But don't you think it is a lost opportunity?

Mr. JOHNSON. Mr. Chairman, I have to obey——

Chairman WAXMAN. Just give me a yes or no.

Mr. JOHNSON. I have to obey what the law directs me to do at this point and work through expeditiously, which we are, but also responsibly to make sure that we are doing the right thing.

Chairman WAXMAN. OK, thank you.

Mr. Yarmuth.

Mr. YARMUTH. Thank you, Mr. Chairman.

Good morning, Mr. Johnson. Thank you for being here.

I am going to ask a couple of questions at the outset that may sound a little picky, but I am an editor by background and I worry about what words mean, particularly when, as I do, I have suspicions about the administration's commitment to environmental progress. On the second page of your statement, about midway through the paragraph, you say, these strategies, referring to strategies of reducing greenhouse gas emissions, "must be environmentally effective."

What does environmentally effective mean? I understand environmentally beneficial and environmentally sensitive. I don't understand effective.

Mr. JOHNSON. I would say that what we are trying to say is that there is an effect in a positive way on the environment. Of course, in many parts of our statutes, including the Clean Air Act, we are directed to balance the costs and benefits. Of course, that becomes part of the decision process. We are also required to, in parts of the Clean Air Act, to consider available technology, in some cases, the best available technology. So that becomes part of the equation for determining whether we have an effective environmental outcome.

Mr. YARMUTH. An effective outcome. Then on page 6, in the second paragraph, the first full paragraph on that page you talk about resulting policies would achieve genuine environmental results. I hope you mean positive results.

Mr. JOHNSON. I certainly mean positive results.

Mr. YARMUTH. In Kentucky, we have a lot of not so positive environmental results from energy extraction. That is a very significant concern of ours.

I want to move to a discussion of the Desert case and also the Supreme Court decision. As we have talked about, the court decision found that you do have the authority to regulate greenhouse gases. You recently granted a permit to Desert, as we know, to build the plant. You took the position that the law did not require you to regulate CO_2 emissions from these plants. I don't agree with that analysis, but for the purpose of my question, I want to focus on something else, and that is whether you had the authority to consider alternatives to the Desert Plant.

I want to read to you from Section 165(a)(2) of the Clean Air Act. It says that you have to hold hearings to consider "the air quality impact of such source, alternatives thereto, control technology requirements and other appropriate considerations." Now, the Desert Plan is not a very large facility. It would seem to me there is a fairly obvious alternative to that, of using maybe wind power or solar power. But there is no evidence in the record that you ever considered, the agency ever considered those alternatives.

Why did the EPA refuse to consider the possibility of rejecting this plant, the coal-fired plant, in favor of a wind or solar plant?

Mr. JOHNSON. There are several key points I would like to make to respond to your question. The first one is that alternative analysis, which is what you are referring to, the Clean Air Act does not require permitting authorities to independently study all potential alternatives that are not raised during the public comment process.

In addition, as part of the BACT analysis, the best available control technology analysis, commenters did not provide any evidence showing that the outcome of our BACT analysis would have resulted in a different choice of control technologies. Also, it is a longstanding policy that we would not use the BACT requirement as a means to re-define the basic design or scope of a proposed project.

Then third, the technology that was raised, IGCC, which is the Integrated Gasification Combined Cycle new technology, this alternative process not only represents a redefinition of the scope, but beyond that, it wouldn't work. It was technically infeasible because of the fuel and the plant size.

Mr. YARMUTH. According to the section that I read to you, it says that your agency is mandated to do, is required to consider the alternatives in the hearing, in the process. Did you not, do you disagree with that?

Mr. JOHNSON. There were public notices, several public notice and comments, which are all part of the record. As I said, the Clean Air Act does not require us to consider alternative analyses unless it was raised during the public comment. IGCC was one of the key areas that was raised during the public comment, and I have commented on the feasibility of that.

Mr. YARMUTH. My time is up, Mr. Chairman, but it seems to me that they certainly had the opportunity to pursue alternatives to permitting this polluting plant. Because I think it shows an unwillingness to do what might be in the best interest of the environment. I yield back.

Chairman WAXMAN. Thank you, Mr. Yarmuth.

Mr. Davis.

Mr. DAVIS OF VIRGINIA. Thank you, Mr. Chairman.

Mr. Johnson, do you think that the CAA is well-designed to regulate carbon dioxide emissions?

Mr. JOHNSON. Sir, I am faced with the reality that it is the act that I am to focus my attention on. Having said that, I think it is very important in responding to your question, as we considered as an administration the impact of the Supreme Court decision on mobile sources, it became very clear that a better approach than going through regulation, which I have already commented that we are going to be proposing a regulation, was a legislative fix. Certainly that is why the President proposed and certainly is encouraging Members of Congress to take up his Twenty in Ten plan, which would not only help for energy security, but would also help our environment in particular, addressing greenhouse gas emissions.

Mr. DAVIS OF VIRGINIA. Or we could just take up part of the plan, or we could just fix this legislatively, and it would be pretty easy, wouldn't it?

Mr. JOHNSON. Yes.

Mr. DAVIS OF VIRGINIA. How is CO_2 unlike other air pollutants that the EPA has effectively regulated under the Clean Air Act?

Mr. JOHNSON. It is, as we all keep using words, it is a global greenhouse gas. That presents a challenge, and part of the complexity. Having said that, being part of, in many things of uniqueness, the other part, which really shares, all sources share in common, and that is, how do you address it. The common element in addressing, whether it is mobile source or stationary source or whatever the source might be, is what is the technology that is available.

Of course, one of the things I am very proud as a Nation and under the President's leadership, we have been investing in technologies. Technologies like on the fuel side, cellulosic ethanol, which helps us in energy security and has a much better environmental profile, particularly with regard to greenhouse gases. And of course on stationary sources, carbon sequestration and storage is going to be key to addressing greenhouse gas emissions, particularly for a number of stationary sources. We have been investing a lot in trying to sort that out, and as I mentioned earlier——

Mr. DAVIS OF VIRGINIA. Higher miles per gallon, so higher CAFE standards help, too, don't they?

Mr. JOHNSON. And as part of the regulatory approach that we are going to be proposing by the end of the year is a higher fuel economy standard as well.

Mr. DAVIS OF VIRGINIA. Did you know that the Energy Bill passed by the House did not have higher CAFE standards?

Mr. JOHNSON. Sir, we think, certainly to address greenhouse gas emissions——

Mr. DAVIS OF VIRGINIA. That is one of the reasons I opposed it. I don't think you can be serious about this without raising that.

Mr. JOHNSON. That is correct.

Mr. DAVIS OF VIRGINIA. Let me just ask this. Are there different challenges associated with regulating mobile sources of CO_2 and stationary sources of CO_2?

Mr. JOHNSON. Again, I think that the challenges are very complex. Mobile sources, there is certainly a defined smaller universe of mobile sources. There is a very wide range of potential station-

ary sources that we have to consider. As I mentioned, I think one of the key, both differences, as well as similarities, is how do you address it. It is going to be technology driven.

Mr. DAVIS OF VIRGINIA. In your testimony you highlight the need to apply the law and the regulations that currently exist when evaluating a permit application. I think part of the thrust of the hearing is to give you the assumption you have more authority than maybe you feel you do under the law, which is why you want a statutory change as opposed to a broader interpretation of a judicial ruling.

Is part of your motivation behind that policy the desire not to be sued for arbitrary and capricious actions?

Mr. JOHNSON. Sir, the first is, I have to abide by the law as it is written today. That is certainly my first charge and responsibility. The second is recognizing that we are working diligently to understand what the impact of the Supreme Court decision and the steps we are taking on mobile sources, what effect that may or may not have on stationary sources.

Mr. DAVIS OF VIRGINIA. So if the law relates to, if the interpretation relates to one, but mobile and stationary may not be the same, there is a different interpretation on that?

Mr. JOHNSON. That is a very important question. That is the question we are asking ourselves.

Mr. DAVIS OF VIRGINIA. Also, aside from if you act arbitrarily and capriciously, you can get sued for that. I understand the argument here is let's be bold and let's move ahead, and you are saying, make a statutory change that makes it easy for you. But second, you want to create a sense of predictability and regulatory certainty, don't you, so that the business community can make rational investment decisions. If you are constantly changing policies without statutory authority, that is a hindrance. Is that a fair assumption?

Mr. JOHNSON. That is one of the key elements of the President's Twenty in Ten proposal, is that it provided certainty and also tends to eliminate the lengthy, lengthy litigation that goes on. So of course, when litigation happens, there is no environmental protection. That is why we would prefer to see, for mobile sources, the President's Twenty in Ten plan passed.

But in the meantime, we are developing regulations to pursue it from a regulatory, administrative standpoint.

Mr. DAVIS OF VIRGINIA. Thank you.

Chairman WAXMAN. Thank you, Mr. Davis.

Mr. Hodes.

Mr. HODES. Thank you, Mr. Chairman.

Good morning, Mr. Johnson, how are you?

Mr. JOHNSON. Good morning. Good, thank you.

Mr. HODES. I live in New Hampshire, where the natural air flow patterns that exist show that New Hampshire and much of the northeast is really the tailpipe of the country. We are subject to the air pollution of other industrialized portions of the country. So New Hampshire has joined other New England States in taking aggressive action on climate change and CO_2 emissions, far more aggressive action than the EPA seems to have been willing to do.

And we are feeling the effects in New Hampshire of climate change. They are evident in the patterns of snowfall and our maple syrup production. Our tourist industry depends on skiing. The effects in New Hampshire of global climate change are manifest. And 164 New Hampshire towns signed petitions, urging Congress, the President to take immediate action on climate change.

The United Nations Intergovernmental Panel on Climate Change [IPCC], won the Nobel Prize this year for its role in helping humanity understand the causes and effects of global climate change. One of their conclusions is that climate change is likely to adversely affect the health of millions of people. It will result in increased deaths, disease and injury due to heat waves, floods, storms, fires and droughts. Climate change will result in increased malnutrition, increased diarrheal disease and increased cardio-respiratory disease, due to higher levels of smog.

And the IPCC is not alone in sounding the alarm about climate change. The World Health Organization has also stated that climate changes poses serious health risks. They project that it now causes over 150,000 deaths annually. Earlier this week, the American Public Health Association announced a new policy on climate change. Their executive director stated, "Global climate change will undoubtedly have a detrimental effect on human health and the environment."

The White House, however, has tried to suppress discussions of the public health effects of climate change. When the CDC director testified before the Senate, her testimony was edited by the White House to delete the statement that CDC "considers climate change a serious public health concern." And a White House spokesman emphasized in the press that there could be health benefits from climate change.

Now, we have heard in this committee plenty about the politicization of science by this administration. You are now here as the Administrator of the Environmental Protection Agency. And I have a very simple question for you, to which I would like a yes or no answer. Do you agree that climate change is a serious public health concern?

Mr. JOHNSON. Sir, I believe that climate change is a serious concern. In the context of the Clean Air Act, the Clean Air Act defines whether it causes or contributes to public welfare or public health. So in the context of the Clean Air Act, we are currently evaluating all of the science, and by the way, I am very proud of the EPA scientists who are part of and participated in the Intergovernmental Panel on Climate Change. They are very capable and competent scientists.

So we are, as I mentioned to the chairman, we are going to be addressing the issue of endangerment, which then focuses on public welfare or public health as part of our proposal to regulate carbon dioxide for the first time in our Nation's history from mobile sources later this year.

Mr. HODES. That is a long way of not answering my question. I am asking you, Mr. Johnson, to tell us today, here, right now, do you consider climate change a serious public health concern? I want to know what you think.

Mr. JOHNSON. I have said what I think, and I will be happy to repeat it.

Mr. HODES. I don't want you to repeat that answer.

Mr. JOHNSON. All right. That is what I think, sir.

Mr. HODES. So the answer is, you don't know whether or not climate change is a serious public health concern?

Mr. JOHNSON. No, the answer is, in the context of the Clean Air Act, I do not want to prejudge an issue that is before me called endangerment, which I will be proposing to address later this year, by the end of the year, so that there will be an opportunity for everyone to comment on whether it is or isn't. We are working to address that issue, and it will be part of our notice and comment process later this year.

Mr. HODES. I will just finish up, Mr. Chairman, by saying this. Your refusal to answer the question which I have posed to you, even understanding the context of what you say is coming in terms of various evaluations you are performing, is stunning in the light of the scientific consensus that climate change is a major public health threat. And it is stunning that you, as the Administrator of the Environmental Protection Agency, refuse to tell Congress whether or not you consider this a serious public health concern. Frankly, it is why many people who talk to me rename your agency the Environmental Pollution Agency.

I have nothing further of this witness at this time.

Chairman WAXMAN. The gentleman's time has expired.

Did you want to say something? Yes.

Mr. JOHNSON. Thank you. I think that is a very unfair characterization, sir. We as an agency and certainly as an EPA employee, this year 27 years, we have consistently considered and achieved environmental protection. Our Nation's water is cleaner than it was a decade ago, certainly 36 years ago, even a few years ago. The same for our air and the same for our land. And I respectfully disagree with your characterization. I think that is very unfair and unkind to the hard-working employees of EPA.

Mr. HODES. Sir, it is not my characterization. As I said to you, it is what I hear from constituents and what I hear about the characterization. It is not mine, sir, at all. I know EPA people and I have no truck with the work that many fine employees of the EPA do. What I find stunning is your refusal to admit, concede or acknowledge that global climate change is a serious public health concern.

Mr. JOHNSON. And I said I think it is very inappropriate of me to prejudge and to make a comment on a regulation that I am going to be proposing.

Chairman WAXMAN. He didn't ask you about the regulation. He asked you whether you thought that climate change was a public health issue. Now, you are committed to reducing pollution in the water. You are mandated by law to do it, but I assume you are committed to it. You are committed to reducing pollution in the air. That is what the Clean Air Act requires, and I assume you are committed personally to trying to achieve those objectives.

You may or may not have legal authority to deal with climate change, but do you think it is a problem? That is what he asked you. It is not an insult to your employees.

Mr. JOHNSON. And I said to your comment, Mr. Chairman, and as I said, I speak for the agency. I, Steve Johnson, am the Administrator of the agency. And when I speak, I speak on behalf of the agency and as Administrator. I have said I cannot and will not prejudge what we are going to propose to address——

Chairman WAXMAN. He asked you, do you think it is a public health problem?

Mr. JOHNSON. As I said, the consequences of his question are directly related to the issue of endangerment under the Clean Air Act. That is why I said I am not going to prejudge until we have an opportunity to propose.

Chairman WAXMAN. Then I think the question has been asked and answered.

Ms. McCollum.

Ms. MCCOLLUM. Thank you, Mr. Chair.

Mr. Johnson, you said you were very proud of the work of your scientists in the EPA. Did you strongly object and let people know forcefully that you did not appreciate the fact that some of the writings that the scientists had presented on global climate change had been altered by the White House?

Mr. JOHNSON. Again, my experience as a 27 year veteran of the agency is that there is an appropriate, and I think it is good government to have inter-agency review——

Ms. MCCOLLUM. So you answered the question, then, it is OK to alter science, then?

Mr. JOHNSON. No, that is not what I said.

Ms. MCCOLLUM. Well, you said you were proud of the work that your scientists did. You keep referring to the fact that you are going to go with scientific information. Yet White House policy drivers altered scientific documents, and I asked you if you objected to it, yes or no.

Mr. JOHNSON. In my tenure as Administrator, I have not experienced that.

Ms. MCCOLLUM. Did you object to it, yes or no?

Mr. JOHNSON. I said, in my experience as EPA Administrator, I have not experienced that. And that has certainly not been my experience of the past 27 years, either.

Ms. MCCOLLUM. So the White House did not interfere at all with any of the testimony that has been put forward by Government-paid scientists, people who work in the pollution control agency, people who work for the CDC, to your knowledge, the White House never interferes?

Mr. JOHNSON. I can only speak to that of the EPA, and in my experience it is not——

Ms. MCCOLLUM. And if you knew that was happening, if you knew that was happening, would you speak up and speak out?

Mr. JOHNSON. Again, there is a line which I certainly support and have supported through the years. I think it is appropriate for testimony and key policy issues to go through inter-agency review.

Ms. MCCOLLUM. I hear what you are saying, you think it is appropriate for the White House to alter documents, then.

Mr. JOHNSON. Well, that is not the case.

Ms. MCCOLLUM. That is—well, that is what is going on here.

CO_2 occurs naturally. That is a given. But when you have coal plants and cars emitting more of it, then volume becomes a problem,a nd a lot of scientists think it is a public health problem. In fact, President Bush has decided that we need to regulate car emissions. So if the Supreme Court says you need to be looking at doing your job and regulating pollution, you are the pollution control agency, the President wants to do something about car emissions, we have California, Wyoming, Washington and the northern States coming up with creative ideas. The States, after all, are the laboratory of which makes this country strong.

You feel that you are under no compulsion to regulate CO_2?

Mr. JOHNSON. As I have said, we are in the process of proposing to regulate greenhouse gas emissions, CO_2 is one of those, from mobile sources. There are two ways to do it, fuel and through the CAFE program. We are proposing that by the end of this year——

Ms. MCCOLLUM. Sir, if I could, when I as a person breathe CO_2, my lungs doesn't say mobile source, stationary source, you are OK, it is from a stationary source, it is a public health problem for me to be involved in having pollutants around that are affecting climate change. It affects my public health, whether it comes from a car or whether it comes from a power plant doesn't change the fact that it is a pollutant. Am I not correct with that? It is not any different if it comes from a car or a power plant, is it?

Mr. JOHNSON. One thing you need to be certainly aware of is the health effects that have been identified by IPCC and others are generally characterized as what you would call indirect health effects. In other words, the level of carbon dioxide for a human of concern is a very high level where there is a——

Ms. MCCOLLUM. Mr. Johnson, my question wasn't that——

Mr. JOHNSON [continuing]. Health consequence. So I just want to make sure that you understand the science.

Ms. MCCOLLUM. I understand the science. And I understand that it has been altered by this White House. My question is, if it is CO_2, does it make any difference to global climate change or to me indirectly for my health whether it comes from a mobile source or a stationary source? And if it doesn't make any difference, then why aren't you regulating it? Because the President of the United States thinks we need to regulate it at least at the mobile source level. You are the pollution control agency.

Mr. JOHNSON. As I said, we are working through what the Supreme Court said. We have made a decision in the context of mobile sources that we are going to proceed with and propose regulations to propose. We are working through what that means for, as well as what the science says, for stationary sources. So we are working aggressively but deliberatively. As I said, as a 27 year veteran, not only a veteran, my background, I am a scientist by training.

Chairman WAXMAN. Thank you, Ms. McCollum.

Mr. Shays.

Mr. SHAYS. Thank you, Mr. Administrator. As I listen to this, I feel we are all over the lot. Frankly, the administration bears the burden of not waking up early to global warming, in my judgment, and has basically said the marketplace is going to take care of a lot of these problems. And I think it does, I think it does it too late.

But Congress is reprimanding you for not doing and enforcing rules and regulations that I don't think we have given you necessarily the power to do. Because Congress can't even agree, we are wrestling whether we are going to have 35 miles per gallon and 15 percent renewable by the year 2020. And it is questionable whether that will pass the House and pass the Senate.

So what we can't pass in law we want you to kind of deal with administratively. I am struck by the fact that 100 of the Senators, 100 percent of the Senators, all 100 said, do not give us a Kyoto Agreement that does not include India and China. And President Clinton was not able to negotiate China and India into it. So he never submitted it to the Senate, because there were only about five Senators who would have voted for it.

I wish to God the President had submitted Kyoto without prejudice to the Senate, because it probably would have had at best 20 votes. Then we wouldn't have so many Senators acting like they would have supported it. At least we would have a more honest dialog.

I am struck by the fact that we want certain things to happen, like global warming dealt with, but we don't want nuclear power. We want cleaner air, and my plants in Connecticut use coal, but we don't want liquified natural gas. So I am struck by the fact that Europe is dealing with global warming and we give them credit, but we don't want to use the same mechanisms they are using to deal with it.

So as I listen to this, I think people can throw stones at you and get away with it, because frankly, the administration hasn't been the champion of dealing with global warming. And that I think is regretful.

I am struck by the fact that the *Massachusetts* v. *EPA* said, "We need not and do not reach the question whether on reprimand EPA must make an endangered finding or whether policy concerns can inform EPA's actions in the event that it makes such a finding. We hold only that EPA must ground its reasons for actions or inactions in the statute."

Now, what I am hearing in this debate is that you are legally bound to come to a decision about global warming and so on that has to go through a process. Whether or not you feel that CO_2 is dangerous to one's health has to go through a process. That is what I am hearing you say. And you may and say it is.

Now, the one thing I am struck with though about CO_2 is it is not localized. Explain to me what that means. In other words, CO_2 spreads out over, it doesn't stay stationary. Tell me if that is a factor in what we are wrestling with. Tell me why some think CO_2 is different than other pollutants.

Mr. JOHNSON. You have raised a number of very key points. The first is, I think that certainly the issue of global climate change before Congress really helps illustrate the complexity and the difficulty of addressing it. Of course, again, I am very proud both of the President's leadership and the agency.

Mr. SHAYS. Give me the facts right now, rather than being proud right now.

Mr. JOHNSON. We have spent more money than any other country in investing in science. We are going to be regulating——

Mr. SHAYS. Let me ask you this question. To the first point of whether you are being responsive or not to the questions asked, what I understand is, you have a court mandate to come back to us. Is that true or not?

Mr. JOHNSON. The court mandate clearly lays out that it is a pollutant, then it is up to me as Administrator to determine the issue of endangerment or what the next steps will be.

Mr. SHAYS. So, one, it is a pollutant, but then the question is what kind?

Mr. JOHNSON. The next steps, it is up to us, and as the President has announced, we are proceeding with regulation to regulate it from mobile sources.

Mr. SHAYS. Why will it take, by the end of this year and the next——

Mr. JOHNSON. We will be proposing.

Mr. SHAYS. Will then the question be answered that was asked of you?

Mr. JOHNSON. Yes.

Mr. SHAYS. So there will be an answer and it will be an official answer going through a process?

Mr. JOHNSON. That is correct.

Mr. SHAYS. OK. Tell me the other aspect of CO_2.

Mr. JOHNSON. CO_2 is well mixed in the atmosphere, whereas, other pollutants seem to be localized or can get into the atmosphere. CO_2 is among the unique gases that it is well mixed in the atmosphere. In fact, individual sources all contribute to what is effectively a global pool. That is one of the challenges that we face, both in our science understanding but also in the challenge of how are the best ways to address that. As I mentioned to your colleague, clearly technology is going to be the issue, whether it is mobile source or stationary source or other sources.

Mr. SHAYS. Thank you.

Chairman WAXMAN. Thank you, Mr. Shays.

Mr. Johnson, we are being summoned for a single vote on the House floor. We are going to recess and then continue with you. I know that Members will want a second round and we have some Members who haven't even had the first round.

Mr. DAVIS OF VIRGINIA. We have to go cancel each other on this vote. [Laughter.]

[Recess.]

Chairman WAXMAN. The hearing will come back to order.

I am waiting for some of the Members who have not had their opportunity for a first round, but rather than lose this opportunity to question you, I will just take my second round.

Any objection? [Laughter.]

Oh, Mr. Sarbanes, you haven't had a chance for the first round. Do you want to ask questions now? You are welcome to.

Mr. SARBANES. Mr. Chairman, I have no objection. [Laughter.]

Chairman WAXMAN. Well, thank you very much.

Mr. Johnson, you have indicated that you are considering some regulations on mobile sources based on the Supreme Court decision. Now, has your counsel instructed you not to look at the stationary sources, the power plants? Did he say that you don't have the authority to do that?

Mr. JOHNSON. That is a very important question. As part of our deliberative process that we are evaluating, as I said, we are very clear that we are going to be proposing to regulate CO_2 and greenhouse gases from mobile sources. We are evaluating what the impact of the Supreme Court decision and obviously what we are proposing to do on mobile sources, what impact if any that will have on stationary sources. So it is very much being considered as part of the agency deliberative process.

Chairman WAXMAN. I wrote you a letter requesting you provide the committee with documents relating to the Supreme Court decision. Some of the documents were given to us, others not. But we learned from these documents that EPA has had multiple meetings with the White House about regulating stationary sources of greenhouse gas emissions. Committee staff also reviewed four internal EPA documents that describe what EPA is currently considering in response to the Supreme Court case. Unfortunately, EPA has refused to provide these documents to the committee prior to today's hearing. Are you familiar with the EPA documents that EPA is currently withholding from the committee?

Mr. JOHNSON. I am familiar with those, yes, sir.

Chairman WAXMAN. Administrator Johnson, ordinarily I understand the need to keep internal strategy documents confidential. But these documents are incredibly cynical. They show that you are considering issuing the weakest possible CO_2 standards for power plants at the last possible minute before this administration is out of power. The motivation appears to be to preempt the ability of your successor to take meaningful action. Unless the President is prepared to assert executive privilege over these documents, I believe they should be provided to the committee. If you have a secret plan to issue the weakest possible standards at the last possible moment, I think they should be exposed to the American people.

Is the President going to assert executive privilege over our document request?

Mr. JOHNSON. No, not at this time, Mr. Chairman. But let me——

Chairman WAXMAN. Is there any reason why we should not get these documents?

Mr. JOHNSON. Well, yes, and let me explain. I am currently evaluating, both being educated, but also evaluating what options may or may not be available and what the impact of the Supreme Court decision and the direction we are heading on mobile sources, on stationary sources. So we are very much in a pre-decisional mode. I have not made any decisions, and——

Chairman WAXMAN. Well, I am not asking——

Mr. JOHNSON [continuing]. What I am very concerned about is the chilling effect that would occur within the agency if agency employees believed that their frank and candid comments were going to be released before I made a decision while I am in the decision-making process, that is of grave concern. Mr. Chairman, we fully, and I certainly fully respect your responsibilities as chairman of the Oversight Committee. That is why I had my staff come up and brief you.

But given the fact that we are pre-decisional, I have not made any decisions, and this chilling effect it would have on my staff providing candid comments, and further, as the EPA response to your letter noted, that the committee really hasn't articulated why further access to these documents, which really don't discuss the PSD permitting issue with Desert Bonanza, which certainly is my understanding was the subject of this committee's investigation, particularly in light of the significant accommodations, we didn't think that it would be appropriate to expose those documents at this time.

Chairman WAXMAN. When you make accommodations for information for the Congress, you are not just doing us a favor. You are doing what is required.

Mr. JOHNSON. No, and I fully support that, that is why we did it.

Chairman WAXMAN. We are trying to do our job. And our job, unless you have a legal reason, I ordinarily expect these deliberative documents. But unless you have a legal reason to withhold it, what we seem to see is that EPA is in your deliberative process, not just planning to address the issue in a way that I consider very weak, but deliberating on how to make it weak so that you can bind your successors. On that basis, I think we are entitled to those documents, and we are going to have to confront this issue. But I do believe we are entitled to it. If my guess is right as to what is happening, I think it is even more imperative that the Congress of the United States have access to them.

I want to recognize the gentlelady from California.

Ms. WATSON. Thank you so much, Mr. Chairman.

Administrator Johnson, this morning you testified primarily about greenhouse gas emissions of stationary sources like power plants. These sources are major contributors to climate change, but they are only part of the problem. Mobile sources like cars and trucks are also an enormous part of the problem.

I represent Los Angeles, CA. We are the largest State in the Union, and on average, there are six cars per one. I was in the Senate for 20 years, and for the last 30 to 40 years, we have been working to clean up our atmosphere. When I first went to Sacramento and was coming back to my district, it looked like we were going through a valley of tar. It is very, very much cleaner than it was 30 or 40 years ago.

In 2002, California took action to regulate greenhouse gas emissions of automobiles. And we developed a sensible plan to reduce vehicle emissions and then requested from EPA the necessary waivers in order to enforce our regulations in December 2005. A dozen States have decided to also adopt California's regulations. In June, we learned that the Department of Transportation had organized an lobbying campaign to generate opposition to our rules.

So the committee, as a result, has been investigating this matter. The Transportation Secretary's Deputy Chief of Staff confirmed to the committee that the Department of Transportation "is hoping to solicit comments against California's waiver." A number of internal DOT documents indicate that their lobbying campaign was coordinated with the White House and with EPA.

Some e-mails, and we have a copy of them, indicate that you spoke with Transportation Secretary Peters about California's waivers. My question directly to you, under oath, did you discuss the California waiver with Transportation Secretary Peters?

Mr. JOHNSON. As I testified before the Senate Environment and Public Works Committee——

Ms. WATSON. Yes or no.

Mr. JOHNSON [continuing]. As part of our regular and routine conversations——

Ms. WATSON. Yes or no.

Mr. JOHNSON [continuing]. I contacted Secretary Peters to give her an update on the status of several actions before the agency. One of the items I wanted to notify her of was of the comment period on the California——

Ms. WATSON. So the answer is yes.

Mr. JOHNSON [continuing]. Waiver request was closing, that I had received requests for extension, which I was inclined to deny——

Ms. WATSON. OK, you answered my question.

Chairman WAXMAN. The gentleman has answered the question, Ms. Watson.

Ms. WATSON. Yes, I am going on to the next.

Did she tell you that she was going to lobby Governors and Members of Congress to oppose California's request?

Mr. JOHNSON. I do not recall any specific discussion regarding contacting congressional offices, including particularly whether to solicit opinions on the California waiver.

Ms. WATSON. Did you discuss DOT's lobbying plan with Secretary Peters or anyone else at DOT?

Mr. JOHNSON. I do recall asking Secretary Peters whether she was aware of anyone else seeking an extension on the comment period. Of course, a day after that, I instructed my staff to deny the request for an extension of the comment period.

Chairman WAXMAN. The gentleman does not seem to answer the question. Did she tell you that she was going to lobby Governors as well as Members of Congress? You answered Members of Congress.

Mr. JOHNSON. I don't recall any discussion of lobbying——

Ms. WATSON. You don't recall?

Mr. JOHNSON. Of lobbying.

Ms. WATSON. OK. Let me see if I can get through my questions, because I see the lights. On May 23, 2007, DOT's chief of staff sent an e-mail that suggests you might have asked Secretary Peters to initiate this lobbying campaign, and the e-mail states, Johnson asked her to do this yesterday.

Now, Mr. Johnson, did you ask Secretary Peters to initiate the lobbying campaign?

Mr. JOHNSON. I have answered the question of what I discussed with her and asked of her. And I did not ask her to lobby.

Ms. WATSON. Another internal DOT e-mail indicates that the White House staff discussed the California waiver and the DOT's lobbying effort with you. Did you discuss the lobbying effort with anyone at the White House?

Mr. JOHNSON. I don't recall having any discussion on that topic with anyone in the White House.

Ms. WATSON. OK. Now, remember, Administrator Johnson, you are under oath, can you promise us now that you will decide California' request for a waiver purely upon the merits of the request and not based on political factors?

Mr. JOHNSON. I can assure you that under the Clean Air Act, it is the responsibility of me to make a decision, independent, based upon the record. I intend to do so, and I have committed to the Governor to have that decision made by the end of the year. As you are probably well aware, this waiver request——

Ms. WATSON. As what is all aware?

Mr. JOHNSON. I was just going to say——

Ms. WATSON. As Republicans are all aware?

Mr. JOHNSON. No, as everyone is well aware, we have over 100,000 comments, literally thousands of pages of comments, of technical and scientific comments, that we are expeditiously yet responsibility reviewing.

Ms. WATSON. My time is over. Let me just make this last statement, Mr. Chairman, if I may. My understanding that California is filing suit today against you for failure to grant their waiver and the administration's approach to this matter has been completely irresponsible and rather than working with the States to increase environmental protection, the administration has waged a secret effort to undermine it.

Thank you so much, Mr. Chairman.

[The prepared statement of Hon. Diane E. Watson follows:]

Opening Statement
Congresswoman Diane E. Watson
Oversight & Government Reform
Hearing: "EPA Approval of New Power Plants"
November 8, 2007

Thank you Mr. Chairman for holding today's hearing concerning the Environmental Protection Agency's refusal to consider the global warming effects of coal-fired power plant's greenhouse gas emissions. In order to understand the causes of global warming we must take into consideration all pollutants that are distributed into the environment. That why it is imperative that the Environmental Protection Agency reconsider the global warming effects of coal-fired power plants.

Greenhouse gas emissions are a serious global threat that jeopardizes the health and welfare of

millions of people across the world. The rising temperatures across the globe have displaced wildlife and altered our water supplies. If this trend in rising temperatures continues we will notice that natural disasters like the recent California wildfires will grow in number and become more frequent.

If the E.P.A. fails to regulate greenhouse gas emissions, which it decided to do in the case of issuing a permit to Desert Power to construct a 110-megawatt coal-fired power unit at the Bonanza Power Plant in Uintah County, Utah, we will see increased levels of carbon dioxide emissions released into the environment. It is estimated that this relatively small unit could produce up to 90 million tons of carbon dioxide over an estimated 50-year lifetime.

This is frightening to think about, if a small plant can pump out that much emissions, what about the three other proposed coal power plants in New Mexico, Nevada and New York that are under review by the E.P.A.; Their combined estimated output of carbon dioxide emissions could be nearly a billion tons.

I hope the E.P.A. strongly reconsiders their current practice and adds coal fire power plants greenhouse gas emissions to the criteria of receiving a permit .

Thank you Mr. Chairman for the time and I yield back.

Chairman WAXMAN. Thank you, Ms. Watson.

Mr. Johnson, in her May 31st e-mail to her chief of staff, Secretary Peters refers to "calls to the Governors on the issue I had discussed with Administrator Johnson." So she, in her e-mails, referred to a conversation with you to call the Governors. And on June 6th, the Secretary's executive assistant wrote, "Administrator Johnson has just called and would like to speak with S1 this morning," and Mr. Duvall, the Assistant Secretary, responded, "OK, they think it may be about the California waiver." Why would Secretary Peters say that she had discussed this with you about lobbying the Governors?

Mr. JOHNSON. Mr. Chairman, I can't speculate on what e-mails that either the Secretary or that occurred within the Department of Transportation. As I have stated for the record and under oath, I do recall asking Secretary Peters whether she was aware of anyone seeking an extension on the comment period. That was the purpose of my phone call. Whether or not there was a need, was she aware of anyone wanting to extend the comment period.

Chairman WAXMAN. Why would you make that phone call to the Secretary?

Mr. ISSA. Point of order, Mr. Chairman.

Chairman WAXMAN. The chairman has the right. Why would you make——

Mr. ISSA. Point of order, Mr. Chairman. The rules of the House and the rules of this committee call for 5 minutes per side divided. It does not have a separate——

Chairman WAXMAN. I understand the rule. But on behalf of the Governor of our State and in the interest of our State, I want an answer to this question. Why would you have made the call——

Mr. ISSA. Mr. Chairman, it is my State, too. I ask for regular order.

Chairman WAXMAN. The gentleman has made a point. I am just going to ask you to answer this one question. Why would you have called the Secretary of Transportation about this issue at all?

Mr. JOHNSON. Because I know that she is very interested in issues of transportation. This is an issue of whether she was aware that there was anyone who was going to ask for an extension of public comment period, and as I said to her, and certainly I would ask that my statement, the comments made before the Senate EPW be made part of the record here, is that I said I was inclined to not approve, and a day later, that is what I did.

Chairman WAXMAN. OK, thanks.

Mr. JOHNSON. That is the extension of the comment period, to be clear.

Chairman WAXMAN. Mr. Sali, I think it is your turn next.

Mr. SALI. Thank you, Mr. Chairman.

If we were going to deal with all of the sources of carbon emission, greenhouse gases, what would do us the most good? Where could we make the most impact?

Mr. JOHNSON. Well, it is clear that one is, it is important that as we reflect on the Supreme Court decision and the complexity of the Supreme Court decision, as well as the complexity of technology and science, that we look at all of these issues. It is clear that electric generating units are the major source of carbon diox-

ide in the United States. Second is transportation. Then third, there are a variety of other sources.

Of course, before the agency, given the Supreme Court decision in *Massachusetts* v. *EPA,* the focus is on mobile sources. So we are, as I have already mentioned, going to be proposing regulating CO_2, greenhouse gases, from mobile sources by the end of this year. And as we prepare that proposed regulation, we are also considering what the impacts of the Supreme Court decision and our action on mobile sources will have on these other, including stationary sources. So we are very much on an internal, deliberative, thoughtful process. I have made no decisions. It is an important issue, it is a complex issue and we are working diligently and expeditiously, but responsibly.

Mr. SALI. In the State of Idaho, we had over 2 million acres of forest land that burned up this year. My guess would be that would be a significant source of carbon and other types of gases that might contribute to global warming. You didn't include that in your list of sources, and I am wondering, is there any effort on the part of the EPA to look outside of the sources that you have described here?

By way of reference, I understand that the fires in the Yukon, in Canada and Alaska in 2004, a pretty significant fire, emitted as much carbon as all man-made sources in all of the continental United States for the rest of the year, just that one fire. Has your agency looked at any of that as a way to perhaps deal with the balance of where we should look to get the most bang for the buck?

Mr. JOHNSON. EPA does not regulate forests, and of course, under the President's Healthy Forests Initiative, a key feature of that is to help to manage in a better way potential outcomes or adverse outcomes like forest fires.

With regard to the pollution that is emitted from forest fires, that is something that through a variety of monitoring stations that we have, or that the States have in place, or tribes have in place, are often picked up, and we have to assess that as part of whether, in fact, States or tribes are in compliance with the Clean Air Act.

Mr. SALI. Well, isn't it possible, though, that you are contributing carbon or other types of emissions to stationary or mobile sources that might be coming from forest fires?

Mr. JOHNSON. Certainly, combustion of product contributes to greenhouse gas emissions.

Mr. SALI. How shall we, as a committee, dealing with oversight of this, how should we proceed? Because we apparently want a more comprehensive view than your agency is charged with. What suggestions would you have for us?

Mr. JOHNSON. That is a great question. I don't have any answer off the top of my head, but certainly look forward to working with you as you address the whole issue of global climate change. I did also want to mention that we are one of the ones in the Federal Government that actually maintains and does the accounting and inventory of greenhouse gas emissions for reporting, not only to the public, but as well as the U.N. framework for climate change. So we can look and we have looked and will continue to look over the

years to see what the trends are, if we are aware of any influences, like major forest fires.

Again, from a science perspective, it is often difficult to discern in these local conditions of how they contribute to this global problem of greenhouse gas emissions. I look forward to working with you.

Mr. SALI. Do I hear you committing that you are going to be looking at that as you go forward?

Mr. JOHNSON. I will be happy to work with you and our colleagues who have oversight responsibility, regulatory authority for our forests in the Nation, not only the U.S. Department of Agriculture and the Department of Interior.

Mr. SALI. Thank you, Mr. Chairman.

Chairman WAXMAN. Thank you, Mr. Sali.

Mr. Kucinich.

Mr. KUCINICH. Thank you, Mr. Chairman.

Mr. Johnson, you called Secretary Peters at the Department of Transportation to tell her about the closing of the comment period with respect to the California waiver issue, is that not correct?

Mr. JOHNSON. It would be a better characterization that I have regular and routine conversations with my Cabinet colleagues. During one of those routine conversations, I mentioned that subject. There were other subjects that we talked about. But I——

Mr. KUCINICH. But you did call her to tell her about the closing of comment period?

Mr. JOHNSON. As I said, there were other topics that I talked to her about.

Mr. KUCINICH. What else did you talk to her about?

Mr. JOHNSON. On that particular day that I talked to her, I was supposed to be testifying in 2 days. The head of NHTSA was supposed to testify with me. I talked to her and said that I was going to be calling one of her senior people to ask if there were any questions——

Mr. KUCINICH. So you talked about many things. Now, did you call the Energy Secretary to tell the Energy Secretary that the comment period was closing?

Mr. JOHNSON. Again, this was dealing with transportation issues, and I did not talk to, I don't recall talking to the Secretary. That is my recollection.

Mr. KUCINICH. Did you talk to the Energy Secretary?

Mr. JOHNSON. I have routine conversations with——

Mr. KUCINICH. Did you talk to the Energy Secretary about the closing of the comment period?

Mr. JOHNSON. To the best of my recollection, no.

Mr. KUCINICH. Did you talk to the Commerce Secretary about the closing of the comment period?

Mr. JOHNSON. To the best of my recollection on this issue, no, but again, I have routine conversations with Secretary Guitierrez as well.

Mr. KUCINICH. Good enough. Did you talk to anybody in the Executive Office Building about the closing of the comment period?

Mr. JOHNSON. I don't recall having a conversation with anybody there.

Mr. KUCINICH. Did you talk with anybody in the coal industry about the closing of the comment period?

Mr. JOHNSON. No, I did not.

Mr. KUCINICH. Did you meet with anybody in the coal industry in terms of promulgating rules with respect to the decision that the EPA made with respect to approval of new power plants?

Mr. JOHNSON. I personally did not.

Mr. KUCINICH. Did anybody on your staff talk to people in the power industry?

Mr. JOHNSON. As part of a routine permitting process, staff in our regions do meet with the permittee.

Mr. KUCINICH. Why did you call the Department of Transportation Secretary, since there seemed to be a close coincidence between the time that the closing period was coming up and the occasion of your call? At the time that the closing period was coming up, did that have something to do with your initiating that call to her?

Mr. JOHNSON. Again, I contacted Secretary Peters to give her an update on the status of several actions before the agency. And one of the items I wanted to notify her of was that the comment period on the California waiver request was closing. While I had received request for extension, I was inclined to deny these requests. And I—excuse me?

Mr. KUCINICH. Did you tell your general counsel that you were leaning toward not extending the comment period, but you wanted people to know that you had the discretion to accept late-filed comments?

Mr. JOHNSON. That is under the Clean Air Act and under petition process acceptable procedure.

Mr. KUCINICH. And did your general counsel then communicate that legislators and Governors should not despair if they can't meet the June 15th deadline?

Mr. JOHNSON. I don't recall that conversation.

Mr. KUCINICH. I am really concerned we have a condition here where we see the EPA defending a flawed legal interpretation of the Clean Air Act all the way to the Supreme Court, delaying approving the waiver necessary for California to enforce its regulation of greenhouse gases, granting permits to coal-fired plants without even considering alternatives for reducing greenhouse gas emissions. Mr. Chairman, when I listen to this recitation, you are supposed to be the Environmental Protection Agency, Mr. Johnson. It seems that under the Bush administration, the EPA is beginning to be better described as Every Polluters Ally.

Thank you, Mr. Chairman.

Chairman WAXMAN. If the gentleman would yield to me, I find this very hard to believe.

Mr. KUCINICH. I will yield remaining time to the Chair.

Chairman WAXMAN. I find this very hard to believe. You took the time to call the Secretary of Transportation about a comment period, but you didn't call the Secretary of Commerce and you didn't call the Secretary of Energy, who also have an interest in this rule. Is that your testimony?

Mr. JOHNSON. As I have stated, to the best of my recollection, as part of my regular and routine conversations, I contacted Secretary Peters——

Chairman WAXMAN. Well, wait a second. Rather than read your statement back to me, because obviously you have it there in writing, you are a busy man. Did you know at the time you called her that she was engaged in a lobbying effort against the California waiver?

Mr. JOHNSON. I did not know. To the best of my recollection, I did not know.

Chairman WAXMAN. Well, I am glad you threw in the best of recollection, "I did not know," because you are afraid of maybe saying "I did not know" might be contradicted? I mean, you are under oath, so it sounds like to me like——

Mr. JOHNSON. No, Mr. Chairman——

Chairman WAXMAN. Were you briefed by——

Mr. JOHNSON [continuing]. I have routine and——

Chairman WAXMAN. Excuse me, Mr. Johnson, I am in the middle of a question.

Mr. JOHNSON. I am trying to answer your question, sir.

Chairman WAXMAN. Were you briefed by your lawyer how to say things so that you wouldn't be committing perjury?

Mr. JOHNSON. Mr. Chairman, I have regular and routine conversations with members of the Cabinet——

Chairman WAXMAN. But not the others. Only with the Secretary of Transportation on this issue.

Mr. JOHNSON. I have routine and regular conversations with members of the Cabinet. And I recall the conversation I had with Secretary Peters. I testified before the Senate EPW. To the best of my recollection, that testimony reflects my remembrance of the conversation.

Chairman WAXMAN. We will incorporate that testimony by reference. But I want to ask you, did you know at the time you had that conversation with her that the Department of Transportation, which was losing jurisdiction over CAFE standards to EPA, did you know that the Department of Transportation was unhappy about it and was trying to lobby against California getting this waiver?

Mr. JOHNSON. Mr. Chairman, I stand by my statement that——

Chairman WAXMAN. Which is?

Mr. JOHNSON. Which is, I do recall asking Secretary Peters whether she was aware of anyone else seeking an——

Chairman WAXMAN. No, no, you didn't answer me. Did you know what her view was and did you know she was lobbying against the California waiver?

Mr. JOHNSON. As I said, this is the best of my recollection of the conversation.

Chairman WAXMAN. Which is?

Mr. JOHNSON. Which I will be happy to read to you.

Chairman WAXMAN. No, I don't want you to read to me a prepared statement. I asked you a simple question. Did you know at the time you called her, to presumably say you have an extension, do you know of anybody who wants an extension on time for filing comments, did you know that she was lobbying against the California waiver and she did not want the California waiver?

Mr. JOHNSON. Mr. Chairman, there are many, many opinions on the topics that are——

Chairman WAXMAN. Did you know what her views were at that time and that she was involved in trying to undercut the California waiver? Did you know, yes or no?

Mr. JOHNSON. Mr. Chairman, to the best of my recollection, the statement reflects the conversation and what I remember of that conversation.

Chairman WAXMAN. Did you have a conversation with her on any other rule that you have had before the EPA?

Mr. JOHNSON. I have had other conversations with her on other rules, yes.

Chairman WAXMAN. About extension of comment periods? Do you call her regularly when you have a rule to ask her about extension of comment periods?

Mr. JOHNSON. Again, I have routine and regular conversations with her on a variety of topics.

Chairman WAXMAN. You are not answering the question, and I guess there is a reason for your not answering the question. Because we did submit that there are multiple e-mails, in our letter to you, that contain references to communications between EPA, the Transportation Department and the White House. We have an e-mail that says on May 25th, the Secretary's executive assistant e-mailed your chief of staff to say, "Spoke with Steve Johnson, the EPA Administrator, before approving the Secretary's calls to the Governors." And further, in a May 31st e-mail to her chief of staff, Secretary Peters refers to "calls to the Governors on the issue I had discussed with Administrator Johnson." Do you think she was calling the Governors to see if they wanted more time to submit comments?

Mr. JOHNSON. Mr. Chairman, what Secretary Peters did or her staff did in the e-mails I am not accountable for and I can't speculate.

Chairman WAXMAN. Well, you are accountable for your answers.

Mr. JOHNSON. I can't speculate on what they did or didn't do.

Chairman WAXMAN. You are accountable for your answers here under oath and you have refused to answer some of these questions directly.

Mr. JOHNSON. Mr. Chairman, I have given you the best of my recollection.

Chairman WAXMAN. On June 6th, the Secretary's executive assistant wrote, "Administrator Johnson just called and would like to speak with S1," oh, S1 is Secretary Peters, "this morning." So S1 means Secretary Peters. Administrator Johnson just called and would like to speak with, we will say Secretary Peters, this morning. Mr. Duvall, the Assistant Secretary, responded, "OK, they think it might be about the California wavier." So within the Department of Transportation, they didn't think you were calling about extensions of time to file comments. They thought you were calling about her campaign to stop the California waiver.

Did you ever discuss with Secretary Peters efforts to undermine or efforts—no, did you ever discuss with Secretary Peters her views about the California waiver?

Mr. JOHNSON. As I said, Mr. Chairman——

Chairman WAXMAN. On the substance.

Mr. JOHNSON [continuing]. I talked to her about the extension of the comment period for the California waiver petition. That was the nature and the extent of the conversation to the best of my recollection.

Chairman WAXMAN. And therefore, you did not talk to her about her desire to not see the California waiver granted?

Mr. JOHNSON. Again, under the Clean Air Act, it is the responsibility of me to make an independent decision on the California waiver petition. I intend to do that, and I promised the Governor that I would make that decision by the end of the year.

Chairman WAXMAN. Well, I just would repeat that it makes no sense, a busy man like you, would take the time to call the Secretary of Transportation and ask her whether she knew of people who wanted extensions of time to comment on the California waiver, I guess, unless you thought that she was going to have extension of times for people to comment against the California waiver. Is that an accurate statement?

Mr. JOHNSON. No.

Chairman WAXMAN. You didn't think that was why she would have an interest in the extension of time? Why wouldn't you think the Secretary of Energy would have an interest in that issue?

Mr. JOHNSON. It is a transportation issue.

Chairman WAXMAN. Aha. Well, it is an energy issue. How about the Secretary of Commerce? It certainly affects the commerce in this country.

Mr. JOHNSON. Again, it is a transportation issue. And I have routine conversations, again——

Chairman WAXMAN. Yes.

Mr. JOHNSON [continuing]. With my Cabinet colleagues on a wide range of issues. I think that is good government, for the Cabinet members to talk with one another.

Chairman WAXMAN. Do you know where in the Clean Air Act it says that this is a transportation issue and involves the Secretary of Transportation? Or does it say that the California waiver is to be approved or not approved by the Environmental Protection Agency? And do you know whether any previous EPA Administrator ever called the Secretary of Transportation before they approved a California waiver? There have been many approved over the years, as well as other States' requests.

Mr. JOHNSON. Again, the responsibility, as you correctly point out, for making a decision on the California waiver, rests with me as Administrator of the Environmental Protection Agency.

Chairman WAXMAN. Do you feel it is important to get input from the Department of Transportation on that issue?

Mr. JOHNSON. I think that it is important for me to make that independent decision under the Clean Air Act. I also think that it is important to have routine conversations with my Cabinet colleagues on a wide range of issues.

Chairman WAXMAN. I know you have said Cabinet colleagues on a wide range of issues, but you only talk about one Cabinet colleague. The others you didn't think had a view on this question.

Mr. JOHNSON. Again, this was not the only topic that we discussed that day.

Chairman WAXMAN. What else did you talk about?

Mr. JOHNSON. Again, to the best of my recollection, my statement, I did add one additional thing. Again, I recall talking to her about the upcoming hearing that I was going to be sharing the witness stand with the head of NHTSA, and that I was going to be calling. I wanted to tell her that I was going to be calling the head of NHTSA to make sure that we were both prepared for the upcoming hearing.

Chairman WAXMAN. And had you coordinated that with the White House, for the upcoming hearing?

Mr. JOHNSON. To the best of my recollection, I had not had a discussion with the White House, other than again, as part of a routine process for clearance of testimony.

Chairman WAXMAN. What was the upcoming hearing that you were concerned about?

Mr. JOHNSON. At this point in time, I don't recall what the hearing was.

Chairman WAXMAN. A congressional hearing?

Mr. JOHNSON. It was a congressional hearing, yes.

Chairman WAXMAN. I see. So what did it have to do with the California waiver?

Mr. JOHNSON. I don't recall at this moment what the specifics were for the hearing. We can certainly go back as a matter of record what the hearing and the specific topics were. But I wanted to, as again, I think it is good government to have inter-agency coordination. That is what I have done for the past 27 years and I think that is good government for the future.

Chairman WAXMAN. Did you want to make sure that you and the NHTSA representative were on the same wavelength in terms of your views?

Mr. JOHNSON. No. Again, I don't recall the specifics of that particular hearing. But I wanted to ask if there were any questions or if they had any questions of me.

Chairman WAXMAN. OK, so you called her about anybody she knows that wants an extension of time to submit opinions on the waiver, and you also talked to her about this upcoming hearing, so that you and the NHTSA representative would be representing administration policy. Any other topics you remember?

Mr. JOHNSON. I don't recall. I think there were, but I don't recall what they were.

Chairman WAXMAN. How many conversations have you had with her on this subject? How many conversations have you had with her that might have led people in her office to think that you were talking to her about the subject of the California wavier?

Mr. JOHNSON. The vast majority of my conversations with her have been on our development of the rulemaking for mobile sources, particularly on that portion dealing with CAFE.

Chairman WAXMAN. I see. So were these conversations after the Supreme Court decision?

Mr. JOHNSON. Yes.

Chairman WAXMAN. And if the Supreme Court had not made the decision it had made, would you be talking to her about the California waiver?

Mr. JOHNSON. If the Supreme Court had not made the decision it was a pollutant, then it wouldn't be regulated under the Clean Air Act, and then we wouldn't be having that conversation.

Chairman WAXMAN. But California waiver wasn't dependent on the Supreme Court decision, was it? The California waiver is a long-established practice under the Clean Air Act. California was way ahead of EPA in establishing tighter standards. So we have always said California may go on its own and has permission, has to get a waiver to permit California to do that. That had nothing to do with that Supreme Court decision, did it?

Mr. JOHNSON. Mr. Chairman, as we noted to California that the Supreme Court would have, because if it was not a pollutant under the Clean Air Act, then what authority would there be, or then how would the Clean Air Act then apply to the waiver petition, which is Section 209 of the Clean Air Act? So it was very relevant, and that is why we told California that clearly, the decision that was pending before the Supreme Court could have a dramatic effect on whether or not, depending upon their outcome. And of course, once the Supreme Court made the decision it was a pollutant, then I acted very quickly to initiate the public, the actual statutory process of holding a hearing. The Governor asked me if I would hold an additional hearing out in the State of California, which we did. And as I have mentioned, we have approximately 100,000 comments.

Admittedly, many of those comments, or a few were repeat comments; nonetheless, we still need to consider those.

Chairman WAXMAN. How many conversations did you have with Secretary Peters about the Supreme Court issue?

Mr. JOHNSON. I don't recall, Mr. Chairman.

Chairman WAXMAN. More than one?

Mr. JOHNSON. Yes, definitely more than one.

Chairman WAXMAN. More than five?

Mr. JOHNSON. Likely, but I don't recall.

Chairman WAXMAN. And why did you feel it was important to talk to her about the Supreme Court issuance of a decision that said you now can regulate?

Mr. JOHNSON. We were having multiple conversations, interagency conversations as we were looking at the impact of the Supreme Court decision.

Chairman WAXMAN. Do you recall her telling you in any of these conversations that she thought it was not a good idea to give California the waiver?

Mr. JOHNSON. I don't recall. As I said, there are many, many——

Chairman WAXMAN. Really, why wouldn't she tell you if she is telling all these Governors and Congressmen she doesn't like the California position and request? Why wouldn't she tell you? It is hard to believe she—maybe she did?

Mr. JOHNSON. Sir, there are many, many opinions on the California waiver, as well as other issues that are before the agency. It is my responsibility to make a decision independently based upon——

Chairman WAXMAN. I understand that, and I have every confidence—I hope—that you will do that. But I am asking whether the Secretary of Transportation, since you were talking to her

about the subject, ever said, "by the way, I don't think you ought to grant that California waiver?"

Mr. JOHNSON. Again, the nature of our conversation was with regard to the comment period and the extension of the comment period.

Chairman WAXMAN. But that wasn't the exclusive and only subject?

Mr. JOHNSON. No. Again, as I have said, there were other topics that we talked about.

Chairman WAXMAN. And you had more than five conversations. So you didn't talk about the extension of the filing period on every conversation, I assume.

Mr. JOHNSON. No.

Chairman WAXMAN. So what did you talk about in the other conversations?

Mr. JOHNSON. Well, as I said, generally one topic area that we have had a lot of conversations, as I have had with the Secretary of Agriculture, as I have had also with the Secretary of Energy, under the context of, when the President made the decision that we were going to be moved forward with taking the steps to regulate greenhouse gases from mobile sources, he issued an Executive order. As part of that executive order, he directed us to make sure that we were working together, including the Department of Transportation, the EPA, the Department of Agriculture, as well as the Department of Energy. So we have had numerous conversations.

Chairman WAXMAN. OK. Well, Mr. Kucinich's time has expired, so I will now recognize Mr. Sarbanes.

Mr. SARBANES. Thank you, Mr. Chairman.

Administrator Johnson, obviously EPA has the ability to directly influence a lot of things with respect to global warming and to take the measures that everyone seems to be calling for, at least the consensus that is emerging these days, to regulate those more effectively, greenhouse gas emissions and other emissions that are harming the environment.

But you also have a lot of ability to influence what the States do by setting a standard, by looking over their shoulder in appropriate cases and making sure that you are modeling for them the kinds of measures that ought to be taken. I think there is high concern among some members of this committee that role isn't being performed adequately either. You have some States that really are taking a leadership role with respect to global warming and regulating these emissions. New Mexico is a good example of that in terms of requiring new plants to have cleaner technology as part of their operation.

But then you have other States that are really permitting these huge new coal-fired power plants to come online that don't have any kind of controls over greenhouse gas emissions. It doesn't appear that the EPA is urging States as it should be, taking a leadership role in urging States to require these pollution controls. I guess that is not surprising, given that EPA is not acting in those arenas where it has direct authority, why would we expect it to act in those where it has the ability to influence or cajole or push States to do the right thing?

Let me give you a concrete example. The State of North Carolina is considering a new coal-fired power plant which has been proposed by Duke Energy at Cliffside Facility, which is near the Great Smoky Mountains National Park. This plant doesn't use advanced technology. As an aside, it is incredible to me that we are building and bringing online new plants that don't have this technology.

But in any event, first of all, are you aware of this proposal that is out there?

Mr. JOHNSON. I am not aware of that specific proposal, no, I am not.

Mr. SARBANES. OK. Because EPA did submit comments on the permit application for this plant, as you would want them to do. Unfortunately, it didn't mention in those comments any of the potential effect on global warming that the absence of this kind of advanced technology would have. It didn't ask the State to consider requiring coal gasification to reduce greenhouse gas emissions and looking at capturing and sequestering those emissions. You are not aware of it, which is a surprise to me, but don't you think that the EPA should have been recommending these kinds of measures that North Carolina take with respect to greenhouse gas emissions?

Mr. JOHNSON. Again, each permit needs to be evaluated on a case by case basis and within the context of what the current law is. As I have already mentioned, we are aggressively, yet responsibly, trying to sort through what the impact of the Supreme Court decision is on mobile sources and what that means for stationary sources. We are right now in a deliberative process. In the meantime, we will look at these on a case by case basis, based upon existing law.

Mr. SARBANES. Well, this is really the role of leadership. It is less about where your authority is than about understanding the science, taking a leadership role with respect to the kinds of technologies that ought to be deployed out there, and encouraging States to do that kind of thing, rather than looking the other way or becoming a sort of pushover for industry. It is in contrast, I will tell you, with some of the other agencies that have weighed in. The National Park Service has taken a very strong line with respect to the particular plan I referenced. They provided comments that are encouraging the State of North Carolina consider coal gasification and asking for significant documentation on how emissions will be reduced.

The National Park Service is doing that, but the Environmental Protection Agency is not doing that. It seems to me that is a total abdication of your role, and I know it is disappointing to many of us, and I think ought to be an embarrassment to the agency. I yield back my time.

Chairman WAXMAN. Thank you, Mr. Sarbanes.

Mr. Yarmuth, do you wish a second round? The gentleman is recognized.

Mr. YARMUTH. Thank you, Mr. Chairman.

I just have one question I would like to pursue regarding another statement that you made in your prepared statement. You said that EPA meets regularly with the Departments of Transportation, Energy and Agriculture to ensure coordination of our work efforts.

In addition, we have ensured major stakeholder group involvement in the process from the very beginning.

I want some clarification as to what the agency considers major stakeholders, how expansive is that list, and whether there is transparency on that issue. I ask it in the context not necessarily as a direct comment on anything EPA has done, but certainly with respect to what we know the Vice President did and—some of what we know the Vice President did with regard to development of energy policy back in the early years of the Bush administration. So I would like you to discuss the issue of making sure that a comprehensive range of input is solicited and utilized by EPA.

Mr. JOHNSON. Yes, and that is very important. In fact, certainly one of your next panel members from NRDC was recently part of the, I think referred to as the green team in my office, as well as I invited industry, as well as I invited State and local government. I would be happy to provide those lists. We also make sure that we are open and transparent. I think that it is important for me as the decisionmaker to not only have an open and transparent process, but also make sure that there are opportunities for hearing from different perspectives. That is something that I have prided myself in in my 27 years and have continued that as Administrator.

Mr. YARMUTH. Good.

I have no other questions, Mr. Chairman.

Chairman WAXMAN. Would the gentleman yield to me?

Mr. YARMUTH. I would be happy to yield to my chairman.

Chairman WAXMAN. I thank the gentleman. Because I am trying to think through this issue that I was questioning you about. So you called Secretary Peters to ask if she knew some people who wanted an extension for filing. Is that your testimony? Filing comments on the California waiver?

Mr. JOHNSON. As I said, Mr. Chairman, I have routine conversations with her. And among the topics that we talked about, to the best of my recollection, was that and was she was aware of anyone who wanted——

Chairman WAXMAN. And was she aware of anybody?

Mr. JOHNSON. She was not, off the top of her head, and she said that she was going to check with her staff.

Chairman WAXMAN. And did you ever hear from her staff about that?

Mr. JOHNSON. I think my staff heard from her staff, which indicated she was not aware of any. Again, I made the decision the next day to not approve an extension of the public comment period.

Chairman WAXMAN. I see. So her staff informed you that they knew of, informed your people that they knew of no one who wanted an extension, they had already filed their comments?

Mr. JOHNSON. That hadn't already asked for an extension.

Chairman WAXMAN. Oh, there were——

Mr. JOHNSON. There were people that had asked for an extension, yes. But I was dis-inclined to approve it, in spite of the request.

Chairman WAXMAN. OK. Mr. Davis is here, and I want to see if he wants to pursue some questions.

Mr. DAVIS OF VIRGINIA. I would be happy to.

My understanding, the chairman read from a letter that he wrote to Mr. Connaughton. I have the e-mail here from Sandy Snyder. Do you know her?

Mr. JOHNSON. I don't.

Mr. DAVIS OF VIRGINIA. To Tyler Duvall at OST and some others. But it basically says, subject, the call from the EPA Administrator Johnson, and it says: "Administrator Johnson just called and would like to speak with S1," who is Secretary Peters, "this morning regarding the climate change proposal they are working on with NHTSA. S1 is on travel and will not be available until 2 o'clock, and then we will work in a call with S1-EPA possibly 3:45."

Pretty innocent, isn't it? I mean, I don't understand anything wrong out of that. Now, you are a career employee, aren't you?

Mr. JOHNSON. I am career, I have had the pleasure and opportunity and honor of serving as a political appointee now heading the agency.

Mr. DAVIS OF VIRGINIA. You weren't active on the campaign or anything, were you?

Mr. JOHNSON. I was not, no.

Mr. DAVIS OF VIRGINIA. Under the Hatch Act and everything else, you would have been limited had you tried to be so?

Mr. JOHNSON. That is correct.

Mr. DAVIS OF VIRGINIA. And you have had a long and distinguished career in the civil service, I think at one point got, was it the President's Award? What was the highest award you got as a civilian employee?

Mr. JOHNSON. Well, I have been honored to receive a number of awards. I have received Vice President Gore's hammer award for streamlining regulations.

Mr. DAVIS OF VIRGINIA. Well, you get another hammer award here this morning just standing up to some of the examination.

Mr. JOHNSON. I have also received the Presidential Distinguished Service Award.

Mr. DAVIS OF VIRGINIA. From what I gleaned from here, my friends on the other side would like you to interpret a court ruling in a certain way without going through the usual legal and rulemaking changes, when we could change it very simply here with a statute, couldn't we?

Mr. JOHNSON. Yes, you could.

Mr. DAVIS OF VIRGINIA. And my party is, for better or for worse, not in the majority, so we don't have control over the agenda on that. But if they wanted to change it, pass a law, send it up. If the President wants to veto it, then we can have this debate. I may end up supporting that law, if they were to put it forward.

But to ask you to willy-nilly interpret this thing without going through the appropriate procedures seems to me to be a stretch. Do you have any comment on that?

Mr. JOHNSON. I think it would be highly inappropriate, and I would be, I am sure, up here before oversight committees saying that I was not following the notice and comment rulemaking process and good public policy.

Mr. DAVIS OF VIRGINIA. My reading of the *Massachusetts* v. *EPA* case is exactly that, that you need to go through an appropriate process before you can make that.

Now, based on your experience, how long does a typical rulemaking take?

Mr. JOHNSON. Typically, sir, it takes several years.

Mr. DAVIS OF VIRGINIA. Now, is the time line that you announced today typical of EPA rulemakings?

Mr. JOHNSON. It is atypical, it is a very, very aggressive rulemaking schedule.

Mr. DAVIS OF VIRGINIA. So you are way ahead of schedule?

Mr. JOHNSON. That is correct.

Mr. DAVIS OF VIRGINIA. And yet passing a law, there is no standard procedure for passing a law here, but in the House majority rules and you can move things out. The Senate is a completely different body altogether. But it would be much faster, it seems to me, to pass a law than it would be to have you go through a rulemaking.

Mr. JOHNSON. Well, it can certainly be faster, but it certainly provides certainty and certainly, if past is prologue, also eliminates all the continuous litigation that seems to go on with any regulation that we issue.

Mr. DAVIS OF VIRGINIA. And unlike the congressional rulemaking procedure, law making procedure, under your rulemaking, basically anybody can make a comment, can't they?

Mr. JOHNSON. That is correct. In fact, we encourage people to comment.

Mr. DAVIS OF VIRGINIA. So you are open to everybody.

And right now, you hope to have that response by the end of 2008?

Mr. JOHNSON. We intend to propose our regulation by the end of this year, and the President has asked that we have a final decision in place by the end of 2008 on mobile sources.

Mr. DAVIS OF VIRGINIA. In your written testimony, you mention that EPA is moving forward with a rule to guide future efforts to sequester carbon dioxide.

Mr. JOHNSON. Yes.

Mr. DAVIS OF VIRGINIA. Could you tell us a little more about the state of the technology and how far we are from commercial viability, what are the infrastructure issues involved, like transporting and storing the carbon dioxide?

Mr. JOHNSON. Currently, there are no commercial scale carbon sequestration, certainly not cost-effective carbon sequestration storage, capture and storage that is available in the United States, or for that matter, around the world. As a Nation and other parts of the world, too, we are investing a lot of research dollars to help develop and perfect that.

Having said that, we recognize, certainly at EPA recognize that is going to be a significant opportunity, that is sequestration and storage. One of the issues that we need to make sure that we are protecting the public health and environment is that storage. Under our Clean Water and Safe Drinking Water Acts, we have the responsibility under the Underground Injection Control Program to make sure that anything injected into the Earth, such as carbon dioxide, such as greenhouse gases, is done in an environmentally and public health protective way.

Mr. DAVIS OF VIRGINIA. Are we even sure how to do that?

Mr. JOHNSON. We have experience of using CO_2, in fact, as a Nation have probably 30 years of experience of using it in oil recovery. What we don't have a lot of experience in is in the long-term storage. Of course, that is why we are writing regulation to make sure that as we approach the long-term storage, after it is sequestered, that we are able to do that in a way that is meeting our statute of being environmentally protective.

Mr. DAVIS OF VIRGINIA. When do you believe that carbon sequestration will become a meaningful element of our efforts to mitigate carbon emissions?

Mr. JOHNSON. It is difficult to predict. But some have suggested that we are still some decade or more so away from having commercial grade. Again, it is a very important area, and it is one that as a Nation we are investing in research to help identify these cost-effective, both sequestration as well as storage techniques.

Mr. DAVIS OF VIRGINIA. OK, thank you.

Chairman WAXMAN. Thank you, Mr. Davis.

Mr. Tierney, for your first round.

Mr. TIERNEY. Thank you, Mr. Chairman.

Administrator Johnson, you testified earlier in your remarks, as I understand it, in your written comments, that you have a legal responsibility to continue to process permits for coal-fired power plants. I think the implication of that is that you feel you have no choice but to approve the permits without any consideration at all of their major contributions to climate change. The problem is, coming from Massachusetts, where we are involved in a regional effort up there, with the approval of one of these plants, or a couple of them, you can undo all the work that we have done through this regional effort.

So since you raised the EPA's legal responsibility, I want to ask you some questions about that. Do you have a legal responsibility under the Clean Air Act to protect the public health and environment?

Mr. JOHNSON. Yes, we do.

Mr. TIERNEY. Now, the Supreme Court made it clear that if the EPA determines that greenhouse gases present a threat to the public's health or welfare the EPA is required to take action under the Clean Air Act. So do you have a legal responsibility to address global warming?

Mr. JOHNSON. The Supreme Court didn't say required to. What the Supreme Court did was define CO_2 and other greenhouse gases as pollutant. The issue of whether it should be subject to regulation is precisely what we have been talking about, and in fact, the Supreme Court clearly indicated that analysis needs to be done by me before the next steps are taken.

Mr. TIERNEY. All right, well, that was a point. Does the Clean Air Act provide any statutory deadline about which time you have to act on permit applications?

Mr. JOHNSON. There is no—I am not aware of any statutory deadline, no.

Mr. TIERNEY. So you have the discretion under the Clean Air Act to defer action on those permits for as many months as you may want until EPA develops a plan for regulating carbon dioxide in power plants?

Mr. JOHNSON. There is a balance, and that is why we need to look at these on a case by case basis. There is a balance of making sure that they, one, meet the requirements of today under the Clean Air Act; and second, as we develop a need, new energy sources as a Nation, because of energy security, because of economic growth, that balance of making sure that we are achieving our environmental protection responsibilities, at the same time making sure that we as a Nation have the kind of energy——

Mr. TIERNEY. Well, you are responsible for environmental protection, not development.

Mr. JOHNSON. My responsibility is environmental protection under the Clean Air Act.

Mr. TIERNEY. And if you have the ability to delay those permits for a few months because you determine that you have a responsibility under the Clean Air Act to protect the public's health and welfare, you could do it?

Mr. JOHNSON. My responsibility, again, is to protect public health and welfare under the Clean Air Act and what the law is as of today. As I have previously commented to your colleagues, we are very aggressively looking at it. Again, the Supreme Court decision was very, very historic and complex.

Mr. TIERNEY. Let's get back—my question is, sir, my question is, you have the ability to not act right now, if you think this is harming the public's health or welfare, or that there is a risk that is the case, nothing in the Clean Air Act requires that you act before you have those regulations in place, before you put something in place to deal with the climate change issue and global warming?

Mr. JOHNSON. Again, we are currently evaluating that particular issue as we speak.

Mr. TIERNEY. That is right. And as long as you are evaluating it, you have no obligation, the Clean Air Act does not require that you act under any of these permits. It is perfectly acceptable within the law for you to say, I am going to wait until we get those regulations done, because this is an issue of public health and welfare.

Mr. JOHNSON. Again, as I have stated, we are going to be evaluating each of the permits as we do on a case by case basis, as they come before the agency.

Mr. TIERNEY. What provision in the Clean Air Act requires you to take action that sacrifices the public health and welfare and the environment rather than use your discretionary authority to reduce greenhouse gas emissions?

Mr. JOHNSON. Again, the decision and the issue before the agency, based upon the Supreme Court, is dealing with mobile sources. And we have said what our mobile source decision is. Under the Clean Air Act Title I, there are many sections of Title I, for example, Section 108, the National Ambient Air Quality Standards, Section 111, the New Source Performance Standard, as well as Section 112, the Hazardous Air Pollutant Section. The Clean Air Act is very complex. We are evaluating what is the best approach dealing for what the Supreme Court says——

Mr. TIERNEY. You say that over and over again. But sitting from my perspective in Massachusetts, and part of that regional group that is working up there, the public is watching your action. You have already approved one plant, back in August 30th, to Desert

Power for the construction of a 110 megawatt coal-fired power unit in the Bonanza Power Plant in Uintah County, UT. That is relatively small, but it is still going to emit up to 90 million tons of carbon dioxide over a 50 year lifetime.

I guess the question is, the Clean Air Act does not require that you do things like that are sending us backward. You have the authority to delay until you get your regulations in place, you have the obligation to protect the public's health. I hear you giving the same answer now four times, I think, on that. But I will give you one last chance to succinctly tell us why you don't just delay on these permits until you get the regulations in place in order to protect the public health and welfare?

Mr. JOHNSON. Because, as I said, that I need to act within the confines of the Clean Air Act and what the law is as of today——

Mr. TIERNEY. But sir, you already testified that you have no obligation to approve those permits within any particular timeframe.

Mr. JOHNSON. As I said, there is no time direction as part of the Clean Air Act, but it is also my responsibility to make sure that permits are processed in an appropriate time. Three years——

Mr. TIERNEY. Not if that affects adversely the public health and welfare, you are making a balancing act here that is not working in the public's interest.

Mr. JOHNSON. Three years is not what most would say would be an aggressive pace of evaluating a permit.

Mr. TIERNEY. Well, I think what most would say was that you are making a balancing act here where the public's health and welfare comes out on the short end of your considerations and that there is nothing within the statute that requires you to act by any particular timeframe and you are sacrificing the public health and welfare by moving these permits before you get your regulations done.

Mr. JOHNSON. Well——

Mr. TIERNEY. I yield back, Mr. Chairman.

Chairman WAXMAN. The gentleman's time has expired. Mr. Hodes, did you want a second round? The gentleman is recognized for 5 minutes.

Mr. HODES. Thank you, Mr. Chairman.

Mr. Johnson, you would agree that it is proper for this committee to exercise its oversight on whether or not your agency is acting within the law and whether you are properly administering that agency, would you not?

Mr. JOHNSON. I fully support the oversight responsibility, yes.

Mr. HODES. And you agree that as an administrator, you have certain areas in which you exercise discretion?

Mr. JOHNSON. Yes, under the law.

Mr. HODES. And you would agree that consistency in your exercise of discretion is critical to proper administration of your agency, would you not?

Mr. JOHNSON. That is always a question that I ask of consistency, just because something has been done a particular way for years or—that is a question I ask myself.

Mr. HODES. You would agree that a double standard in the exercise of discretion would constitute arguably an abuse of discretion, correct?

Mr. JOHNSON. I am not sure where you are directing the comment.

Mr. HODES. Let me direct you to a specific case in point. Fifteen months ago, the EPA proposed a permit for the Desert Rock Power Plant, which is an enormous proposed plant in Shiprock, NM. The public comment for the permit ended on November 13th. That was before the Supreme Court ruled that EPA has the authority to regulate CO_2 emissions. Now, recently, a number of citizens and environmental groups filed new comments on the proposed power plant, based on the Supreme Court decision and asked EPA to consider alternatives to the planned power plant.

Are you going to consider those comments when you make your final decision on that permit?

Mr. JOHNSON. Sir, the decision, the PSD permit decision was made by our Region 8. In granting the permit the status now is that the Sierra Club has appealed the Desert PSD permit to our environmental appeals board. Our environmental appeals board is independent; they have the delegated authority to make the final decision. However, at their discretion, they can refer——

Mr. HODES. Can I just stop you for a second? I am not talking about Desert, I am talking about the Desert Rock Power Plant in Shiprock, NM. And I understand, the question I am asking you is, notwithstanding the end of the comment period on November 13th, given that new comments have bene filed following the Supreme Court decision, are you going to consider those comments when you make your final decision on the Desert Rock Power Plant?

Mr. JOHNSON. I am sorry, I was getting it confused with the Desert Bonanza. I am not familiar, personally familiar with the specifics of that, so I would like to get back to you for the record.

Mr. HODES. So sitting here today, you have not made a decision whether or not you will or will not accept comments which may have been filed after the comment period?

Mr. JOHNSON. As I said, I am not familiar with that specific case, so I would have to get back to you for the record.

Mr. HODES. Do you agree that you have discretion to accept late-filed comments?

Mr. JOHNSON. Again, I don't know the specifics of this permit.

Mr. HODES. Sir, in general, do you agree that you have the discretion to accept late-filed comments?

Mr. JOHNSON. It depends upon what the issue is at hand. For example, once a public comment period is closed and a formal rulemaking that, it is my understanding that we don't, because if we open it for one individual, then we have to make that available for everyone. It is a notice and comment issue that we would have to address.

Mr. HODES. Let me bring this to your attention. And this reflects in some sense on the conversation you were having earlier with Chairman Waxman about internal e-mails from the Department of Transportation about your pending decision on California's new motor vehicle standards. There, the Department of Transportation was trying to line up State Governors and Members of Congress to oppose the California request. Your general counsel stated that you would accept late comments opposing California.

Here is what one internal e-mail says: "EPA's General Counsel's Office says the Administrator is leaning toward not extending the comment period, but wants people to know that he has the discretion to accept late-filed comments." Now, sir, if you have the discretion to accept late-filed comments opposing greenhouse gas controls, you should have discretion to accept late-filed comments supporting the controls for Desert Rock. Will you assure this committee that you will consider the late comments received on the Desert Rock application just like you assured the Department of Transportation that you would consider late comments opposing California's standards?

Mr. JOHNSON. Again, for that I will have to get back to you for the record. I think it is important to note that this was a petition process, not a regulation process. And that in fact, California itself submitted comments after the comment period.

Mr. HODES. Will you commit to reopen the comment period on Desert Rock in light of the Supreme Court decision which you are now reviewing and which, from the various answers you have given to various questions, you apparently say has thrown your evaluation process into a state where you are not able to answer a lot of questions because you are still evaluating? So will you commit to reopening the comment period on this proposed power plant?

Mr. JOHNSON. Since I am not familiar with that specific power plant, that is why I said I would get back to you for the record.

Chairman WAXMAN. We will await a response for the record, unless someone just handed you a response.

Mr. JOHNSON. And certainly, Mr. Chairman, I would be happy to have my staff talk to your staff as well.

Chairman WAXMAN. OK, but we do want the answers for the record.

[The information referred to follows:]

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

MAR 1 1 2008

OFFICE OF CONGRESSIONAL AND
INTERGOVERNMENTAL RELATIONS

The Honorable Henry A. Waxman
Chairman
Committee on Oversight and Government Reform
U.S. House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

Thank you for the opportunity to respond to questions for the record that followed a November 8, 2007 hearing on the Environmental Protection Agency's (EPA's) approval of new power plants. I hope this information will be useful to you and the members of the Committee.

If you have any further questions, please contact me or your staff may contact Josh Lewis in my office at 202-564-2095.

Sincerely,

Christopher P. Bliley
Associate Administrator

Enclosure

November 8, 2007 Committee on Oversight and Government Reform
Hearing on EPA's Approval of New Power Plants

(1) Request from Chairman Waxman for EPA to provide four specific documents that relate to ongoing, pre-decisional deliberations at EPA.

Response:
EPA's November 7, 2007, letter to the Chairman Waxman (Attachment 1 as reference) provides the Agency's position with regard to these four documents.

(2) Request from Chairman Waxman for information about which hearing EPA Administrator Johnson spoke with Secretary Peters.

Response:
Administrator Johnson spoke with Secretary Peters about a June 8, 2007, hearing on the Bush Administration's Response to the Supreme Court's *Massachusetts v. EPA* decision before the House Select Committee on Energy Independence and Global Warming. Administrator Johnson and National Highway Traffic Safety Administration (NHTSA) Administrator Nicole Nason testified at this hearing.

(3) Request from Representative Hodes for information on whether EPA would consider recently submitted comments when we make a final decision on the PSD permit for the Desert Rock Energy Facility. Representative Hodes also asked whether EPA will commit to reopen the comment period on the Desert Rock Energy Facility PSD permit in light of the Supreme Court's decision in *Massachusetts v. EPA*.

Response:
EPA Region 9 received a 30 page comment letter dated October 4, 2007, from a consortium of groups including Dine Citizens Against Ruining Our Environment, San Juan Citizens Alliance, Environmental Defense, Western Resource Advocates, Natural Resources Defense Council, Sierra Club, Forest Guardians, Environment California, Clean Air Task Force, and Grand Canyon Trust. The October 4, 2007, letter supplements comment letters from many of these groups filed during the 90 day public comment period on the proposed PSD permit during July - November, 2006. The October 4, 2007, letter references recent international and governmental reports about global warming and discusses other developments since the close of the comment period, such as the Supreme Court's ruling in *Massachusetts v. EPA*. The second letter, dated October 9, 2007, was filed on behalf of Environmental Defense. This letter also supplements a letter Environmental Defense filed during the 2006 public comment period and discusses comments by Region 9 on a draft document prepared under the National Environmental Policy Act for the White Pine Energy Center in Ely, Nevada. Both of the supplemental comment letters on the Desert Rock permit refer to and supplement matters that are

related to the public comment letters filed by these or other groups during the 2006 comment period.

Given the importance of, and heightened interest in, these issues, EPA Region 9 will exercise its discretion and consider the additional information provided in the October 2007 submissions referenced above in making its final permit decision and will provide a response to all significant issues raised in these supplemental comments submitted after the close of the comment period. EPA Region 9 does not consider it necessary to reopen the comment period on the proposed PSD permit for the Desert Rock Energy Facility.

(4) Request from Representative Tierney for information on a pending rulemaking that would allow automakers to use CO2 as an alternative to chemicals that harm the ozone layer.

Response:

EPA has a draft final rule at the Office of Management and Budget (OMB) that would condition the use of CO_2 refrigerant, as an alternative to ozone depleting substances (ODS), in motor vehicle air conditioning (MVAC) systems. Approving this alternative under the Significant New Alternatives Policy (SNAP) program will allow EPA to expand the list of ozone-safe choices available to the automotive industry.

EPA proposed to "condition" use of CO_2 refrigerant because of safety concerns associated with an unmitigated release of refrigerant into the passenger compartment. At high concentrations, CO_2 refrigerant can reduce driver performance in ways that may affect safety, for example, by making drivers sleepy. The CO_2 refrigerant concentrations of concern well exceed atmospheric concentrations of CO_2 (greater than 100 times the atmospheric concentrations). In the proposed rule, EPA referred to CO_2 exposure limits developed by the American Council of Industrial Hygienists (ACGIH) and the National Institute of Occupational Safety and Health (NIOSH), which is part of the Centers for Disease Control (CDC).

EPA recognizes the importance of addressing the global challenge of climate change, and in light of the Supreme Court's decision in *Massachusetts v. EPA*, 127 S. Ct. 1438 (2007), the Agency is working diligently to develop an overall strategy for addressing CO2 and other greenhouse gases under the Clean Air Act. The SNAP MVAC rule is being addressed within this larger effort regarding greenhouse gases underway at the Agency.

(5) Request from Representative Yarmuth for lists of stakeholders with whom Administrator Johnson met regarding regulations being developed under the President's "Twenty in Ten" plan.

Response:

The following are the lists of attendees at October 1, 2007 outreach meetings between Administrator Johnson and various stakeholder groups.

Industry Attendees:

Mike Stanton	Association of International Automobile Manufacturers
Gov. John Engler	National Association of Manufacturers
Red Cavaney	American Petroleum Institute
Dave McCurdy	The Alliance of Automobile Manufacturers
Allen Schaefer	Diesel Technology Forum
Jed Mandel	Engine Manufacturers Association

Accompanying Staff:

Keith McCoy	National Association of Manufacturers
Khary Cauthen	American Petroleum Institute
Shane Karr	The Alliance of Automobile Manufacturers
Catherine Sulzer	National Petrochemical & Refiners Association
Tim Hogan	National Petrochemical & Refiners Association

NGO / Environmental Groups:

Larry Schweiger	National Wildlife Federation
Mark MacLeod	Environmental Defense
Ann Mesnikoff	Sierra Club
Jimmy Powell	The Nature Conservancy
Debbie Reed	Clean Air Task Force
Shannon Heyck-Williams	National Environmental Trust
Michelle Robinson	Union of Concerned Scientists
Emily Figdor	U.S. Public Interest Group

State and Local Groups:

Steve Brown	Environmental Council of the States
Danielle Wagner	International City/County Management Association
Brendan P. Costigan	Southern Governors Association
Paula Cotter	National Association of Attorneys General
Andy Seth	National Association of Towns and Townships
Kevin Morand	Western Governors Association
Dan Simmons	American Legislative Exchange Council
Arthur Marin	Northeast States for Coordinated Air Use Management
Bill Becker	National Association of Clean Air Agencies
Tamara Spielvogel	National Conference of State Legislatures
Sue Gander	National Governors Association
Peggy Tadej	National Association of Regional Councils
Laura Fiffick	City of Dallas, TX/Local Government Advisory Committee

The following are the attendees at an October 26, 2007, meeting between Administrator Johnson and the Green Group.

Attendees:

Kevin Knobloch	Union of Concerned Scientists (Green Group Chair)
Frances Beinecke	Natural Resources Defense Council
Brent Blackwelder	Friends of the Earth
Phil Clapp	National Environmental Trust
Gene Karpinski	League of Conservation Voters
David Bookbinder	Sierra Club
Mark MacLeod	Environmental Defense
David Doniger	Natural Resources Defense Council
Jim Lyons	National Wildlife Federation
Mark Wenzler	National Parks Conservation Association
Eli Hopson	Union of Concerned Scientists
Anna Aurilio	U.S. Public Interest Research Group
Joy Blackwood	Green Group Program Manager

Chairman WAXMAN. Mr. Shays.

Mr. SHAYS. Thank you.

I am wrestling with a few emotions here. One of them is that the chairman has a record of 20 years of being more right than wrong on issues dealing with the environment. The public is catching up around the country to his position. It seems to me the administration is slowing adjusting its emphasis about a number of issues, particularly related to global warming.

I am struck by Mr. Hodes, who I think was an attorney for the State of New Hampshire, and knows that there are rules and regulations that you have to follow. I have listened to some of the questions when I have been here that, while they are not badgering you, are basically, it seems to me, asking you to circumvent the process that Congress establishes and you by law have to follow. You are going to get sued by the industry or you are going to get sued by the environmental community, but you are going to get sued by one or the other or both because you didn't follow the process the way it has to be followed. So I have some empathy for you in this circumstance.

What I am interested in knowing is, is it illegal for the Department of Transportation to have an opinion about a waiver and is it illegal for the Department to encourage people who may have an opinion about it, whether they are Members of Congress or Governors, to weigh in? It would strike me that it may be illegal for you to do that, since you are going to be having to make a decision on this. But is it illegal for another department of Government to do that?

Mr. JOHNSON. Sir, I wouldn't want to comment on the legality of what one can or can't do.

Mr. SHAYS. Tell me why, because you don't know the answer?

Mr. JOHNSON. Because I don't know the answer. Again, what I think is good, I think that it is important that our Government officials talk to one another. As I said, on all of our issues at EPA, there are many, many opinions. Again, my responsibility as the Administrator and the decisionmaker under multiple statutes is to make that final decision, independent, based upon the record. And that is what I will do.

Mr. SHAYS. Then let me ask you this. Would it be inappropriate or illegal, and tell me which it might be, for anyone within EPA to tell Members of Congress or Governors to weigh in on this, not to weigh in but to take a particular position on it? To weigh in, it would strike me as being very appropriate to suggest to a Member of Congress or—and I am not saying this is happening—or to the Governor, to a Governor to weigh in on a particular side. Would you agree that would be inappropriate for someone within your own department to do that?

Mr. JOHNSON. Again, all of my staff needs to follow what the rules are, and certainly those that are anti-lobbying. Certainly as the head of the agency I feel free to be able to talk to you Members of Congress——

Mr. SHAYS. I am really not talking about anti-lobbying. I am really talking about the appropriateness of the agency, your agency, because you are an agency, not a department, correct?

Mr. JOHNSON. That is correct.

Mr. SHAYS. Your agency, while you couldn't comment on whether it would be appropriate for the Department of Transportation to be lobbying or arguing or encouraging people to contact EPA, would it be inappropriate, one, I will give you the answer and then you tell me if you agree. I don't think it is inappropriate for EPA to encourage anyone to comment on the decisionmaking process as you allow anyone to comment. But it would be inappropriate for people at EPA to suggest what someone should say to EPA.

Mr. JOHNSON. I agree with that.

Mr. SHAYS. OK. Thank you. I yield back.

Chairman WAXMAN. Thank you, Mr. Shays.

Ms. Watson, did you want a second round? You don't have to. We have another panel, but you are entitled.

Ms. WATSON. Just very quickly, thank you, Mr. Chairman. I want to hear from the other panel. But I have just called up from California to get the bill, my staff is bringing it in to me. What I am gathering from the conversation that we had prior is that there was a bias against California's request for a waiver. Would you say that were true?

Mr. JOHNSON. There are many opinions. I am aware of the many diverse opinions. My responsibility as Administrator and under the Clean Air Act is to make an independent decision based upon the record, based upon what the statutory requirements are. I will do that, and I have committed to the Governor to do that by the end of the year.

Ms. WATSON. All right. I did hear you say that you make your decisions based case by case. California discussed and debated how we could continue to improve our air quality. The bill went through both Houses, went to our Governor, it was signed. We are implementing it. It looks like—or we are trying to—that it is a model for other States. And other States have been inquiring to California to see if this is something they could customize to their air quality bills.

I am really highly concerned that there is a built-in bias against California, against what we are trying to do. That is the reason why we are filing, as we speak, a suit against EPA, because we are gathering more and more evidence that there was conversation about denying the waiver. I am highly concerned that you sit here in Washington, DC, and you would disregard the will of our 120 person legislature and our Governor, and try to rule, and make a decision against our waiver.

With that, thank you, Mr. Chairman. I look forward to hearing from the other panel.

Mr. JOHNSON. Mr. Chairman, may I add a comment?

The statute under the Clean Air Act, Section 209, is very specific as to the criteria on which I need to base——

Ms. WATSON. I am well aware, that is why I am giving you the bill and the provisions. And we debated this in California, and what I heard from you is that there is a bias against California's own decision——

Mr. JOHNSON. That is not correct.

Ms. WATSON. And that people have been talking about denying the waiver.

Mr. JOHNSON. Again, there are many, many opinions——

Ms. WATSON. We will go to court and adjudicate this. Thank you very much, Mr. Chairman.

Mr. JOHNSON. Again, my responsibility is to make sure that I evaluate what the record is——

Ms. WATSON. We will settle it in court, thank you.

Mr. JOHNSON [continuing]. Under Section 209 and I intend to do that.

Chairman WAXMAN. Thank you, Ms. Watson.

Mr. Sarbanes, do you wish to ask further questions?

Mr. SARBANES. Very quickly. I am just curious where you believe that you are on the spectrum of urgency with respect to the issue of climate change and global warming and greenhouse gas emissions. I mean, you are trying to present the notion, I think, today, that you are sort of hemmed in from being able to be as aggressive as maybe you would like to be with respect to those issues.

But do you think you fall on the urgent end of the spectrum in terms of the steps that we need to start taking with respect to global warming? Where you would put yourself on that?

Mr. JOHNSON. Well, I put myself that this is a serious concern for the Nation. And I put myself in being in an urgency, yet at the same time, we need to be deliberative. That is the balance. As I said, we for the first time in our Nation's history are going to be regulating greenhouse gases, proposing to regulate greenhouse gases from mobile sources. That includes fuel——

Mr. SARBANES. Well, that is the first time in U.S. history.

Mr. JOHNSON. We are for the first time in U.S. history going to be proposing regulations to regulate greenhouse gas, carbon dioxide in particular, storage, as part of our underground injection control program. That is the first time in our Nation's history.

Mr. SARBANES. And hallelujah, that you got to the party, you are here. You can now regulate these things.

Mr. JOHNSON. So we are working our way through. This is a serious problem, but we are working our way through it, a very deliberate process, to make sure that we are, again, understanding what the implications are of the Supreme Court decision. This is very, very complex. The Clean Air Act is very, very complex.

We need to make sure, and I need to make sure that I am being aggressive, yet I am being responsible in my decisionmaking.

Mr. SARBANES. I would just interrupt, before I run out of time, but it would seem to me that if you are bringing a personal and professional urgency to this issue that I think so many others are bringing that you would regard having now arrived with the regulatory authority to be able to move on this issue as a huge opportunity to catch up for lost time, rather than to engage in this sort of, this babble about deliberation, which in the meantime is allowing the industry to move forward in ways that are going to cost us significantly over the long term.

You talk about a feeling of urgency, but every action that you have taken with respect to the waiver request, fighting against the regulation of these emissions as the case was coming on its way to the Supreme Court, approving these permits when we have already, I think, established clearly that you are not required by law to do it, all of these things belie the notion, in fact, you are bringing that kind of urgency.

I would just suggest that you are way, way out of step with where most of the science and the experts are with respect to this issue. I hope that you get in step and that the agency gets in step as quickly as you can.

Thank you, Mr. Chairman.

Mr. JOHNSON. Sir, I respectfully disagree. Once the Supreme Court made the decision that it is a pollutant, then set about an aggressive path to address the California petition, set about an aggressive path to regulate greenhouse gas emissions, to propose them for mobile sources, set about the path of proposing a regulation for dealing with underground injection, in the meantime continuing to promote all the other programs, in the meantime sorting through what all this means and what it should mean with regard to stationary sources.

Chairman WAXMAN. Will the gentleman yield?

Mr. JOHNSON. This is a very aggressive path.

Mr. SARBANES. You have set about an aggressive path to push these permits out the door, when there is no requirement that you do that. That in and of itself it seems to me competes against the idea that you are being aggressive on all these other fronts.

Thank you, Mr. Chairman.

Chairman WAXMAN. The gentleman's time has expired.

Your aggressive path, what does that mean in terms of your decision on the California waiver? Is that going to be aggressively decided soon?

Mr. JOHNSON. By the end of the year was my commitment to the Governor.

Chairman WAXMAN. Mr. Tierney.

Mr. TIERNEY. Thank you, Mr. Chairman.

Administrator Johnson, let's turn to the question of whether you are legally required to regulate carbon dioxide when you approve new power plants. Let's get back to that. If you look at your decision on the Desert Plant, and your reasoning appears to be one of a bootstrap sort of argument, your position seems to be that you are required to regulate on pollutants that the EPA has already regulated on in some other context. And since the EPA has never previously regulated CO_2, you take the position that you are not required to regulate it now. Is that pretty much it?

Mr. JOHNSON. What the law says, and certainly it is not a regulated pollutant under the law at this time——

Mr. TIERNEY. Because it is not a regulated pollutant, you don't have to regulate it now until you get the regulation?

Mr. JOHNSON [continuing]. But the very issue that you are talking about is, we are in a very deliberative process to try and sort through what this means.

Mr. TIERNEY. In April, you submitted what appears to be a very non-controversial rule to the White House for pre-publication review. That is the rule that would allow auto makers to use CO_2 as an alternative to chemicals that harm the ozone layer in motor vehicle air conditioners. The rule imposes some restrictions on how auto makers can use carbon dioxide, because apparently if they leak into the passenger compartment at a high enough level, it will hurt or kill people.

As far as it appears here, no one opposes that rule. But it has sat around at OMB and the White House now for 6 months, which is about twice as long as the usual 90 day deadline period for usual OMB review. Can you tell us why it is still being stalled over there at the White House?

Mr. JOHNSON. I know that it is not a final rule and that it is currently being reviewed as part of an inter-agency process.

Mr. TIERNEY. Pre-publication review, usually that is a 90 day process. It has been 6 months, twice that long. Can you tell me why they are stalling on it?

Mr. JOHNSON. Again, I know that it is in the inter-agency process. Beyond that, I would be happy to get back to you for the record.

Mr. TIERNEY. It is a non-controversial rule, apparently. But the fact of the matter is, let's see what it is here, if it were issued, sort of undercuts your position that you had an unregulated carbon dioxide here, it would be regulated carbon dioxide, then you would have to do something about the power plants, you would have to consider regulating in the power plants.

So that seems to be the point here, and that is why I think we are drawing attention to it right here. You are just in a situation, you are like the person that ties themselves onto the train tracks and then complains the train is coming. You say you can't, but it appears more and more like this administration just won't. If you did that regulation, if you didn't put it around over there for twice as long, 6 months instead of 90 days and you actually did something on that, you would then be in a position where you had to do something on the power plants.

Mr. JOHNSON. Well, as I have said, and let me just repeat one more time, we really are working very diligently in developing an overall approach——

Mr. TIERNEY. You know something, Mr. Administrator Johnson? No, you are not. All right? If you were working diligently, you wouldn't be allowing this thing to be stalled over at the White House for 6 months and undercutting your argument that I really can't do anything. That non-controversial, fairly simple regulation of CO_2 would be done and then you would have a reason why you had to do something on the power plants. But you are busy on your review, which you have answered four or five times now, and apparently you are busy not getting this out of the White House OMB office, anywhere near close to the usual time it takes. I think the message that sends to the American public, certainly sends to me, and I suspect my colleagues, is you are not looking for any avenue to do it, you are looking for every avenue you can to not do it.

I yield back.

Chairman WAXMAN. Do you wish to respond?

Mr. JOHNSON. As I said, I would be happy to get back to him on the record. I think that again illustrates the complexity that we are dealing with. We have the Supreme Court decision, we are proposing regulations to regulate greenhouse gases for the first time from mobile sources. We have the California petition, which is a separate section of the Clean Air Act. We have the question of the impact on other stationary sources. We have permits that are pending before the agency. We have lawsuits, petitions before the agency.

So there are many, many activities all addressing the issue of greenhouse gases. We are working very deliberately to work through all of these issues, but in a responsible way.

Chairman WAXMAN. Administrator Johnson, we appreciate your being here, but let me just comment. I fear you may be encouraging the energy industry to quickly build dirty energy infrastructure instead of sending a signal that it is time to take climate change seriously and deploy advanced technology. So I am going to introduce legislation, based on what I have learned today, it is important that we prevent EPA from continuing to issue permits for uncontrolled power plants.

We also need to let every investor know that if they build a dirty power plant today, they should not expect to be grandfathered into a future climate change program. Investors need to understand that projects that do not account for climate concerns will be at risk of being a stranded investment. We should alert ratepayers to the large future costs and rate increases they may face if their local utility builds uncontrolled plants today.

Further, Administrator Johnson, I also will followup on the issue of your communications with the Department of Transportation. I am going to send you a request for all documents relating to communications with the Transportation Department and/or the White House about the California waiver, and I expect you to cooperate with this request and provide the documents without delay.

I thank you very much for your being here today. I thank you for your participation in this hearing. We will look forward to getting the information from you.

[The information referred to follows:]

Questions for EPA Administrator Stephen Johnson for the Hearing Record
Hearing on EPA Approval of New Power Plants
November 8, 2007, Committee on Oversight and Government Reform

1. In Massachusetts v. EPA, the Supreme Court overturned the Administration's position that greenhouse gases are not pollutants under the Clean Air Act and that therefore EPA has no authority to regulate emissions of greenhouse gases. You stated in your testimony that EPA is "evaluating the potential effects of the Supreme Court decision on a variety of Clean Air Act programs, including stationary source programs." Do you agree that this Supreme Court decision has potentially broad and significant impacts on a variety of Clean Air Act provisions? If not, why not?

Response: As EPA has noted on several occasions, the Supreme Court decision has the potential to impact a variety of Clean Air Act sections and programs, which is why the Agency is moving forward in a careful and deliberate manner.

2. Do you agree that the Court's recognition that greenhouse gases are air pollutants requires EPA to consider whether and how CAA Title I provisions, such as section 165, may apply with respect to greenhouse gases?

Response: EPA agrees that the Agency is required to consider whether and how CAA Title I provision may apply with respect to greenhouse gases, given the Court's recognition that greenhouse gases are air pollutants.

3. In light of the important legal and policy issues raised by the Supreme Court's decision, will you commit to request the State of Nevada, which is acting as the federal government's agent as the permitting authority for the White Pine plant, either to reopen the comment period or accept late comments on the White Pine proposed permit decision, to enable commenters to address the effect of the Supreme Court's decision in Massachusetts v. EPA, which was issued after the comment period closed, on the permit decision?

Response: We do not consider it necessary for the Nevada Department of Environmental Protection to reopen the public comment period in order to consider late comments on the effect of the Supreme Court's decision. EPA Region 9 will recommend that the NDEP accept and respond to all significant comments concerning the Supreme Court's ruling in *Massachusetts v. EPA* to the extent practicable.

4. In your responses to questions at the hearing, you indicated that you had not looked at the statistics on the quantity of carbon dioxide emissions that would occur if the Desert Rock and White Pine plants were built. This is surprising, as the effect of these plants on global warming is a primary focus of the Committee's ongoing investigation and the hearing. Based on the projected emissions quantities

estimated by others, the lifetime emissions from these two plants together would offset the 1.3 billion tons of greenhouse gas emissions avoided through EPA's major voluntary climate programs (Energy Star, the methane program, the Green Power Partnership, the Combined Heat and Power Partnership, and the high GWP gas programs) since President Bush took office.

a. Before you directly permit or allow to be permitted any plant with global warming impacts of this scale, will you, as EPA Administrator, commit to examine each plant's contribution to global warming if it were built? If not, why not?

b. Will you commit to take such contribution into account to the fullest extent allowed under the Clean Air Act in any future permit decision? If not, why not?

c. Will you commit to urge or require states with SIP-approved permit programs to take each proposed source's potential contribution to global warming into account to the fullest extent allowed under the Clean Air Act in any future permit decision? If not, why not?

Response: We recognize the importance of addressing the global challenge of climate change. The Agency continues to work on developing an overall strategy to most effectively address emissions of greenhouse gases. We believe that an overall strategy provides the best mechanism for assessing and addressing the full range of potential effects of GHG emissions.

As a general matter, EPA uses established standards or criteria to judge whether a permit should be issued, conditioned or denied on the basis of such impacts. Without such guideposts for greenhouse gas emissions, any action to delay, condition, or deny permits based on the potential effects of those emissions raises significant issues. We will continue to take a case-by-case approach to permitting decisions so that we can determine the proper course of action in the absence of the usual analytical guideposts for making permitting decisions. I am committed to ensuring that the Agency is appropriately reviewing pending permit applications and comments before issuing any final permits.

5. Has EPA calculated the CO2 emissions from Desert Rock and White Pine in terms of the total annual CO2 emissions and the pounds of CO2 per MWh?

a. If not, why not?

b. If yes, please provide those numbers for each plant.

Response: EPA Region 9 has not calculated the CO2 emissions from Desert Rock or White Pine. The Draft Environmental Impact Statements prepared for Desert Rock and White Pine estimated annual CO2 emissions. The Draft EIS for the Desert Rock facility relied on an EPA emissions factor from AP-42 and estimated that Desert Rock will emit

12.7 million tons per year of CO2. The Draft EIS prepared for White Pine relied on an emissions factor from EPA's Climate Leaders Program and estimated that White Pine will emit 20.1 million tons of CO2 annually.

6. The current and threatened future effects of global warming recognized by the IPCC include, among others, sea level rise, loss of glaciers, reduced snowpack, increased drought, changes in precipitation, increases in the severity and extent of forest fires, increases in hurricane intensity, property damage, loss of species habitat, extinction of species, loss of coral reefs, effects on agriculture, expansion in the range of disease vectors, increases in air pollution, and harm to human health.

a. Has EPA independently analyzed the full range of potential effects of the contribution to global warming from the Desert Rock and White Pine plants, if they are built?

Response: Power plants are required by law to calculate and report CO2 emissions under section 821 of the Clean Air Act Amendments of 1990 and regulations at 40 CFR Part 75. There is discretion in the review process to calculate and understand the greenhouse gas profile of new sources. However, while EPA can project CO2 emissions in tons over the projected life of a particular project based in part on assumptions concerning the plant's operating parameters, we lack, and the general climate change research community lacks, the tools and methods to credibly quantify the specific end-point impacts listed above due to the CO2 emissions from an individual power plant.

b. Does anything in the Clean Air Act prohibit EPA from conducting such an analysis?

Response: Nothing in the Clean Air Act precludes EPA or State evaluation of the potential effects of emissions on global climate change. It is a separate issue as to whether any such evaluation is required.

c. If you have not conducted such an analysis, will you commit to do so, and require the State of Nevada to do so, prior to the issuance of a permit to either plant?

d. If not, why not?

Response:

As explained above, current modeling tools and methods do not permit us to credibly estimate the full range of specific endpoint impacts listed above due to the CO2 emissions of an individual power plant.

e. To the extent that other federal agencies have a role to play in any of this analysis (e .g ., the Fish and Wildlife Service and the National Oceanic and Atmospheric Administration for species impacts and the Park Service for impacts on National

Parks), will you commit to ensure that such agencies' views are fully considered prior to issuance of any permit by EPA or a delegated state program? If not, why not?

Response: EPA complies with the requirements of the Clean Air Act (CAA), the Endangered Species Act and any other applicable statutes. Furthermore, it is standard practice that we consider the views of other federal agencies in our permitting decisions provided they are submitted in a timely manner.

7. In 2006, EPA revised the New Source Performance Standards (NSPS) for utility boilers and declined to regulate CO2 in that rulemaking. In September 2007, the DC Circuit remanded this decision to the Agency.

a. When will EPA issue a proposed rule responding to the remand?

b. When will EPA issue a final rule responding to the remand?

c. If EPA has no schedule for responding to the remand, why not?

Response: At this time the Agency is evaluating its options for responding to the remand as part of its overall consideration of greenhouse gas regulation under the Clean Air Act. Since a decision to control GHG emissions as part of a NSPS would impact other Clean Air Act programs with potentially far-reaching implications for many industrial sectors, it is vitally important that we consider our approach to GHG control from this broader perspective.

8. In April 2007, EPA issued a proposed rule revising the NSPS for refineries. In that rulemaking, commenters asserted that EPA must regulate CO2 and methane emissions from refineries. EPA is under a deadline in a consent decree to issue the final rule by April 30, 2008.

a. Will you have formulated an "overall strategy" for addressing greenhouse gas emissions from stationary sources prior to April 30, 2008?

Response:

EPA is making progress in evaluating the availability and potential use of various Clean Air Act authorities for greenhouse gas mitigation efforts, including the NSPS program. The Agency is continuing to collect information to evaluate the scope of sources potentially affected; the flexibility, reasonableness, and effectiveness of potential options for regulation under each authority; and the potential implications of each decision, including the interrelationships between different parts of the Act. For example, we have compiled publicly available data on potential greenhouse gas emissions across industrial sectors; evaluated the use of surrogate data to predict potential CO2 emissions; identified

a range of general greenhouse gas mitigation options; and begun to examine the applicability of these mitigation options in specific industries.

As we indicated above, we are committed to developing a sound strategy for addressing greenhouse gas emissions. In developing that strategy, we have come to appreciate the complexity and interrelationship of potential approaches to greenhouse gas regulation under the Clean Air Act, and the resulting importance of developing a sound overall strategy. In this regard, as we gather information to identify the potential universe of affected facilities if GHGs are regulated under the Act, we recognize that thresholds used for the Prevention of Significant Deterioration (PSD) determinations may greatly increase the number of facilities subject to New Source Review. For example, using a 250-ton per year threshold, facilities that could be covered during new construction and major modification include large apartment buildings, schools, hospitals and retail stores, or potentially large entertainment venues. In addition, for many combustion sources, some of the most effective mechanisms for mitigating GHGs, such as carbon capture and sequestration, need significant study and development before they could be implemented in a regulatory framework.

In view of these potential effects of CAA regulation, we believe it is vitally important to have an overall strategy in place to help guide regulatory decision-making. While we continue to make progress in developing a strategy, I cannot now commit to having a fully articulated strategy in place by a certain date.

b. Will EPA include a full analysis of the global warming effects of refinery greenhouse gas emissions in the technical documents supporting the final NSPS rule? If not, what would be your justification for refusing to consider such effects?

Response: As indicated in our answer to the first part of this question, the Agency is collecting information about potential greenhouse gas emissions from various industrial sectors, including refineries. Under the United Nations Framework Convention on Climate Change, EPA develops the annual U.S. inventory of greenhouse gases. We have included in that inventory our estimate of the greenhouse gas emissions from the refinery sector. We plan to include that information in the rulemaking record for the final refinery NSPS. As we explained in our answer to question 6.a., the modeling tools currently available are not adequate to credibly quantify the impact of an amount of greenhouse gas emissions on the climate change endpoint impacts listed in question 6.

9. EPA is under a deadline in a consent decree to issue a proposed rule to establish an NSPS for the Portland cement sector by May 31, 2008, and to issue the final rule by May 31, 2009. Portland cement manufacturing produces large quantities of greenhouse gas emissions, and it is to be expected that commenters will assert that EPA is required to set limits on those emissions in this rulemaking.

a. Will you have formulated an "overall strategy" for addressing greenhouse gas emissions from stationary sources prior to May 31, 2008?

Response: Please see our answer to 8.a. above.

b. Will EPA include a full analysis of the global warming effects of Portland cement greenhouse gas emissions in the technical documents supporting the proposed NSPS rule? If not, what would be your justification for refusing to consider such effects?

Response: As in the case of refinery greenhouse gas emissions, we plan to include the information we have on Portland cement greenhouse gas emissions in the rulemaking record for the cement NSPS, but available models cannot at this time credibly quantify the potential impact of those emissions on specific climate change endpoint impacts.

10. In your oral testimony, you stated: "we're working very diligently for developing an overall strategy for addressing greenhouse gas emissions, given the Supreme Court decision under Massachusetts v. EPA under the Clean Air Act, and that includes stationary sources." It has now been eight months since the Supreme Court decision. There are a number of pending permitting actions and regulatory actions facing the agency regarding greenhouse gas emissions from stationary sources.

a. Have you finalized any aspect of your "overall strategy for addressing greenhouse gas emissions?" If so, please describe that aspect of your strategy.

b. Have you taken or are you working on any action pursuant to an "overall strategy for addressing greenhouse gas emissions?" If so, please describe that action or actions.

c. When will you finalize the portion of an "overall strategy for addressing greenhouse gas emissions" that addresses stationary sources?

d. In the absence of an "overall strategy for addressing greenhouse gas emissions that addresses stationary sources" are you taking any measures to assure that any permit or regulatory decision with the potential to affect greenhouse gas emissions from a stationary source or sources takes those effects into account? If so, please describe. If not, why not?

Response: We have not finalized any aspect of our overall strategy at this time. For a description of our progress in developing a strategy and how we will approach permitting and regulatory decisions in the meantime, please see our answer to questions 8.a. and 4.c. above.

11. If carbon dioxide is a pollutant subject to regulation under the Clean Air Act, this triggers applicability of the new source review requirements for major sources located in clean air areas under section 165. Some have raised concerns that in the absence of specific threshold levels for CO2 emissions established by EPA, the new

source review requirements would apply if a new or modified major source were to increase CO2 emissions by any quantity.

a. Is EPA working on a rule to establish significance thresholds for emissions of CO2 under section 165. If not, why not?

b. When will EPA issue a proposed rule to establish significance thresholds for emissions of CO2 under section 165? When will EPA issue a final rule?

Response: EPA is in the midst of evaluating the potential effects of the Supreme Court's decision on the mobile and stationary provisions of the Clean Air Act. This work includes an assessment of the implications of the interplay between any mobile or stationary source rule that regulates GHGs and the Prevention of Significant Deterioration (PSD) program under section 165 of the Clean Air Act. CO2 is different because of its global nature and because the quantity released is generally larger than for regulated pollutants. As mentioned in our response to question 8.a., the potential universe of affected facilities would be different than with currently regulated pollutants. As part of that assessment, we are considering, within the framework of our overall climate strategy, whether (and if so, when and how) to proceed regarding any rulemaking to establish PSD significance thresholds for emissions of greenhouse gases.

12. The Bali Roadmap agreed to by the United States and the other parties to the UN Framework Convention on Climate Change last week "[r]ecogniz[ed] that "deep cuts in global emissions will be required to achieve the ultimate objective of the Convention and emphasiz[ed] the urgency to address climate change as indicated in the Fourth Assessment Report of the Intergovernmental, Panel on Climate Change." The IPCC identified the need for developed countries to reduce emissions by 25-40% by 2020 to avoid exceeding atmospheric greenhouse gas concentrations of 450 ppm C02-equivalent.

a. Do you agree that it will it be more difficult and costly to achieve reductions on the scale identified as necessary by the IPCC if new coal-fired plants are built without controls?

Response:
The question implies that the Bali Roadmap and IPCC identified a specific C02-equivalent ppm target when many different scenarios and targets have been evaluated through the IPCC process. Moreover, the Bali Roadmap also provides emphasis on the need for development and dissemination of technology to address climate change.

It is evident from the Agency's review and reporting responsibilities under the Framework Convention on Climate Change that many sectors of the economy emit greenhouse gases. In developing an overall strategy for addressing greenhouse gas emissions, we are compiling and assessing information about available and potential control strategies for various sectors. At this point in time, it is not evident what set of

strategies would be more or less difficult or costly to employ for achieving a particular level of reductions. Further, any assessment must also consider the need for affordable, reliable, and domestically secure energy generation and appropriate ways to promote greenhouse gas reductions. In this area as with other sectors of the economy, programs aimed at the development of technology are essential to long-term progress.

b. Will you take this concern into account in each future permit action and in developing your overall strategy for addressing stationary sources? If not, why not?"

Response: Please see my answers to questions 4.c. and 12.a.

13. With the potential addition of six new coal units in the 17th Texas Congressional District alone, there are serious concerns about the cumulative impact on air quality and public health in Central Texas. Representative Edwards believes that we must determine the cumulative environmental effect that these proposed coal plants would have on Central Texas and state as a whole. In his view, it would be inadequate to just review the impact of each plant individually. The Texas Prevention of Significant Deterioration (PSD) State Implementation Plan (SIP), under which the Texas Commission on Environmental Quality (TCEQ issues permits to power plants, was approved by EPA to be consistent with the federal requirements of the Clean Air Act. In Texas, the PSD program requires air quality impacts from an individual facility and other facilities that impact the same area to be considered in the permitting process. How will EPA ensure that a cumulative analysis of emissions from existing and new sources will be performed?

Response: The PSD permit program requires a proposed source to include in their source impact analysis the effects of its new emissions and the emissions from other existing sources in the area where the source would locate. For such purpose, an "existing" source generally includes any source that has received a permit but is not yet operating. In addition, EPA guidance recommends that the new source's analysis include emissions that would result from sources whose complete application was submitted as of thirty days prior to the date the proposed source files its PSD application. In cases where several sources are "planning" to construct in an area, it is not mandatory for a proposed source to include in its source impact analysis emissions from any potential source that has not yet applied for a permit. Some States may elect to do a cumulative analysis of all such sources simultaneously. EPA is aware of the situation in Texas and has reviewed the preliminary permits for several potential sources. We intend to continue such reviews as part of our responsibility for program oversight to ensure that the PSD program is implemented in accordance with the national requirements.

Chairman WAXMAN. We are now being called to the House floor for a series of a couple of votes. That should take no more than a half hour and maybe less. I would like to request that all Members come back here immediately after the second vote, and we will hear from the second panel that is scheduled to testify. We stand in recess.

[Recess.]

Chairman WAXMAN. The committee will come to order. We would like our next group of witnesses to please take their positions. I want to thank all of you for being here and for your patience. I know that many of you traveled some distance to discuss these critical issues of greenhouse gas emissions from coal-fired power plants.

We have with us Ron Curry. Mr. Curry has served as Secretary of the New Mexico Environment Department since January 2003. He previously served as the New Mexico Environment Department's first Deputy Secretary, and from 1997 to 1998 as Santa Fe city manager.

David Doniger is the policy director of the Natural Resources Defense Council's Climate Center. He has previously served as Director of Climate Change Policy at the Environmental Protection Agency and a counsel to the head of the EPA's Clean Air Program.

Dr. Daniel M. Kammen is the founding director of the Renewable and Appropriate Energy Laboratory at the University of California, Berkeley where he also serves as a professor in the Energy and Resources Group, the Goldman School of Public Policy, and the Department of Nuclear Engineering. Dr. Kammen received his Ph.D. in physics from Harvard University.

Mr. John R. Cline is a partner with Troutman Sanders, and is a member of the firm's environmental and natural resources practice group. Before joining the firm, he worked as a manager of environmental affairs for the Potomac Electric Power Co.

I am delighted that you are all here. It is the practice of this committee that all witnesses testify under oath. So if you would please rise, we will administer the oath to you.

[Witnesses sworn.]

Chairman WAXMAN. Let the record indicate that all the witnesses answered in the affirmative.

Your prepared statements will be in the record in full. What we would like to ask you to do is to limit the oral presentation to 5 minutes. We have a clock, the light is green at the moment, but I am going to set it. When there is 1 minute left, it will turn yellow, and then after that, it will turn red.

Mr. Curry, we will start with you. We are looking forward to your testimony.

STATEMENTS OF RON CURRY, SECRETARY, NEW MEXICO ENVIRONMENT DEPARTMENT; DAVID DONIGER, POLICY DIRECTOR, CLIMATE CENTER, NATURAL RESOURCES DEFENSE COUNCIL; DANIEL M. KAMMEN, DIRECTOR, RENEWABLE AND APPROPRIATE ENERGY LABORATORY, UNIVERSITY OF CALIFORNIA BERKELEY; AND JOHN CLINE, PARTNER, TROUTMAN SANDERS LLP

STATEMENT OF RON CURRY

Mr. CURRY. Thank you, Chairman Waxman and Representative Davis and members of the committee, for inviting me to testify here today. My name is Ron Curry, and I am Cabinet Secretary for the New Mexico Environment Department under the administration of Governor Bill Richardson.

Global climate change is an extremely important issue to New Mexico. New Mexico's precious limited water supply will be threatened if temperatures increase and drought conditions continue. In the desert southwest, we simply have no water to waste, and cannot wait to address climate change.

Under the leadership of the Governor, we have established some of the toughest State greenhouse gas emissions reduction targets in the Nation: 2000 levels by the year 2012; 10 percent below 2000 levels by 2020; and 75 percent below 2000 levels by 2050. Governor Richardson also established the New Mexico Climate Change Advisory Group, which developed 69 greenhouse gas emission reduction strategies. Out of those 69, 67 of them were passed unanimously.

Many of the advisory group's recommendations focus on New Mexico's energy economy. New Mexico is a fossil energy State. We are third in the Nation, third in the Nation for on-shore gas production and fifth in oil production. We export about half the electrical power generated in the State, which is mostly from coal-fired plants.

Since two-thirds of the State's greenhouse gas emissions come from coal and our oil and gas industry, to effectively address climate change we must change and diversify our energy economy. This is particularly important in New Mexico because the majority of our State revenues come from the oil and gas industry.

Nationally, emissions for electricity production account for about 40 percent of all greenhouse emissions. The decisions you make here today and in the future will focus on atmospheric concentrations for decades, because those plants will operate for about a half a century and carbon dioxide emissions remain in the air for at least a century.

When you consider the long-term effects of those plants, you must think about the legacy of future generations. I am a fortunate grandfather, having Julia and Aiden as my grandchildren. I look to them as a reason to prevent global warming in the future.

New Mexico became the first State in the Nation in 2002 and 2003 to require an applicant for a coal-fired power plant to consider integrated gasification combined cycle [IGCC], technology when determining the best available control technology. That is significant, because many believe that not only does this technology result in fewer criteria pollutant emissions and lower water consumption than most conventional power plant technologies, but IGCC is also

the most economical way to capture carbon from coal in the power production process.

The EPA stated in a December 2005 letter that IGCC need not be part of the BACT analysis for the conventional pulverized coal-fired unit, because it would redefine the source. New Mexico could not disagree more strongly.

Congress' record is clear in that it intended to require the consideration of innovative fuel combustion techniques, like IGCC, and BACT analysis. The Clean Air Act requires the assessment of collateral impacts, such as the effects of unregulated pollutants in the BACT analysis.

The recent Supreme Court decision that carbon dioxide is a pollutant should provide EPA with the impetus to address carbon dioxide emissions from stationary and mobile sources. We have not seen evidence of that yet. In New Mexico, we have established greenhouse gases as a pollutant, and therefore we have the authority to regulate those emissions in the State. In New Mexico, we have exercised that authority, just last month by adopting the Nation's most comprehensive greenhouse gas emissions reporting rules. Those rules require mandatory reporting of greenhouse gas emissions from certain industrial sectors reporting in the year 2008.

Governor Richardson understands that we cannot stop global warming by ourselves in New Mexico. We are only the cause of about 1.2 percent of the national total. But we can do our part by leading by example. I ask this group, this Congress, to help us do exactly that. Attaching a cost to carbon emissions from new plants will send the right message to industry and encourage the use of carbon emissions controls in the near-term.

Mr. Chairman, thank you for letting us testify here today. On behalf of Governor Richardson, we continue to promote this effort, as he says, by leading by a very strong example.

[The prepared statement of Mr. Curry follows:]

Written Testimony of
Ron Curry
Secretary of the New Mexico Environment Department

Before the

United States House Committee on Oversight and Government Reform
Hearing on EPA Approval of New Power Plants
November 8, 2007

Introduction

Thank you Chairman Waxman, Representative Davis, and members of the committee for inviting me to testify today. My name is Ron Curry and I am the Cabinet Secretary of the New Mexico Environment Department in the administration of Governor Bill Richardson. I am here to testify today on how New Mexico has addressed climate change through the permitting of new coal fired power plants.

Global climate change is an extremely important issue to New Mexico. Temperatures in New Mexico increased an average 2 degrees Fahrenheit over the past century and are expected to continue to rise. New Mexico's precious, limited water supply will be extremely vulnerable if temperatures increase and drought conditions continue. We expect the warming trend to result in more limited water resources, more extreme weather events, reduced biodiversity and increased air pollution, which will adversely affect New Mexico's infrastructure and economy. In the desert southwest, we simply have no water to waste and we cannot afford to wait to address climate change.

Under the leadership of Governor Richardson, New Mexico is addressing climate change head on. Governor Richardson has established some of the toughest state greenhouse gas emissions reduction targets in the nation -- 2000 levels by the year 2012, 10 percent below 2000 levels by 2020 and 75 percent below 2000 levels by 2050. The Governor also spearheaded the Western Climate Initiative to address this issue regionally. Governor Richardson also established the New Mexico Climate Change Advisory Group. This diverse group of 40 stakeholders from industry, environmental groups and local and tribal governments developed 69 greenhouse gas emissions reduction strategies to achieve the Governor's emissions reduction targets. When the state completes the implementation of all the group's reduction recommendations, we will exceed the Governor's emissions reduction targets at significant net savings to our state's economy.

Many of the recommendations from the advisory group focus on New Mexico's energy economy. New Mexico historically has been a fossil energy state. We are third in the nation for onshore gas production and fifth in oil production. We export about half the electrical power generated in the state, which is mostly from coal fired power plants. However, if we are to effectively address climate change, we must change and diversify our energy economy to include energy production that is efficient, cost-effective and less polluting. In New Mexico, the number one source of greenhouse gas emissions is power production, while the number two source is production and processing of oil and gas. Those two industries combined account for nearly two-thirds of the greenhouse gas emissions in the state.

Permitting New Power Plants

To combat global warming, we must effectively address carbon dioxide emissions from coal fired power plants. Nationally, these emissions account for about 40% of all greenhouse gas emissions. Since new plants that come online today will operate for about a half a century and carbon dioxide emissions remain in the atmosphere for at least 100 years, the decisions we make today regarding these plants will drive atmospheric

concentrations for decades. Each new conventional coal plant built without technology to reduce of capture carbon dioxide emissions is a step backwards and does not move us towards a future of more safe and efficient energy use.

Even before Governor Richardson brought together the advisory group, the state took steps to address carbon dioxide emissions in the permitting of new coal fired power plants. In 2002, New Mexico became the first state in the nation to require an applicant for a coal fired power plant to consider Integrated Gasification Combined Cycle (IGCC) technology when determining the Best Available Control Technology (BACT) for that facility. This is significant because many believe that not only does this technology result in fewer criteria pollutant emissions and lower water consumption than most conventional power plant technologies, but it is also currently the most economical way to capture carbon from coal in the power production process.

In a December 2005 letter, EPA stated that IGCC need not be a part of the BACT analysis for a conventional pulverized coal-fired unit because it would "redefine the source". New Mexico strongly disagrees with this statement. The Clean Air Act states that BACT should take into account both "clean fuels" and "innovative fuel combustion techniques", and the legislative history shows that this language was intended to include both cleaner forms of coal fuels and clean coal combustion technology. During deliberation of the 1977 CAA Amendments, Senator Huddleston of Kentucky added language *specifically* to promote the consideration of coal burning options such as fluidized bed boilers and gasification technologies. IGCC technology is currently available and technologically feasible, as evidenced in part by the proposed construction of numerous IGCC power plants around the country. Congress intended the Clean Air Act to act as a regulatory driver that promotes the implementation of advanced energy technologies.

The Clean Air Act requires the assessment of "impacts other than impacts on air quality standards due to emissions of the regulated pollutant in question, such as solid or hazardous waste generation, discharges of polluted water from a control device, visibility impacts, or emissions of unregulated pollutants" in the BACT analysis. Although carbon dioxide emissions are currently unregulated, the impacts of these emissions are significant and result in adverse impacts to our state, the nation and world.

Governor Richardson has established state-wide greenhouse gas emission reduction goals. It would be difficult, if not impossible, for us to meet these goals if another conventional coal fired powered plant were constructed in the state. The greenhouse gas emissions from a conventional coal-fired power plant are far greater than our opportunities to reduce emissions from other sources in the state. This is why we were very concerned when EPA Region 9 recently issued a draft permit for a 1500 MW supercritical coal fired power plant on the Navajo Nation, the Desert Rock facility. EPA did not require the applicant to consider IGCC in the BACT analysis and did not even ask the applicant to calculate carbon dioxide emissions for the plant. It is our estimate that if this plant is constructed, it will emit about 12 million metric tons of carbon dioxide annually.

New Mexico does not see statements in the December 2005 EPA letter or recent EPA permit decisions as establishing policy for states. Our state has EPA's approval of our state's implementation plan for the Clean Air Act, so New Mexico has full authority to make decisions regarding pollutants in accordance with EPA guidelines and regulations. In considering carbon dioxide emissions from proposed power plants, New Mexico is simply implementing the Clean Air Act provisions, and EPA should do the same. EPA has not gone through any formal rule-making regarding IGCC and CO2 emissions in the BACT analysis, nor has the dust settled on recently issued EPA permits for coal-fired power plants. EPA's recent statements and actions will not affect how New Mexico conducts the BACT analysis for coal fired power plants.

EPA vs. Massachusetts

The recent Supreme Court decision that carbon dioxide is a pollutant should provide EPA with impetus to address carbon dioxide emissions from stationary and mobile sources, though we have not seen evidence of this yet. In New Mexico, we have established greenhouse gases as a regulated pollutant and therefore we have the authority to regulate greenhouse gas emissions in the state. Just last month we exercised this authority with the adoption of the nation's most comprehensive greenhouse gas emissions reporting rules. This rule requires the mandatory reporting of greenhouse gas emissions from certain industrial sectors starting with reporting year 2008.

Future Strategies

We believe that the best way to regulate and reduce greenhouse gas emissions is through a mandatory market-based greenhouse gas reduction program that covers all major economic sectors including power production. Once there is a cost to emitting carbon, power plants that control emissions will be more economical than those that don't. In the absence of a strong national climate program, Governor Richardson is pushing for market-based solutions at the regional level. On February 26, 2007, he signed a memorandum of understanding with Governors Arnold Schwarzenegger of California, Janet Napolitano of Arizona, Chris Gregoire of Washington and Ted Kulongoski of Oregon creating the Western Climate Initiative. Since this time, Utah, Manitoba and British Columbia have joined as official members, while other jurisdictions are participating as observers. The partners have set a regional greenhouse gas emissions reduction goal of 15% below 2005 levels by 2020 and are developing a regional market based program for achieving this goal. Since utilities are a major source of greenhouse has emissions in the west, it is quite likely that this sector will be included in a regional market based program. The WCI is scheduled to complete the design of this program by August 2008.

Conclusions

New Mexico understands that we cannot stop the global warming trend on our own. Our greenhouse gas emissions account for only about 1.2 percent of the national total, but we can do our part by controlling existing emissions where we can and ensuring that new facilities control or capture greenhouse gas emissions as much as possible.

New Mexico intends to continue to show other states, regions and our nation how greenhouse gases can be reduced in a responsible manner. We will continue to comply with the Clean Air Act by requiring the consideration of IGCC in the BACT analysis for any proposed coal fired power plant in the state and will consider GHG emissions when determining BACT. We will also work regionally to develop market based mechanisms for reducing greenhouse gas emissions from all sources.

By promoting advanced coal technologies we can utilize our vast coal resources to produce power in a manner that will have less impact to the environment, climate and public health while at the same time promoting job growth and economic development. We need to move forward toward new carbon capture-ready technologies for power generation so that there are no regrets in the future. From past history, we know that the power constructed today will likely be in existence for decades to come.

Lastly, I urge this committee to consider mechanisms to disallow the grandfathering of emissions from new electrical generating units into any future cap and trade program unless the facility meets specific greenhouse gas emission performance standards. There may be a rush to construct conventional coal fired power plants before new carbon regulations are in affect. Assuring that there will be a cost associated with carbon emissions from these new plants will send the right signal to industry and encourage the use of carbon emission controls in the near term.

Thank you for inviting me here today to testify on this important issue. I look forward to your questions.

Chairman WAXMAN. Thank you very much, Mr. Curry.

Mr. Doniger.

STATEMENT OF DAVID DONIGER

Mr. DONIGER. Thank you, Mr. Chairman and Mr. Issa.

I am David Doniger. I am policy director for the Climate Center of the NRDC. NRDC is a national non-profit organization of scientists and lawyers and environmental specialists. We have been around since 1970. We have 1.2 million members and supporters.

I would like to begin with an observation about the Supreme Court case. There are actually two cases, *Massachusetts* v. *EPA,* decided by the Supreme Court, which concerns mobile sources directly. There was another case, *New York* v. *EPA,* which concerned the same decision by EPA not to regulate power plant CO_2 for the same reasons given by the agency in deciding not to do that for motor vehicles. So when the Supreme Court overruled EPA on motor vehicles, the D.C. Circuit sent both cases back to the EPA for new decisions on both motor vehicles and on power plants, pursuant to the Supreme Court rationale.

We have a schedule from EPA for dealing with motor vehicles. We don't have any schedule from EPA for dealing with power plants. So that is the first observation.

The second point is there seems to be one point of agreement, we think, between EPA and NRDC when it comes to CO_2 and Clean Air Act permitting. That is that once EPA issues regulations to establish controls for CO_2 emissions for vehicles, or maybe for power plants also, at that point it becomes an obligation to evaluate CO_2 in the PSD permitting process. EPA concedes that. But that is a couple of years off.

So what we are concerned about here is what happens in the meantime with respect to maybe a couple of dozen power plants that are in the permitting process now. It is clear that if they came up in a year and a half, 2 years from now, there would have to be an analysis of "best available control technology" for CO_2. There is, we believe, the requirement to do that now. And certainly the authority to do that now.

Why is it required? Because CO_2 is already regulated under Section 821 of the Clean Air Act, which establishes monitoring regulations and reporting regulations for the CO_2 emissions from existing power plants. And those are requirements under the Acid Rain title. They are part of the program for, the monitoring requirements are part of the program for curbing sulfur and NO_x. But they are regulations written under the Clean Air Act and adopted into the Clean Air Act. So we think at this point, it is already the case that CO_2 is regulated under the Clean Air Act. And certainly, it is subject to regulation under the Clean Air Act.

The act doesn't say that the PSD permitting, the BACT analysis is required only for regulated pollutants. It uses a broader phrase. It is required for pollutants that are subject to regulation. We think that this is a requirement now to be doing BACT analysis for CO_2 for the power plants that are in the pipeline now and not let them slip under the wire while waiting for a future decision about motor vehicles coming maybe at the end of next year.

The consequences of letting these power plants go through is that you end up with new plants that have a 60 year lifetime and, as the chairman has noted, up to a billion tons of lifetime emissions. And they are let in under the wire for the last 58 or 59 years of their life, they would be subject to no CO_2 controls that could have been imposed at the beginning and maybe it would have altered the decision about what kind of a plant to build.

So there are other authorities in the PSD program, the requirement to consider alternative technologies and to consider the collateral impacts, environmental impacts of the decisions. All of these would provide EPA the authority to hold these plants up or to require that they now go through a BACT analysis and an alternatives analysis for CO_2-related technology.

My organization believes that we should not be building any more coal plants of the conventional design without carbon capture and storage. Preferably, we should be relying on efficiency and renewables. But we recognize that coal is a major part of the energy picture for a long time, will be. And that any new coal plants that are built should be built right now, starting now, with carbon capture and disposal. And that might lead companies to choose, as Mr. Curry said, to go with coal gasification technology, as it is more amenable to the capture and disposal.

By the way, we support the EPA in the recent decision to set up rules to provide the ground rules for carbon capture and disposal under the underground injection program. That is something we asked for some time ago, and we are glad that they have agreed to go down that track. We will watch closely what the requirements are. But we agree that there is a need for rules to tell everybody, the prospective builders of these plants, exactly what is required by way of carbon capture and disposal and that will facilitate the quick movement into that technology.

If we don't do this, we will have, as I said, this legacy of new plants, maybe a dozen new plants, slipped in under the wire that don't have the right technology, don't have the right controls. And it will raise the cost of the CO_2 control program once Congress enacts it, more generally, because you have plants with old technology that are harder to control, and that will reflect itself in higher costs on the companies and perhaps higher costs on the ratepayers. This is why so many power company executives now join us in supporting the call for new legislation, because they realize that the choice of what technology to invest in now is on the line here. Smart decisions under a carbon regime will be different than the decisions they would make without a carbon regime. They want the certainty, they want to know. EPA has the ability right now to clear that up for them by requiring that CO_2 be accounted for in the permitting of new power plants.

So a responsible policy would include two specific steps for large new power plants starting now. First, EPA should immediately require that any future PSD permits be issued only after a BACT analysis and a determination of what is BACT. Second, even if EPA didn't do that, they should reach basically the same policy outcome under their authority to consider alternatives and collateral environmental impacts under Section 165(a)(2).

I would be happy to answer your questions. Thanks.

[The prepared statement of Mr. Doniger follows:]

David Doniger

Policy Director, Climate Center

Natural Resources Defense Council

Testimony

Before the
Committee on Oversight and Government Reform
United States House of Representatives

Hearing on

EPA Approval of New Power Plants: Failure to Address Global Warming Pollutants

November 8, 2007

Testimony

Thank you for the opportunity to testify today on the subject of EPA's failure to address global warming pollutants in the permitting of new power plants. My name is David Doniger. I am Policy Director of the Climate Center at the Natural Resources Defense Council (NRDC). NRDC is a national, nonprofit organization of scientists, lawyers and environmental specialists dedicated to protecting public health and the environment. Founded in 1970, NRDC has more than 1.2 million members and online activists nationwide, served from offices in New York, Washington, Los Angeles and San Francisco, Chicago and Beijing.

I have been asked to focus my remarks today on the EPA permitting of new coal fired power plants. EPA has recently made a decision to permit a new coal fired power plant in Utah, the Deseret/Bonanza facility, and has refused to consider the global warming effects of the plant or to require any measures to mitigate or eliminate greenhouse gas emissions from the plant. As I will explain below, this position is not consistent with either sound public policy or the existing Clean Air Act, as interpreted by the Supreme Court's in Massachusetts v. EPA, 127 S. Ct. 1438 (2007).

The Massachusetts decision confirmed that greenhouse gases, such as carbon dioxide (CO_2) emitted from powerplants, are "air pollutants" under the Clean Air Act. Since CO_2 is now unambiguously an air pollutant, and it is clearly "subject to regulation," Clean Air Act section 165 requires that EPA conduct an analysis of Best Available Control Technology and establish appropriate emissions limitations. Even where EPA

refuses to follow the law in this regard, the Agency must undertake other analyses related to the collateral environmental impacts of greenhouse gases and the availability of alternatives. If these analyses were properly performed, EPA would be forced to conclude that new coal-fired power plants pose a grave threat to public health and the environment, and that mitigation strategies, such as carbon capture and disposal, energy efficiency, renewable energy, alternative fuels, and other options must be adopted before any project can more forward.

EPA, however, continues to insist that it is powerless to consider greenhouse gas emissions in approving PSD permits under the Clean Air Act until the agency issues final standards limiting such pollutants from motor vehicles or some other source – something not likely to happen before the end of 2008. It would be an environmental tragedy, however, to let more conventional coal-fired power plants slip "under the wire" in the next 14 months.

EPA is now involved in the permit application process for at least three other proposed coal-fired power plants (in addition to the Bonanza facility): the Desert Rock facility on Navajo land in New Mexico; the White Pine facility in Nevada; and the Carlson coal plant in New York. Additionally, several other states with delegated Federal permit programs under the Clean Air Act, such as Illinois and Michigan, are currently considering permit applications for new coal fired power plants. The Desert Rock and White Pine plants would each have a generating capacity of approximately 1500

megawatts and would each produce ten times more global warming pollution than the Deseret/Bonanza facility.

There is a growing recognition that allowing another generation of new coal-fired power plants to be built without carbon capture and disposal (CCD) is utterly inconsistent with an effective strategy for combating global warming. As the reality of global warming sinks in, and as it becomes clearer that future legislation will significantly regulate such plants, more and more utilities and other companies are reconsidering plans to construct new coal plants. Indeed, as shown in the attached document prepared by NRDC, plans to construct new coal-fired plants without CCD are being scrapped at numerous sites throughout the United States.

The latest high-profile example comes from Kansas. On October 17, 2007, the Kansas Department of Health and Environment denied a permit to Sunflower Electric Power to construct two 700-megawatt, coal-fired plants in Holcomb, Kansas. Together the plants would have produced 11 million tons of carbon dioxide annually. That is almost equal to the total amount of CO_2 emissions that the states in the northeastern Regional Greenhouse Gas Initiative plan to save by 2020.

Roderick L. Bremby, secretary of the Kansas Department of Health and Environment, said that 'it would be irresponsible to ignore emerging information about the contribution of carbon dioxide and other greenhouse gases to climate change and the potential harm to our environment and health if we do nothing." Kansas' decision to deny a permit because of CO_2 emissions highlights the lack of EPA leadership on this issue.

Indeed, greater federal leadership is being shown by the National Park Service. In comments recently submitted to EPA regarding Duke Energy's proposed Cliffside power plant, the Park Service urged that consideration be given to Integrated Gasification Combined Cycle (IGCC) both as a means of controlling conventional pollutants, such as NOx, SOx and mercury, and as a mechanism for capturing CO_2 pursuant to future greenhouse gas legislation.

Businesses are also coming to terms with the need for and current availability of carbon capture and sequestration. Recently, several companies have announced plans to pursue projects that would include CO_2 capture, including IGCC-based projects such as BP's proposed project in Carson, CA. Additionally, just last week, NRG Energy and Powerspan, Inc., announced plans to capture the CO_2 from the flue gas at an existing coal fired plant at a scale equivalent to the operation of a 125 megawatt power plant. The CO_2 will be used for underground injection in connection with enhanced oil recovery in the Houston area. NRG expects that this project will be operational in 2012 and that it will capture approximately 90 percent of the incoming CO_2, marking an important step in the development of a new technology for capturing CO_2 emissions.

It is also worth noting that a recent filing by Idaho Power Co. (IPC) before the Securities and Exchange Commission indicates that "due to…continued uncertainty surrounding future GHG laws and regulations, IPC has determined that coal fired generation is not the best technology to meet its resource needs in 2013." The fact that businesses recognize that carbon controls will soon be an inevitable cost of doing business and are investing

their own financial resources in systems to capture carbon from coal belies EPA's claim that it is too early to take concrete action. The fact of the matter is, coal use and climate protection are on a collision course, and without rapid deployment of CCD systems, that collision will occur quickly and with spectacularly bad results.

How we use coal in the decades ahead will have an immense impact, for better or for worse, on our economy and our energy and environmental security. Coal is cheap and abundant compared to oil and natural gas. But the toll from coal as it is used today is enormous. From mining deaths and illness and devastated mountains and streams from practices like mountain top removal mining, to accidents at coal train crossings, to air emissions of acidic, toxic, and heat-trapping pollution from coal combustion, to water pollution from coal mining and combustion wastes, the conventional coal fuel cycle is among the most environmentally destructive activities on earth.

EPA's continued refusal to require analysis of BACT, environmental impacts, or alternatives regarding the CO_2 emissions from new coal power plants is both unlawful and irresponsible public policy. Allowing these new coal plants to be built without using available methods to control CO_2 will create a legacy of damage that will be difficult if not impossible to reverse.

The central challenge facing coal as an energy resource is its global warming emissions. Large amounts of coal are being used today because it is abundant and cheap. Coal today, however, is a bigger global warming polluter per unit of energy delivered than any other fuel: double that of natural gas; 50 per cent more than oil; and, of course,

enormously more polluting than renewable energy, energy efficiency, and, more controversially, nuclear power. To reduce coal's contribution to global warming, federal policy must focus on requiring systems that will keep the carbon in coal out of the atmosphere, specifically systems that capture CO_2 from coal plants and dispose of it in geologic formations.

My organization opposes new coal plants that do not capture their CO_2. Our first recourse must be to take advantage of the untapped energy efficiency resources of this economy, and of renewable energy. Recognizing that coal will continue to be a part of the energy landscape for decades, however, NRDC supports rapid deployment of carbon capture and disposal (CCD) systems for any new coal sources. Any significant additional use of coal without CCD is fundamentally in conflict with the need to keep atmospheric concentrations of CO_2 from rising to levels that will produce truly dangerous disruption of the climate system. Given that an immediate world-wide halt to coal use is not plausible, analysts and advocates with a broad range of views should be able to agree that, if it is safe and effective, CCD should be rapidly deployed to minimize CO_2 emissions from the coal that we do use. As discussed more fully in the attached Appendix prepared by my colleague, David Hawkins, the Director of NRDC's Climate Center, geologic disposal of large amounts of CO_2 is viable and we know enough today to conclude that it can be done safely and effectively.

Since the dawn of the industrial age, human use of coal has released about 150 billion metric tons of carbon into the atmosphere—about half the total carbon emissions due to

fossil fuel use in human history. But that contribution is the tip of the carbon iceberg. Another 4 *trillion* metric tons of carbon are contained in the remaining global coal resources. That is nearly seven times the carbon that resided in our atmosphere before the industrial revolution began. Using that coal without preventing the release of that carbon to the atmosphere means a climate catastrophe.

The die is being cast for that catastrophe today, not decades from now. Decisions being made today in corporate board rooms, at the EPA, and in congressional hearing rooms are determining whether the next generation of coal-fired power plants will be designed and operated to belch their CO_2 into the atmosphere, or to return it deep underground. Power plant investments are enormous in scale, more than $1 billion per plant, and plants built today will operate for 60 years or more. The International Energy Agency (IEA) forecasts that more than $5 trillion will be spent globally on new power plants in the next 25 years. Under IEA's forecasts, over 1800 gigawatts (GW) of new coal plants will be built between now and 2030—capacity equivalent to 3000 large coal plants, or an average of ten new coal plants every month for the next quarter century. This new capacity amounts to 1.5 times the total of all the coal plants operating in the world today. Over a projected 60-year life these plants would likely emit 750 billion tons of CO_2, a total, from just 25 years of investment decisions, that is 30% greater than the total CO_2 emissions from all previous human use of coal. Once emitted, this CO_2 pollution load remains in the atmosphere for centuries. Indeed, half of the CO_2 emitted during World War I remains in the atmosphere today.

The astounding fact is that under IEA's forecast, 7 out of every 10 coal plants that will be operating in 2030 don't exist today. That fact presents a huge opportunity—many of these coal plants will not need to be built if we invest more in efficiency; additional numbers of these coal plants can be replaced with clean, renewable alternative power sources; and for the remainder, we can build them to capture their CO_2, instead of building them the way our grandfathers built them.

If we decide to do it, the world could build and operate new coal plants so that their CO_2 is returned to the ground rather than polluting the atmosphere. But we are losing that opportunity with every month of delay—10 coal plants were built the old-fashioned way last month somewhere in the world and 10 more old-style plants will be built this month, and the next and the next. Worse still, with current policies in place, none of the 3000 new plants projected by IEA are likely to capture their CO_2.

If we build a new fleet of coal plants that vent their CO_2 emissions there is little reason to trust that these plants will someday be retrofit with CO_2 capture devices later in life. While commercial technologies exist for pre-combustion capture from gasification-based power plants, most new plants are not using gasification designs and the few that are, are not incorporating capture systems. Installing capture equipment at these new plants after the fact is currently implausible for traditional coal plant designs and expensive for gasification processes.

How can U.S. policy help avert this catastrophe? We should implement a national policy that new coal plants be required to employ CCD without delay. By taking action ourselves, we can speed the deployment of CCD here at home and set an example of leadership. That leadership will bring us economic rewards in the new business opportunities it creates here and abroad and it will speed engagement by critical countries like China and India.

While in the last several years there has been a surge of announcements for planned construction of new coal-fired power plants, and EIA's energy models forecast that as much as 160 GW of new coal capacity might be built in the U.S. between now and 2030 (with as much as 61 billion metric tons of CO_2), it is worth noting that the actual amount of new coal capacity that will be built, given the unsettled policy environment, is quite uncertain. NRDC and other organizations are successfully challenging new coal plants, and regulators and the financial community are increasingly questioning the wisdom of such projects. Nonetheless, we cannot assume that new CO_2-emitting coal plants will not be built in the U.S. in the years to come. In fact, the Department of Energy's National Energy Technology Laboratory's most recent report tracking new coal plants identifies 32 projects that are either "under construction" or "near construction" in the U.S., with a total capacity of more than 17,000 MW.

In face of this climate challenge, EPA should be taking advantage of every opportunity and authority to address CO_2 emissions from coal plants now, while both EPA and

Congress work towards the development of clear requirements that would ensure the rapid deployment of CCD systems.

My organization has joined with other environmental organizations in objecting to EPA permitting decisions that refuse to consider greenhouse gas impacts and mitigation measures for new coal fired plants. A copy of our latest set of comments to EPA regarding the upcoming permit for the Desert Rock facility is attached to this testimony. The principal legal basis for our objection is that such an analysis is required under the existing Clean Air Act, in light of the Supreme Court's decision in Massachusetts v. EPA, 127 S. Ct. 1438 (2007).

In the Massachusetts v. EPA case, the Supreme Court held that CO_2 and other greenhouse gases are air pollutants as defined in Clean Air Act § 302(g), 42 U.S.C. § 7602(g). The Court based its holding on the "unambiguous" language of the definition. Specifically, the Court held that "The Clean Air Act's sweeping definition of "air pollutant" includes "*any* air pollution agent or combination of such agents, including *any* physical, chemical....substance or matter which is emitted into or otherwise enters the ambient air .... Carbon dioxide, methane, nitrous oxide, and hydrofluorocarbons are without a doubt "physical [and] chemical . . . substance[s] which [are] emitted into . . . the ambient air." 127 S. Ct. 1438, 1460 (2007). According to the Court, on this point "[t]he statute is unambiguous." Id. Thus, the Court in Massachusetts v. EPA clearly concluded that CO_2 is an "air pollutant" under the plain meaning of the Clean Air Act.

Section 165(a)(4) of the Clean Air Act requires that permits for proposed major sources include an emission limit reflecting the Best Available Control Technology (BACT) "for each pollutant subject to regulation" under the Act. In light of the Massachusetts v. EPA decision, CO_2 is plainly a pollutant "subject to regulation" under the Act. Indeed, following the Massachusetts v. EPA decision, President Bush issued an Executive Order on May 14, 2007, directing EPA to regulate greenhouse gases, including CO_2, from motor vehicles and fuels under the Clean Air Act. The President's action suggests that even the President is of the opinion that CO_2 is a "pollutant" and must be further regulated under the Clean Air Act.

In fact, not only is CO_2 subject to imminent regulation under the Clean Air Act, it is actually a "regulated" pollutant under the Clean Air Act Amendments of 1990 already. Pursuant to existing regulations, promulgated under section 821 of the Clean Air Act Amendments of 1990, EPA requires utilities to monitor CO_2 emissions, keep records of such emissions, and report those emissions to the Agency. Given the status of CO_2 as a pollutant that is already "regulated," and as a pollutant that is subject to further regulation under the Clean Air Act Amendments, Section 165 requires that an emission limitation be established for CO_2 at new coal fired power plants, reflecting Best Available Control Technology. Indeed, emission limits for CO_2 are already effective in states such as California, Washington and Wyoming, requiring substantial carbon capture and geologic disposal for coal fired power plants (or the use of energy sources other than coal).

In the absence of a BACT emission limitation for CO_2, Clean Air Act sections 165(a)(4) and 169(3) also require that EPA consider other environmental effects as it conducts its

BACT analysis for conventional pollutants. These requirements obligate EPA to consider the impact of greenhouse gases, including CO_2, as it determines what is BACT for conventional pollutants (such as sulfur oxides and nitrogen oxides). Although few other environmental considerations could be as important, EPA has refused to undertake even this critical analysis in connection with issuing air permits for new coal plants. The result is to give the green light to huge, long-lived new sources of global warming pollution without any meaningful assessment of the human health or environmental consequences.

Finally, under Clean Air Act 165(a)(2), EPA must consider comments that are raised during the comment process regarding, among other things, "the air quality impacts of such source, alternatives thereto, control technology requirements, and other appropriate considerations," and the Agency may establish additional requirements for a source based on these considerations. EPA may also consider these factors even if they are not raised in public comments. If such analysis were properly conducted, taking into account greenhouse gas emissions and global warming, EPA would find in many, if not all cases, that available alternatives to permitting new conventional coal plants would include energy efficiency improvements, renewable energy alternatives, CCD systems, smaller power facilities, alternative fuel choices, and other options. As others will testify today, the range of such alternatives is large and increases with each passing year. Yet EPA refuses to conduct any such analysis, thereby failing to fulfill both its duty under the law and its professed desire to act now to reduce greenhouse gas emissions. In light of the very long lifetimes of coal fired power plants, the consequences of this failure, if

EPA's policy continues to be pursued at more plants, could haunt us for many decades to come.

Conclusions

We have no time to lose to begin cutting global warming emissions. Fortunately, we have technologies ready for use today that can get us started. We need to use the authorities that already exist under the law today to require the use of such technologies and we need to enact comprehensive federal global warming legislation that provides a science based limit on U.S. greenhouse gas emissions.

Because we will almost certainly continue using coal in the U.S. and globally in the coming decades, it is imperative that we act now to deploy Carbon Capture and Disposal (CCD) systems on all new coal fired power plants. EPA has had the legal authority to require this under the existing Clean Air Act for many years, but even now refuses to exercise that authority. We cannot afford to lose any more time or allow permitting of any more coal fired power plants without CO_2 controls. Commercially demonstrated CO_2 capture systems exist today and competing systems are being researched. Improvements in current systems and emergence of new approaches will be accelerated by requirements to limit CO_2 emissions.

The challenge is daunting, but it can be done. But to be successful we must begin immediately, and the most immediately available tool to address the core issues of CO_2 emissions is the existing Clean Air Act permitting process.

Mr. Chairman, that completes my testimony, I will be happy to take any questions you or other committee members may have.

APPENDIX A:

Is CCD Ready for Broad Deployment?

David Hawkins,

Director, Climate Center

Natural Resources Defense Council

Is CCD Ready for Broad Deployment?

Key Questions about CCD

I started studying CCD in detail ten years ago and the questions I had then are those asked today by people new to the subject. Do reliable systems exist to capture CO_2 from power plants and other industrial sources? Where can we put CO_2 after we have captured it? Will the CO_2 stay where we put it or will it leak? How much disposal capacity is there? Are CCD systems "affordable"? To answer these questions, the Intergovernmental Panel on Climate Change (IPCC) decided four years ago to prepare a special report on the subject. That report was issued in September, 2005 as the IPCC Special Report on Carbon Dioxide Capture and Storage. I was privileged to serve as a review editor for the report's chapter on geologic storage of CO_2.

CO_2 Capture

The IPCC special report groups capture or separation of CO_2 from industrial gases into four categories: post-combustion; pre-combustion; oxyfuel combustion; and industrial separation. I will say a few words about the basics and status of each of these approaches. In a conventional pulverized coal power plant, the coal is combusted using normal air at atmospheric pressures. This combustion process produces a large volume of exhaust gas that contains CO_2 in large amounts but in low concentrations and low pressures. Commercial post-combustion systems exist to capture CO_2 from such exhaust gases using chemical "stripping" compounds and they have been applied to very small

portions of flue gases (tens of thousands of tons from plants that emit several million tons of CO_2 annually) from a few coal-fired power plants in the U.S. that sell the captured CO_2 to the food and beverage industry. However, industry analysts state that today's systems, based on publicly available information, involve much higher costs and energy penalties than the principal demonstrated alternative, pre-combustion capture.

New and potentially less expensive post-combustion concepts have been evaluated in laboratory tests and some, like ammonia-based capture systems, are scheduled for small pilot-scale tests in the next few years. Under normal industrial development scenarios, if successful such pilot tests would be followed by larger demonstration tests and then by commercial-scale tests. These and other approaches should continue to be explored. However, unless accelerated by a combination of policies, subsidies, and willingness to take increased technical risks, such a development program could take one or two decades before post-combustion systems would be accepted for broad commercial application.

Pre-combustion capture is applied to coal conversion processes that gasify coal rather than combust it in air. In the oxygen-blown gasification process coal is heated under pressure with a mixture of pure oxygen, producing an energy-rich gas stream consisting mostly of hydrogen and carbon monoxide. Coal gasification is widely used in industrial processes, such as ammonia and fertilizer production around the world. Hundreds of such industrial gasifiers are in operation today. In power generation applications as practiced today this "syngas" stream is cleaned of impurities and then burned in a combustion turbine to make electricity in a process known as Integrated Gasification

Combined Cycle or IGCC. In the power generation business, IGCC is a relatively recent development—about two decades old and is still not widely deployed. There are two IGCC power-only plants operating in the U.S. today and about 14 commercial IGCC plants are operating globally, with most of the capacity in Europe. In early years of operation for power applications a number of IGCC projects encountered availability problems but those issues appear to be resolved today, with Tampa Electric Company reporting that its IGCC plant in Florida is the most dispatched and most economic unit in its generating system.

Commercially demonstrated systems for pre-combustion capture from the coal gasification process involve treating the syngas to form a mixture of hydrogen and CO_2 and then separating the CO_2, primarily through the use of solvents. These same techniques are used in industrial plants to separate CO_2 from natural gas and to make chemicals such as ammonia out of gasified coal. However, because CO_2 can be released to the air in unlimited amounts under today's laws, except in niche applications, even plants that separate CO_2 do not capture it; rather they release it to the atmosphere. Notable exceptions include the Dakota Gasification Company plant in Beulah, North Dakota, which captures and pipelines more than one million tons of CO_2 per year from its lignite gasification plant to an oil field in Saskatchewan, and ExxonMobil's Shute Creek natural gas processing plant in Wyoming, which strips CO_2 from sour gas and pipelines several million tons per year to oil fields in Colorado and Wyoming.

Today's pre-combustion capture approach is not applicable to the installed base of conventional pulverized coal in the U.S. and elsewhere. However, it is ready today for use with IGCC power plants. The oil giant BP has announced an IGCC project with pre-combustion CO_2 capture at its refinery in Carson, California. When operational the project will gasify petroleum coke, a solid fuel that resembles coal more than petroleum to make electricity for sale to the grid. The captured CO_2 will be sold to an oil field operator in California to enhance oil recovery. The principal obstacle for broad application of pre-combustion capture to new power plants is not technical, it is economic: under today's laws it is cheaper to release CO_2 to the air rather than capturing it. Enacting laws to limit CO_2 can change this situation, as discussed in my testimony.

While pre-combustion capture from IGCC plants is the approach that is ready today for commercial application, it is not the only method for CO_2 capture that may emerge if laws creating a market for CO_2 capture are adopted. I have previously mentioned post-combustion techniques now being explored. Another approach, known as oxyfuel combustion, is also in the early stages of research and development. In the oxyfuel process, coal is burned in oxygen rather than air and the exhaust gases are recycled to build up CO_2 concentrations to a point where separation at reasonable cost and energy penalties may be feasible. Small scale pilot studies for oxyfuel processes have been announced. As with post-combustion processes, absent an accelerated effort to leapfrog the normal commercialization process, it could be one or two decades before such systems might begin to be deployed broadly in commercial application.

Given, the massive amount of new coal capacity scheduled for construction in the next two decades, we cannot afford to wait and see whether these alternative capture systems prove out, nor do we need to. Coal plants in the design process today can employ proven IGCC and pre-combustion capture systems to reduce their CO_2 emissions by about 90 percent. Adoption of policies that set a CO_2 performance standard now for such new plants will not anoint IGCC as the technological winner since alternative approaches can be employed when they are ready. If the alternatives prove superior to IGCC and pre-combustion capture, the market will reward them accordingly. As discussed in my testimony, adoption of CO_2 performance standards is a critical step to improve today's capture methods and to stimulate development of competing systems.

I would like to say a few words about so-called "capture-ready" or "capture-capable" coal plants. Some years ago I was under the impression that some technologies like IGCC, initially built without capture equipment could be properly called "capture-ready." However, the implications of the rapid build-out of new coal plants for global warming and many conversations with engineers since then have educated me to a different view. An IGCC unit built without capture equipment can be equipped later with such equipment and at much lower cost than attempting to retrofit a conventional pulverized coal plant with today's demonstrated post-combustion systems. However, the costs and engineering reconfigurations of such an approach are substantial. More importantly, we need to begin capturing CO_2 from new coal plants without delay in order to keep global warming from becoming a potentially runaway problem. Given the pace of new coal

investments in the U.S. and globally, we simply do not have the time to build a coal plant today and think about capturing its CO_2 down the road.

Implementation of the Energy Policy Act of 2005 approach to this topic needs a review in my opinion. The Act provides significant subsidies for coal plants that do not actually capture their CO_2 but rather merely have carbon "capture capability." While the Act limits this term to plants using gasification processes, it is not being implemented in a manner that provides a meaningful substantive difference between an ordinary IGCC unit and one that genuinely has been designed with early integration of CO_2 capture in mind. Further, in its FY2008 budget request, the administration seeks appropriations allowing it to provide $9 billion in loan guarantees under Title XVII of the Act, including as much as $4 billion in loans for "carbon sequestration optimized coal power plants." The administration request does not define a "carbon sequestration optimized" coal power plant and it could mean almost anything, including, according to some industry representatives, a plant that simply leaves physical space for an unidentified black box. If that makes a power plant "capture-ready" Mr. Chairman, then my driveway is "Ferrari-ready." We should not be investing today in coal plants at more than a billion dollars apiece with nothing more than a hope that some kind of capture system will turn up. We would not get on a plane to a destination if the pilot told us there was no landing site but options were being researched.

Geologic Disposal

We have a significant experience base for injecting large amounts of CO_2 into geologic formations. For several decades oil field operators have received high pressure CO_2 for injection into fields to enhance oil recovery, delivered by pipelines spanning as much as several hundred miles. Today in the U.S. a total of more than 35 million tons of CO_2 are injected annually in more than 70 projects. (Unfortunately, due to the lack of any controls on CO_2 emissions, about 80 per cent of that CO_2 is sources from natural CO_2 formations rather than captured from industrial sources. Historians will marvel that we persisted so long in pulling CO_2 out of holes in the ground in order to move it hundreds of miles and stick in back in holes at the same time we were recognizing the harm being caused by emissions of the same molecule from nearby large industrial sources.) In addition to this enhanced oil recovery experience, there are several other large injection projects in operation or announced. The longest running of these, the Sleipner project, began in 1996.

But the largest of these projects injects on the order of one million tons per year of CO_2, while a single large coal power plant can produce about five million tons per year. And of course, our experience with man-made injection projects does not extend for the thousand year or more period that we would need to keep CO_2 in place underground for it to be effective in helping to avoid dangerous global warming. Accordingly, the public and interested members of the environmental, industry and policy communities rightly ask whether we can carry out a large scale injection program safely and assure that the injected CO_2 will stay where we put it.

Let me summarize the findings of the IPCC on the safety and efficacy of geologic disposal. In its 2005 report the IPCC concluded the following with respect to the question of whether we can safely carry out carbon injection operations on the required scale:

"With appropriate site selection based on available subsurface information, a monitoring programme to detect problems, a regulatory system and the appropriate use of remediation methods to stop or control CO2 releases if they arise, the local health, safety and environment risks of geological storage would be comparable to the risks of current activities such as natural gas storage, EOR and deep underground disposal of acid gas."

The knowledge exists to fulfill all of the conditions the IPCC identifies as needed to assure safety. While EPA has authority regulate large scale CO_2 injection projects its current underground injection control regulations are not designed to require the appropriate showings for permitting a facility intended for long-term retention of large amounts of CO_2. With adequate resources applied, EPA should be able to make the necessary revisions to its rules in two to three years. We urge the members of this Committee to support legislation to require EPA to undertake this effort this year.

Do we have a basis today for concluding that injected CO_2 will stay in place for the long periods required to prevent its contributing to global warming? The IPCC report concluded that we do, stating:

"Observations from engineered and natural analogues as well as models suggest that the fraction retained in appropriately selected and managed geological reservoirs is very likely to exceed 99% over 100 years and is likely to exceed 99% over 1,000 years."

Despite this conclusion by recognized experts there is still reason to ask about the implications of imperfect execution of large scale injection projects, especially in the early years before we have amassed more experience. Is the possibility of imperfect

execution reason enough to delay application of CO_2 capture systems to new power plants until we gain such experience from an initial round of multi-million ton "demonstration" projects? To sketch an answer to this question, my colleague Stefan Bachu, a geologist with the Alberta Energy and Utilities Board, and I wrote a paper for the Eighth International Conference on Greenhouse Gas Control Technologies in June 2006. The obvious and fundamental point we made is that without CO_2 capture, new coal plants built during any "delay and research" period will put 100 per cent of their CO_2 into the air and may do so for their operating life if they were "grandfathered" from retrofit requirements. Those releases need to be compared to hypothetical leaks from early injection sites.

Our conclusions were that even with extreme, unrealistically high hypothetical leakage rates from early injection sites (10% per year), a long period to leak detection (5 years) and a prolonged period to correct the leak (1 year), a policy that delayed installation of CO_2 capture at new coal plants to await further research would result in cumulative CO_2 releases twenty times greater than from the hypothetical faulty injection sites, if power plants built during the research period were "grandfathered" from retrofit requirements. If this wave of new coal plants were all required to retrofit CO_2 capture by no later than 2030, the cumulative emissions would still be four times greater than under the no delay scenario. I believe that any objective assessment will conclude that allowing new coal plants to be built without CO_2 capture equipment on the ground that we need more large scale injection experience will always result in significantly greater CO_2 releases than starting CO_2 capture without delay for new coal plants now being designed.

The IPCC also made estimates about global storage capacity for CO_2 in geologic formations. It concluded as follows:

"Available evidence suggests that, worldwide, it is likely that there is a technical potential of at least about 2,000 GtCO2 (545 GtC) of storage capacity in geological formations. There could be a much larger potential for geological storage in saline formations, but the upper limit estimates are uncertain due to lack of information and an agreed methodology."

Current CO_2 emissions from the world's power plants are about 10 Gt (billion metric tons) per year, so the IPCC estimate indicates 200 years of capacity if power plant emissions did not increase and 100 years capacity if annual emissions doubled.

APPENDIX B:

The Growing Trend Against Coal-Fired Power Plants

Natural Resources Defense Council

The Growing Trend Against Coal-Fired Power Plants

The past year has witnessed a remarkable and growing rejection of efforts to increase our nation's reliance on coal as a source for power. Just a few years ago a new coal rush was widely predicted. Today communities throughout the country are rejecting this 19th century approach, due to concerns about escalating construction costs, uncertainty regarding the cost of future carbon dioxide ("CO2") regulations, and the economic and environmental benefits of cleaner energy sources. As the investment company Citigroup stated in its recent decision to downgrade coal stocks, "prophesies of a new wave of Coal-fired generation have vaporized" and the industry is "likely to be structurally impaired by new regulatory mandates applied to a group perceived as landscape-disfiguring global warming bad guys."[1]

Following are 18 of the coal plant proposals that have been scrapped since September 2006:

1. Sunflower Electric Power Corporation (Kansas) – proposed 1,400 megawatt ("MW") coal plant denied air permit by Kansas Department of Health and Environment ("KDHE") due to concerns about global warming. The Director of KDHE stated that it would be "irresponsible" to ignore global warming concerns when evaluating whether to build a new plant. October 2007.[2]

2. Southwestern Power Group's Bowie Power Station (Arizona) - proposed 600 MW IGCC coal plant cancelled by company in favor of pursuing a natural gas fired plant, in part because of market economics and regulatory uncertainty. September 2007.[3]

3. Florida Power & Light's Glades Power Plant - Proposed 1,960 MW power plant rejected by Florida Public Service Commission due, in part, to the uncertainty over the cost of future carbon regulations. July 2007.[4]

4. American Electric Power and Oklahoma Gas & Electric's Red Rock Generating Station (Oklahoma) - proposed 950 MW plant rejected by the Oklahoma Corporation Commission for failure to evaluate alternatives such as natural gas. September 2007.[5]

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[1] Citigroup Global Markets, *COAL: Missing the Window* (July 18, 2007), at p. 3.
[2] KDHE Denies Sunflower Electric Air Quality Permit, http://www.kdheks.gov/news/web_archives/2007/10182007a.htm.
[3] Bob Christie, Facing Criticism, Power Firm Drops Plan to Burn Coal at Proposed Plant, Arizona Daily Star (Sept. 3, 2007), available at http://www.azstarnet.com/sn/printDS/199452.
[4] Steve Bousquet and Craig Pittman, Fla. Utilities Dump coal-fired power plant, St. Petersburg Times (July 4, 2007), available at http://www.sptimes.com/2007/07/04/State/Fla_utilities_dump_co.shtml.

[5] AEP News Release, OCC Denies Application for Red Rock Power Plant (Sept. 10, 2007), available at http://www.aep.com/investors/newsreleases/print.asp?ID=1396.

5. Tenaska's Sallisaw Electric Generating Plant (Oklahoma) - Company cancelled its plans to build a 660-880 MW plant on the grounds that it is not economically viable. July 2007.[6]

6. Peabody Coal Company's Thoroughbred Generating Station (Kentucky) - air permit for 1500 MW plant reversed by Franklin Circuit Court due to inadequate air pollution control analysis. August 2007.[7]

7. Seminole Electric Power Cooperative's Seminole 3 Generating Station (Florida) - proposed 750 MW plant rejected by Florida Department of Environmental Protection on the grounds that the plant would not minimize environmental and public health impacts, and would not serve the public interest. August 2007.[8]

8. Great Northern Power Development's South Heart Power Project (North Dakota) - applicant withdrew air permit application for 500 MW plant. August 2007.[9]

9. Florida Municipal Power Agency's Taylor Energy Center (Florida) - proposed 800 MW plant withdrawn by applicant shortly after Florida PSC denied application for Glades Power Plant. July 2007.[10]

10. TXU Corporation (March 2007) – As part of a buyout of TXU Corporation by private equity firms, TXU announced that it would abandon plans for eight out of eleven proposed plants in Texas.[11]

11. Indeck Energy Service's Elwood Energy Center (Illinois) - US EPA's Environmental Appeals Board reversed the air permit for a proposed 660 MW plant. Sept. 2006.[12]

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[6] Lareign Ward, Tenaska Blames Costs, Fort Smith Times Record (July 9, 2007), available at http://www.swtimes.com/articles/2007/07/09/news/news02.txt.
[7] *Sierra Club v. Environmental and Public Protection Cabinet*, Civ. Action No. 06-CI-00640 (Franklin County Circuit Court Aug. 6, 2007).
[8] Marcia Lane, Seminole Electric Plans to Appeal Rejection of Coal-Burning Unit, St. Augustine Record (Aug. 22, 2007), available at http://staugustine.com/stories/082207/news_4789614.shtml.
[9] Dakota Council, South Heart on Life Support (Aug. 2007), available at http://www.drcinfo.com/documents/DRC%20newsletterAug07.pdf.
[10] Steve Bousquet and Craig Pittman, Fla. Utilities Dump coal-fired power plant, St. Petersburg Times (July 4, 2007), available at http://www.sptimes.com/2007/07/04/State/Fla_utilities_dump_co.shtml.
[11] MarketWatch, TXU's Emissions U-Turn Shocks Power Industry (Feb. 26, 2007).
[12] Alison Carney Brown, EPA Denies Permit for Coal Plant Near Midewin, Chicago Wilderness (Winter 2007), available at http://chicagowildernessmag.org/issues/winter2007/news/midewin.html.

APPENDIX C:

RE: Comments on EPA's Proposed Construction Permit for Sithe Global Power to Construct the Desert Rock Energy Facility

DINE' CITIZENS AGAINST RUINING OUR ENVIRONMENT*
SAN JUAN CITIZENS ALLIANCE*
ENVIRONMENTAL DEFENSE*WESTERN RESOURCE ADVOCATES*NATURAL RESOURCES DEFENSE COUNCIL*
SIERRA CLUB*FOREST GUARDIANS*
ENVIRONMENT COLORADO*CLEAN AIR TASK FORCE*
GRAND CANYON TRUST

October 4, 2007

By email (desertrockairpermit@epa.gov and Lapka.joseph@epa.gov) and Fed. Ex.

Joseph Lapka
U.S. Environmental Protection Agency
Region 9
Air Permits Office (AIR-3)
EPA Region IX
75 Hawthorne Street
San Francisco, CA 94105

RE: Comments on EPA's Proposed Construction Permit for Sithe Global Power to Construct the Desert Rock Energy Facility

Dear Mr. Lapka:

We are writing to supplement the administrative record in this matter based on recent developments that directly relate to our previously submitted comments.[1] In our November 13, 2006 comments we expressed grave concerns about the estimated 13.7 million tons of carbon dioxide that the plant will emit to the air each year. We asserted that the proposed permit is deficient because it does not address emissions of carbon dioxide and other greenhouse gases. Specifically, we asserted that EPA is required to regulate carbon dioxide and other greenhouse gases as pollutants under the Clean Air Act, and that EPA had no lawful basis for declining to limit the plant's emissions of those pollutants. Comment 23, at 4-6[2]. We further asserted that even if EPA had a lawful basis to refuse to limit the plant's carbon dioxide emissions, it must consider the collateral environmental impacts of those emissions and the collateral costs of future regulation of those emissions in its BACT analysis. Id. 6-12. Numerous other members of the public also commented on the plant's greenhouse gas emissions. See, egs., Comment Nos. 1 (City of Aspen), 8 (Interfaith Alliance for Environmental Stewardship), 60, 88, and 93.

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[1] We are emailing a copy of this letter only, without exhibits. Included in the package that we are submitting by Fed Ex are a hard copy of this letter and all exhibits, with the exception of attachments to Exhibit 11. Also, included in the Fed Ex package are a cd containing a copy of this letter and all exhibits. The letter and all exhibits with the exception of attachments to Exhibit 11 are in the folder entitled October 4 Comment Letter and Exhibits. Attachments to Exhibit 11 are located elsewhere on the cd.

[2] References to Comments in this letter are to the Comments at http://www.epa.gov/region09/air/permit/desertrock/index.html#pub-comments.

We write to advise you of two major, recent developments that directly relate to these issues and compel EPA to prevent or limit the plant's carbon dioxide emissions. First, the Intergovernmental Panel on Climate Change ("IPCC") has issued an authoritative series of summary reports on the "unequivocal" warming of the climate system resulting from increased atmospheric carbon dioxide concentrations primarily attributable to the burning of fossil fuels. Second, the United States Supreme Court in Massachusetts v. EPA, ___ U.S. ___, 127 S. Ct. 1438 (2007) squarely held that carbon dioxide is an "air pollutant" under the Clean Air Act. These developments require EPA to deny the proposed permit. If EPA proceeds to issue a final PSD permit, a best available control technology ("BACT") analysis for carbon dioxide must be conducted and BACT emission limitations for carbon dioxide must be included in the permit. Even if EPA could lawfully issue a final permit without BACT limitations for CO_2, in light of recent events it would be arbitrary, capricious and unreasonable for the Agency to do so without reopening the permitting process and exercising its discretionary authority to specifically evaluate and address greenhouse gas emissions from the proposed Desert Rock Energy Facility.

We also write to advise you of information and analyses set forth in comments on the Bureau of Indian Affairs' Draft Environmental Impact Statement for the Desert Rock Energy Facility that are directly relevant to the PSD permitting issues now before EPA. EPA is required to consider all such information and analysis in its PSD permit proceedings and must either deny the proposed permit or make changes to the proposed permit compelled by such information and analyses.

Finally, we write to advise you of the Governor of New Mexico's recent request for consultation with the Navajo Nation on the Desert Rock Energy Facility. EPA should not issue a PSD permit for the facility before this consultation has been completed. Furthermore, EPA should consider any information and analyses developed in connection with the consultation in taking further action on the proposed PSD permit.

I. EPA SHOULD DENY THE PROPOSED PERMIT BECAUSE IT DOES NOT ADDRESS THE CONTRIBUTION OF THE PLANT'S CARBON DIOXIDE EMISSIONS TO GLOBAL WARMING AND ITS IMPACTS DESCRIBED IN THE IPCC'S FOURTH ASSESSMENT REPORT.

The Intergovernmental Panel on Climate Change ("IPCC") was established by the World Meteorological Organization ("WMO") and the United Nations Environment Programme ("UNEP") in 1988. The IPCC's mission is to comprehensively and objectively assess the scientific, technical and socio-economic information relevant to human-induced climate change, its potential impacts, and options for adaptation and mitigation. See http://www.ipcc.ch/about/about.htm. The IPCC completed its First Assessment Report in 1990, its Second Assessment Report in 1995, and its Third Assessment Report in 2001. Id. The IPCC is currently finalizing its Fourth Assessment Report, "Climate Change 2007." Id. In advance of public release of the finalized Fourth Assessment Report, the IPCC has recently released summaries of its three working groups that are contributing to the Fourth Assessment Report.

In February 2007, the IPCC released a summary of the contribution of Working Group I to its Fourth Assessment Report. Working Group I is responsible for assessing the scientific aspects of the climate system and climate change. http://www.ipcc.ch/about/about.htm. The

Working Group I Summary, a copy of which is attached as Exhibit 1, concludes, among other things:

- The global atmospheric concentration of carbon dioxide has increased from a pre-industrial value of about 280 ppm to 379 ppm in 2005;

- The atmospheric concentration of carbon dioxide in 2005 exceeds by far the natural range over the last 650,000 years;

- The primary source of the increased atmospheric concentration of carbon dioxide since the pre-industrial period results from fossil fuel use;

- There is at least a 9 out of 10 chance that the global average net effect of human activities since 1750 has been one of warming;

- Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level;

- At continental, regional and ocean basin scales, numerous long term changes have been observed. These include changes in arctic temperatures and ice, widespread changes in precipitation amounts, ocean salinity, wind patterns and aspects of extreme weather including droughts, heavy precipitation, heat waves and the intensity of tropical cyclones;

- There is greater than a 90% likelihood that most of the observed increases in global average temperatures since the mid-20th century are due to the observed increases in anthropogenic greenhouse gas emissions;

- For the next two decades, warming of about 0.2 Degrees Celsius per decade is projected for a range of emission scenarios;

- There is greater than a 90% likelihood that hot extremes, heat waves and heavy precipitation events will continue to become more frequent; and

- Anthropogenic warming and sea level rise would continue for centuries due to the time scales associated with climate processes and feedbacks, even if greenhouse gas concentrations were to be stabilized.

In April 2007, the IPCC released a summary of the Contribution of Working Group II to its Fourth Assessment Report. Working Group II is responsible for assessing the vulnerability of socio-economic and natural systems to climate change, the consequences of climate change, and the options for adapting to it. http://www.ipcc.ch/about/about.htm The Working Group II Summary, a copy of which is attached as Exhibit 2, concludes, among other things:

- By mid-century, annual average river runoff and water availability are projected to decrease by 10-30% over some dry regions at mid-latitudes and in the dry tropics, some of which are presently water stressed areas;

- In the course of the century, water supplies stored in glaciers and snow cover are projected to decline, reducing water availability in regions supplied by meltwater from major mountain ranges, where more than one-sixth of the world population currently lives;

- Warming in the mountains of western North America is projected to cause decreased snowpack, more winter flooding, and reduced summer flows, exacerbating competition for over-allocated water resources;

- Drought-affected areas will likely increase in extent. Heavy precipitation events which are very likely to increase in frequency, will augment flood risk;

- Increases in the frequency of droughts and floods are projected to affect local crop production, especially in subsistence sectors at low latitudes;

- Poor communities can be especially vulnerable, in particular those concentrated in high-risk areas. They tend to have more limited adaptive capacities, and are more dependent on climate-sensitive resources such as local food and water supply;

- Disturbances from pests, disease and fire are projected to have increasing impacts on North American forests, with an extended period of high fire risk and large increases in area burned;

- In North America, major challenges are projected for crops that are near the warm end of their suitable range or depend on highly utilized water resources;

- The resilience of many ecosystems is likely to be exceeded this century by an unprecedented combination of climate change, associated disturbances (e.g., flooding, drought, wildfire, insects, ocean acidification), and other global change drivers (e.g., land use change, pollution, over-exploitation of resources);

- Approximately 20-30% of plant and animal species assessed so far are likely to be at increased risk of extinction if increases in global average temperatures exceed 1.5-2.5 Degrees Celsius;

- For increases in global average temperature exceeding 1.5-2.5 Degrees Celsius and in concomitant atmospheric carbon dioxide concentrations, there are projected to be major changes in ecosystem structure and function, species' ecological interactions, and species' geographic ranges, with predominantly negative consequences for biodiversity, and ecosystem goods and service, e.g., water and food supply;

- Projected climate change-related exposures are likely to affect the health status of millions of people, particularly those with low adaptive capacity; and

- Even the most stringent mitigation efforts cannot avoid further impacts of climate change in the next few decades, which make adaptation essential, particularly in addressing near-term impacts. Unmitigated climate would, in the long term, be likely to exceed the capacity of natural, managed and human systems to adapt.

On or about May 4, 2007, the IPCC released a summary of the contribution of Working Group III to its Fourth Assessment Report. Working Group III is responsible for assessing options for limiting greenhouse gas emissions and otherwise mitigating climate change. http://www.ipcc.ch/about/about.htm The Working Group III Summary, a copy of which is attached hereto as Exhibit 3, concludes, among other things:

- Global greenhouse gas (GHG) emissions have grown since preindustrial times, with an increase of 70% between 1970 and 2004;

- The largest growth in global GHG emissions between 1970 and 2004 has come from the energy supply sector (an increase of 145%);

- With current global climate change mitigation policies and related sustainable development practices, global GHG emissions will continue to grow over the next few decades;

- There is substantial economic potential for the mitigation of global GHG emissions over the coming decades, that could offset the projected growth of global emissions or reduce emissions below current levels;

- There are mitigation opportunities with net negative costs, in other words, for which the benefits such as reduced energy costs and reduced emissions of pollutants equal or exceed their costs to society, excluding the benefits of avoided climate change;

- Fuel switching from coal to gas, renewable heat and power (hydropower, solar, wind, geothermal and bioenergy), and early applications of carbon capture and storage (e.g. storage of removed carbon dioxide from natural gas) are key mitigation technologies and practices currently commercially available;

- Near-term health co-benefits from reduced air pollution as a result of actions to reduce GHG emissions can be substantial and may offset a substantial fraction of mitigation costs;

- It is often more cost-effective to invest in end-use energy efficiency improvement than in increasing energy supply to satisfy demand for energy services. Efficiency improvement has a positive effect on energy security, local and regional air pollution abatement and employment;

- Renewable energy generally has a positive effect on energy security, employment and on air quality; and

- In order to stabilize the concentrations of GHGs in the atmosphere, emissions would need to peak and decline thereafter.

EPA should consider the entire Fourth Assessment Report and make it part of the administrative record for the proposed permit.[3] The Report authoritatively documents the

[3] The IPCC recently made the full reports of Working Groups I and II, and a "pre-copy edit version" of the full report of Working Group III available on-line at http://www.ipcc.ch/.

adverse environmental and socio-economic impacts of global warming at local, regional, national and global scales, and the primary role of the burning of fossil fuels, including coal, in causing global warming.

The serious harms attributable to global warming were also recently acknowledged by the United States Supreme Court. On April 2, 2007, the Supreme Court issued a seminal ruling on EPA's authority and obligations under the Clean Air Act to regulate greenhouse gas emissions. Massachusetts v. EPA, 127 S. Ct. 1438 (2007). In its decision, which is discussed more fully below, the Court resoundingly rejected the core claims upon which EPA has relied to avoid regulating global warming pollutants under the Clean Air Act's provisions addressing emissions from mobile sources.

In so doing, the Court, even without the benefit of the most recent IPCC Summary Reports, noted that the "[t]he harms associated with climate change are serious and well recognized." 127 S. Ct. at 1455. The Supreme Court also acknowledged "the enormity of the potential consequences associated with man-made climate change," and the contribution of carbon dioxide emissions to global warming. Id. at 1457 - 58[4]. As we noted in our November 13, 2006 comments (Comment 23, at 8), reducing carbon dioxide emissions, especially emissions from coal-fired power plants, is the single most important strategy to fight the adverse consequences of global warming. Because the proposed permit altogether fails to address the Desert Rock Energy Facility's carbon dioxide emissions, EPA should deny the proposed permit.

II. IF EPA PROCEEDS TO PROCESS THE PERMIT IT MUST CONDUCT A CASE SPECIFIC BACT ANALYSIS FOR CARBON DIOXIDE AND SIGNIFICANTLY REVISE THE PROPOSED PERMIT TO INCLUDE BACT EMISSION LIMITATIONS FOR CARBON DIOXIDE.

If EPA proceeds to process the requested permit, it is clear following the Supreme Court's decision in Massachusetts v. EPA, 127 S. Ct. 1438 (2007), a copy of which is attached as Exhibit 4, that EPA must conduct a BACT analysis and set BACT emission limitations for carbon dioxide in any permit that it issues for the Desert Rock Energy Facility. In Massachusetts v. EPA, the Supreme Court squarely rejected the two primary rationales offered by EPA for refusing to regulate greenhouse gas emissions under the Clean Air Act's provisions addressing emissions from mobile sources—that EPA lacked legal authority under the CAA to regulate global warming pollutants, and that even if it had authority to regulate it could decline to regulate

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[4]As we discussed at length in our November 13, 2006 comments, many other entities have also recognized the potential for devastating consequences from global warming. A number of relevant reports, including the 2006 "Stern Report" are already included in the record. See Stern Review on the Economics of Climate Change, available at: http://www.hm-treasury.gov.uk/Independent_Reviews/stern_review_economics_climate_change/sternreview_index.cfm. (incorporated by reference here). Moreover, EPA itself has acknowledged the tremendous potential for global warming-related harms, including direct heat-related effects, extreme weather events, climate-sensitive disease impacts, air quality effects, agricultural effects (and related impacts on nutrition), wildlife and habitat impacts, biodiversity impacts, impacts on marine life, economic effects, and social disruption (such as population displacement) (see http://www.epa.gov/climatechange/effects/index.html (last visited 9/05/07). See also Section II.B.2.b.ii, below.

based entirely on non-statutory policy considerations. The Court held that EPA has authority to regulate emissions of greenhouse gases under the Act because greenhouse gases are pollutants under the Act, and that EPA must regulate greenhouse gas emissions if they endanger public health, welfare or the environment—which they undeniably do. Carbon dioxide is the most prevalent greenhouse gas contributing to global warming and its devastating environmental impacts. Because carbon dioxide is a "pollutant subject to regulation under [the Clean Air Act]," EPA must conduct a BACT analysis and include BACT emissions limitations in any permit that it issues for the Desert Rock Energy Facility.

A. THE CAA REQUIRES A BACT ANALYSIS AND BACT EMISSION LIMITATIONS FOR EACH POLLUTANT SUBJECT TO REGULATION UNDER THE ACT EMITTED IN EXCESS OF SPECIFIED SIGNIFICANCE LEVELS.

1. BACT Requirements Apply to Each Pollutant Subject to Regulation Under the CAA Emitted In Excess of Specified Significance Levels.

The federal Clean Air Act and Prevention of Significant Deterioration ("PSD") Regulations[5] prohibit the construction of a new major stationary source of air pollutants at the Desert Rock site except in accordance with a PSD construction permit issued by EPA. Clean Air Act § 165(a), 42 U.S.C. § 7475(a); 40 C.F.R. § 52.21(a)(2)(iii). EPA must conduct a BACT analysis and include in the construction permit BACT emission limitations "for each pollutant subject to regulation under [the Clean Air Act]" for which emissions exceed specified significance levels. Clean Air Act, §§ 165(a), 169, 42 U.S.C. §§ 7475(a), 7479; 40 C.F.R. §§ 52.21(b)(1), (b)(2), (b)(12), (b)(50), (j)(2)). The federal PSD Regulations provide that "[a] new major stationary source shall apply best available control technology <u>for each regulated NSR pollutant</u> that it would have the potential to emit in significant amounts." 40 C.F.R. § 52.21(j)(1)(emphasis added). Section 52.21(b)(50) defines "regulated NSR pollutant" as including "any pollutant . . . subject to regulation under the Act." Specifically, the regulation provides:

> <u>Regulated NSR pollutant</u>, for purposes of this section, <u>means</u> the following:
>
> (i) Any pollutant for which a national ambient air quality standard has been promulgated and any constituents or precursors for such pollutants identified by the Administrator (e.g., volatile organic compounds are precursors for ozone);
>
> (ii) Any pollutant that is subject to any standard promulgated under Section 111 of the Act;
>
> (iii) Any Class I or Class II substance subject to a standard promulgated under or established by title VI of the Act; or

[5] Pursuant to 40 C.F.R. § 52.1634(b), the provisions of the federal PSD regulations set forth at 40 C.F.R. § 52.21(b) – (w) are applicable to sources on land in New Mexico under the control of Indian governing bodies, such as the Navajo Reservation where the Desert Rock Energy Facility is to be located.

(iv) Any pollutant that otherwise is subject to regulation under the Act; except that any or all hazardous air pollutants either listed in section 112 of the Act or added to the list pursuant to section 112(b)(2) of the Act, which have not been delisted pursuant to section 112(b)(3) of the Act, are not regulated NSR pollutants unless the listed hazardous air pollutant is also regulated as a constituent or precursor of a general pollutant listed under section 108 of the Act.

40 C.F.R. § 52.21(b)(50)(emphasis added). Section 52.21(b)(12), which defines BACT, also makes clear that BACT requirements apply to all air pollutants subject to regulation under the Clean Air Act. The regulation states:

> Best available control technology means an emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under Act which would be emitted from any proposed major stationary source or major modification which the Administrator, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant.

40 C.F.R. § 52.21(b)(12)(emphasis added); see also 42 U.S.C. 7479(3).

2. Pollutants Subject to Regulation Under the CAA Include Both Currently Regulated Pollutants and Pollutants for Which EPA and the States Possess But Have Not Yet Exercised Authority to Regulate.

Notably, emissions of a pollutant need not be limited by existing emissions regulations for the pollutant to be "subject to" regulation under the Clean Air Act. "Subject to regulation" means "capable of being regulated" and is not limited to pollutants that are "currently regulated." The plain meaning of Section 165(a)(4) of the Clean Air Act's mandate that BACT applies to "each pollutant subject to regulation under [the Clean Air Act]" extends not only to air pollutants for which the Act itself or EPA or the States by regulation have imposed requirements, but also to air pollutants for which EPA and the States possess but have not exercised authority to impose such requirements.

While the plain, unambiguous language of the statute is dispositive, EPA's PSD regulations cited above echo the mandate of Section 165(c)(4). The regulations provide that BACT applies not only to air pollutants for which there are national ambient air quality standards under Section 109 of the Act, standards of performance for new sources under Section 111 of the Act, or standards under or established by Title VI of the Act (relating to acid deposition control), but also to "[a]ny pollutant that is otherwise subject to regulation under the Act." 40 C.F.R. § 52.21(b)(50).

Further, EPA has recognized the general principle that "[t]echnically, a pollutant is considered regulated once it is *subject to regulation* under the Act. A pollutant *need not be specifically regulated* by a section 111 or 112 standard to be considered regulated. (See 61 FR 38250, 38309, July 23, 1996.)" *See* RULES and REGULATIONS, ENVIRONMENTAL

PROTECTION AGENCY, 40 CFR Part 70, Change to Definition of Major Source Tuesday, 66 Fed. Reg. 59161 (Nov. 27, 2001) (emphasis added).[6]
EPA has also previously interpreted the phrase "subject to" in the context of the Resource Conservation and Recovery Act (RCRA) and Clean Water Act as meaning "should" be regulated, as opposed to currently regulated:

> RCRA section 1004(27) excludes from the definition of solid waste "solid or dissolved materials in ... industrial discharges which are point sources subject to permits under [section 402 of the Clean Water Act]." For the purposes of the RCRA program, EPA has consistently interpreted the language "point sources *subject to permits* under [section 402 of the Clean Water Act]" to mean point sources that *should have* a NPDES permit in place, whether in fact they do or not. Under EPA's interpretation of the "subject to" language, a facility that should, but does not, have the proper NPDES permit is in violation of the CWA, not RCRA.

Memo from Michael Shapiro and Lisa Friedman (OGC) to Waste Management Division Directors, Interpretation of Industrial Wastewater Discharge Exclusion from the Definition of Solid Waste at 2, (Feb. 17, 1995) (emphasis added).[7]

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[6] Indeed, this principle only makes sense. For example, section 112(b)(1) of the Act specifically lists more than 180 chemicals which it defines as "hazardous air pollutants" from stationary sources for purposes of section 112. However, whether or not EPA ever adopts any stationary source rule with actual emission limitations for an individual hazardous chemical, all of these chemicals are "subject to regulation" under the Act . The hazardous air pollutants listed in Section 112(b)(1), are, however, expressly excluded from prevention of significant deterioration requirements, including BACT emissions limitations, by Section 112(b)(6). Section 112(b)(6) provides that "[t]he provisions of part C of this subchapter (prevention of significant deterioration) shall not apply to pollutants under this section." The fact that Congress specifically exempted these pollutants from prevention of significant deterioration requirements, while not exempting carbon dioxide or other greenhouse gases is yet another indication that carbon dioxide is subject to Prevention of Significant Deterioration requirements, including BACT emission limitations. Congress clearly recognized that any substance or matter emitted into the air that effects "weather" or "climate" is a pollutant subject to regulation under the Act (see Sections 302(g), (h), 111(b)(1)(A), 202(a)(1)), yet did not exempt such substances or matter (including carbon dioxide) from the CAA's prevention of significant deterioration requirements. In the wake of the Supreme Court's recent decision, CO_2 must be understood as "subject to regulation."

[7] The EPA memo is available at:
http://yosemite.epa.gov/osw/rcra.nsf/ea6e50dc6214725285256bf00063269d/C8FA9634A91B9FE08525670F006BF1ED/$file/11895.pdf (last visited July 6, 2007).

3. The Required BACT Analysis and Emission Limitations Must Be Based on a Case Specific Review of Relevant Energy, Environmental and Economic Considerations.

The BACT analysis that EPA must conduct for each pollutant subject to regulation under the Clean Air Act, and emitted in excess of the relevant significance level, must include a case specific review of relevant energy, environmental and economic considerations that is informed by detailed information submitted by the applicant. See 42 U.S.C. § 7479(3); 40 C.F.R. 52.21(b)(12), (n). Based on its BACT analysis, EPA must set emission limitations in its permit. See 42 U.S.C. § 7479(3) (BACT means "an emission limitation"); 40 C.F.R. 52.21(b)(12)(same).

B. CARBON DIOXIDE IS A POLLUTANT SUBJECT TO REGULATION UNDER THE CAA FOR WHICH EPA MUST CONDUCT A BACT ANALYSIS AND ESTABLISH BACT EMISSION LIMITATIONS.

The plain language of the CAA, EPA's regulations, the Supreme Court's decision in Massachusetts v. EPA, and a recent executive order make clear that CO_2 is a pollutant "subject to regulation" under the CAA.

1. Carbon Dioxide is a "Pollutant."

Section 302(g) of the Clean Air Act defines "air pollutant" expansively to include "any physical, chemical, biological, radioactive . . . substance or matter which is emitted into or otherwise enters into the ambient air." 42 U.S.C. § 7602(g)(emphasis added). In Massachusetts v. EPA, 127 S. Ct. 1438 (2007), the Supreme Court held that carbon dioxide and other greenhouse gases are air pollutants as defined in § 302(g), 42 U.S.C. § 7602(g). The Court based its holding on the "unambiguous" language of the definition. Id. at 1460. Specifically, the Court held:

> The Clean Air Act's sweeping definition of "air pollutant" includes "*any* air pollution agent or combination of such agents, including *any* physical, chemical . . . substance or matter which is emitted into or otherwise enters the ambient air . . . ." §7602(g) (emphasis added). 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.

127 U.S. at 1460 (footnotes omitted). Thus, the Court in Massachusetts v. EPA dispensed with any uncertainty whether carbon dioxide is an "air pollutant" under the Clean Air Act.[8]

[8] EPA's then general counsel, Jonathan Z. Cannon, opined in 1998 that carbon dioxide is within the Clean Air Act's definition of "air pollutant" and that EPA has the authority to regulate carbon dioxide. More recently, however, EPA had advanced an interpretation that is contrary to the plain language of Section 302(g), an interpretation that the court in Massachusetts v. EPA rejected.

2. Carbon Dioxide is Subject to Regulation Under the CAA.

As it happens, carbon dioxide is an "air pollutant" that is not only "subject" to regulation under the Act, but is currently regulated under the Act.

a. Carbon Dioxide is Currently Regulated Under Section 821 of the Clean Air Act Amendments of 1990.

Section 821 of the Clean Air Act Amendments of 1990 required EPA to promulgate, within 18 months after enactment of the Amendments, regulations to require certain sources, including coal-fired electric generating stations, to monitor carbon dioxide emissions and report monitoring data to EPA. 42 U.S.C. § 7651k note. In 1993, EPA promulgated such regulations, which are set forth at 40 C.F.R. Part 75. The regulations generally require monitoring of carbon dioxide emissions through installation, certification, operation and maintenance of a continuous emission monitoring system or an alternative method (40 C.F.R. §§ 75.1(b), 75.10(a)(3)); preparation and maintenance of a monitoring plan (40 C.F.R. § 75.33); maintenance of certain records (40 C.F.R. § 75.57); and reporting of certain information to EPA, including electronic quarterly reports of carbon dioxide emissions data (40 C.F.R. §§ 75.60 – 64). Section 75.5, 40 C.F.R., prohibits operation of an affected source in the absence of compliance with the substantive requirements of Part 75, and provides that a violation of any requirement of Part 75 is a violation of the Clean Air Act. Given this regulatory scheme and the Supreme Court's determination that EPA is authorized to regulate CO_2 as a "pollutant" under the Act, the status of CO_2 is absolutely unambiguous – it is a CAA regulated pollutant.

b. Carbon Dioxide is Also Subject to Regulation Under Sections 111 and 202 of the CAA.

In addition, to being currently regulated under Section 821 of the 1990 Clean Air Act Amendments, carbon dioxide is also subject to regulation under a number of the Clean Air Act's other provisions, including Sections 111 and 202.

i. Sections 111 and 202 of the CAA Require EPA to Promulgate Regulations Limiting Emissions of Pollutants from New Stationary Sources and Motor Vehicles.

Section 111 of the Act requires EPA to promulgate regulations establishing standards of performance for emissions of "air pollutants" from new stationary sources. 42 U.S.C. § 7411. Section 202 requires EPA to promulgate regulations establishing standards applicable to emissions of "any air pollutant" from motor vehicles. 42 U.S.C. § 7521. Regulation under Sections 111 and 202 is required where air pollution "may reasonably be anticipated to endanger public health or welfare." 42 U.S.C. § 7411(b)(1)(A); 42 U.S.C. § 7521(a)(1).[9] In

[9] The Massachusetts v. EPA case specifically involved a challenge to EPA's failure to prescribe regulations on carbon dioxide emissions from motor vehicles under Section 202 of the Clean Air Act. The Court held that EPA has the authority to issue such regulations, and rejected the excuses advanced by EPA for failing to do so. 127 S. Ct. at 1459-63. A challenge to EPA's failure to establish emission limits for carbon dioxide emissions from power plants under Section 111 of the Clean Air Act is pending before the United States Court of Appeals for the District of

Massachusetts v. EPA, the Court held that if EPA makes an endangerment finding for a pollutant, it must regulate emissions of the pollutant from new motor vehicles. 127 S. Ct. at 1462. The same analysis applies with equal force to Section 111.

ii. EPA Must Regulate Carbon Dioxide Emissions Under Sections 111 and 202 Because Such Emissions May Reasonably Be Anticipated to Endanger the Public Health and Welfare.

EPA is not only authorized to regulate carbon dioxide emissions under Sections 202 and 111, but is required to do so because there is no question that emissions of carbon dioxide from motor vehicles, power plants and other sources "may reasonably be anticipated to endanger the public health and welfare." [10] As an initial matter, this standard, reflecting the precautionary nature of the Clean Air Act, does not require proof of actual harm. Congress directed that regulatory action taken pursuant to an endangerment finding would be designed to "precede, and, optimally, prevent, the perceived threat." Ethyl Corp. v. EPA, 541 F.2d 1, 13 (D.C. Cir. 1976). EPA is not required to document "proof of actual harm" as a prerequisite to regulation; rather, EPA is supposed to act where there is "a significant risk of harm." Id. at 12-13. In Ethyl Corp. v. EPA, noting the novelty of many human alterations of the environment, the Court of Appeals for the District of Columbia Circuit found:

> Sometimes, of course, relatively certain proof of danger or harm from such modifications can be readily found. But, more commonly, 'reasonable medical concerns' and theory long precede certainty. Yet the statutes and common sense demand regulatory action to prevent harm, even if the regulator is less than certain that harm is otherwise inevitable. Id. at 25.[11]

The 1977 Clean Air Act Amendments confirmed and adopted the precautionary interpretation enunciated in Ethyl, enacting special provisions, Pub. L. No. 95-95, § 401, 91 Stat. 790-91

Columbia Circuit. State of New York, et al. v. EPA, No. 06-1322. EPA refused to establish such emission limits solely on the ground that EPA lacked the authority to regulate carbon dioxide under the Clean Air Act. Based on Massachusetts v. EPA, petitioners, on May 2, 2007, asked the Court of Appeals to vacate EPA's determination that it lacks authority to regulate carbon dioxide emissions under Section 111, and to remand the matter to EPA for further proceedings consistent with the Massachusetts v. EPA decision.

[10] In Green Mountain Plymouth Dodge Jeep v. Crombie, the United States District Court for the District of Vermont, relying on Massachusetts v. EPA, stressed the importance of controlling emissions of greenhouse gasees, even where the sources at issue make only a relatively small contribution to the very large global problems presented by global warming. Case Nos. 2:05-cv-320 and 304, slip op. at 46-47, 93-94 and 234 (September 12, 2007). The court rejected an automobile industry challenge to Vermont regulations establishing greenhouse gas emission standards for automobiles.

[11] Accord, Industrial Union Dep't v. American Petroleum Institute, 448 U.S. 607, 656 (1980) (plurality) (agency need not support finding of significant risk "with anything approaching scientific certainty," but rather must have "some leeway where its findings must be made on the frontiers of scientific knowledge," and "is free to use conservative assumptions in interpreting the data," "risking error on the side of overprotection rather than underprotection").

(August 7, 1977), designed to "apply this interpretation to all other sections of the act relating to public health protection." H.R. Rep. No. 294, 95th Cong., 1st Sess. 49 (1977); Accord, id. at 51 (amendments are designed inter alia 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)"). Congress rejected the argument that, "unless conclusive proof of actual harm can be found based on the past occurrence of adverse effects, then the standards should remain unchanged," finding that this approach "ignores the commonsense reality that 'an ounce of prevention is worth a pound of cure.'" Id. at 127.

While the precautionary nature of the Clean Air Act creates a low threshold for findings relating to the negative consequences of air pollution, here there is ample evidence that global climate change is endangering and will continue to endanger public health and welfare. Evidence of dramatic changes in Earth's climatic system abounds. Changes in climatically sensitive indicators support the inference that the average temperature in the Northern Hemisphere over the last half-century is likely higher than at any time in the previous 1,300 years, while ice core records indicate that the polar regions have not experienced an extended period of temperatures significantly warmer than today's in about 125,000 years. IPCC Working Group I Summary, Ex. 1, at 9. Meanwhile, the IPCC reports "numerous long-term changes in climate" observed at "continental, regional and ocean basin scales," including "changes in arctic temperatures and ice, widespread changes in precipitation amounts, ocean salinity, wind patterns and aspects of extreme weather including droughts, heavy precipitation, heat waves and the intensity of tropical cyclones." Id. at 7. As demonstrated below, such changes will have pronounced adverse impacts on public health and welfare.

a. Public Health Impacts

Global climate change is expected to have significant impacts on human health in numerous ways, including increased heat-related mortalities, the spread of infectious disease vectors, greater air and water pollution, an increase in malnutrition, and greater casualties from fires, storms, and floods. EPA has already recognized that climate plays a significant role in public health:

> Throughout the world, the prevalence of some diseases and other threats to human health depend largely on local climate. Extreme temperatures can directly lead to loss of life, while climate-related disturbances in ecological systems, such as changes in the range of infective parasites, can indirectly impact the incidence of serious infectious diseases. In addition, warm temperatures can increase air and water pollution, which in turn harm human health.

EPA, Climate Change, Health and Environmental Effects [hereinafter EPA Report].[12] Given the ample evidence linking climate change to adverse public health impacts, there is no rational basis for EPA to conclude that climate change could not be reasonably anticipated to endanger public health.

Perhaps the most direct impact of climate change on human health will occur through increased heat-related mortalities. Heat waves already pose a serious threat to public health, and

[12] Available at http://www.epa.gov/climatechange/effects/index.html (last updated Apr. 6, 2007).

climate change is predicted to increase the magnitude, frequency, and duration of heat waves in the United States. See IPCC Working Group II Summary, Ex. 2, at 10-11. Thus, the U.S. Department of State's, U.S. Climate Action Report 2002, indicated that rising temperatures will likely produce dramatic increases in summer heat index values in the Northeast, Southeast, and Midwest. U.S. Department of State, U.S. Climate Action Report 2002 at 110. (2002) [hereinafter CAR 2002]. By the end of the century, cities such as Hartford and Philadelphia could average nearly 30 days with high temperatures above 100°F each year. Peter C. Frumhoff, et al., Confronting Climate Change in the U.S. Northeast: Science, Impacts, and Solutions at x (July 2007) [hereinafter Northeast Report].[13] Segments of the population that are particularly vulnerable, such as those with heart problems, asthma, the elderly and very young, and the homeless, are especially at risk to extreme heat. EPA Report.

Climate change is also expected to play a role in worsening air quality problems that already impact human health. For example, EPA has recognized that the higher temperatures that result from climate change may result in increased concentrations of ground-level ozone. EPA Report. Breathing ozone can trigger a variety of health problems, including chest pain, coughing, throat irritation, and congestion, and repeated exposure can lead to bronchitis, emphysema, asthma, and permanent scarring of lung tissue. EPA, Ground-Level Ozone: Health and Environment (2007).[14] Moreover, climate change may also indirectly affect the concentration of PM in the air by increasing sources such as wildfires and dust from dry soils. EPA Report. Exposure to such particles can affect both the lungs and heart and has been linked to a variety of problems, including increased respiratory symptoms such as irritation of the airways, coughing or difficulty breathing, decreased lung function, aggravated asthma, development of chronic bronchitis, irregular heartbeat, nonfatal heart attacks, and premature death in people with heart or lung disease. EPA, Particulate Matter: Health and Environment (2007).[15] As with other forms of air pollution, certain vulnerable segments of the population, such as children with asthma and the elderly, are the most likely to be affected. Id.

Climate change is also expected to increase the risk from certain infectious diseases, especially vector-born diseases spread by mosquitoes or other insects. EPA Report. Thus, vector-born diseases like malaria and dengue fever may expand their ranges in the United States. Id. Moreover, hotter, longer, and drier summers punctuated by heavy rainstorms may also create more favorable conditions for outbreaks of West Nile Virus in the Northeast. Northeast Report at xi.

Climate change's role in increasing the frequency and severity of extreme weather events, such as hurricanes, droughts, and floods, may also adversely impact public health. For example, in delta regions, coastal areas, and small islands, sea level rise is anticipated to threaten human populations by exacerbating flooding and increasing the size of storm surges. Ex. 2, at 8-11. The Atlantic coast of the Southeast is likely to see such effects and suffer the loss of important buffers against storm damage. CAR 2002 at 110. In Appalachia, the increase in intense rainfall events is likely to result in more dangerous flash floods. Id. Meanwhile, warming in the West is projected to decrease mountain snowpack and cause more winter

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[13] Available at http://www.climatechoices.org/ne/resources_ne/nereport.html (last visited Aug. 27, 2007)

[14] Available at http://www.epa.gov/air/ozonepollution/health.html (last visited Aug. 26, 2007).

[15] Available at http://www.epa.gov/air/particlepollution/health.html (last visited Aug. 26, 2007)

flooding with reduced summer flows. Ex. 2, at 10. Finally, rising sea levels are expected to increase the salinity of surface and ground water through salt water intrusion, threatening drinking water supplies in places like New York City, Philadelphia, southern Florida, and California's Central Valley. EPA Report.

b. Public Welfare Impacts

The Clean Air Act provides a broad definition of "welfare," that encompasses a host of environmental ills:

> All language referring to effects on welfare includes, but is not limited to, effects on soils, water, crops, vegetation, manmade materials, animals, wildlife, weather, visibility, and climate, damage to and deterioration of property, and hazards to transportation, as well as effects on economic values and on personal comfort and well-being, whether caused by transformation, conversion, or combination with other air pollutants.

42 U.S.C. § 7602(h). Of particular importance here, "welfare" refers to "effects on . . . weather . . . and climate." Thus, the most basic effect of global climate change – that the Earth's average mean temperature will increase – is directly implicated as an effect on public welfare under the Act. As discussed above, global climate change is already resulting in well documented impacts on climate and weather, including air and ocean temperature increases, widespread melting of snow and ice, changes in precipitation amounts and wind patterns, and more frequent extreme weather events such as hurricanes, heat waves, floods, and droughts. Ex. 1, at 5-9. However, aside from direct impacts on weather and climate, there are numerous other ways in which global climate change may be reasonably anticipated to endanger public welfare.

In its recent assessment of the impacts of climate change, the IPCC concluded that "[o]bservational evidence from all continents and most oceans shows that many natural systems are being affected by regional climate changes, particularly temperature increases." Ex. 2, at 1. In the U.S., the impacts vary by region, but climate change will have significant consequences for ecosystems in many areas. For example, CAR 2002 reports that each of the following are likely climate change outcomes: (1) water quantity and quality in the Great Lakes will decrease; (2) prairie potholes, an important migratory bird habitat in the Great Plains, will become drier; (3) river temperatures in the Northwest will increase, placing additional stress on migrating fish; and (4) melting of sea ice and permafrost in Alaska will harm ecosystems and infrastructure.[16] CAR 2002 at 110. Climate change is also likely to pose problems for many forested areas in the U.S. by extending and increasing the intensity of fire seasons and fostering insect outbreaks. EPA Report.

Some habitats that are already imperiled by other forces will be particularly susceptible to damage from climate change. For example, sea level rise driven by climate change will contribute to the loss of coastal wetlands. Ex. 2, at 3. In addition to their role in protecting against floods and storm surges, such wetlands provide habitat for many species, enable recreational opportunities, and play a key role in both nutrient uptake and the economy of

[16] This is especially true for species like the polar bear, which is evolutionarily adapted to life on the sea ice and spends only short periods on land. See 72 Fed, Reg. 1064 (Jan. 9, 2007)(Proposed Rule to List the Polar Bear as Threatened Under the Endangered Species Act).

the surrounding area. EPA Report. However, because they are generally located within a few feet of sea level, coastal marshes and swamps are particularly vulnerable to rising sea levels. Id. Thus, sea level rise could eliminate up to 22% of the world's coastal wetlands by the end of this century. Id. EPA has estimated that a two foot rise in sea level, a figure that is within range of the IPCC's modeling for sea level rise during the 21st Century, could eliminate between 17 and 43 percent of U.S. wetlands. See id.; Ex. 1, at 13, Table SPM.3.

Moreover, changes in the Earth's climate are already having an impact on marine and freshwater biological systems. For example, the ranges of algae, plankton, and fish have shifted in many water bodies in response to changes in water temperature, ice cover, oxygen content, salinity, and circulation. Ex. 2, at 2. However, corals are particularly vulnerable to thermal stress and have a limited ability to adapt to changes in their ecosystem. Id. at 6. Thus, the IPCC projects that an increase in sea surface temperature of approximately 1 to 3°C (1.8-5.4°F) will result in widespread coral mortality. Id.[17] Finally, the increasing absorption of CO_2 has already decreased ocean pH by 0.1 units on average, id. at 2, and the IPCC predicts that further acidification will have negative impacts on corals and other shell forming organisms. Id. at 6.

The welfare impacts of climate change are not limited to impacts on natural systems. For example, climate change will also adversely affect agriculture. EPA has recognized that, "[a]griculture is highly sensitive to climate variability and weather extremes, such as droughts, floods and severe storms," and that climate change can adversely affect crop yields in regions where summer heat already limits production, increase the likelihood of severe droughts, and increase the rate of evaporation of moisture from topsoil. EPA Report. Moreover, the increase in heavy precipitation events to which climate change contributes is projected to lead to increased soil erosion. Ex. 2, at 14.

Global warming's far reaching and grave public health and welfare impacts, which are in large part attributable to carbon dioxide emissions from power plants, automobiles and other sources, compel EPA to exercise its authority under Sections 111 and 202 of the Clean Air act to regulate carbon dioxide emissions. Carbon dioxide is "subject to regulation under the Clean Air Act."

c. The President's Recent Executive Order Confirms EPA's Authority to Regulate Carbon Dioxide Emissions and Directs EPA to Exercise That Authority.

If there were any doubt that carbon dioxide is subject to regulation under the Clean Air Act following Massachusetts v. EPA, 127 S. Ct. at 1459-63, the President's May 14, 2007 Executive Order laid that to rest.[18] The Executive Order reconfirms that EPA can regulate greenhouse gases, including carbon dioxide, from motor vehicles, nonroad vehicles and nonroad

[17] The National Marine Fisheries Service has found that shallow reef habitats are especially vulnerable to increases in global air and sea temperatures due to coral bleaching. 71 Fed. Reg. 26,852, 26,858 (May 9, 2006)(Final Rule to List Elkhorn (*Acropora palmata)* and Staghorn (*A. cervicornis)* Corals as Threatened Under the Endangered Species Act).

[18] The Executive Order is available at www.whitehouse.gov/news/releases/200705/20070514 2.html.

engines under the Clean Air Act. It then directs EPA to coordinate with other federal agencies in undertaking precisely such regulatory action. The President's action indicates clearly that even the Chief Executive is of the opinion that carbon dioxide is a "pollutant" and must be further regulated under the Clean Air Act.[19]

For all of the above reasons, carbon dioxide is an air pollutant subject to regulation under the Clean Air Act for which EPA must comply with BACT requirements.[20]

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[19] Indeed, in other contexts EPA has specifically acknowledged that the impact of global warming pollutants is an important consideration for potential new sources. *See* Letter from EPA Region 8 to Charles Richmond, Forest Supervisor Gunnison National Forest (June 1, 2007), attached as Ex. 5. This letter relates to an Environmental Impact Statement regarding a proposal to drill 168 methane drainage wells at the West Elk Mine in Gunnison County, CO. In this letter, the Deputy Regional Administrator explains:

> The draft EIS does not present information on the amount of methane that is expected to be released from the proposed action . . . As indicated on EPA's website, methane is a greenhouse gas that remains in the atmosphere for approximately 9-15 years and is over 20 time more effective in trapping heat in the atmosphere than carbon dioxide (CO_2) over a 100-year period. Methane's relatively short atmospheric lifetime, coupled with its potency as a greenhouse gas, makes it a candidate for mitigation global warming over the near-term (i.e., next 25 years or so). . . . Given the project's release of significant quantities of methane, there is an important economic and environmental opportunity here to capture and utilize the methane resource. . . . [W]e recommend that the final EIS analyze measures for capturing all or part of the methane to be vented from the mine. . . . Methane capture and reuse is a reasonable alternative to the proposal of venting the methane to the atmosphere, and thus, we recommend that it be analyzed. . . . EPA believes that the information in the DEIS is insufficient and the missing information and analyses are substantial issues which must be resolved and disclosed in the Final Environmental Impact Statement.

[20] While the issue of EPA's obligation to establish CO_2 limits in connection with PSD permits is currently before the Environmental Appeals Board (In re Christian County Generation, PSD Appeal 07-001), and EPA has recently addressed this issue in connection with a PSD permit for a 110MW waste coal plant in Utah (see http://www.epa.gov/region8/air/permitting/deseret.html (Response to Comments)), EPA's arguments to date for not addressing CO_2 in the context of BACT are far from compelling. While not entirely clear, EPA appears to offer two main arguments for its failure to regulate CO_2. First EPA argues that it is well established that "subject to regulation" means subject to existing regulations that actually limit emissions (this argument is simply false – EPA has never expressed this opinion in the past, in fact is it contrary to prior Agency statements and flies in the face of both the statute and the regulations). Second, EPA appears to argue that CO_2 is not even a "pollutant" until EPA takes action to regulate it (this again impermissibly turns the analysis on its head).

C. EPA MUST CONDUCT A BACT ANALYSIS AND SET BACT EMISISON LIMITATIONS IN ANY PERMIT THAT IT ISSUES FOR THE DESERT ROCK ENERGY FACILITY.

EPA cannot lawfully issue a permit for the Desert Rock Energy Facility until it conducts a BACT analysis for the proposed plant's carbon dioxide emissions and, based on the BACT analysis, proposes BACT emission limitations for those carbon dioxide emissions.
It is undisputed that the proposed Desert Rock Energy Facility is subject to BACT requirements for a number of air pollutants for which emissions will exceed specified significance levels. The significance level, which triggers the obligation for a BACT emission limitation for any NSR pollutant that is not listed in the table at 40 C.F.R. § 52.21(b)(23)(i), is "any net emission increase." 40 C.F.R. § 52.21(b)(23)(ii). There is no significance level for CO_2 listed in the table at 40 C.F.R. § 52.21(b)(23)(i). Thus, the obligation to adopt a BACT emission limitation for CO_2 is triggered by *any increase* in emissions of CO_2. 42 U.S.C. §§ 7475(a)(1), (4), 7479(3); 40 C.F.R. § 52.21(j)(2); 40 C.F.R. § 52.21(b)(23)(ii). There is no dispute that the Desert Rock Energy Project would emit significant quantities of CO_2; in fact, the facility is expected to emit almost 14 million tons of CO_2 for each year of operation (totaling some 700 millions tons over its 50-year operational life). The Desert Rock Energy Facility must comply with BACT requirements for carbon dioxide.

Contrary to EPA's boasts in this case that "the emission limits required by EPA's proposed permit for the Desert Rock power plant . . . are some of the most stringent in the country and would set a new level of performance for coal-fired plants in the United States,"[21] the proposed permit does not contain a BACT emission limitation for carbon dioxide. EPA has not conducted a BACT analysis for carbon dioxide. EPA has made no effort to identify or evaluate available "production processes or available methods, systems and techniques," for control of carbon dioxide emissions. See 40 C.F.R. § 52.21(b)(12).

The required BACT analysis for carbon dioxide should consider, among other things, use of cleaner fuels and available, demonstrated Integrated Gasification Combined Cycle coal combustion technology, for the reasons described in our November 13, 2006 comments (PP. 12-38). While it is not sufficient to simply select an emission limitation used elsewhere without conducting the required analysis, EPA's BACT analysis may also be informed by the carbon dioxide emission limitations that states have placed on new coal-fired power plants. California and Washington have both adopted carbon dioxide emission limitations of 1100 pounds per MW-hr. Montana recently adopted a minimum sequestration mandate, providing that new coal plants must capture and sequester a minimum of 50% of the carbon dioxide produced.

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[21] Press Release, July 19, 2006
http://yosemite.epa.gov/opa/admpress.nsf/9e50770d29adb32685257018004d06fd/f21cb782482e8379852571b000772708!OpenDocument

The table below summarizes the carbon dioxide emission standards and limits adopted by other western states.

Table 1: Western State Carbon Dioxide Emission Limitations (as of July 2007)

STATE LAW	STANDARD	APPLICABILITY	EFFECTIVE DATE
State of Montana, HB 0025, signed into law by Gov. Schweitzer on May 14, 2007	Mandate for the facility to capture and sequester a minimum of 50% of the carbon dioxide produced.	Applies to new electric generating units "primarily fueled by coal."	January 1, 2007
State of Washington, SB 6001, signed into law by Gov. Gregoire on May 3, 2007	The lower of 1100 pounds of greenhouse gases per megawatt-hour or the average available GHG emission output of new combined cycle natural gas thermal electric generation turbines commercially available and offered for sale.	Triggered upon long-term financial commitments: (1) new ownership interest or upgrade to baseline power plant, or (2) new/renewed contract with a term or five years or more.	Standard takes effect on July 1, 2008
State of California, SB 1368, signed into law by Governor Schwarzenegger on Sept. 29, 2006	Greenhouse gas emissions performance standard shall be established by administrative agency at a rate that is no higher than the rate of emissions of greenhouse gases for combined-cycle natural gas baseload generation; CPUC recently established 1100 pounds of CO2 per MW-hour as the operative standard	Applies to long-term contracts for baseload power of five years or longer	CPUC rules for IOUs take effect February 1, 2007

EPA's failure to conduct a searching BACT analysis and establish emission limitations for carbon dioxide must be rectified before EPA may lawfully issue a PSD construction permit for the Desert Rock Energy Facility. It appears that Sithe Global Power has not provided EPA as part of its permit application relevant information sufficient to allow EPA to conduct the required BACT analysis. See November 13, 2006 Comments 17 & n.46, 23-24. If EPA does not categorically deny the requested permit at this time, EPA should request Sithe to provide it with

all information necessary to conduct a BACT analysis, conduct the BACT analysis, and issue a revised proposed permit containing the required carbon dioxide emission limitations. Further, the public must be provided notice and an opportunity to comment and request a hearing on the revised proposed permit.

For these reasons and for the reasons described in the comments previously submitted by the undersigned and others, EPA should deny the requested PSD construction permit for the Desert Rock Energy Facility. Alternatively, EPA must conduct a BACT analysis for carbon dioxide, revise the proposed permit to include a carbon dioxide emission limitation selected through the BACT analysis, and provide public notice and an opportunity to comment and request a hearing on the revised proposed permit.

III. EVEN IF EPA IS NOT OBLIGATED TO ESTABLISH EMISSION LIMITATIONS FOR CO_2 IT SHOULD CONDUCT A ROBUST ALTERNATIVES ANALYSIS REGARDING CO_2 IMPACTS

EPA's Office of Air and Radiation, Office of General Counsel, and the Environmental Appeals Board have expressed the opinion that permitting authorities (including EPA when it acts as the permitting authority) have broad discretion to consider alternatives, conduct or require analyses, and impose permit conditions to address issues under CAA section 165(a)(2) beyond the required BACT analysis. *See* In re Prairies State, PSD Appeal 05-05, 12 E.A.D. __ (Aug. 24, 2006); In re Knauf Fiber Glass, 8 E.A.D. 1212, (EAB 1999); In re Hillman Power, 10 E.A.D. 673, 692 (EAB 2002).[22] In this case, given the Supreme Court's decision, the latest IPCC reports, the President's Executive Order which will result in imminent further regulation of CO_2 (undeniably making it "subject to regulation" even under EPA's twisted reading of the Act), Congressional efforts to establish global warming legislation, EPA's recognition of "the importance of addressing the global challenge of climate change,"[23] and the Agency's "diligent" work to "develop an overall strategy for addressing the emissions of CO_2 and other [greenhouse gases],"[24] it would be an astoundingly negligent policy decision for EPA to ignore possible options and alternatives that might eliminate or mitigate the impacts of a huge new source of CO_2. Accordingly, even assuming that EPA could lawfully issue a PSD permit for the proposed Desert Rock plant without establishing a BACT limit for CO_2, EPA has a duty to responsibly exercise its broad discretion under CAA section 165(a)(2) to consider all alternatives and options available to address the greenhouse gas emissions from the proposed Facility. Indeed, this authority gives EPA an important opportunity to implement stop-gap measures to help evaluate and address CO_2 and other greenhouse gases on a case-by-case basis as other policy, regulatory,

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[22] This discretion even extends to requiring specific additional BACT analysis. In Knauf, the Board explained that although "[s]ubstitution of a gas-fired power plant for a planned coal-fired plant would amount to redefining the source . . . redefinition of the source is not always prohibited. This is a matter for the *permitting authority's discretion. The permitting authority may require consideration of alternative production processes in the BACT analysis when appropriate. See* NSR Manual at B.13-B.14; Old Dominion, 3 E.A.D. at 793 (permit issuer has discretion "to consider clean fuels other than those proposed by the permit applicant."). " Knauf, 8 E.A.D. at 136 (emphasis added).

[23] See Deseret Response to Comment Document at 5, available at http://www.epa.gov/region8/air/permitting/deseret.html.

[24] Id.

and legislative efforts mature. The alternative approach followed by EPA in issuing the proposed permit for Desert Rock is a "head-in-the-sand" approach that will allow the problem to worsen unnecessarily without specific scrutiny or deliberation.[25]

A. EPA HAS THE AUTHORITY TO CONSIDER CO_2 EMISSIONS AND ESTABLISH APPROPRIATE PERMIT CONDITIONS.

Regardless of whether CO_2 is currently a pollutant subject to regulation under the Act, EPA as the permitting authority for Desert Rock has the authority to require evaluation of CO_2 emissions and establish appropriate permit conditions or otherwise address these emissions. Permitting authorities may exercise broad discretion under BACT requirements and CAA § 165(a)(2) to consider alternatives. See In re Prairies State, PSD Appeal 05-05, 12 E.A.D. __ (Aug. 24, 2006); In re Knauf Fiber Glass, 8 E.A.D. 1212 (EAB 1999); In re Hillman Power, 10 E.A.D. 673, 692 (EAB 2002). EAB has consistently held that states have broad discretion to consider various options (even under EPA's interpretation of the Act before Massachusetts v. EPA), including, among other things, broad discretion to independently evaluate options and alternatives, and to adopt conditions or requirements that they deem appropriate. For example, the Board has held that a permitting authority may require "redefinition of the source," including requiring or restricting certain fuels. Hillman Power, 10 E.A.D. at 692.

While EPA does not believe that Section 165 "include[s] a comparable requirement to that contained in section 173(a)(5) of the CAA [nonattainment NSR], which requires that New Source Review in non-attainment areas include an analysis of alternative sites, sizes, production processes, and environmental control techniques to demonstrate that the benefits of the source outweigh its costs," the agency has recognized that "a PSD permitting authority still has an obligation under section 165(a)(2) to consider and respond to relevant public comments on alternatives to the source," and that a "PSD permitting authority *has discretion under the Clean Air Act to modify the PSD permit based on comments raising alternatives* or other appropriate considerations." Brief of the EPA Office of Air and Radiation and Region V, In re Prairie State, PSD Appeal 05-05, 12 E.A.D. __ (EAB, Aug. 24, 2006). Moreover, the EAB has made clear that a permitting authority has discretion to modify a permit based on consideration of "alternatives" whether or not the issues are raised by commenters:

> Indeed, the permit issuer is not required to wait until an "alternative" is suggested in the public comments before the permit issuer may exercise the discretion to consider the alternative. Instead, the permit issuer *may identify an alternative on its own.* This interpretation of the authority conferred by CAA section 165(a)(2)'s reference to "alternatives" is consistent with the Agency's longstanding policy that, . . . "this is an aspect of the PSD permitting process in which *states have the discretion to engage in a broader analysis if they so desire.*"

See In re Prairies State, PSD Appeal 05-05 (Aug. 24, 2006) (quoting the NSR Workshop Manual at B.13).[26]

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[25] In addition to being, so obviously, reprehensible policy, a decision not to exercise its discretion here would be arbitrary, capricious and unreasonable.

[26] One version of the NSR Workshop Manual is available at: http://www.epa.gov/Region7/programs/artd/air/nsr/nsrmemos/1990wman.pdf.

In fact, under this authority, a permitting authority can engage in a wide ranging exploration of options, including fuel switching, and other generation and non-generation alternatives. Under this authority EPA clearly has the discretion to require specific evaluation and control of CO_2 emissions, and/or to require other action to mitigate potential global warming impacts. Failure to do so is a material breach of the Agency's obligations to the people of the Navajo Nation, the State of New Mexico and the United States.

B. THERE ARE STEPS THAT CAN BE TAKEN TO REDUCE THE GLOBAL WARMING IMPACT OF THE DESERT ROCK ENERGY FACILITY.

EPA could require any number of possible actions to address the CO_2 footprint of the proposed Desert Rock Energy Facility. Options include requiring specific energy efficiency, conservation or demand-side-management activities to reduce energy consumption, requiring development of renewable energy sources, requiring a change to a less CO_2-intensive fuel (like natural gas or biomass co-firing), requiring construction of a smaller source, imposing limits on hours of operation, requiring the capture and sequestration of CO_2, requiring construction of a more efficient facility, requiring the purchase of CO_2 offsets, or some combination of these approaches or others. Indeed, in its comments on the proposed Draft Environmental Impact Statement for White Pine Energy Station near Ely, Nevada, EPA Region 9 recently recommended that "carbon capture and sequestration and other means of capture and storage of carbon" be evaluated as a means of mitigating emissions from the proposed coal plant. See, EPA comments on White Pine DEIS at p. 14 attached hereto as Ex. 6. Thus, EPA agrees that control technology for reducing emissions of CO2 should be evaluated at new coal plants. Additionally, EPA may also consider a no-build option under CAA § 165(a)(2), which gives EPA the authority to deny a PSD permit based on policy considerations related to CO_2.[27]

The consideration of such options should be subject to a process of public discussion. Therefore, EPA should conduct a searching alternatives analysis and make that analysis available to the pubic for comment and input. To date, there has been no specific assessment of measures, alternatives, or options to address greenhouse gas emissions at the proposed Desert Rock plant.

Under no circumstance should EPA issue a final permit for the Desert Rock facility prior to its development of "an overall strategy for addressing the emissions of CO_2 and other [greenhouse gases] under the Clean Air Act]," and without itself conducting a thorough CO_2-related alternatives analysis, identifying all available options for addressing the proposed plant's

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[27] The Board has said:

> We are unable to reconcile the view that consideration of need for a facility is outside the scope of section 165(a)(2) of the Clean Air Act with the text of the statute and prior decisions. The statutory text's plain meaning does not lend itself to excluding public comments that request consideration of the "no build" alternative to address air quality concerns. Moreover, the Board's and Administrator's prior decisions would appear to recognize that consideration of "need" is an appropriate topic under section 165(a)(2). See In re EcoEléctrica, LP, 7 E.A.D. 56, 74 (EAB 1997)

In re Prairie State, PSD Appeal 05-05, 12 E.A.D. __ (EAB Aug. 24 2005).

global warming impacts, and adopting appropriate permit conditions or other requirements or restrictions. Indeed, the best course of action is for EPA to decline to approve major new CO_2 sources like Desert Rock[28] until an "overall policy" is in place – otherwise EPA dangerously puts the cart before the horse.

IV. THE COMMENTS OF EPA, NMED AND OTHERS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE DESERT ROCK ENERGY FACILITY COMPEL EPA TO REOPEN THE PERMIT PROCEEDINGS AND DENY OR MODIFY THE PROPOSED PERMIT.

A. EPA'S MANDATORY DUTY TO COORDINATE THE PSD PERMITTING PROCEEDINGS WITH NATIONAL ENVIRONMENTAL POLCY ACT PROCEEDINGS REQUIRES EPA TO CONSIDER INFORMATION AND ANALYSES DEVELOPED IN CONNECTION WITH THE ENVIRONMENTAL IMPACT STATEMENT, INCLUDING THE COMMENTS OF EPA, NMED, AND OTHERS.

In our initial comments, we asserted that EPA must coordinate its PSD permit review with the Bureau of Indian Affairs' required development of an environmental impact statement ("EIS") for the Desert Rock Energy Facility under the National Environmental Policy Act, and EPA's review of and comment on the EIS under Section 309 of the CAA. Comment 23, at 93. Section 52.21(s), 40 C.F.R., specifically requires EPA to coordinate its proceedings on a proposed PSD permit for a facility with both the development of an EIS for the facility, and with EPA's own review of and comments on the EIS under Section 309[29] "to the maximum extent feasible and reasonable." Section 52.21(s), 40 C.F.R., provides:

> (s) *Environmental impact statements.*
> Whenever any proposed source or modification is subject to action by a Federal Agency which might necessitate preparation of an environmental impact statement pursuant to the National Environmental Policy Act (42 U.S.C. § 4321), review by the Administrator conducted pursuant to this section shall be conducted with the broad environmental reviews under that Act and under section 309 to the maximum extent feasible and reasonable.

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[28] In fact, as a "merchant" plant the need for Desert Rock has never even been established – it is little more than a "power prospecting" project, that threatens to compromise U.S. efforts to affirmatively deal with climate change. There is no ready market of consumers waiting for the power that Desert Rock would produce, and there has been little if any scrutiny of the appropriateness of this project from an energy planning perspective (or of alternative measures – such as energy efficiency projects – that might reduce or eliminate the need for the power to the extent it even exists).

[29] Section 309 of the Clean Air Act requires EPA to "review and comment in writing on the environmental impact of any matter related to duties and responsibilities granted pursuant to this chapter [The CAA] or other provisions of the authority of the Administrator, contained in any . . . newly authorized Federal projects for construction" or other major federal agency action requiring an environmental impact statement.

There do not appear to be any circumstances that render full coordination of the PSD permitting and NEPA proceedings for the Desert Rock Energy Facility unfeasible or unreasonable. As we noted in our initial comment letter, EPA, should have, but has failed to conduct its PSD proceedings in parallel with the Bureau of Indian Affairs' development of an EIS for the facility. Comment 23, at 93. In view of the numerous deficiencies in the proposed PSD permit pointed out in the public comments, EPA must reopen the PSD permitting proceedings.[30] When it does so, the comment period on the draft Environmental Impact statement should also be reopened so that the two sets of proceedings can proceed in parallel.

At a minimum, EPA must consider in the PSD proceedings all information and analyses developed in connection with the EIS that are relevant to the proposed PSD permit, including the comments submitted by EPA on the DEIS under CAA Section 309, and the comments submitted by the New Mexico Environment Department ("NMED") and others. EPA, NMED, and others have submitted comments on the DEIS that point to a number of glaring deficiencies in the analyses supporting and the terms of the proposed PSD permit. It would be arbitrary, capricious, and a violation of EPA's mandatory coordination duty, to fail to consider and to take any action with respect to the PSD permit compelled by those comments, or other information or analyses developed in connection with the EIS.

B. THE COMMENTS OF EPA, NMED AND OTHERS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT REQUIRE EPA TO DENY OR SUBSTANTIALLY MODIFY THE PROPOSED PSD PERMIT.

1. EPA's Comments on the DEIS Require Further Modeling and Analysis of PM-10 Emissions.

EPA cannot issue a PSD permit unless the permit applicant demonstrates that emissions from construction or operation of the facility will not cause or contribute to violation of any national ambient air quality standard ("NAAQS"). CAA § 165(a)(3), 42 U.S.C. § 7475(a)(3). In our initial comments, we asserted that the modeling that Sithe relies on to show that the facility will not cause or contribute to violation of the NAAQS for PM-10 is flawed for a number of reasons. Comment 23, at 57-58. Specifically, we asserted that the modeling failed to model PM-10 emissions from all nearby sources, including the Four Corners Power Plant, and relied on incorrect background concentrations. Id. In its comments on the DEIS, a copy of which are attached as Exhibit 8, EPA is highly critical of Sithe's PM-10 modeling—the very modeling submitted by Sithe in support of its PSD permit application. EPA notes that the modeling is based on PM-10 emissions of 1,100 tons per year from the Desert Rock plant site, and does not include emissions attributable to employees commuting to and from their jobs on paved and unpaved roads, which the DEIS estimates will result in peak PM-10 emissions of more than 14,300 tons per year during construction, and more than 6,100 tons per year during operation. Ex. 8, at 4-6. EPA notes that even these higher figures that Sithe failed to model are based on

[30] We note that EPA, in response to a request to extend the public comment period on the proposed PSD permit, stated that "when the draft EIS for the Desert Rock Energy Facility is released, EPA will consider any requests to reopen the public comment period if we have not yet issued our Response to Comments and reached a final PSD permit decision." Ex. 7. EPA thereby acknowledged that information relevant to the proposed PSD permit may be developed in connection with the DEIS.

questionable assumptions that 75% of employees would rely on ridesharing and that 80% of travel would be on paved roads. Id. EPA recommends substantiation and/or mitigation measures to ensure that these assumptions are realized, and modeling of the PM-10 emissions from employee commuting travel to determine compliance with the NAAQS.

Particulate matter emissions from other sources in the area are already causing serious health problems for local residents. In its comments on the DEIS, EPA notes that a study by the United States Geological Survey determined that due to atmospheric thermal inversions and existing sources of particulate matter, residents of Shiprock are more than five times as likely to seek assistance for respiratory ailments from the local Indian Health Services Clinic as residents of other nearby communities.[31] Ex. 8, at 7-8.

If EPA proceeds to process the proposed PSD permit for the Desert Rock Energy Facility, EPA must require additional modeling and analysis of PM-10 emissions that address the deficiencies identified by EPA in its comments on the DEIS, as well as the deficiencies identified in comments on the proposed PSD permit. EPA may not issue the permit if such modeling and analysis indicate that the facility will cause or contribute to violation of the PM-10 NAAQS.

2. NMED's Comments on the DEIS Require Modeling of PM 2.5 Emissions.

In our initial comments, we asserted that EPA has failed to require Sithe to model PM 2.5 emissions to ensure that the facility's emissions of PM 2.5 will not cause or contribute to violations of the NAAQS for PM 2.5. Comment No. 23, at 55. Instead, EPA treated PM-10 as a surrogate for PM 2.5. Id. Even if this were permissible, which it is not, the PM-10 modeling and analysis is flawed for the reasons discussed above, and, therefore, the assessment of PM 2.5 emissions that relies on the assessment of PM-10 emissions as a surrogate is also flawed.

In its comments on the DEIS, NMED asserts that "[t]he PM 2.5 emissions that would be directly and indirectly emitted by the proposed power plant should be modeled to determine if the proposed plant's emissions will meet federal and state ambient air quality standards." Ex. 9, at 2. The State bases this statement on the fact that PM 2.5 emissions would comprise approximately 78 percent of the plant's PM-10 emissions, and on the significant health problems and impacts to visibility attributable to small particles. Id. NMED notes that "[e]xposure to particle pollution is linked to a variety of significant health problems, ranging from aggravated asthma to premature death in people with heart and lung disease." Id. The State also notes that "[p]article pollution is the main cause of visibility impairment in the nation's cities and national parks." Id.

If EPA proceeds to process the proposed PSD permit for the Desert Rock Energy Facility, it must require modeling and analysis of PM 2.5 emissions. If the modeling and analysis shows that the facility will cause or contribute to violation of the NAAQS for PM 2.5, EPA cannot issue the permit.

[31] A fact sheet is available at http://pubs.usgs.gov/fs/2006/3094/fs2006-3094_eng.pdf.

3. EPA's and NMED's Comments on the DEIS Require Analysis of Impacts to Ozone Levels.

In our initial comments, we asserted that EPA has failed to require an analysis of the impacts of the Desert Rock Energy Facility on already high ozone levels in the area. Ex. 23, at 52-54 and accompanying expert reports of Khanh Tran and Jana Milford. Despite the fact that the facility has the potential to emit 3,491 tons per year of the ozone precursors nitrogen oxides and volatile organic compounds, EPA did not require Sithe to conduct modeling and analysis to determine whether the facility will cause of contribute to violation of the 8-hour NAAQS for ozone. Instead, EPA has permitted Sithe to rely on inadequate, flawed, and now outdated modeling conducted by NMED in connection with efforts to address high ozone levels in the Farmington, New Mexico area. Ozone levels in the Farmington area have been bumping up against the current ozone NAAQS for years even without Desert Rock's massive anticipated emissions of ozone precursors. In its comments on the DEIS, EPA takes issue with the DEIS' astonishing and unsupportable conclusion that "plant emissions of 3,325 tpy of nitrogen oxides (NOx) and 166 tpy of volatile organic compounds (VOCs) would not cause or contribute to significant ozone formation in the region." Ex. 8, at 7 (citations omitted). EPA notes that the conclusion, which appears to be based on the analysis relied on in support of the proposed PSD permit, does not consider emissions from vehicles estimated at 199 tpy of VOCs and 1,314 tpy of NOx. Id. NMED is also critical of the DEIS' assessment of the plant's impacts to ozone levels. Ex. 9, at 1-2. NMED notes that the DEIS reports an incorrectly high value for the ozone NAAQS. The effect of this error is that the DEIS reports ozone concentrations recorded in Shiprock as falling below the standard, when in fact, they exceed the standard. See Ex. 9, at 2 and DEIS at 3-10.

High ozone levels are already having serious adverse effects on the health of area residents. A recent New Mexico Department of Health Study concludes that asthma-related emergency room visits in San Juan County, New Mexico, increase when the area's ozone concentrations are high. Myers, Orrin, et al., The Association between Ambient Air Quality Ozone Levels and Medical Visits for Asthma in San Juan County (August 2007), attached as Ex. 10.

If EPA proceeds to process the proposed PSD permit for the Desert Rock Energy Facility, it must require modeling and analysis of the project's impacts to ozone levels in the area. If the modeling and analysis shows that the project will cause or contribute to violation of the ozone NAAQS, EPA cannot issue the permit.

4. The State's Comments on the DEIS Require A Full Accounting for Oil and Gas Emissions.

In our initial comments, we asserted that the analysis conducted in support of the proposed permit fails in a number of ways to account for the very significant emissions of nitrogen oxides and other pollutants from the extensive and increasing oil and gas operations in the area. We asserted that these emissions must be fully accounted for not only in cumulative PSD NO2 increment consumption analysis (Comment 23,at 58-63), but also in regional haze modeling. Id. at 74-78. In its comments on the DEIS, NMED repeatedly notes that the DEIS "consistently minimizes oil and gas source emissions." NMED's comments are not surprising given that the DEIS relies in large part on the flawed analyses conducted for the proposed PSD

permit. NMED notes that emissions from oil and gas sources must be considered when analyzing potential ozone and visibility impacts. Ex. 9, at 2-4. According to NMED, recent estimates indicate that area oil and gas sources emit an estimated 35,000 tons of NOx and 100,000 tons of VOCs each year, and that new oil and gas sources are expected to come on line over the next 20 years. Ex. 9, at 2, 4. "Modeling and impact assessments are incomplete without accounting for these existing and new sources." Id. at 2, 5. If EPA proceeds to process the proposed permit for the Desert Rock Energy Facility it must require Sithe to incorporate into its modeling and analyses in support of the proposed PSD permit all of the emissions from the area's extensive oil and gas operations. If the modeling shows violation of an applicable increment consumption level or other requirement, EPA cannot issue the proposed permit.

5. EPA's and the State's Comments on the DEIS Require Limitations on the Facility's Emissions of Mercury and Other Hazardous Air Pollutants.

In our initial comments, we asserted that the proposed PSD permit fails to include any emissions limitation for mercury, and that the facility will emit mercury in excess of the Navajo Nation's cap for mercury emissions. Comment 23, at 50-52. We noted that fish consumption advisories due to mercury contamination are already in effect in a number of area waters, and that EPA must require state-of–the-art controls that achieve mercury removal of up to 90%. Id. Although Sithe has proposed, subject to certain conditions, to reduce mercury emissions by 80%, this proposal is set forth in a mitigation agreement that is not included in the proposed permit, and, therefore, would not be enforceable by citizens as part of the permit.

In its comments on the DEIS, EPA questions how the vague provisions of the mitigation agreement would result in attainment of the promised 80% reduction in mercury emissions. EPA notes that "[i]t is not clear how the air mitigation agreement will apply if the 80% mercury removal is not achievable using the control technologies in the air permit application [which do not include carbon injection], nor is it clear whether the not-to-exceed cost of $ 13,000/lb mercury removal applies if carbon injection is being used to achieve the minimum 80% removal." Ex. 8, at 6.

In its comments on the DEIS, NMED encourages the use of activated carbon injection to obtain mercury removal of 90% of more. Ex. 9, at 3. NMED also notes that other hazardous air pollutants emitted from the Desert Rock Energy Facility "have the potential to cause serious health effects and adverse environmental and ecological effects." NMED notes that this is a "serious concern" given the area's exiting power plants that are a major source of hazardous air pollutants. The impacts of mercury and other hazardous air pollutants have been documented and are well-known to EPA. The comments of Dine Care and others on the DEIS discuss at length the devastating impacts of mercury to humans, wildlife and plants. Ex. 11, at 55-63. EPA cannot lawfully issue a PSD permit for the Desert Rock Energy Facility without minimizing the emissions of mercury and other hazardous air pollutants.

6. Other comments on the DEIS, Including the Comments Submitted by Dine Care, Require Additional Analysis In Connection With the PSD Permit, Including Compliance With the Endangered Species Act.

We reiterate that given its mandatory duty to coordinate its PSD permit proceedings with BIA's development of the EIS, EPA must consider in its proceedings on the proposed PSD permit all information and analysis developed in connection with the EIS that relate to the proposed PSD permit, including all relevant comments submitted on the DEIS. It is not the undersigned's responsibility to bring specific points raised in the comments on the DEIS to the attention of EPA for consideration in connection with the proposed PSD permit Rather, it is EPA's duty to consider any pertinent comments. We further note that BIA has extended the comment deadline until October 9, 2007, so all comments on the DEIS relevant to the PSD permit cannot be identified at this time. Nevertheless, in addition to the comments of EPA and NMED on the DEIS described above, we specifically submit the comments of Dine Care et al. on the DEIS, attached as Exhibit 11, for consideration in connection with the proposed PSD permit. We note that portions of these comments are directly relevant to, among other things, EPA's failure in its consideration of the proposed PSD permit to limit PM 2.5 emissions (Ex. 11, at 22); limit mercury emissions (id., at 23); limit carbon dioxide emissions and consider alternatives to dirty pulverized coal technology (id., at 31 -41, 44- 49, 72-78); assess fugitive dust from coal combustion waste (id., at 86-88); address environmental justice requirements (id., at 17-28); and comply with the Endangered Species Act (id., at 49-68).

While these comments speak for themselves, we feel compelled to further discuss EPA's failure to comply with the Endangered Species Act. We asserted in our initial comments on the proposed PSD permit that EPA is responsible for complying with the Endangered Species Act before approving a PSD permit for the Desert Rock Energy Facility. Comment 23, at 83-85. Rather than conduct the consultation required by Section 7 of the Act, EPA has indicated that it will rely on the consultation conducted by BIA in connection with the EIS. Id. Even assuming that EPA could lawfully dispense with the consultation requirements and rely on BIA's consultation, which it cannot, BIA's consultation is flawed for the reasons set forth in our comments on the DEIS. Ex. 11, at 49-68. If EPA proceeds to process the proposed PSD permit for the Desert Rock Energy Facility it must first conduct the consultation required by Section 7 of the Endangered Species Act.

V. EPA MUST CONSIDER ANY INFORMATION OR ANALYSES PRESENTED IN CONNECTION WITH THE STATE OF NEW MEXICO'S CONSULTATION WITH THE NAVAJO NATION ON THE PROPOSED DESERT ROCK ENERGY FACILITY.

One of the Desert Rock Energy Facility's proponents is the Dine Power Authority, an enterprise of the Navajo Nation. On August 20, 2007, the Governor of New Mexico requested formal government- to- government consultation between the State of New Mexico and the Navajo Nation regarding the proposed Desert Rock Energy Facility. Ex. 12. The request was made pursuant to a Statement of Policy and Process between the State of New Mexico and the Navajo Nation that allows either sovereign to request consultation with the other to discuss maters of concern before implementation of final action. Id. (emphasis added). The Desert Rock Energy Facility is of special concern to the State, which has undertaken efforts to reduce

emissions of greenhouse gases. Carbon dioxide emissions from Desert Rock would make it difficult to meet Governor Richardson's greenhouse gas reduction goals. Ex. 9, at 4.

Under no circumstances should EPA issue a final PSD permit for the Desert Rock Energy Facility before the requested consultation between the State of New Mexico and the Navajo Nation is completed. Further, if EPA proceeds to process the proposed permit for the Desert Rock Energy Facility, it must consider any information, analyses or alternatives[32] developed in connection with the consultation

CONCLUSION

For these reasons, and for the reasons stated in our initial comments, EPA should deny the proposed PSD permit for the Desert Rock Energy Facility. If EPA proceeds to process the proposed permit, it should reopen and supplement the administrative record, make significant changes to the proposed permit to address its numerous deficiencies, and request public notice and comment on the modified proposed permit.

[32] NMED in its comments on the DEIS noted: "If the Desert Rock Energy Facility employed Integrated Gasification Combined Cycle Technology, CO2 emissions (as well as emissions of other pollutants such as mercury) would be minimized. The conventional coal combustion technology being used at Desert Rock makes CO2 capture and storage (control) less feasible technically and economically. Ex. 9, at 4.

Sincerely,

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Chairman WAXMAN. Thank you very much, Mr. Doniger.

Dr. Kammen.

STATEMENT OF DANIEL M. KAMMEN

Mr. KAMMEN. Thank you, Mr. Chairman. I do have some slides, if we could bring those up.

Thank you for the chance to be here, Mr. Chairman and Mr. Issa. I appreciate your taking on such an important topic today. Global warming is a challenge that we all must face. The greenhouse gas emissions that we are putting into the atmosphere today are in fact part of our future legacy. The current round of climate change that we are already seeing is a result of emissions that we have already made, and in fact, the emissions we are now making today and will make in the future, are part of the legacy that we leave to future generations.

Global warming has also been called the mother of all externalities. For that reason, I concur with Mr. Curry in calling for discussions and action on a price for carbon as soon as possible. That will facilitate more of these actions than any other single measure, because it will bring a price to the pollution we don't want, and we can use that as well to reward behaviors we do want, such as income generation and paying for workers in factories and plants.

As a scientist who was involved in the IPCC process, and as the director of the Renewable Energy Laboratory, I will focus my comments today on the technologies that are available for us to deal with this problem. And in fact, this is one of the areas where we have significant good news. Instead of licensing new sources of emissions that will be with us for decades, the good news is that we have a range of technologies available today that can make a significant impact.

In the next slide, I highlight just one of those, which are compact fluorescent light bulbs that make an immediate impact. They reduce the need for power, the emissions, and they save ratepayers on their bills effective immediately. In fact, there is a challenge in California for families that install four to five bulbs, compact fluorescents, if they do not see an immediate savings, to call into our California Energy Commission to discuss that. Because you will see an immediate rate savings. So Californians and people across the country who invest in these will see an immediate decrease in their bills, which benefits people across the entire economic spectrum. In fact, our utilities are already giving out benefits and credits for the purchase of efficient appliances and other technologies. In fact, Pacific Gas and Electric, PG&E, now has a Climate Smart program that now actually rewards you and allows you to zero your carbon emissions as well.

What is needed in the process is to bring these technologies much more broadly to market and to establish a vision and a plan for how to put this in place. If we can put the next slide up, please, this highlights the dramatic difference, the almost 40 percent difference in electricity consumed among some of the most efficient States, such as New York and California and the country as a whole. The message here is that not only is a range of technologies available today, dramatic enough to not just cause personal levels

of savings, but to cause savings that have saved the States the need to install entire new power plants, including some of the most polluting coal-fired power plants, but also to close down current plants, such as the Bay View Hunters Point Plant in the San Francisco area, and replace it not with new generation, but with a suite of efficiency measures and a range of local generation of solar and wind power that again have dramatically saved emissions in the region.

If we can advance to slide one, the savings that we have seen in these most efficient States, if applied nationwide, would actually more than offset our entire import of fossil fuels from off of North America. So it is far more than an individual measure. It saves dramatic amounts of carbon emissions.

Next slide, please. We have also seen a dramatic increase in the ability of renewable energy to provide significant amounts of power supply. Wind power in particular, in some of the most efficient wind plants, such as the San Pablo Plant in New Mexico, are producing electricity at 3 cents a kilowatt hour, a price far lower than any of the fossil fuel plants we are discussing today. So renewable energy options provide a way to do very low cost carbon-free generation, across a range of options.

In fact, in the next slide, I highlight a map of the United States showing the States across the country, the 29 States and the District of Columbia that have all enacted significant calls for renewable energy, so-called renewable energy portfolio standards, that range from 10 to 15 to almost 30 percent of their electricity needs in the coming years to come from renewables. So it is far from an isolated or a small-scale effort. In fact, those States have done this, such as Colorado, they instituted one of these issues by popular vote, and have seen their rates fall in the last months, not increase, but drop.

Next slide, please. There are job benefits by investing in new energy industries, both efficiency and in renewables. In fact, a study that our lab recently completed concluded that there were three to five times more jobs generated by a dollar investment in these clean technologies than in the existing mix. It is a dramatic savings.

I will end with the last picture that shows that we in fact have quite a road map already in place, with a range of options that both save on energy and save money immediately, and a road map toward the introduction of renewables as well as efficiency that have been instituted on a national level or State by State, that can dramatically reduce the need for these fossil fuel power plants. So while we wait to act at the EPA level, we have a dramatic range of opportunities available for us today.

Thank you very much for your time.

[The prepared statement of Mr. Kammen follows:]

United States House of Representatives
Committee on Oversight and Government Reform
Testimony for the November 8, 2007 Hearing on:

Opportunities for Greenhouse Gas Emissions Reductions

by

Daniel M. Kammen

Class of 1935 Distinguished Professor of Energy in the
Energy and Resources Group (ERG), the Goldman School of Public Policy
and the Department of Nuclear Engineering
Co-director, Berkeley Institute of the Environment
Founding Director, Renewable and Appropriate Energy Laboratory (RAEL)
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The Low-Carbon Imperative and Economic Opportunity

Congressman Henry Waxman, Committee Chairman, Ranking Minority Member Tom Davis, and the rest of the Committee on Oversight and Government Reform, I am very pleased to have the opportunity to appear before you again. I appreciate the attention your committee is giving to the vital issues of greenhouse gas emissions reduction and climate protection.

I am particularly pleased to appear before this committee so soon after the Intergovernmental Panel on Climate Change (IPCC) was awarded the 2007 Nobel Peace Prize. I have served as a Coordinating Lead Author of IPCC investigations and reports, in particular focusing on the science and engineering of climate-friendly innovations, technologies, and policies (IPCC, 2000). Along with several thousand other climate and energy scientists, economic and policy analysts, I am tremendously pleased to share in the honor and the continuing responsibility to provide our collective best assessments on the state of climate science, and of both the need and the opportunities to effectively and efficiently address this national and global challenge. My laboratory group at the University of California, Berkeley, is focused on energy efficiency and renewable energy science, technology, and implementation. In addition, I also serve on the Executive Committee of the $500 million Energy Biosciences Institute funded by BP.

The United States is today faced with both a challenge to reduce our greenhouse gas emissions, and an opportunity to invent and re-invigorate several key industrial sectors. A key finding of my research is that by investing in, and deploying, low-carbon technologies we can add significantly to our economic and geopolitical health and security, while moving states and the nation to a position of global leadership in the emerging clean energy economy

My comments today will be focused on the availability and cost-effectiveness of *advanced control technologies and clean energy alternatives such as energy efficiency and renewable technologies* that the Environmental Protection Agency and state and local energy planners can consider as they strive to met growing energy demands in an environmentally responsible way.

While a great deal of research, development, and deployment will be needed to meet the long-term goals of climate stabilization, we currently have a diverse, cost-effective, and powerful array of highly efficient energy use technologies and management practices, and a growing range of low-carbon power generation technologies for both our stationary and mobile energy needs.

An expanding body of research, including a series of scientific, technological, and economic studies from my research team, the Renewable and Appropriate Energy Laboratory at the University of California, Berkeley, all indicate that a low-carbon economy can be achieved while expanding the economy and, in fact, reinvesting significantly in our industrial base.

Energy Efficiency Options to Meet Energy Service Needs

We now have over three decades of active research, investment, and deployment of energy efficiency technologies, practices, management strategies, and market mechanisms. The overwhelming conclusion from this work is that the most cost-effective form of energy is the energy that we did not need to design, build, deploy, or manage. This knowledge exists as a major resource of shared experience and expertise that is currently in the hands of Investor-Owned Utilities, Municipal Utility Districts, state Public Utility Commissions, the United States Department of Energy, the Environmental Protection Agency, and a number of other institutions and individuals.

The lists of individual energy efficiency innovations is tremendously long, and includes: efficient water heaters; improved refrigerators and freezers; advanced building control technologies and advances in heating, ventilation, and cooling (HVAC); smart windows that adapt to maintain a comfortable interior environment; a steady stream of new building codes to reduce needless energy use, compact fluorescent lights; the emerging wave of even lower energy solid state ("light-emitting diode") lights so forth. Improvements in buildings alone, where we use over sixty-percent of all energy, have come at savings of *tens of billions of dollars* each year.

Several states, including California, New York, Rhode Island, Wisconsin, and others, that have consistently deployed energy efficiency innovations. Their state planners officials, citizens, and industry leaders, have found these to be tremendously cost-effective, often providing greater service at *lower personal and social cost than the 'conventional'* route of simply adding more fossil-fuel based supply technologies. This is the case for several reasons. First, energy efficient technologies often represent upgrades in service through superior performance (e.g. higher quality lighting, heating and cooling with greater controls, or improved reliability of service through greater ability of utilities to respond to time of peak demand). These innovations can provide better, less expensive, service.

Second, a wide range of energy efficient technologies have ancillary benefits of improved quality of life, such as advanced windows that not only save on heating and cooling expenses, but also make the work-place or home more comfortable. More efficient vehicles, for example, not only save immediately on fuel purchases, but also emit less pollutants, improving health and saving on medical costs to the individual and to society.

The integrated benefits of energy efficiency have been so striking that those states and nations that have invested significantly in these technologies have saved significantly on energy costs and on greenhouse gas emissions.

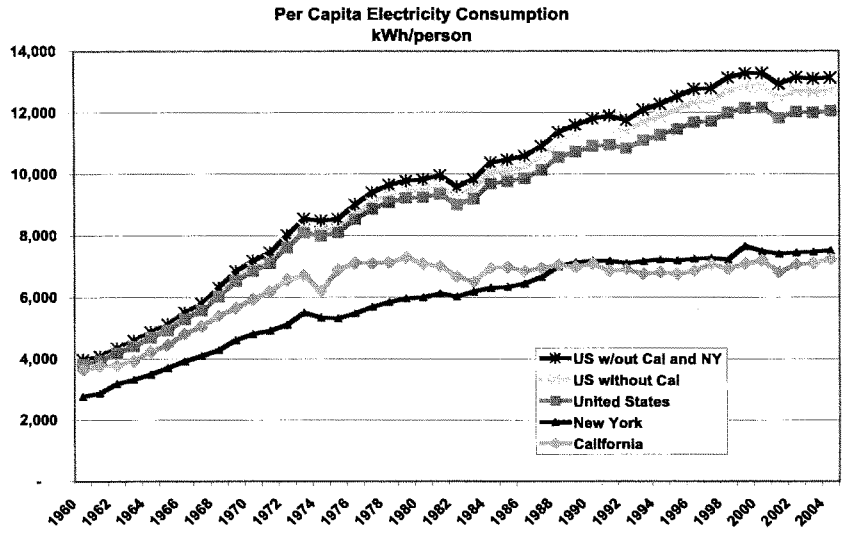

Figure 1: Per capita energy consumption in California, New York, and the United States as a whole. Energy consumption in the most efficient states is fully 40% lower than the national average. A number of nations, such as Denmark, are even far more efficient than the leading U. S. states, indicating strongly that a wealth of further innovations are possible if we invest in, and deploy, these technologies. Source: California Energy Commission.

The adoption rate of energy efficient technologies and energy management practices varies widely around the nation, with some states *more than 40% more efficient than the national average* on a per capita basis (Figure 1). According to statistics provided by the California Utilities Commission and the California Energy Commission, savings in California in 2007, relative to the national average amounted to more than $400/per person per year.

The United States, through the long-standing efforts of the EPA and the Department of Energy, have developed and facilitated in the adoption of a number of energy efficiency practices. The *Green Light*, *EnergyStar* programs, and much of the U. S. housing codes are derived from this experience. In Germany, a similar effort, *GreenFreeze* is credited with similar savings that are financial as well as in greenhouse gas emissions. In total, energy efficiency investments save the nation *over $170 billion* annually, an amount that is rising with increasing energy costs. While these savings are impressive, a wealth of data indicates that far greater savings could be realized if these programs were expanded to a greater number of appliances, lighting systems, and if the

standards in place were to be made more stringent. *The most efficient technologies consistently provide remarkable levels of savings*, often repaying their added cost in mere weeks or months, and then providing those savings year after year.

These energy savings are *not* simply local benefit, providing much-needed savings for individuals and businesses. In regions with aggressive energy efficiency programs, the need for new power plants has been significantly reduced, in some locations permitting the *removal* of poorly functioning, or expensive fossil-fuel supply options.

Taking the Next Step in Energy Efficiency - Reducing Carbon Emissions at a Savings

Energy efficiency has been, and continues to provide, a tremendously cost-effective opportunity to reduce the need for new power generation and greenhouse gas generation. In many cases investments in energy efficiency can be made at near zero or even *negative* cost, when health, adder worker productivity, or security or other 'co-benefits' are taken into account (Kammen and Pacca, 2004).

Opportunities for energy efficiency come in a great many technologies and practices. California has been a consistent leader in developing and deploying energy efficiency and in the early 1980s took the innovative step to *decouple* revenues and total sales from its investor owned utilities. As a result, revenues are determined by a process of matching predicted and observed energy sales, with the effective price of electricity adjusted to meet an expected revenue target. This innovation has put energy efficiency and conservation on an 'even footing' with new generation, and has, in fact, institutionalized energy conservation and efficiency. The reason is that the value of efficiency is now equivalent to new generation on a kilowatt-to-kilowatt comparison, and in fact energy savings is generally superior due to the avoided costs of added power generation, operation and maintenance.

New energy efficiency innovations are taking place all the time, and should be featured prominently in the technical and economic assessments conducted by the EPA. On September 27, 2007, for example, the California Public Utilities Commission[1] voted to enhance energy efficiency performance standards by adding a new incentive program. This program returns a portion of the financial savings form deploying energy efficiency (e.g. compact fluorescent lighting, improved efficiency water heating and space conditioning) innovations as a monetary incentive to the Investor Owned Utilities based on the level of end-user (ratepayer) efficiency.

The opportunities to continue and expand the deployment of energy efficient technologies is vast. The evolution of solid state lighting, for example, has been sufficiently promising that the Office of Energy Efficiency and Renewable at the U. S. Department of Energy has now set a technology-based goal of lights that are fully 50% more efficient that what we have today, and result in a *decrease in total electricity consumption of ten percent*[2]. Sandia National Laboratory projects that advances in solid state lighting will save the nation over 70 GW of supply capacity, more than 100 million tons of carbon emissions annually, and save more than $42 billion/year.

[1] http://www.cpuc.ca.gov/static/news/index.htm
[2] http://www.netl.doe.gov/ssl

A vigorous energy efficiency research program will is needed to spur these advances, but as we have seen over the past decades, will pay for itself many times over in energy savings, avoided supply and greenhouse gas emissions.

Renewable Energy Technologies

The last few years have seen a tremendous expansion in interest in renewable energy supply technologies. Technological and cost advances in solar, wind, biofuel, geothermal, and ocean energy systems have made renewable energy supply options competitive with fossil fuel technologies in an increasing number of locations.

Wind energy in particular is now often directly cost competitive, and at times is a least-cost supply option. Prices for delivered wind energy range as low as 3.2 cents/kWh for the 120 MW San Juan Mesa wind farm in New Mexico[3]. Ownership and financial structures are particularly important for wind projects, with those privately owned averaging 4.95 cents/kWh including the federal production tax credit (PTC), 6.56 cents/kWh without the PTC. Investor Owned Utility projects with corporate financing averaged 3.53 cents/kWh including PTC, 5.9 cents/kWh without. Projects with public utility ownership, and project financing are inexpensive as 3.43 cents/kWh including renewable energy production incentives, and 4.89 cents/kWh without (Wiser and Bollinger, et al, 2007). The recent volatility in natural gas prices makes renewables an even better relative deal.

The performance of renewable energy technologies, including not limited to wind, has encouraged twenty-nine states and the District of Columbia to enact Renewable Energy Portfolio Standards, which each call for a specific percentage of electricity generated to come from renewable energy (Figure 2). Some of the most aggressive state standards call for over 20% of total electricity generation to come from renewable sources by 2020, and in 2007 these technologies generated almost 150 TWh of electricity. States that have seen that they will likely meet their RPS goals, including Texas, California, and Colorado, have in turn increased their call for renewable installations based on the performance, cost-effectiveness, and the benefits of supply diversity that renewables provide.

[3] http://www.awea.org/projects/newmexico.html

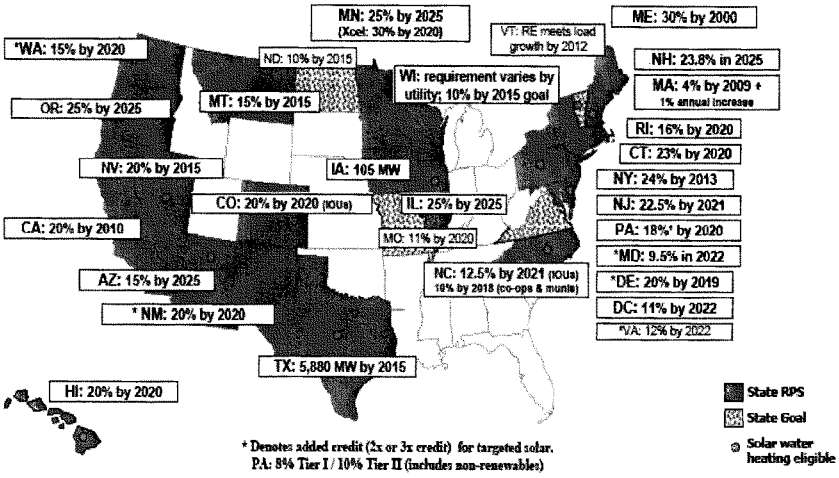

Figure 2. Map of States with Renewable Energy Portfolio Standards As of September 2007, 29 states and the District of Columbia have enacted or voted to adopt either an RPS or a state goal. These plans represent a diversity of approaches and levels, but each reflect a commitment to clean and secure energy that could be emulated at the federal level. In addition 13 states have specific measures to increase the amount of solar photovoltaic power in use. These range from specific solar energy targets, to double (MD) or up to triple credit (DE, MN, & NV) for solar. Electricity rates *fell* in portions of Colorado after voters approved Proposition 37, a 20% RPS limited to the Investor Owned Utilities.

An important feedback effect exists in the call for, and installation of clean energy supply and pollution control technologies. As more and more solar, wind, biofuel, and trace-gas emissions control technologies (e.g. NOx) and constructed and deployed, the price has consistently fallen by 10 – 20% per doubling of the total number of units ordered (Figure 3). This effect, termed the 'learning curve' has held remarkably constant over a wide range of technologies for many years of technology experience (Duke and Kammen, 1999). An outcome of this process of industrial learning is that as we invest more in the clean energy sector, the products we desire have become increasingly affordable, further increasing their significance in the market. This effect has been seen to occur for technologies than can be mass-produced. Our investment and deployment of energy efficiency, renewable energy, and of pollution control technologies are important drivers of future innovation.

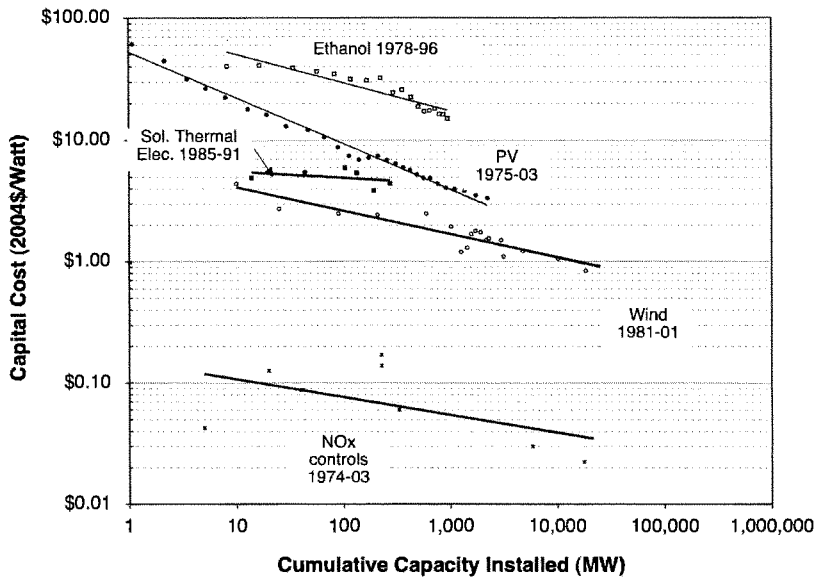

Figure 3: The 'learning curve', showing the cost declines in clean energy and pollution control technologies than accompanies expanded commercial production. A 10 – 20% decrease in per unit cost typically accompanies each doubling of cumulative production.

A diverse range of low-carbon energy supply, and energy efficiency options exist around the nation. Table 1 lists a range of current policies, and potential resources for two states, Utah and Kansas that currently do not currently have RPS policies in place. These states illustrate an added level of diversity in the efficiency and supply options, and policy measures, that can reduce greenhouse gas emissions and obviate the need for added fossil-fuel capacity.

Support and Opportunities for Efficient and Clean Energy Systems in Utah and Kansas

Current Utah Policies:

- Utah Renewable Energy Systems Tax Credit: 25% residential, 10% commercial
- Utah Renewable Energy Sales and Use Tax Exemption
- Utilize the Federal Renewable Energy Production Tax Credit of 1.9 cents/kWh
- Utah Solar and Geothermal Business Tax Credit of 10%

Opportunities for Utah:

- Utah has an exceptional solar resource, for both solar thermal (~ $0.1/kWh) and solar photovoltaic (~ $0.2/kWh) installations.
- Utah has a significant wind resource in the southwest and northwest areas of the state, and could meet a significant portion of total demand. An even more impressive wind resource exists in neighboring Colorado, where over 360 MW of wind has been installed, and where ratepayers in many parts of the state have seen *electricity rates fall since the adoption, by popular vote*, of a renewable energy portfolio standard (Proposition 37).

Current Kansas Policies:

- Renewable Energy Property Tax Exemption (100%)
- The Renewable Energy Electric Generation Cooperative Act (which provides for creation of non-profit cooperatives to generate electricity from renewables)
- Kansas Energy Efficiency Program (Zero interest on state loans for energy efficient appliances for low-income residential customers)
- Kansas City Power & Light Commercial / Industrial Energy Efficiency Rebate Program (which provides varying incentives for pre-approved projects)

Opportunities for Kansas:

- Kansas has an exceptional wind resource, estimated to be roughly 122,000 MW, third largest in the nation. According to the U.S. Energy Information Administration, it is also one of the four states with the most land near existing transmission lines which is suitable for wind energy development, making the state a leading candidate for utility-scale wind energy development. Kansas could thus become a low-cost *national* supplier of wind energy.

Table 1: The Utah and Kansas portfolios as examples of efficient and clean energy investment drivers and a number of opportunities for carbon savings, CO_2 mitigation, and economic growth.

The Job Creation Dividend from Greenhouse Gas Abatement

A number of analysts have charted an additional benefit of developing the clean energy options of efficiency and renewable energy technologies: job creation. My laboratory conducted a study of job growth in the clean energy industry across the nation relative to that seen in the fossil-fuel sector. We found (Kammen, Kapadia and Fripp, 2004) that on average, three to five times as

many jobs were created by a similar investment in renewable energy versus that when the same investment was made in fossil-fuel energy systems.

In addition, an important aspect of the job growth is that a large percentage of the jobs will be local, community based. Van Jones of the Ella Baker Center for Human Rights in Oakland California has noted that not only can these jobs become drivers of re-development, but that they afford a chance to turn augment 'Blue Collar' with 'Green Collar' in poor communities, and in communities of color.

One way to sum up the job growth potential of an efficient and clean energy economy is to compare employment totals under fossil-based and clean energy-based supply scenarios. Using U. S. Department of Energy forecasts for new generation mixes, we provide a comparison in Figure 4.

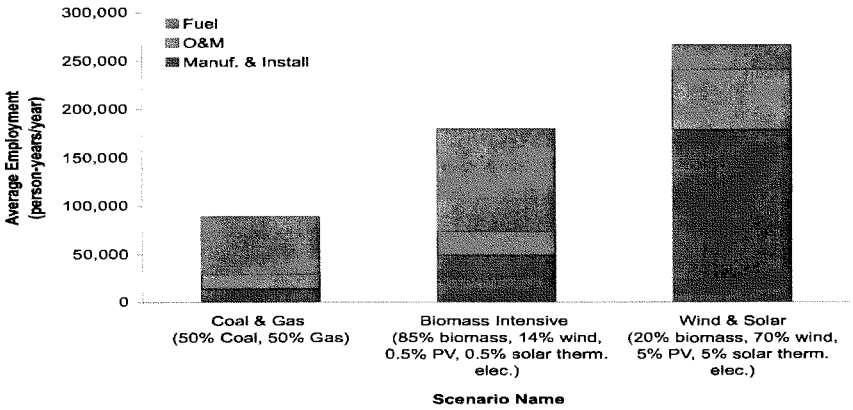

Figure 4: Comparison of the estimated employment created by meeting the equivalent of 20 percent of current U.S. electricity demand via and expansion of fossil or renewables-based electricity generation. These totals use the jobs per megawatt numbers from Kammen, Kapadia, and Fripp, 2004. These scenarios are for different fuel mixtures that could comprise state or federal Renewable Energy Portfolio Standards. The use of biofuel assumes that a range of biomass sources are either mixed with coal and combused as a solid fuel, or as a gasified feedstock that is combined with natural gas. In either case, the net greenhouse gas emissions is reduced over the coal-only or gas-only case because of the amount of biomass that is regrown in subsequent years (based on U. S. Department of Energy work in *The Billion Ton Feedstock Supply*, 2004).

A key result emerges from our work, and can be seen in Figure 4. Across a range of scenarios, the renewable energy sector generates more jobs than the fossil fuel-based energy sector per unit of energy delivered (i.e., per average megawatt). In addition, we find that supporting renewables within a comprehensive and coordinated energy policy that also supports energy efficiency and

sustainable transportation will yield far greater employment benefits than supporting one or two of these sectors separately. Work by the German Potsdam Institute for Climate Change and the Ministry of the Environment comes to similar conclusions.

The U. S. Government Accounting Office conducted its own study of the job creation potential of a clean energy economy (GAO, 2004). In an important assessment of rural employment and income opportunities, they found that:

> ... a farmer who leases land for a wind project can expect to receive $2,000 to $5,000 per turbine per year in lease payments. In addition, large wind power projects in some of the nation's poorest rural counties have added much needed tax revenues and employment opportunities.

Combining Technology and Financial Innovation – the Next Wave of Greenhouse Gas Abatement

As states and cities explore greenhouse gas emission reduction opportunities, new and important financial models are also emerging. The City of Berkeley, California provides one recent example that has already attracted international attention.

A Sustainable Energy Financing District is being developed as part of the City of Berkeley's implementation of Measure G – a successful 2006 ballot measure setting greenhouse gas reduction targets of a full 80% reduction in emissions by 2050.

The financing mechanism is loosely based on existing "underground utility districts" where the City serves as the financing agent for a neighborhood when they move utility poles and wires underground. In this case, individual property owners would contract directly with qualified private solar installers and contractors for energy efficiency and solar projects on their building. The City provides the funding for the project from a bond or loan fund that it repays through assessments on participating property owners' tax bills for 20 years. Cities may also be able to aggregate bonds, and states governments can facilitate this program in a number of ways.

No property owner would pay an assessment unless they had work done on their property as part of the program. Those who choose to pay for energy efficiency first, and then solar and energy installations through this program would pay only for the cost of their project, interest, and a small administrative fee.

The Financing District solves many of the financial hurdles facing property owners. First, there would be little upfront cost to the property owner. Second, the total cost of the solar system and energy improvements may be less when compared to financing through a traditional equity line or mortgage refinancing because the well-secured bond will provide lower interest rates than is commercially available. Third, the tax assessment is transferable between owners. Therefore, if an individual sells their property prior to the end of the 20-year repayment period, the next owner takes over the assessment as part of their property tax bill.

This mechanism, announced publicly on October 23, 2007, has attracted statewide attention as other cities, and now the state government, looks to find ways to expand the Financing District

model statewide. Further, the U. S. Department of Energy has expressed its willingness to facilitate the dissemination of the program to other cities, states, and regions.

A Roadmap to Low Carbon Energy Efficiency and Clean Energy Supply Options

A particularly useful view of low carbon energy options has been developed by the Vattenfall Utility Cooperative in Sweden and can be done in the U.S. Such a roadmap can focus and contextualize EPA considerations of alternative power generation proposals and their related costs. This presentation, seen in Figure 5 shows:

- Estimated costs (some of which are negative, implying overall *savings* to the economy through the adoption of clean energy options) of potential climate solutions, *and* the amount of carbon they may be able to offset, or avoid, by a specific time (in this case 2030)
- The potential for a wide range of energy options to play a significant role in CO_2 reduction, which in turn leads to distinct technology and management strategies that individual states may pursue
- A clear conclusion that we will need to adopt policies that support and encourage development and deployment of a *diversity* of clean energy options.

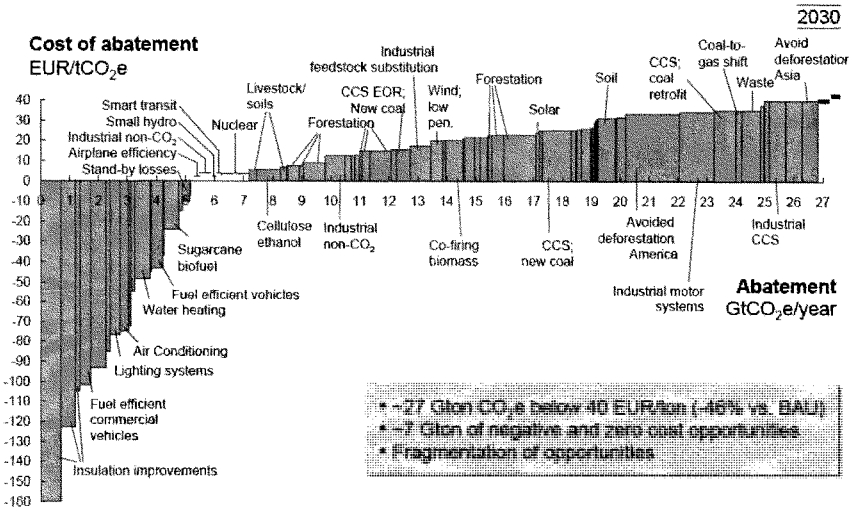

Figure 5: Estimate carbon reduction possibilities in Euros per ton of carbon dioxide equivalent (EUR/tCO_2e). The vertical axis shows the cost (or benefit) of the specific mitigation option, while the horizontal axis shows the estimated amount of savings (in giga-tons of carbon) by 2030.

The key insight from this analysis is that a portfolio of low-carbon opportunities exists, and that state and local governments, if supported by analysis and policies at the federal level, can enact a wide range of cost-effective dissemination programs. While these will require a combination of research and deployment to become major components of our economy, the tools to begin this process exist today. The abundance of cost-effective energy efficiency options, and of low-carbon sources in the U. S. is a rich resource from which we can draw.

The critical first step in achieving the benefits of a low-carbon economy is conduct systematic reviews of our options, and to build supply portfolios that protect the economy and the environment. My testimony highlights the degree to which this task, while significant, can be accomplished through actions by the EPA and other federal agencies.

Thank you for the opportunity to appear before your committee.

Brief Biography – Daniel M. Kammen

I hold the Class of 1935 Distinguished Professorship in Energy at the University of California, Berkeley, where I am a professor in the Energy and Resources Group, the Goldman School of Public Policy, and the Department of Nuclear Engineering. I am the founding director of the Renewable and Appropriate Energy Laboratory (http://rael.berkeley.edu), an interdisciplinary research unit that explores a diverse set of energy technologies through scientific, engineering, economic and policy issues. I am also the Co-Director of the University of California, Berkeley Institute of the Environment. I have served on the Nobel Peace Prize winning Intergovernmental Panel on Climate Change (IPCC) as a Coordinating Lead Author. I have testified before both United States House and Senate Committees on the science of regional and global climate change, and on the technical and economic status and the potential of a wide range of energy systems, notably renewable and energy efficiency technologies for use in both developed and developing nations. I am the author of over 200 research papers, and five books, most of which can be found online at http://rael.berkeley.edu

In July of last year the Honorable R. John Efford, the then Minister of Natural Resources Canada, announced my appointment, as the only U. S. citizen, to serve on the Canadian National Advisory Panel on the Sustainable Energy Science and Technology (S&T) Strategy.

I played a leadership role in developing, and now in managing, the successful $500 million Energy Biosciences Institute award from BP, won by our team from the University of California, Berkeley, the University of Illinois at Urbana Champaign, and Lawrence Berkeley National Laboratory.

Acknowledgments

This work was supported by a grant from the Energy Foundation, the Karsten Family Foundation endowment of the Renewable and Appropriate Energy Laboratory, and the support of the

University of California Class of 1935. I am delighted to thank Carla Peterman, graduate students in the Energy and Resources Group at the University of California, Berkeley, for her assistance in developing this testimony.

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Chairman WAXMAN. Thank you very much, Dr. Kammen.

Mr. Cline.

STATEMENT OF JOHN CLINE

Mr. CLINE. Thank you, Chairman Waxman. My name is John Cline. I am a partner at the law firm of Troutman Sanders. My practice focuses almost exclusively on air quality issues, particularly under the Federal Clean Air Act.

Before I begin, let me state that I am not here advocating or representing any particular position of a company or industry. Nor am I receiving any remuneration for this testimony. The views expressed today are my own.

Having said that, I would like to start out by stating that within the confines of the Clean Air Act, I believe that EPA Region 8 correctly decided the question of whether to regulate CO_2 emissions with the Bonanza PSD permit. The PSD program applies to air pollutants subject to regulation under the act. However, Region 8 appropriately concluded that greenhouse gases are not at this time subject to regulation under the act.

In *Massachusetts* v. *EPA,* the Supreme Court concluded that greenhouse gases are Clean Air Act pollutants. The Court also held that EPA must regulate greenhouse gases for motor vehicles, but only if EPA first determines that greenhouse gas emissions may reasonably be anticipated to endanger public health or welfare. So until EPA actually makes that necessary endangerment finding, and then requires some type of control limits or emission limits on carbon dioxide, CO_2 cannot be regulated under the PSD program. Therefore, even after Massachusetts, it was necessary for Region 8 to decline to include CO_2 conditions in the Bonanza permit.

We have heard that EPA has indicated it will soon commence a rulemaking to determine whether it will make the endangerment finding, and if so, the type of greenhouse gas regulations it will adopt for motor vehicles. However, the committee must understand that if EPA regulates mobile sources, this action has the potential for enormous impacts on stationary sources. Indeed, these enormous impacts on stationary sources would exist today if CO_2 were determined to be a regulated air pollutant under the act. That determination would trigger PSD regulation of a huge number of buildings and facilities.

Under the act, major sources are defined as the type of facility that emits either 100 tons per year or 250 tons per year. Now, 100 tons or 250 tons may not be very much for a traditional air pollutant, but it really is a very small amount of CO_2. CO_2 emissions from hundreds of thousands of buildings and facilities likely now exceed this threshold, including apartment and office buildings, hotels, malls, large retail stores, warehouses, colleges, hospitals, as well as product pipelines, food processing facilities, heated agricultural facilities, many, many more. These types of sources have never gone through PSD permitting before because they emit so very little of the traditional air pollutants. But they would now if CO_2 is deemed to be a regulated air pollutant at this point.

Now, PSD permitting is incredibly costly, time-consuming and burdensome. But if CO_2 were deemed to be a regulated air pollutant before EPA completes its expected rulemaking on greenhouse

gas emissions from motor vehicles, the State permitting authorities at EPA would become swamped with huge backlogs of PSD applications. An overwhelming and unprecedented roadblock to new investment would be created for a host of previously unregulated buildings and facilities. Yet all of this economic pain would come at very little environmental gain.

I understand EPA is likely to address the implications of PSD regulation of greenhouse gases as part of its rulemaking process under the remand of the *Massachusetts* case. EPA needs the time to craft a greenhouse gas regulatory program that will lessen the regulatory burdens on all these very small CO_2 emitters. And the public deserves the opportunity to comment on that regulatory approach.

On the other hand, if carbon dioxide is declared to be subject to Clean Air Act regulation right now, then a multitude of new and expanded buildings and facilities will be subject to the substantial burden, expense and the delay of PSD permitting.

Thank you.

[The prepared statement of Mr. Cline follows:]

TESTIMONY OF PETER GLASER AND JOHN CLINE
ON EPA'S APPROACH TO ADDRESSING GREENHOUSE GASES IN THE WAKE OF THE SUPREME COURT'S DECISION IN *MASSACHUSETTS V. EPA*

HOUSE COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM
November 8, 2007

INTRODUCTION

We are Peter Glaser and John Cline, partners in the law firm of Troutman Sanders LLP. We each have an active Clean Air Act (CAA) practice and have been involved in greenhouse gas (GHG) legal issues for more than a decade. We represented the Washington Legal Foundation in filing an amicus brief before the Supreme Court in the *Massachusetts v. EPA* litigation.

We are not here before the Committee representing or advocating the position of any particular company or industry. We are not receiving remuneration from anyone for our testimony, and the views expressed in our testimony are our own and not necessarily those of any company or group that we currently represent or have represented.

In addition, we are not here to recommend any particular course of action by this Committee or Congress. We have been asked to offer our views as practicing attorneys on issues pertaining to the U.S. Environmental Protection Agency's (EPA) approach to addressing GHGs in the wake of the Supreme Court's decision in *Massachusetts v. EPA.*[1] In particular, we have been asked to comment on EPA Region 8's recent decision not to require Best Available Control Technology (BACT) for carbon dioxide (CO_2) emissions in its Prevention of Significant Deterioration (PSD) permit for the proposed Bonanza electric generating unit in Utah.[2] We believe EPA's Bonanza decision was appropriate. EPA Region 8 correctly held that BACT may

[1] 127 S. Ct. 1438 (2007).
[2] *Final Air Pollution Control Prevention of Significant Deterioration (PSD) Permit to Construct, Permit* No. PSD-OU-0002-04.00 (Aug. 30, 2007).

not be required for CO_2 because CO_2 is not currently subject to emission limitation or control requirements under the Clean Air Act.

Those who criticize the Bonanza decision take the position that GHGs, including CO_2, are regulated pollutants under the CAA at the present time, even before EPA acts on remand of the *Massachusetts* decision. As a result, they state that EPA, right now, under the PSD provisions of the CAA and its regulations, must establish BACT CO_2 limits in PSD permits.

The Committee should be aware of the implications of this position because it would create a huge and unprecedented burden for business activity across the economy and not just for new electric generators using coal. As explained in more detail below, if CO_2 is deemed to be a regulated CAA pollutant, no new "major" stationary source of CO_2 emissions *of any kind* can be built without first obtaining a PSD permit and complying with CO_2 BACT requirements.

Under the CAA, a "major" source is defined as either a source in one of twenty-eight listed categories that emits at least 100 tons per year (tpy) of an air pollutant or a source in an unlisted category that emits at least 250 tpy of an air pollutant.[3] While 100/250 tpy may be appropriate as a threshold for PSD regulation of traditional air pollutants, it is a minuscule amount of CO_2. Buildings the size of the one we are in now, exceeding about 100,000 square feet, if they are heated by a furnace using fossil fuel (including oil or natural gas), likely produce CO_2 emissions in excess of 250 tpy. A very large number and variety of buildings and facilities exceed this threshold – including many office and apartment buildings; hotels; enclosed malls; large retail stores and warehouses; colleges, hospitals and large assisted living facilities;[4] large houses of worship; product pipelines; food processing facilities; large heated agricultural

[3] 42 U.S.C. § 7479(1).

[4] 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.

facilities; indoor sports arenas and other large public assembly buildings; and many others. None of these types of sources has ever been subject to PSD permitting requirements before because they emit so little of the traditional air pollutants; but, they would be now if CO_2 is deemed to be a regulated CAA pollutant.

The PSD implications of CO_2 being a regulated CAA pollutant are not limited to new sources. Regulation of CO_2 under the CAA means that existing "major" CO_2 sources – emitting above the 100/250 tpy threshold – could not undertake any modification that would increase their CO_2 emissions by any amount without first undergoing PSD permitting, including BACT.[5]

PSD permitting is an incredibly costly, time-consuming and burdensome process. The Bonanza unit took more than three years to permit at a likely cost of millions of dollars. If CO_2 were deemed to be a regulated CAA pollutant now, then just the administrative burden alone – putting aside any BACT or other requirements that would result from the permitting process – would create an overwhelming and unprecedented roadblock to new investment for a host of previously unregulated buildings and facilities. Because these buildings and facilities are such relatively small CO_2 emitters, all of this economic pain would be created for very little environmental gain.

EPA is aware of the PSD implications of a decision by the Agency to regulate GHGs under the CAA in response to the *Massachusetts* case and is understood to be examining possible regulatory mechanisms to address whether small CO_2 emitters should be subject to PSD requirements if the Agency decides to regulate GHGs. Designing an appropriate mechanism will be difficult enough under EPA's current timeline for responding to the *Massachusetts* case. Whatever mechanism EPA develops will be controversial because of the complex legal issues involved and because the mechanism will decide which CO_2 sources will be subject to PSD

[5] 40 C.F.R. § 52.21(b)(2); 40 C.F.R. § 52.21(b)(23)(ii).

regulation and which will not. Moreover, that EPA regulatory mechanism will not be self-executing in most states – states first will have to adopt the mechanism in their State Implementation Plans (SIPs), and those SIP revisions will then have to be approved by EPA, a process that could take years.

But if, as some parties demand, CO_2 is declared to be, *right now*, a regulated CAA pollutant, then, without warning, a host of relatively small emitters will be immediately thrown into the PSD program. Just the uncertainties that would ensue as to what kind of facilities could be built or modified across the economy would be staggering. Anyone currently planning to build or modify a moderately sized or larger new building or facility which is heated with fossil fuels would have to delay the start of that project, perhaps for several years, while the PSD-permitting process is completed. The result could be an economic train wreck.

PSD BACKGROUND

Some basic background on the PSD program may be helpful before discussing the Bonanza case and its implications. 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 National Ambient Air Quality Standards (NAAQS). Although the NAAQS sets a maximum allowable level of a pollutant in the ambient air, Congress decided that in existing clean air areas the air should stay cleaner than the NAAQS, i.e., that the program must prevent significant deterioration of air quality.[6]

Under the PSD program, permits must be obtained before construction may begin on "major" new stationary sources of air pollutants.[7] The CAA lists 28 specific types of stationary sources, such as power plants, refineries, steel mills, chemical plants, etc., that are "major," and

[6] *See* generally Clean Air Act, Title I, Part C, Subpart I, 42 U.S.C. §§ 7470-7479.
[7] 42 U.S.C. § 7475(a).

subject to the PSD program, if they can emit at least 100 tons per year (tpy) of any air pollutant.[8] Other, unlisted types of sources do not trigger PSD permitting as "major" sources unless they can emit at least 250 tpy of any air pollutant.[9]

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 provided a numerical "significance" definition, such as CO_2, *any* emission increase is considered to be a "significant" increase.[10]

For a "major" source, the CAA requires BACT for each pollutant which is "subject to regulation" under the Act.[11] 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.[12]

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 must first promulgate their own revised PSD regulations in their SIPs. Those revised SIPs must then be submitted to EPA for approval. In a few instances, including the Bonanza permit, EPA itself directly administers the PSD permit

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[8] 42 U.S.C. § 7479(1).
[9] Id.
[10] 40 C.F.R. §§ 52.21(b)(1)(ii), 52.21(b)(2), 52.21(b)(23).
[11] 42 U.S.C. § 7475(a)(4).
[12] 42 U.S.C. § 7479(3).

system. The Bonanza permit was issued by EPA Region 8 because the proposed facility would be located in Indian Country and the affected Tribes do not have their own EPA-approved PSD programs. Challenges to PSD permits issued by either EPA or the seven states operating under delegated authority must first go to the EPA Environmental Appeals Board (EAB) before they go to court.[13] The EAB has no jurisdiction over PSD permits issued by the other forth-three states.

THE BONANZA PERMIT

The Bonanza PSD permit was issued for a 110 megawatt (MW) electric generating unit at the existing Bonanza Power Plant located on the Uintah and Ouray Indian Reservations in Utah. The permit was issued to Deseret Power Electric Cooperative, a member-owned rural electric generation and transmission cooperative providing electric service to rural Utah. Steam from the new unit will be produced by burning waste coal in a circulating fluidized bed boiler, a technology classified as "clean coal" by the U.S. Department of Energy. Reflecting the time-consuming nature of the PSD permit process, the permit application was submitted on April 14, 2004, and the permit was not issued until August 30, 2007.[14] On October 1, 2007, the Sierra Club filed an appeal of the permit to the EAB.[15]

The key issue asserted by the Sierra Club on appeal is that the Bonanza PSD permit did not but should have required BACT for CO_2 emissions from the new electric generating unit . In the Sierra Club's view, CO_2 is presently "subject to regulation" under the CAA. The Sierra Club cites the *Massachusetts* decision as confirming that CO_2 is a CAA air pollutant.[16] Interestingly, however, in light of the implication of today's hearing that the *Massachusetts* case changed the regulatory landscape for consideration of CO_2 in PSD permit proceedings, the Sierra Club does

[13] 40 C.F.R. § 124.19.
[14] *See Final Air Pollution Control Prevention of Significant Deterioration (PSD) Permit to Construct, Permit* No. PSD-OU-0002-04.00 (Aug. 30, 2007).
[15] *See* Petition for Review and Request for Oral Argument, PSD Appeal No. 07-03.
[16] *See* Sierra Club Appeal at 4.

not principally rely on *Massachusetts* in its Bonanza appeal. The Sierra Club's primary argument to the EAB is that CO_2 is "subject to regulation" because Title IV acid rain sources (electric generating units) are required to monitor and report their CO_2 emissions allegedly under Section 821(a) of the 1990 CAA Amendments.[17]

The same issue is currently on appeal before the EAB in *In re Christian County Generation, LLC*, PSD Appeal No. 07-01. In the *Christian County* case, the Illinois Environmental Protection Agency (IEPA) issued a PSD permit to Christian County Generation, LLC for two 330 MW coal-based integrated gasification combined cycle (IGCC) facilities at the Taylorville Energy Center. Like the CFB technology used in the Bonanza project, IGCC is considered by U.S. DOE to be a clean coal technology. The Sierra Club appealed the PSD permit to the EAB on July 7, 2007.[18] Briefing in the case has been completed, and oral argument was held on October 17, 2007. On September 24, 2007, the EPA Office of Air and Radiation (OAR) filed a brief defending IEPA's treatment of CO_2 emissions in the PSD permit, including IEPA's decision that BACT for CO_2 was not required, as consistent with the CAA, EPA's PSD regulations and EPA policy.

THE BONANZA PERMIT WAS CORRECTLY DECIDED

For the reasons set forth in Region 8's Bonanza decision and in EPA OAR's brief and oral argument in the Christian County case, EPA has correctly determined not to treat CO_2 as "subject to regulation" under the CAA at this time and, therefore, not to require BACT for CO2.

As an initial matter, since today's hearing is focused on the *Massachusetts* case, it is important to highlight what the Supreme Court did and did not rule as to GHGs. The Supreme Court ruled only that GHGs are CAA air pollutants and that EPA must regulate GHG emissions

[17] 42 U.S.C. § 7651k note; Pub. L. No. 101-549; 104 Stat. 2699.
[18] Illinois is one of the seven states administering EPA's permit program under "delegated" authority; accordingly, appeals from the IEPA go first to the EAB.

from new motor vehicles under Section 202 of the CAA, *but only if* EPA first finds that such emissions may reasonably be anticipated to endanger public health or welfare. In its response to *Massachusetts*, EPA could make this endangerment finding and promulgate new motor vehicle GHG regulations; it could find that new motor vehicle GHG emissions cannot reasonably be anticipated to endanger public health and welfare and on that basis decline to issue GHG regulations; or it could provide a reasonable explanation for why it cannot or will not make an endangerment finding and thereby decline to issue GHG regulations. If EPA makes the endangerment finding for CO_2 and promulgates new motor vehicle GHG regulations, CO_2 will then be "subject to regulation" under the CAA, and PSD permits will be required to consider BACT for CO_2 emissions. Unless and until EPA promulgates CO_2 regulations, however, CO_2 is not "subject to regulation" under the CAA, and BACT cannot be required for CO_2 in PSD

A semantic argument that CO_2 is presently "subject to regulation" even though it is not actually regulated – on the theory that it *could* be regulated given *Massachusetts* – would make little sense. *Massachusetts* found that CO_2 is a CAA air pollutant based on the Court's finding that the CAA terms "air pollutant" and "air pollution" are extremely broad. Virtually any substance emitted to the air is an air pollutant as the Supreme Court construed that term. As the Court found, however, an air pollutant cannot be regulated under the CAA unless EPA first determines that it may reasonably be anticipated to endanger public health or welfare. Thus, the argument that a substance is "subject to regulation" just because it is a CAA air pollutant, and before EPA actually regulates that substance owing to its health or welfare effects, would mean that EPA must set BACT limits for substances that have not been found to pose harm to the public. EPA quite logically has never interpreted the PSD program in that manner.

Indeed, in defining emissions that are "subject to regulation" for purposes of PSD, EPA's regulations list three specific programs under which a pollutant could be "subject to regulation" (NAAQS, NSPS, stratospheric ozone) and then list a fourth catch-all category for "other" CAA programs.[19] EPA would have had no purpose for creating this list of CAA regulatory programs if any air pollutant, whether or not actually regulated, is "subject to regulation." EPA could much more easily have stated that any substance emitted by the PSD source is subject to BACT controls.

As stated, the Sierra Club argues in the Bonanza appeal that CO_2 at the current time is actually – and not just potentially – regulated because, under Section 821 of the 1990 CAA Amendments, Title IV sources must monitor and report their CO_2 emissions. However, that argument fails to recognize that Section 821 *of the 1990 statute* did not actually amend the Act. When Congress passed Pub.L. 101-549 to amend the CAA, some of the statute's provisions were expressly identified as amendments to the Act while other statutory provisions, including Section 821, were not. Thereafter, when the 1990 Amendments were codified as part of the CAA, Section 821 of the statute appeared only as a note to Section 412 of the Amendments[20] rather than as part of any amendment to the Act. Consequently, contrary to the Sierra Club's assertion, CO_2 cannot constitute an air pollutant subject to regulation "under the Act" because Section 821 of Pub.L. 101-549 has never been part of the Act itself.

Furthermore, the Sierra Club seems to be arguing that, for purposes of PSD requirements, Section 821 of the statute has been unnoticed, hiding in plain sight as part of the Act, for nearly two decades (across two Administrations) of intense debate about GHG regulatory policy until the Sierra Club just recently discovered it as a mandate for CO_2 BACT within the last year. That

[19] 40 C.F.R. § 52.21(b)(50).
[20] 42 U.S.C. § 7651k.

argument makes little sense. The more likely explanation for the fact that Section 821 of the 1990 statute has never before been argued as mandating BACT for CO_2 in PSD permits is that the argument is far-fetched.

In fact, as OAR noted in its *Christian County* brief, the EPA Administrator determined more than twenty years ago that EPA "lacks the authority to impose [PSD permit] limitations or other restrictions directly on the emission of unregulated pollutants."[21] Consistent with this principle, the EAB (which is independent of and does not report to the EPA Administrator) has twice held since the 1990 CAA Amendments that CO_2 is an unregulated pollutant for PSD permitting purposes.[22] EPA's *Christian County* brief also correctly noted that the EAB has ruled that, for PSD purposes, "subject to regulation" means subject to emission limitations or controls.[23] Thus, even if Section 821 of Pub. L. 101-549 had actually amended the CAA, the fact that Title IV sources must monitor and report CO_2 emissions as a result of that provision does not make CO_2 a regulated pollutant for PSD purposes.

In sum, EPA's position in the Bonanza and Christian County cases does not reflect a policy determination after *Massachusetts* to avoid GHG regulation. To the contrary, EPA's determination in the Bonanza case not to include BACT limits for CO_2 is well-grounded in law, Agency regulation and its policy stretching back to the previous Administration and confirmed by decisions of EPA's independent EAB.

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[21] *North County Resource Recovery Assoc.*, 2 E.A.D. 229, 230 (EAB 1986).
[22] *Kawaihae Cogeneration Project*, 7 E.A.D. 107, 132 (EAB 1997); *Inter-power of New York*, 5 E.A.D 130, 151 (EAB 1994).
[23] *See Kawaihae Cogeneration Project*, 7 E.A.D. at 132 (CO2 is not "a regulated air pollutant for permitting purposes" because there were "no regulations or standards prohibiting, limiting or controlling the emissions of greenhouse gases from stationary sources"). *See also Knauf Fiber Glass*, 8 E.A.D. 121, 163-64 (EAB 1999) ("additional [PSD] permit conditions relating to emissions of respirable glass fibers" were not mandated because those fibers are "unregulated pollutants" not subject to actual direct CAA regulation).

IMPLICATIONS OF RULING THAT CO2 PRESENTLY IS "SUBJECT TO REGULATION" UNDER THE CAA

Although the Bonanza and Christian County permits were for new electric generating units using coal, the implication of a decision that CO_2 is presently "subject to regulation" under the CAA goes much further. The PSD regulations, of course, are not just limited to electric generating units; they extend to any new stationary source that is deemed to be a "major" source of regulated emissions.

As discussed above, the term "major" stationary source is defined to include twenty-eight listed categories of sources that have a potential to emit at least 100 tpy of any air pollutant that is subject to CAA regulation. It also includes any other types of stationary sources that have a potential to emit at least 250 tpy of any air pollutant subject to CAA regulation. The term "stationary source" is very broad. It includes "any building, structure, facility or installation" which emits or may emit a regulated pollutant.[24] Thus, if any new sources emit at least 100/250 tpy of CO_2, and if CO_2 is considered to be subject to CAA regulation, then these sources would be subject to PSD permitting requirements.

The 100/250 tpy threshold for PSD applicability was set 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 is 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 plants,

[24] 40 C.F.R. § 52.21(b)(6).

refineries and the like, a 100/250 tpy threshold for CO_2 will subject a massive number of small facilities to PSD requirements.

The PSD burden caused by a 100/250 tpy applicability threshold for CO_2 could be overwhelming for small and large businesses alike. New sources emitting more than 100/250 tpy of CO_2 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 CO_2 that wish to expand or modify their facilities in a way that would increase CO_2 emissions by *any* amount would likewise first have to obtain a PSD permit after undergoing the BACT process. As shown by the Bonanza case, for example, the PSD process can take years and cost millions of dollars. 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 CO_2 apply BACT also injects 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 that weighing process fails to identify a technically and economically feasible technology for controlling the pollutant in question. But since BACT determinations for CO2 have no regulatory history at this time, and can 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.

EPA recognizes this potentially catastrophic PSD implication for small sources if and when it adopts GHG regulations in response to *Massachusetts*. It may be considering ways to

prevent very small sources of GHG emissions from becoming subject to PSD as a result of whatever motor vehicle CO_2 regulations the Agency adopts. Trade press has speculated on several possible alternatives, all of which pose legal issues. We are not aware at this time of anything official from the Agency.

Obviously, the nature of any mechanism EPA may propose to prevent application of the PSD program to very small sources of CO_2 emissions is critical for a broad range of businesses. The mechanism will establish a dividing line defining which sources will become subject to PSD permitting and which will not. EPA needs sufficient time to carefully consider the basis and effect of whatever mechanism it adopts. EPA must establish this dividing line through notice and comment rulemaking so the public has an opportunity to provide input on this very important issue. Unfortunately, if EPA ultimately adopts a mechanism limiting the effect on small sources of a decision to regulate GHGs, that mechanism will not be immediately effective in most states. As previously discussed, seven states essentially act as EPA's agents in administering the PSD program, and the mechanism EPA adopts will immediately become effective in these states. However, the forty-three states that independently administer their own PSD programs under EPA supervision must undertake their own rulemakings to adopt EPA's mechanism or possibly a more stringent mechanism (one that subjects a broader range of CO_2 stationary sources to PSD regulation) in their SIP. A regulatory gap will therefore exist for sources in these states, after EPA has adopted its new mechanism. In these states, until the state also adopts a mechanism in its SIP and the state's SIP revision is approved by EPA, sources will continue to be subject to the state's current PSD regulations. As a result, new sources which emit above the 100/250 tpy CO_2 threshold (and which are therefore "major"), and existing "major" sources undergoing modifications that cause any increase in CO_2 emissions, will need

PSD permits. This will obviously be a potentially disastrous situation for the many sources that emit relatively token amounts of CO_2.

As can be seen, the effect of actual EPA regulation of GHGs creates very important issues for a multitude of small sources, and these issues will be difficult enough to solve even under EPA's current schedule for responding to *Massachusetts*. If, on the other hand, as some demand, CO_2 is determined to be "subject to regulation" under the CAA *now*, the result could be catastrophic. The impact on the American economy would not be favorable, to say the least.

CONCLUSION

EPA correctly decided the Bonanza case. GHGs, including CO_2, are not presently subject to CAA regulation. Therefore, BACT for CO_2 in PSD permits is not authorized by the CAA. The implication of the contrary position should be considered more closely given the huge potential impact on American businesses across the economy. We appreciate the opportunity to submit this testimony.

Chairman WAXMAN. Thank you very much, Mr. Cline. I am going to start off the questions.

Secretary Curry, I want to thank you and the State of New Mexico for making it a priority to address climate change and to reduce greenhouse gas emissions in the State. Your State does produce a lot of energy. If New Mexico can do it, then other States in the Nation can do it as well. I understand you wanted to make some comment about a correction on something you said earlier?

Mr. CURRY. Thank you, Mr. Chairman. That is correct. I feel so passionately about what I was saying I left out "dis" as opposed to, I said agreeing instead of disagreeing. So I mis-spoke, and I wanted to make it clear to the committee that New Mexico strongly disagrees with their statement regarding IGCC and BACT. Thank you, Mr. Chairman.

Chairman WAXMAN. I understand from your written testimony your concerns about the impact of the Desert Rock Power Plant, which would have massive uncontrolled emissions of greenhouse gases. Can you explain why just one facility like the proposed Desert Rock Power Plant will greatly hamper your State's ability to meet greenhouse gas emission reduction goals that it has set?

Mr. CURRY. Mr. Chairman, the primary reason is that the proposed Desert Rock facility will emit approximately 12 million metric tons of CO_2. It is directly in the area where we already have existing two other coal-fired power plants. We think the facility has not been properly studied. We think the facility's market has not been properly looked at.

Chairman WAXMAN. So you would not grant a permit to a plant like this without addressing the greenhouse gas emissions?

Mr. CURRY. Mr. Chairman, if it was located anywhere other than where it is being located, being proposed to be located in the State of New Mexico, no, we would not.

Chairman WAXMAN. I would hope that as New Mexico's environmental secretary that you would be hearing from EPA and they would be reaching out to your State about this Desert Rock Power Plant. Has Administrator Johnson contacted you or the Governor to discuss this power plant?

Mr. CURRY. Mr. Chairman, he has not. We are frustrated even more so by the fact that the administration of this power plant permitting process would come out of EPA Region 9, out of San Francisco. We operate in Region 6. The frustration that exists not only is from the State to EPA but also, I feel that there is some frustration between EPA regions because of the lack of communication on the particulars of this plant.

Chairman WAXMAN. OK, thank you.

Dr. Kammen, I want to talk to you about the jobs issue. Because advocates for the White Pine Energy Station in Nevada and the Desert Rock coal-fired power plant in New Mexico have argued that what is important here are all the jobs that are going to be provided. They are talking about 100 full-time jobs for the life of the plant.

Can we provide jobs to people without polluting the environment through uncontrolled coal-fired power plants?

Mr. KAMMEN. We can. In fact, most of the job benefit that has been cited in these pro-coal plants are in the construction phase,

which lasts a few years. The operations phase jobs are much lower, and in fact, if you look at the jobs over the life of solar facilities, wind facilities and the expansion of the energy efficiency industry, all of which I demonstrate in my testimony were significant players, the job numbers are significantly higher for those low-carbon technologies.

In fact, the average is three to five times more jobs per dollar invested or for megawatt provided by investments in the renewable and efficiency side than in the fossil fuel side of the equation. So it is good for local economies, in fact, too, to build their clean industries up at this time.

Chairman WAXMAN. A lot of people say these power plants are going to be in areas without much population near them, and that this job creation is a selling point to the local communities. What would you say to the local communities if they were considering these coal-fired power plants?

Mr. KAMMEN. In fact, the irony is that large coal-fired power plants do not preferentially send their power locally. It gets put on the grid overall. And we know how to transmit power long distances. So except for the very short construction phase of these facilities, the job benefits to communities will be much higher for ongoing local power provisions. So if you really want to help local communities, you will not only build the jobs there, but you will also reduce the pollution loads. Idaho, for example, has already ruled against building new coal-fired power plants, not even because of the global warming issue, but because of the mercury poisoning. So there are multiple local benefits, in fact, in going toward a lower carbon economy. The analysis in the States like Rhode Island, New York, California that have invested heavily in energy efficiency and renewables have found that those can be brought in exceedingly cheaply, often at a net savings, meaning investing in efficiency in particular has paid back with not only lower cost power, but a whole range of other benefits that accrue to the local community as well.

Chairman WAXMAN. Thank you. There is one last question I have of Mr. Doniger. Mr. Cline suggested in his written testimony that it would be catastrophic if CO_2 is determined to be subject to regulation under the Clean Air Act. He said it would have an enormous impact on the economy and it would not be favorable. How do you respond to that, assuming you disagree with it?

Mr. DONIGER. Two points, Mr. Chairman. First, the Supreme Court heard the same argument from the Government and from the industries and decided, look, the law is the law, let's follow it. Those are make-weight arguments.

The second point I make is, we are talking about elephants here and he is talking about mice. We are talking about the big power plants, no party comment intended, large animals versus mice. We are talking about very, very large power plants, and he is talking about malls and small operations. Now, Mr. Cline indicated that EPA is going to try to work out a solution in their rules to take care of the mice. I am quite interested to see what that might be, something we might be able to cooperate on. But it is not an excuse for ignoring the elephants as we move forward now. The power

plants that are being built now should be regulated for their CO_2 emissions now.

Chairman WAXMAN. Thank you.

Mr. Issa.

Mr. ISSA. Thank you, Mr. Chairman.

Mr. Doniger, I am a little confused. I am going to try and get the record straight. If EPA acts capriciously, in your opinion, you sue them, right? You have a record, your organization has a record——

Mr. DONIGER. When they break the law and when they act arbitrarily, yes, we would.

Mr. ISSA. OK. Mr. Cline, Mr. Doniger has ben saying here, and I just want to make sure we get it from a legal standpoint, saying that in light of a Supreme Court case that says only for mobile, because that is all it said, and it said that it has the power to regulate it, he is saying you should not give permits to power plants that are underway right now, which as I understand, there is a legal mandate passed by this Congress, signed by a previous President, that said you have 1 year in which to allow or deny based on current law.

Mr. Tierney earlier had the same sort of a thing for the EPA Administrator, in which he said they should postpone permits. Can you set the record straight from a legal standpoint? Wouldn't somebody, and let's assume for a moment the people who have hundreds of millions of dollars online and have bought the land and are in the process, wouldn't they have every right to sue if arbitrarily the Administrator or anybody else decided just to not grant permits?

Mr. CLINE. Congressman, I certainly believe they would. I think it is within Section 165 of the Clean Air Act, which addresses the PSD permit requirements, and buried within there is a requirement that once a permit application is complete, the permitting authority has 12 months to either issue the permit or deny it. It cannot just sit on it and let it wait and wait and wait.

Mr. ISSA. So if we wanted to do it immediately, as Mr. Doniger says, Congress offers a bill, the chairman probably has one ready already, get it to the Senate to ratify, get the President to sign it and you change the law, you can do it immediately. That would be the legal way to do it without interfering with existing law, signed, and existing rules that went through a whole process of scientific review and then public hearing, isn't that right?

Mr. CLINE. That is correct. The PSD regulations have been in effect for almost 30 years. I think all these power plants want to do is play by the rules like everyone else and not have them changed in midstream.

Mr. ISSA. Isn't it your understanding that even if we did this, even if the chairman offered a law, the Senate voted the same law, the President signed it, and we stopped all new construction of all new CO_2 plants, wouldn't we in fact simply be watching China with its several new power plants, half a dozen plus a month and growing, producing these unregulated plants regardless, and by the way, producing them to take the jobs that we are not able to do without energy? Isn't that true?

Mr. CLINE. Yes, sir, that is my understanding, although I must admit, I am a lawyer, I don't know necessarily about the economics.

Mr. ISSA. Dr. Kammen, you said a couple of things and I am going to take issue with them. One of them is the 100 jobs. The 100 jobs created by the power plants, isn't it true that in fact 700 or 1,200 megawatts produces jobs? In other words, electricity produces jobs. If you are going to look at the value of jobs, you have to include the electricity. And if you don't produce the electricity, I understand you might choose to produce it through other means. But if you don't produce the electricity, you in fact don't produce the jobs, for all practical purposes, that are produced by the electricity, not the ones produced by producing electricity. Fair enough?

Mr. KAMMEN. It is true that if your industrial activity requires power, then you need a source for it.

Mr. ISSA. OK.

Mr. KAMMEN. Let me just finish——

Mr. ISSA. No, I got the answer to your question——

Mr. KAMMEN [continuing]. We have more jobs for the clean energy generation side, not just the efficiency, but by generating with biofuels, solar or wind.

Mr. ISSA. I understand that there are a lot of ways to produce electricity. I just want to make sure that we all understand we don't produce the electricity, you can't save yourself completely into wealth.

Mr. KAMMEN. Absolutely.

Mr. ISSA. There is no net paycheck if there is no paycheck.

Mr. KAMMEN. That is right. In fact, our report highlights that the jobs come from all these areas.

Mr. ISSA. As my time expires, I have a bone to pick. I would like you to prove for this committee or deliver how you came up with 3 cents a kilowatt hours. I was the chairman of the subcommittee that went through this process. We were working on what it would take to get to zero net carbon in the last Congress. We had testimony after testimony by, to be honest, pro-environment scientists who said, look, here is the scale, it is $350 trillion today, with research and investment, here is how we get it down, here is how we get to that goal as soon as possible at a certain price. Three cents a kilowatt hour is such an absurd term for me to hear as a Californian, a major producer, that if you take away subsidy and you talk about the actual cost of producing, my bill in California, the chairman's bill in Los Angeles——

Mr. KAMMEN. Mine as well.

Mr. ISSA [continuing]. We all pay more than 3 cents a kilowatt hour. So if 3 cents were an unsubsidized capability, wouldn't we all be buying that? And if not, tell me why we would be paying so much more for others. Because to be honest, you just said to me that it beats the price of coal——

Mr. KAMMEN. That is correct.

Mr. ISSA [continuing]. Which it doesn't.

Mr. KAMMEN. I beg to differ.

Mr. ISSA. So would you please, what I am going to ask is, for the record, so we can all look at the same handwriting, you show me where it is 3 cents a kilowatt hour. Because I am going to go to PG&E and SDG&E and all the other utilities. If your facts hold up, you better believe I am going to be doing everything I can to stop the NIMBYs from stopping the windmills from being put up. I real-

ly would appreciate that for the record, because that is too good a figure for me to ever have seen, even though I am a strong supporter of wind energy.

Thank you. I yield back.

Mr. KAMMEN. Mr. Issa, I would be delighted. In fact, both in my testimony I highlight the cost for wind power for some of the best plants. The New Mexico Governor's office has highlighted the cost for that particular plant in the southwest part of the State. I will submit additional data on some of the costs for the best wind farms.

But you are right, the one aspect of the story, in that there is a range of costs. We have wind farms that are performing at that level and significantly higher. But the fact is that we have a number of wind farms designed in the last few years and operating today which do provide power at that exceedingly low cost.

Mr. ISSA. I appreciate that.

[The information referred to follows:]

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To: Congressman Darrell Issa, House Oversight and Government Reform Committee
From: Daniel Kammen & Carla Peterman
Re: Documented Costs of Wind Energy
Date: November 27, 2007

This memo is a requested addendum to the testimony Daniel Kammen delivered to the House Oversight and Government Reform Committee at a Hearing on Carbon Emissions and the EPA. The full hearing testimony of Professor Kammen and that of other witnesses including EPA Administrator Stephen Johnson is available online at:

http://oversight.house.gov/story.asp?ID=1599

Wind Energy Installation and Generation Costs

Wind energy in the United States has continued to grow, and represented 19% of the new nameplate capacity added to the electrical grid in 2006 (Wiser and Bollinger, 2006). With a total cumulative U.S. capacity of 11,575 MW (1% of total U.S. nameplate capacity) at the end of 2006, wind energy is now often directly cost competitive with fossil-fuel generation, and at times is a least-cost supply option.

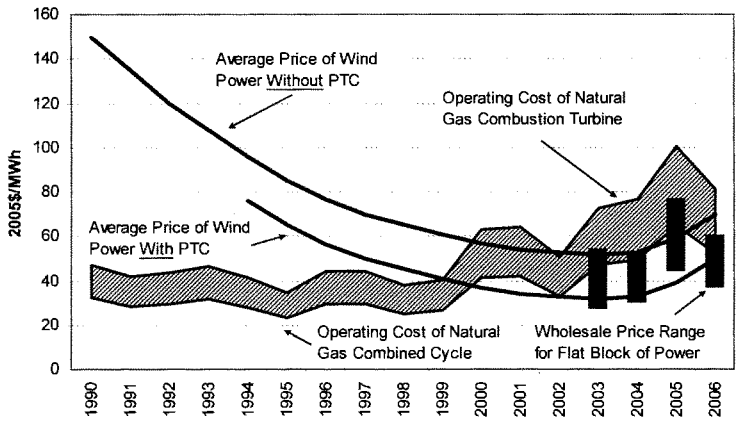
Representative wind project and wind power costs

The attached table (Table 1) details the estimated installation and power costs for twelve recent wind projects, as reported by Lawrence Berkeley National Laboratory. 2007 wholesale power prices for these projects range from 2.5 cents/kWh to 6.4 cents/kWh. Six of the projects provide wholesale power at less than 3 cents/kWh. These prices reflect available state and federal incentives, such as the Production Tax Credit, and any value from Renewable Energy Credits.

As shown in Figure 1, also developed by Lawrence Berkeley National Laboratory, average wind power prices have trended downward over time, notwithstanding a more recent increase in those prices. Even with the increase, however, wind power is found to be competitive with wholesale

power prices and with the cost of operating new natural-gas power plants. This is especially true if the production tax credit is maintained.

Figure 1: Comparison of Wind Power Prices with the Cost of Conventional Generation



Source: Lawrence Berkeley National Laboratory

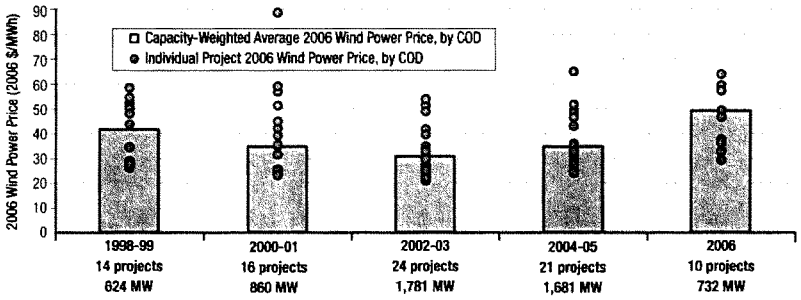
Factors affecting costs and future cost trends

As evidenced in Table 1, the cost of wind projects can vary by a factor of three or more. The reasons for these are varied but include: installation and material costs (turbines purchased in 2004 and 2005 are less expensive than those purchased in 2006 and 2007), relative wind resources (Class 5 wind sites result in higher capacity factors than Class 4 or 3 wind sites), and developer/owner (i.e. experienced developers such as FPL Energy may be able to develop and construct projects at lower cost).

Wind power prices have trended up over the last couple years as shown in Figure 1, and as confirmed by Figure 2, a reflection of increasing installed project costs. This trend is now seen across all capital-intensive energy technologies. Reasons for these increasing costs include: weakness in the dollar; rising materials costs; the move towards increased manufacturing profitability; and a shortage of manufacturing components. Although many of these cost drivers are global, higher costs for wind in the U.S. are also attributable to limited U.S.-based manufacturing of wind-turbines. U.S. turbine manufacturing remains somewhat limited due to uncertainty about demand and the continuation of the Production Tax Credit (Wiser, Bolinger, Barbose, 2007). New manufacturing plants are being built in the U.S. (e.g., Clipper Windpower

plant in Iowa and the Suzlon plant in Minnesota), albeit not at the same pace as in other parts of the world. Some of the 2006 wind power prices reflect lower turbine costs locked in 18-24 months earlier. In 2007, wind project and power costs are likely to trend higher as they will reflect increasing turbine costs. The increasing cost of wind turbines is partially mitigated by improvements in wind project performance. Increases in project capacity factors have been primarily driven by higher turbine heights, improved siting, and technological advancements.[1] As noted earlier, however, these cost trends are affecting other forms of electricity generation as well and, as Figure 1 shows, wind power remains competitive with wholesale power prices and with the cost of operating new natural-gas power plants.

Figure 2: 2006 Wind Power Price by Commercial Operation Date (COD)



Source: Berkeley Lab database.

Global wind energy costs

The U.S. has the third-largest cumulative wind capacity globally, lagging only behind Germany and Spain. Both Germany and Spain have more sizeable national support programs for wind energy (such as guaranteed feed-in tariffs) as compared to the U.S. In Germany, grid operators must pay wind energy providers .0836 €/kWh (.12 US$/kWh[2]) for turbines installed in 2006 for at least the first five years of operation. This starting tariff decreases by 2% annually. In recognition of increasing turbine costs, Germany recently reduced the annual tariff degression from 2% to 1% per year. Germany will also pay a bonus of € 0.007/kWh (.01 US$/kWh) for wind turbines that are more compatible with the needs of the grid. Germany manufacturers report explosive job growth for the wind energy sector and the creation and influx of technology firms to support the wind energy industry. All told, job growth in the ~ 25% of the German energy

[1] For further discussion of these issues please see Wiser, R., Bolinger, M. et al. (2007), *Annual Report on U. S. Windpower Installation, Cost, and Performance Trends 2006*, (United States Department of Energy, Office of Energy Efficiency and Renewable Energy. http://eetd.lbl.gov/ea/ems/reports/ann-rpt-wind-06.pdf

[2] All Euro to U.S. dollar conversions based on an exchange rate of 1 Euro / 1.46 $USD as of November 13, 2007.

sector devoted to renewable energy was in 2006 *equal* to job growth in the entire rest of the energy generation sector.

As cumulative wind capacity increases in Germany and Spain, both countries are revising their rules regarding price support for wind energy. Spain has draft rules to establish maximum, as well as minimum, prices to be paid to wind farm operators. Under Spain's draft rules, for the first five years of operation, a wind farm operator will receive a maximum of .084 €/kWh (.12 US$/kWh) and minimum of .068 €/kWh (.099 US$/kWh). The tariff levels decline over the duration of the plant's operation.[3] Both Germany and Spain, as well as Denmark and other nations that have supported the development of significant wind energy industries, have documented significant job growth in the clean energy sector (Kammen 2007a, b). Export orders for wind turbines in Germany, Spain, and Denmark have now resulted in significant new job creation.

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[3] International Energy Agency. (2006). IEA Wind Energy Annual Report 2006. ISBN 0-9786383-1-x.

Table 1: Wind Generation and Installation Costs

Project Name:	Caprock	Trimont	Burleigh County	San Juan Mesa
State:	New Mexico	Minnesota	North Dakota	New Mexico
Capacity (MW):	80	100.5	49.5	120
2006 Net Capacity Factor:	45.5%	37.0%	37.9%	38.9%
Owner:	Babcock & Brown	PPM Energy	FPL Energy	75% Edison Mission Energy / 25% Citicorp
Power Purchaser:	Southwestern Public Service Company	Great River Energy	Basin Electric	Southwestern Public Service Company
Contract Term (years):	20	15	25	20
COD:	Dec-04	Nov-05	Dec-05	Dec-05
Estimated Installed Cost (nominal $):	#N/A	$120,000,000	$60,000,000	$156,500,000
Estimated Installed Cost (nominal $/kW):	#N/A	$1,194	$1,212	$1,304
2007 Nominal Power Sales Price ($/MWh)	**24.79**	**24.84**	**24.97**	**25.22**

Source: Lawrence Berkeley National Laboratory

Project Name:	Elk River	Oliver	Judith Gap	Klondike II
State:	Kansas	North Dakota	Montana	Oregon
Capacity (MW):	150	50.6	135	75
2006 Net Capacity Factor:	39.9%	#N/A	37.2%	34.5%
Owner:	PPM Energy	FPL Energy	Invenergy	PPM Energy
Power Purchaser:	Empire District Electric Company	Minnesota Power	Northwestern Energy	Portland General Electric
Contract Term (years):	20	25	21	17
COD:	Nov-05	Dec-06	Nov-05	Aug-05
Estimated Installed Cost (nominal $):	$190,000,000	#N/A	$180,000,000	$80,000,000
Estimated Installed Cost (nominal $/kW):	$1,267	#N/A	$1,333	$1,067
2007 Nominal Power Sales Price ($/MWh)	**25.25**	**29.50**	**31.71**	**36.40**

Source: Lawrence Berkeley National Laboratory

Kammen & Peterman – Cost s of Wind power – Page 6

Project Name:	Mower County	Spring Canyon	Aragonne Mesa	Locust Ridge
State:	Minnesota	Colorado	New Mexico	Pennsylvania
Capacity (MW):	98.9	60	90	26
2006 Net Capacity Factor:	#N/A	38.8%	#N/A	#N/A
Owner:	FPL Energy	Invenergy	Babcock & Brown, GE, Wachovia	Iberdrola
Power Purchaser:	Northern States Power	Public Service Company of Colorado	Arizona Public Service	PPL Energy Plus
Contract Term (years):	20	20	20	20
COD:	Oct-06	Jan-06	Dec-06	Dec-06
Estimated Installed Cost (nominal $):	#N/A	#N/A	#N/A	$38,550,000
Estimated Installed Cost (nominal $/kW):	#N/A	#N/A	#N/A	$1,483
2007 Nominal Power Sales Price ($/MWh)	**36.45**	**37.79**	**~60**	**64.00**

Source: Lawrence Berkeley National Laboratory

Chairman WAXMAN. Mr. Doniger, do you want to respond?

Mr. DONIGER. Mr. Issa, I just wanted to clarify that the 1-year deadline that you referred to applies to a permit application that is complete. EPA would have the authority, and we think they have the responsibility to say it is not complete, and the clock doesn't start to run until you have analyzed BACT for CO_2, until you have analyzed the alternative technologies for CO_2. So there is not a strict deadline.

Mr. ISSA. I appreciate that, but there is no regulation at this time that has been produced for that. So if the shoe was on the other foot and there was a regulation and they decided to shortcut it because they considered it already in, you would sue. I don't think there is any question, the testimony is pretty clear, that if the EPA acted in this manner, they would be acting capriciously, they would be sued, and they would lose. We would end up paying for the permit, for the building that wasn't built.

Mr. DONIGER. I disagree with you, sir.

Chairman WAXMAN. All right, the gentleman's time has expired. Ms. Watson.

Ms. WATSON. Thank you so much, Mr. Chairman.

Let me address this to Secretary Curry. I want to commend New Mexico and the other States that have taken the lead on addressing greenhouse gas emissions. You and others are taking steps that benefit the country and the world. I was not here earlier to hear your testimony, but in your written testimony you stated that the Governor has established some of the toughest State greenhouse gas emission reduction targets in the Nation. At the same time, I know that New Mexico has historically been a fossil energy State.

So have the people of New Mexico supported the climate change policies that you and the Governor have introduced?

Mr. CURRY. Mr. Chairman, Member Watson, I would say that they have. We are moving forward on it. One of the things that Governor Richardson did that I think is very important to the process in New Mexico was establishing a very broad stakeholder group of people, the Climate Change Advisory Council, that came up with 69 recommendations for the Governor to implement reduction of greenhouse gases within the State of New Mexico. It is significant because this group worked very hard, it wasn't a situation where they sat around and held hands and sang Kumbayah, by any means. It was hard fought discussions over a period of almost a year.

Ms. WATSON. And who was in the group? What types?

Mr. CURRY. We had members from the dairy industry, we had members from the oil and gas industry, we had members from the car dealers association in New Mexico, we had members from the environmental advocate groups in New Mexico, we had members from State government, we had members from municipalities and counties. So I think the group was as broad as you can possibly imagine in New Mexico.

Sixty-seven of the 69 were passed unanimously. Since that time, we have moved forward with assigning a cost to most of these items and we have started to implement them, such as the Clean Car Initiative that we will be moving forward on in a few weeks to join California. Also, we have just recently established one of the

first in the country as far as a CO_2 registry for the industries in New Mexico like oil and gas. So it is very important in New Mexico that we make things happen. Governor Richardson, aside from everything else that we can talk about things here today is a gentleman who likes to make things happen and insists upon making things happen. In the process, we have a good buy-in and a good consensus to make this happen.

Are there people who disagree? Absolutely. But the benefit that we are able to show through these stakeholder discussions and stuff is going to lead the way.

Ms. WATSON. It speaks well for the people of New Mexico and it seems like they understand that they can fight global warming while growing their State's economy. It seems to me also, being from California, that the people are getting it, you are getting it, but this administration is not. I don't know if you were here for the first panel, but I couldn't believe what I was hearing from the Administrator of the EPA. In California, the largest State in the Union, with the largest number of cars, we are trying to address the environment in which we all live and breathe. And we get stymied here. They are studying whether or not emissions into the air affect the plants on the ground and our personal health.

So I just want to commend you, I appreciate your statement. It seems like you had a very broad base of people coming up with the recommendations that you put in law. I hope that we are successful, because our bill is a product of the people of California.

Thank you so very much. Good luck.

Mr. CURRY. Thank you.

Chairman WAXMAN. Thank you, Ms. Watson.

Mr. Shays.

Mr. SHAYS. Thank you, Mr. Chairman.

I find myself in this wonderful position of wanting us to deal big time with global warming, wanting India and China to be in that mix, questioning the implications of the environmental movement, because it says to me we are going to have to see nuclear power, we are going to have to see greater use of gas. So liquified natural gas sites on the coast. And also caring deeply about energy security, believing obviously that conservation is an absolute first, key, easiest way, and alternative, renewable energy in the mix, but long-term payoff, not real short-term payoff. That is kind of where I come from.

But I am struck by the fact that the ends don't justify the means. And I am feeling like the environmental movement to which I like to think I am a part is not able to get Congress to act, a very difficult Senate and a House that still hasn't come to grips with this, even within the Democratic party. So we are saying, OK, now we have this hook with EPA and let's use the Clean Air Act to deal with global warming.

I am struck by the fact that my colleagues on the other side of the aisle are really railing on the Administrator to express an opinion before he has gone through the process. I want to know if any of you have a feeling, a similar feeling that we are kind of pushing the envelope a bit and kind of potentially mis-using the intent of the law, the Clean Air Act. I will start with you, Mr. Curry.

Mr. CURRY. Mr. Chairman, Member Shays, my concern is that listening to the Administrator this morning and working and seeing how EPA affects the State of New Mexico is that we feel, we believe that the science has been proven.

Mr. SHAYS. I am not talking science, I am talking about law. It seems to me that CO_2 is a different kind of pollutant than any other, that Congress should be directing the administration to deal with it. That is what I am wrestling with. The fact that, I look at the Massachusetts law, and admittedly, I have not read the whole thing, but the excerpts I have, they are looking at mobile sources. The implications of this are mind-boggling to me, what potentially we could be demanding EPA to do. For instance, the Capitol, it emits a tremendous amount of CO_2. Would it be considered a major polluter? And what are the implications of that?

Let me go to Mr. Doniger.

Mr. DONIGER. Mr. Shays, we too advocate and urge that Congress enact new legislation to deal with global warming. The Senate is making tangible progress now, and——

Mr. SHAYS. Who is? The Senate, you said?

Mr. DONIGER. The Senate. And there is tangible movement in the House. We would love to see more and we would love to see it faster.

Mr. SHAYS. So do you think we are going to make better progress through the Senate than the House?

Mr. DONIGER. I would encourage you to keep up with them.

Mr. SHAYS. That wasn't a funny question, honest. Are we having an easier time in the Senate than the House?

Mr. DONIGER. The Lieberman-Warner bill is moving through committee, and that is what I am referring to.

Mr. SHAYS. OK, fair enough.

Mr. DONIGER. The point that I was going to make is that the Clean Air Act, which was enacted in 1970, already gave the administration the power to respond to new pollution problems as they are recognized. Now, for 5 years, the Bush administration took the position that it had no powers in this matter, that the Clean Air Act did not apply. That is what the *Massachusetts* case was about. And the Supreme Court said, you are wrong, despite all the deference that the Government gets, you are just flat wrong, and it is time to start implementing the law.

As I mentioned in my opening statement, there is another case about power plants which was sent back at the same time. So the power plant issue and the car issue are on the table at EPA.

Mr. SHAYS. Is there a difference between monitoring and regulating?

Mr. DONIGER. Not for the purposes of the Clean Air Act, no, not for these purposes. The Clean Air Act did not say, subject to emission limitations. It said subject to regulation. And regulations include the monitoring regulations.

Mr. SHAYS. Let me ask Mr. Cline that same question.

Mr. CLINE. Well, sir, there are several definitions of regulation. I know Black's Law——

Mr. SHAYS. I want you to talk a little louder.

Mr. CLINE. The Black's Law Dictionary defines regulation as the process of controlling by rule or restriction. And it is in that vein

which EPA has interpreted the meaning of subject to regulation for the last 20 some years. Furthermore, if I may, I would question whether or not Section 821 of the statute is really in the Clean Air Act. If you look at the statute, it talks about specific provisions which amend the Clean Air Act. There are other provisions with Statute 101549 where there is no indication that is an amendment.

So it may be stretching the issue to say that this is subject to regulation under the act, when this particular provision that Mr. Doniger refers to is not under the act.

Mr. SHAYS. Do you mind if I ask another question?

Chairman WAXMAN. No, but let me just announce that we have a vote, and we are going to come back, I want to thank all the witnesses. Then we have a markup in committee. So for those who are looking for markup, that will follow the vote.

Mr. SHAYS. But we are not asking the witnesses to come back.

Chairman WAXMAN. After Mr. Shays has completed his questioning, you are free to go, and that will end the hearing.

Mr. SHAYS. Mr. Doniger, I felt like there was a tremendous amount of effort to get the Administrator to say something that he argues should be said when he makes the decision going through a process. How did you view that again?

Mr. DONIGER. Well, look, it is an open secret that the Administrator will make an endangerment determination. The President has said, go ahead and issue motor vehicle rules. And in order to do that, you have to make an endangerment determination.

The President himself embraced the science, the IPCC, and he is, although quibbled about this at great length in the past, finally this September has sort of stopped quibbling about that and said, we accept and we embrace the IPCC science. So I don't think the issue is going to be whether Mr. Johnson equivocates about endangerment. I would be appalled if he did that.

The question is, what does he need to do about the big power plants now. And the big power plant permit decisions don't turn on an endangerment determination. He can make the determination now that they need to go through the ATC and that they need to have their alternatives analyzed.

Mr. SHAYS. Doesn't he have to make the endangerment finding before?

Mr. DONIGER. No. Two answers.

Mr. SHAYS. OK, you say no.

Mr. DONIGER. Two points. As I said in my testimony, subject to regulation, we believe that CO_2 already is. But the alternatives, the requirement to analyze alternatives and consider collateral environmental damages does not turn on subject to regulation. So there is authority to do this now. A responsible administrator would do this now.

Mr. SHAYS. But it can be disagreed. Mr. Cline, is it clear-cut, Mr. Cline?

Mr. CLINE. I would respectfully submit that the collateral impacts analysis is not a vehicle to determine BACT for an un-regulated pollutant. It just simply does not work that way.

Mr. SHAYS. OK. All right. I guess I have passed the time, I have a minute left to get to vote. This has been an interesting session

and I know the chairman would thank you for being here. I guess I call it closed. Thank you very much.

[Whereupon, at 2:38 p.m., the committee was adjourned.]

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