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THE NEED FOR MULTI–EMISSIONS LEGISLATION

HEARING

BEFORE THE

SUBCOMMITTEE ON CLEAN AIR, CLIMATE CHANGE, AND NUCLEAR SAFETY

OF THE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
UNITED STATES SENATE

ONE HUNDRED NINTH CONGRESS

FIRST SESSION

JANUARY 26, 2005

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THE NEED FOR MULTI–EMISSIONS LEGISLATION

WEDNESDAY, JANUARY 26, 2005

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
SUBCOMMITTEE ON CLEAN AIR, CLIMATE CHANGE,
AND NUCLEAR SAFETY,
Washington, DC.

The subcommittee met pursuant to notice, at 10 o'clock a.m. in room 406, Senate Dirksen Building, Hon. George Voinovich (chairman of the subcommittee) presiding.

Present: Senators Inhofe, Voinovich, Bond, DeMint, Isakson, Jeffords, Carper, Lautenberg, and Obama.

OPENING STATEMENT OF HON. GEORGE V. VOINOVICH, U.S. SENATOR FROM THE STATE OF OHIO

Senator VOINOVICH. The committee will come to order.

Good morning and thank all of you for coming. We are here today to discuss an issue on which I think there is broad consensus. Our Nation needs multi-emission legislation.

This is not a new topic for this committee. It is our 23rd hearing on multi-emission issues since 1998. Our consideration of this important matter has spanned four different chairmen and covered many issues ranging from mercury and greenhouse gases to new source review to the National Ambient Air Quality Standards referred to as NAAQS. I believe we have spent enough time talking about this issue and that we must act now to improve the environment and protect public health.

I hope we can renew the bipartisan spirit of this committee which has come together to enact major environmental laws on brownfields and safe drinking water, and that we can now pass a multi-emissions piece of legislation specifically the Clear Skies Act. First and foremost, legislation is needed for our environment. The Clear Skies Act would be the most aggressive clean air proposal ever enacted. On April 1, 2004, Administrator Leavitt testified before the subcommittee that sulfur dioxide and nitrogen oxide reductions "will result in some $50 billion being spent putting new equipment on old plants that will provide for the highest amount of pollution being reduced in the least amount of time in our Nation's history." Although Clear Skies is costly and ambitious, I want to make it clear that it is going to be expensive to implement Clear Skies.

We should pass it because of the certainty it provides. It gives our Nation environmental certainty that sulfur dioxide, nitrogen

oxide and mercury will be reduced by 70 percent by 2018. It ends the cycle of litigation and confrontation obstructing further progress in reducing pollution. It also provides regulatory certainty so that companies can invest in needed pollution control.

Second, legislation is needed to help State and local governments attain the new NAAQS standards. EPA recently designated 474 counties as being in nonattainment for the new NAAQS for ozone and 225 counties for particulate matter. The designations are based on stricter standards. I want to make that clear, not dirtier air. Chart 1 shows that in fact since 1970, while there have been increases of gross domestic product by 176 percent, vehicle miles traveled by 155 percent, energy consumption by 45 percent, and population by 39 percent, emissions of the six main pollutants have decreased by 51 percent, a fact I shared with Tony Blair back in November. We met with him when I was in London and he wasn't aware of what we had done here in this country in terms of reducing pollution. [The referenced chart follows on page 6.]

The nonattainment designations are a threat to many State and local government economies. This point can be best summarized by Cincinnati Chamber of Commerce President Michael Fisher's testimony last year. He said, "Job growth and capital investment for existing operations in our region have been hindered by the nonattainment designation. We have been told by national site location consultants that nonattainment areas are frequently not even included as potential locations for major new manufacturing projects."

The Clear Skies Act would help meet the Nation's new more stringent air quality standards. Although it needs to be updated, Chart 2 still shows that 90 percent of those counties come into attainment under the reductions in Clear Skies and EPA's new fuel and engine regulations to reduce sulfur. The NAAQS are actually an unfunded mandate on our States and localities, something I understand well as a former county commissioner, mayor and Governor who brought almost all of Ohio's counties but one into attainment. That was the first thing that I did when I became Governor of Ohio was work to bring my counties into attainment because I knew that businesses that were there because we weren't in attainment would not expand and I also knew that businesses we were trying to attract to the State would fly over it because they didn't want to get involved in nonattainment areas. [The referenced chart follow on page 7.]

Clear Skies provides that assistance more quickly and cheaply than current law. It expands the Nation's most successful clean air initiative, the Acid Rain Program. Unlike most of our Nation's environmental laws and regulations, this program has had virtually no litigation, 100 percent compliance and has achieved its reductions at less than the projected cost. Clearly, this is what we should strive for in any multi-emissions legislation and Clear Skies does exactly that.

Third, legislation is needed to harmonize our environmental policies with our energy needs. As this chart shows, coal is our most abundant energy source. We have more coal than natural gas or oil reserves. You can see our natural gas reserves and U.S. oil reserves. The fourth chart shows that the more coal you use, the

lower your electricity prices. Businesses and manufacturers in my State and across the country depend on coal and these low prices to stay competitive in the global marketplace. [The referenced charts follow on pages 8 and 9.]

We are just going to keep sending jobs overseas if we don't start addressing some major issues, litigation, health care costs and higher energy and environment costs are a major part of the puzzle if we are going to compete in that global marketplace. Clear Skies will keep our energy prices stable and jobs in America. It allows our Nation to continue to burn coal meaning that we will not continue to rely on natural gas for power generation.

Listen to this. Since 1992 nearly 88 percent of the new power plants built have been for natural gas. The substantial increase in the use of gas is one of the main reasons that we have a natural gas crisis right now. Chart 5 shows natural gas prices have nearly doubled their historic price for industrial users who depend on it for manufacturing. Look at that chart. Look at 1999 and see how natural gas costs have gone up and where we are today. Definitely this country has lost jobs because of high natural gas costs. I would say in my State the recession began when we saw a tremendous spike in natural gas costs. Businesses that had been profitable overnight became unprofitable because they saw their natural gas costs skyrocket. [The referenced chart follows on page 10.]

As Tom Mullen from Cleveland Catholic Charities testified before this committee in 2002, we must also pay attention to the impact on the poor and elderly of multi-emission bills that increase electricity and home heating costs. In fact, higher natural gas prices have forced us to increase funding for a heat program to help low income families with their home heating bills by $800 million since 1999. With this tough winter, we are going to be asked to put more money in that program and basically it is because those energy costs have escalated to the extent that we have to do something to respond to the needs of our older people and to the poor.

We need multi-emissions legislation to continue at a higher rate than this country's commitment to cleaning up the environment and protecting public health. As my first chart showed, we have substantially cleaned up while the Nation has grown. Clear Skies would continue this progress by being the most aggressive clean air proposal ever enacted. Let us not delay any further. We need to come together and in a bipartisan fashion and pass this legislation. A broad coalition supports Clear Skies and is working for its passage which I would like to insert for the record. I am not going into it because I have already exceeded my time by 53 seconds.

I look forward to hearing from our witnesses today on how important it is that this committee and Congress come together and pass this important multi-emissions legislation. I would just show the chart of the various organizations that have publicly endorsed this legislation. Thank you.

I would now like to call on Senator Carper. I am glad to be working with you. Senator Carper and I have worked with each other for a long time. We are both very active in the National Governors Association.

There has been a lot of regionalism in this environmental area. It is the Midwest and the Northeast. I ran into it when I was chair-

man of the National Governors Association. I figure if Carper and Voinovich can't get it together, then this country is in big trouble. I look forward to working with my friend, Tom Carper.

[The prepared statement of Senator Voinovich follows:]

STATEMENT OF HON. GEORGE V. VOINOVICH, U.S. SENATOR FROM THE STATE OF OHIO

The hearing will come to order. Good morning and thank you all for coming. We are here today to discuss an issue on which I think there is broad consensus: our nation needs multi-emissions legislation.

This is not a new topic for this Committee; it is our 23rd hearing on multi-emissions issues since 1998. Our consideration of this important matter has spanned four different chairmen and covered many issues ranging from mercury and greenhouse gases to new source review to the National Ambient Air Quality Standards—referred to as NAAQS.

I believe we have spent enough time talking about this issue and that we must act now to improve the environment and protect public health. I hope we can renew the bipartisan spirit of this Committee—which has come together to enact major environmental laws on brownfields and safe drinking water and that we can now pass multi-emissions legislation, specifically the Clear Skies Act.

First and foremost, legislation is needed for our environment. The Clear Skies Act would be the most aggressive clean air proposal ever enacted. On April 1, 2004, EPA Administrator Leavitt testified before this Subcommittee that sulfur dioxide and nitrogen oxide reductions:

> ". . . will result in some $50 billion being spent putting new equipment on old power plants that will provide for the highest amount of pollution being reduced in the least amount of time in our history."

Although Clear Skies is costly and ambitious, we should pass it because of the certainty it provides. It gives our nation environmental certainty that sulfur dioxide, nitrogen oxide, and mercury will be reduced by 70 percent by 2018—period. It ends the cycle of litigation and confrontation obstructing further progress in reducing pollution. It also provides regulatory certainty so that companies can invest in needed pollution controls.

Second, legislation is needed to help state and local governments attain the new NAAQS. EPA recently designated 474 counties across the country as being in nonattainment for the new NAAQS for ozone and 225 counties for particulate matter.

The designations are based on stricter standards, not dirtier air. [CHART 1] In fact, since 1970, while there have been increases of Gross Domestic Product by 176 percent, vehicle miles traveled by 155 percent, energy consumption by 45 percent, and population by 39 percent—emissions of the six main pollutants have decreased by 51 percent.

The nonattainment designations are a threat to our state and local economies. This point can best be summarized by Cincinnati Chamber of Commerce President Michael Fisher's testimony also on April 1, 2004:

> ". . . job growth and capital investment for existing operations in our region have been hindered by the nonattainment designation. . .(and we have) been told by national site location consultants that nonattainment areas are frequently not even included as potential locations for major new manufacturing projects . . ."

The Clear Skies Act would help meet the nation's new, more stringent air quality standards. [CHART 2] Although it needs to be updated, this chart still shows how 90 percent of these counties come into attainment under the reductions in Clear Skies and EPA's new fuel and engine regulations to reduce sulfur. The NAAQS are actually an unfunded mandate on our states and localities, something I understand well as a former county commissioner and mayor—and as a governor who brought almost all of Ohio's counties into attainment. Our local communities need our help and need it now.

Clear Skies provides that assistance more quickly and cheaply than current law. It expands the nation's most successful clean air initiative—the Acid Rain Program. Unlike most of our nation's environmental laws and regulations, this program has had virtually no litigation, 100 percent compliance, and has achieved its reductions at less than the projected cost. Clearly, this is what we should strive for in any multi-emissions legislation—and Clear Skies does exactly that.

Third, legislation is needed to harmonize our environmental policies with our energy needs. [CHART 3] As this chart shows, coal is our most abundant energy

source—we have more coal than natural gas or oil reserves. It is also our cheapest energy source. [CHART 4] This second chart basically shows that the more coal you use the lower your electricity prices. Businesses and manufacturers in my state and across the country depend on coal and on these low prices to stay competitive in the global marketplace. We are just going to keep sending jobs overseas if we don't start addressing many of these issues—litigation, health care, and higher energy and environment costs are a major piece of the puzzle.

Clear Skies will keep energy prices stable and jobs in America. It allows our nation to continue to burn coal—meaning that we will not rely more on natural gas for power generation. Since 1992, nearly 88 percent of the new power plants built have been natural gas fired. This substantial increase in the use of gas is one of the main reasons that we have a crisis right now. [CHART 5] As this chart shows, natural gas prices have nearly doubled their historical price for industrial users, who depend on it most for manufacturing.

As Tom Mullen from Cleveland Catholic Charities testified before this Committee in 2002, we must pay special attention to the impact on the poor and elderly of multi-emissions bills that increase electricity and home heating costs. In fact, higher natural gas prices have forced us to increase funding for the LIHEAP program to help low income families with their home heating bills by $800 million since 1999.

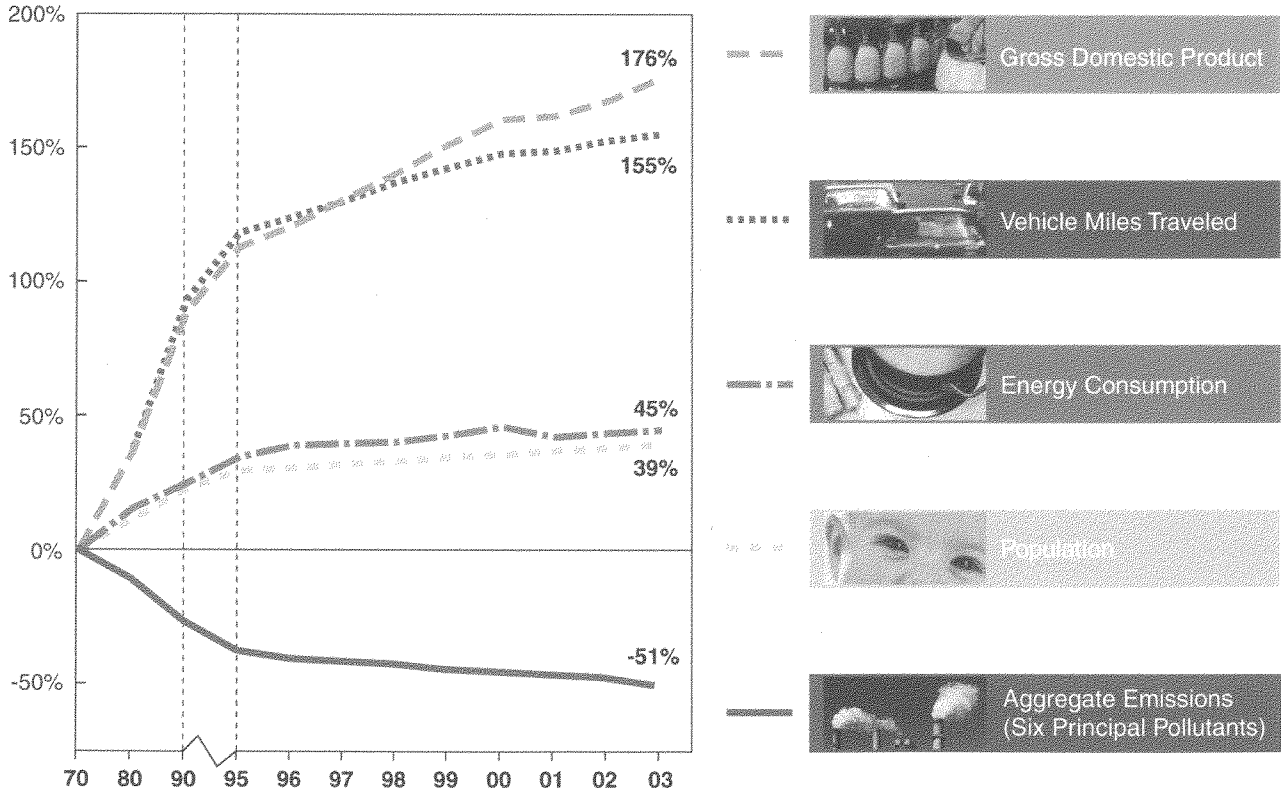
We need multi-emissions legislation to continue at a higher rate this country's commitment to cleaning up the environment and protecting public health. As my first chart showed, we have substantially cleaned up our air while the nation has grown. Clear Skies would continue this progress by being the most aggressive clean air proposal ever enacted.

Let's not delay any further. We need to come together in a bipartisan fashion and pass this legislation. A broad coalition supports Clear Skies and is working for its passage—including (among others) farmers, chemistry, public power, and many legislators.

I look forward to hearing from our witnesses today on how important it is that this Committee and Congress come together and pass this important multi-emissions legislation.

Thank you.

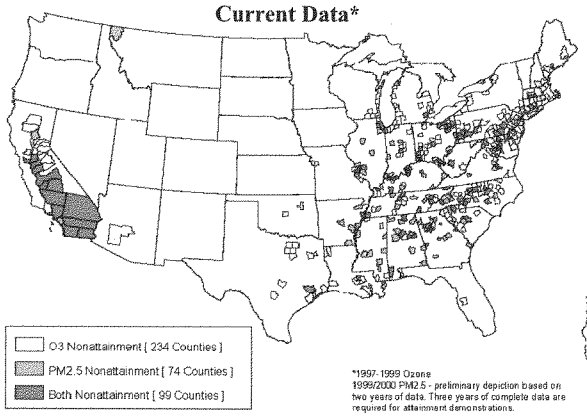
Comparison of Growth Areas and Emissions



THE CLEAR SKIES ACT

Delivering Extensive Health Benefits and Widespread Attainment

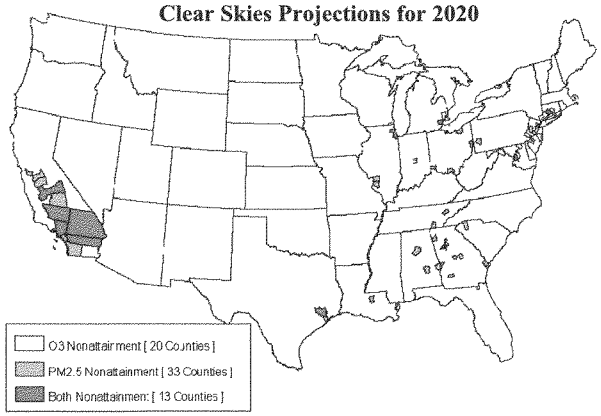
Current Data*



*1997-1999 Ozone
1999/2000 PM2.5 - preliminary depiction based on two years of data. Three years of complete data are required for attainment demonstrations.

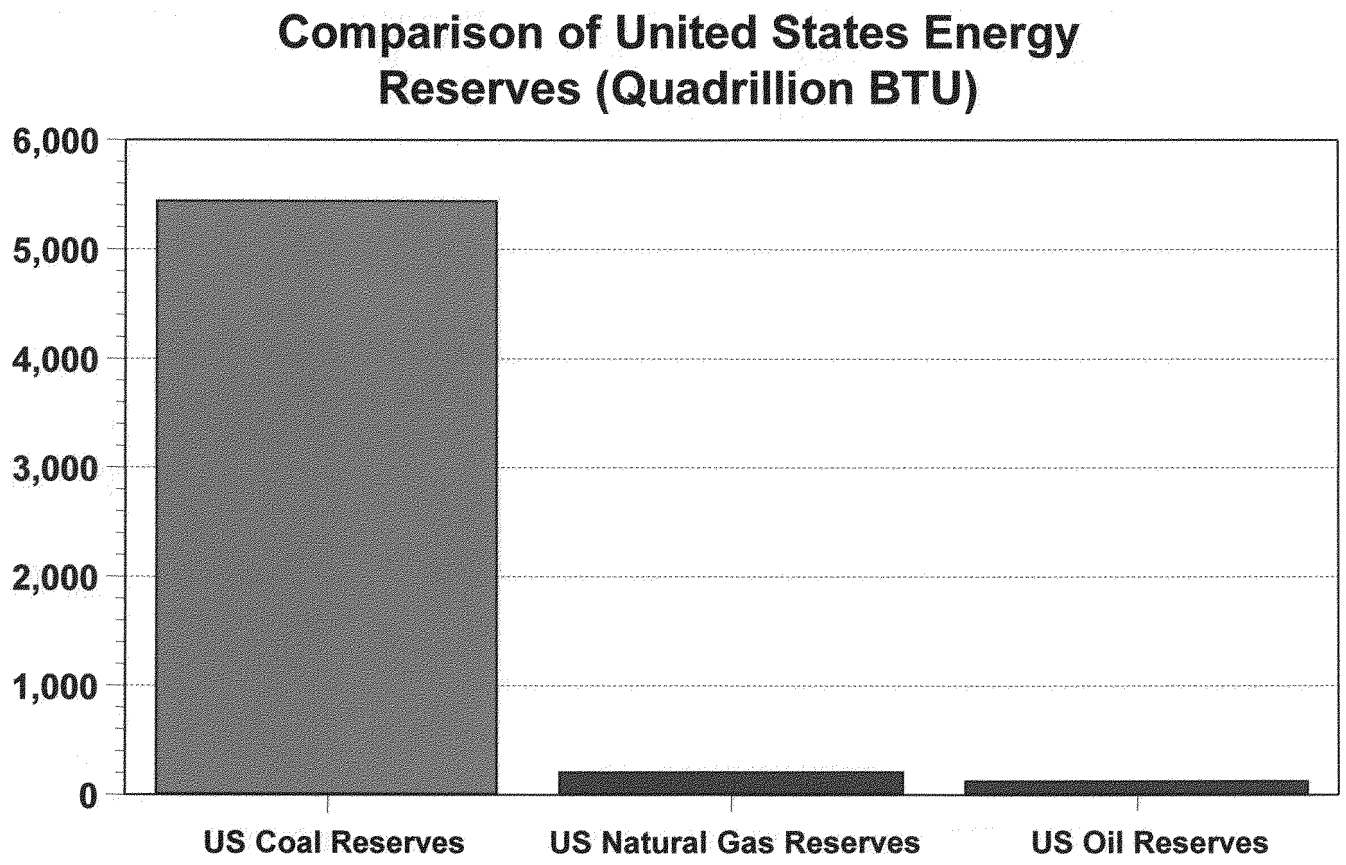
Clear Skies projections for 2020 show dramatic improvement.

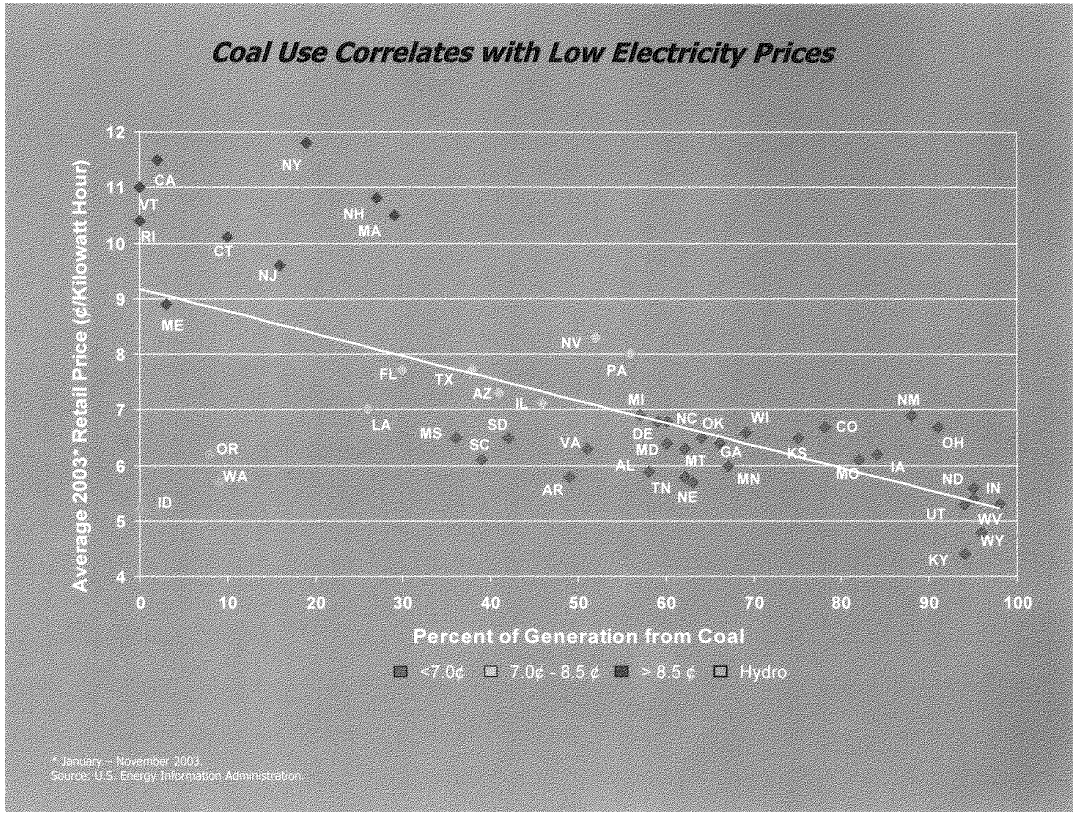
Clear Skies Projections for 2020

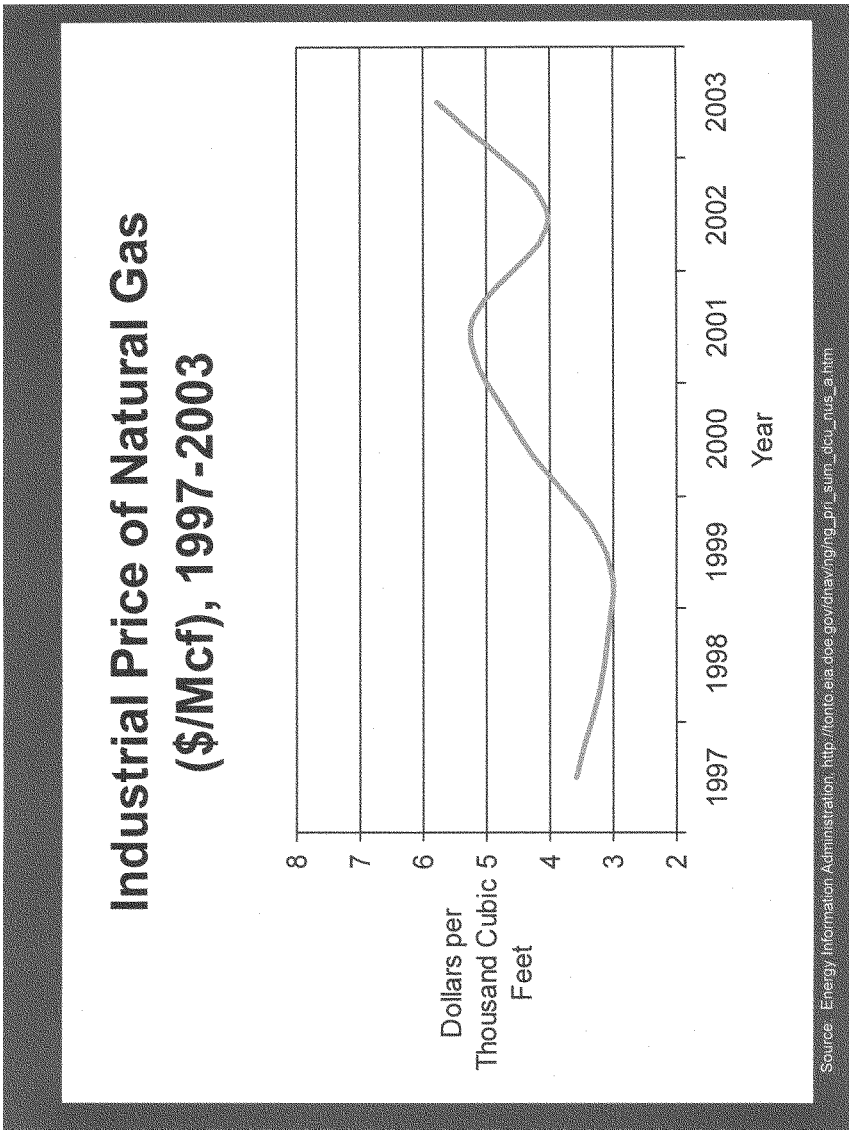


Under Clear Skies, more than 20 million additional people would be breathing air that meets the national standards in 2020.

***Note:** To permit comparisons among various analyses, the air quality data were the most complete and recently available as of mid-2001 (1997-1999 ozone monitoring data and 1999-2000 $PM_{2.5}$ data). More complete and recent air quality data for ozone and fine particles (1999-2001 data) is now available.


Comparison of United States Energy Reserves (Quadrillion BTU)
6,000
5,000
4,000
3,000
2,000
1,000
0
US Coal Reserves
US Natural Gas Reserves
US Oil Reserves


Coal Use Correlates with Low Electricity Prices
Average 2003* Retail Price (¢/Kilowatt Hour)
12
11
10
9
8
7
6
5
4
0
10
20
30
40
50
60
70
80
90
100
Percent of Generation from Coal
CA
VT
RI
ME
NY
NH
MA
CT
NJ
NV
PA
FL
TX
AZ
IL
LA
MS
SD
SC
OR
WA
ID
VA
AR
MI
DE
MD
AL
TN
NC
OK
WI
MT
GA
NE
MN
KS
CO
MO
IA
NM
OH
ND
IN
UT
WV
WY
KY
<7.0¢
7.0¢ - 8.5 ¢
> 8.5 ¢
Hydro
* January – November 2003
Source: U.S. Energy Information Administration



OPENING STATEMENT OF HON. THOMAS R. CARPER, U.S. SENATOR FROM THE STATE OF DELAWARE

Senator CARPER. Thank you. We sat next to each other for a great many years. Senator Voinovich has heard me say as Governor and as a U.S. Senator, I think a major role of government is to provide a nurturing environment for job creation and job preservation. We know from our time as Governors, if you have companies that are profitable, if they are making money, if they are paying taxes, hiring people to work out of colleges, high schools, off

welfare rolls, off unemployment rolls, if you have all that going for you, the rest is pretty easy.

Having said that, I would also add it is important that government not be the lapdog of business or industry. It is important for companies to play by the rules, it is important for them to pay their taxes and be good citizens, good stewards of the environment among those responsibilities.

Recently I spoke at a student assembly back in Delaware. I know we have opportunities to visit schools in our own States but I spoke for a bit and then we opened it to the students for questions. The first question this one student asked was what was the hardest thing about your job? I said, "I think the hardest thing about my job is finding the right sense of balance in my life, what I do here in Washington, my responsibilities here as a legislator, my responsibilities to help build my part of the Democratic Party in the State and in this country and try to find good people to run and support their candidacy, my responsibilities as someone who is trying to be a good husband, a good father, a good son to a mom who has Alzheimer's Disease and to somehow try to balance all those things and get it into a 24-hour day." We all face similar kinds of problems.

I didn't say it at the time but just as difficult a challenge for me with respect to balance is finding the right balance among competing interests that come before us on issues that are important to us as individuals and important to our Nation. We have been able to find that right balance in recent months on a couple difficult issues, trying to take the recommendations of the 9/11 Commission and put them into legislation to restructure our intelligence operations in this country; we are now coming together and I think with a good consensus on significant changes to class action legislation; I think we are close to an issue that Senator Voinovich and I and others care about a lot, finding a good sense of balance on asbestos litigation reform. I think we are coming close to that as well.

Among the reasons why we have made progress on those fronts are strong Presidential leadership and Presidential flexibility and in addition to that, congressional leadership, bipartisan congressional leadership and flexibility. I would add to that unrelenting efforts in many cases of private citizens. The families who were victims of 9/11 certainly come to mind and as we work with asbestos litigation to try to balance the competing interests of victims, labor unions, trial bar, insurers, businesses, those folks have been at the table trying to help us shape our legislation.

Last, I would say among the key reasons we have made progress in those areas is the ability to work across the aisle. I have found the working relationship between Senator Collins and Senator Lieberman as something we should hold out as the gold standard as they work to bring us together on 9/11. Maybe that will be a role model for us as we tackle this issue here this year.

Clean air legislation calls out for the latter. I am encouraged given the long working relationship and frankly the long friendship that Senator Voinovich and I have enjoyed that perhaps this year we can make that progress.

I would say to my colleagues, especially my friends on the Republican side, if we take the approach here that it has to be my way or the highway, we are in for gridlock that is going to make this morning's traffic jams coming into Washington, DC look like a day at the beach. It just can't be my way or the highway. There is room for finding and building consensus and we have to work until we find it.

The stakes are high. There are hundreds of thousands of kids across this country, probably millions of kids who have asthma, who use these inhalers, who have asthma attacks who end up in the hospital and people who die from this stuff because our air is not clean enough. There are millions of women of child bearing age who have higher levels of mercury that are unsafe not just for them but for the children they are going to bring into this world.

I am reminded every time my wife and our boys drive down to North Carolina where my wife is from and we drive through the Blue Ridge Mountains and I think I am in the Smokey Mountains because the haze is so thick you can almost cut through it. I know not everyone is convinced global warming is a problem or an issue. For a number of years, frankly I was not either and I have become convinced and believe it. We need to address that as well.

The last thing I would say in my first race for Governor, a question was asked at a debate with my opponent. The question was this, if you are elected Governor, what will it be? What will be the priority, the economy or the environment? I responded at the time both. I think the right answer today is still both. We can address the economic issues that Senator Voinovich and I share and the environmental issues, the health issues that a lot of us share as well.

I will close with this. Most tough issues around here, and we went through this in orientation with our new members, you need a lot more than 50 votes. On a lot of the tough issues, you need 60. The way to get to those is to work across the aisle. I am willing to do that and I look forward to doing that. It is hard for me to imagine how we get to that number of votes without doing something on global warming, that aspect of clean air.

Senator Jeffords has an admirable proposal and a clear skies proposal from the Administration that has value and the last thing I would say is this, I never liked it when I had just two alternatives, polar alternatives. I always like to be able to vote for something rather than against something. Senators Alexander, Gregg and Senator Chafee and myself have worked to try to find some middle ground. We will be talking about that during the course of this hearing and in the weeks ahead. I don't know that is the middle ground around which we can begin to rally but I hope it might provide some assistance as we move in that direction.

Thank you, Mr. Chairman.

[The prepared statement of Senator Carper follows:]

STATEMENT OF HON. THOMAS R. CARPER, U.S. SENATOR FROM THE STATE OF DELAWARE

I would like to thank Senators Voinovich and Inhofe for scheduling this hearing. The fact that the committee has placed multi-pollutant legislation so high on the agenda for the 109th Congress shows a commitment to the issue that will be necessary to pass a bill. However, to pass multi-pollutant legislation, it will require agreement and cooperation from both sides of the aisle.

Clean air does not have to be a partisan issue. It shouldn't be a partisan issue. This committee has always acted in a bipartisan way, and if you look back in history, the most significant environmental laws all passed with overwhelming support of both Democrats and Republicans. I hope that will be the case on the issue of clean air.

I have concerns about the President's Clear Skies plan because it does not go far enough, fast enough, and it does nothing to address the role electricity generation plays in global warming. The government has a responsibility to provide clean air for people to breathe. If we establish the right targets and timelines, American ingenuity will meet the challenge, clean technologies will come to market and create new jobs, and emissions will be reduced. But if we do nothing or set the wrong targets then we will have failed in one of our basic responsibilities. Clear Skies sets the wrong targets and timetables for the emissions it does address, and it completely misses the mark on CO_2 and global warming. We can do better.

Power plants, particularly those burning coal, are a leading source of air pollution in a state like Delaware and across the nation. Since 1970, the Clean Air Act has helped clean up our nation's air, but we still have work to do. An example of what we need to do comes from the EPA itself, which reported that, in 2000, there were nearly 2 million emergency room visits and nearly half a million hospitalizations due to asthma. Moreover, the rate of asthma among school children has more than doubled in the past 20 years!

From the perspective of industry, businesses do not like unpredictability. Currently, we have several regulations on various pollutants and pollution sources with different implementation schedules and often overlapping goals. New ozone and fine particulate standards are currently being implemented, while new standards for mercury are pending before the EPA right now. Meanwhile, states are considering regulating CO_2. A more-coordinated approach is needed, not just to provide cleaner air but to provide regulatory certainty to utilities.

Last Congress, I introduced a four pollutant bill called the Clean Air Planning Act with Sens. Chafee, Gregg and Alexander. The Clean Air Planning Act takes a market-based approach that, compared to Clear Skies, would achieve the following for only an additional 2 percent in total system costs: an additional 33 million tons of nitrogen oxides reductions; an additional 25 million tons of sulfur dioxide reductions; an additional 150 tons of mercury reductions; and an additional 6 billion tons of CO_2 reductions, plus business and investment certainty.

Dollar for dollar, our 4-pollutant proposal achieves significantly greater benefits than the president's 3-pollutant proposal. Including the cost of regulating CO_2, which is minimal, the total cost difference between Clear Skies and the Clean Air Planning Act over a 20-year period (2005 to 2025) is about 2 percent. The EPA has estimated that retail electricity prices would increase by only $1.20 per month for the average residence under the Clean Air Planning Act versus under Clear Skies.

You can't measure a clean air bill by cost alone, however. You also have to take into consideration public health benefits. When our bill is fully implemented, it will result in $60 billion in public health benefits and prevent 5,900 fewer premature deaths.

The key question is what will happen now. To a large degree, that is up to the President and up to the leadership in the House and Senate. I am concerned about reports saying that the White House and Senate Republicans want to move Clear Skies quickly and without fully engaging Democrats about what is best for the country. If the approach to moving this bill is going to be "my way or the highway" then we're going to end up in a traffic jam. I hope we can work through our differences and produce legislation that will improve our air quality in a cost-effective way.

Senator VOINOVICH. Thank you, Senator Carper.

I will now call on the chairman of our committee, Senator Inhofe.

OPENING STATEMENT OF HON. JAMES M. INHOFE, U.S. SENATOR FROM THE STATE OF OKLAHOMA

Senator INHOFE. Thank you, Mr. Chairman.

I had an opening statement that would have consumed my 5 minutes but as I crossed out things as you said them, I am down to about 30 seconds now.

I think that chart particularly shows the success story that we have in this country in terms of the Clean Air Act and the amendments in the last 30 years.

I am glad we are holding this hearing this early. When I was chairman of this subcommittee we actually had eight hearings on this. We have covered this in every possible way. The debate has been very thorough and I think we are in position now to do something, particularly with the leadership that we have on this subcommittee. Bringing together two people who have been working together, as far as Senator Voinovich is concerned, I had him come in and testify before this subcommittee when I chaired this subcommittee and he was Governor of Ohio. He did an excellent job at that time. In fact, we heard from a couple other Governors. Senator Jeffords and I received a letter from both George Pataki and Arnold Schwarzeneggar from California and New York expressing their concern that States maintain the ability to have stronger pollution controls than those set for the Nation as a whole. I think that is one thing this bill does. I would like to enter this into the record immediately following my opening remarks.

Senator VOINOVICH. Without objection.

Senator INHOFE. I think probably the most telling chart that was held up during the chairman's opening remarks was the one that showed the success story, that our air is far cleaner than it was a few decades ago. In the last 30 years, while our GDP has almost tripled, our energy consumption has increased by 45 percent, emissions from the six major pollutants have been cut by more than half.

We recognize that a lot more needs to be done. On Monday, I introduced with Senator Voinovich the Clear Skies bill. This is the most aggressive mandated reduction in pollutants in the history of this country, of any President, of any time. I think it is very important we understand that.

They were trying to do this earlier by rule and I think we all understand that rules do nothing but invite uncertainty and lawsuits and we have had enough of that in addressing this subject. What we need is legislation and our legislation will clean the air further, faster and cheaper than existing laws.

While some might criticize the legislation because it doesn't address the divisive issue of imposing carbon caps, carbon dioxide is not a pollutant, I think we understand that and while some would sacrifice these massive reductions that would be mandated for a political agenda, I think it is wrong. Let us have a debate on carbon dioxide, on carbon caps, on taxes, all these things dealing with global warming. We will have that debate. We don't want to kill the opportunity to have the most aggressive reduction any President has ever proposed by keeping this from being passed.

I look forward to this hearing. I think we will have a hearing next week some time on this subject and I thank you for giving this the priority you have early in this session.

Thank you.

[The prepared statement of Senator Inhofe follows:]

STATEMENT OF HON. JAMES M. INHOFE, U.S. SENATOR FROM THE STATE OF OKLAHOMA

Thank you for holding this hearing today, Chairman Voinovich. It is another important step in our long-standing consideration of multi-emission legislation. We are now the fourth Congress to address this issue and this is the 23rd hearing of this Committee to address issues related to multi-emissions legislation. I held several

hearings when I was Chairman of this Subcommittee, and I am now the fourth Chairman to examine the matter.

This Committee has vetted the issue thoroughly and debated every aspect. Our examination of this issue over the next month represents the culmination of an exhaustive, deliberate, and time-consuming process to update and modernize our nation's clean air laws.

The Clean Air Act is a vital law to enable Americans to breathe healthy air. And it has had many successes. America's air is far cleaner than a few decades ago. In the last 30 years, while our Gross Domestic Product almost tripled and our energy consumption has increased by 45 percent, emissions of the six major pollutants have been cut by more than half. And lead has been virtually eliminated.

Despite this, more work needs to be done. New more stringent particulate and ozone standards were implemented and hundreds of counties across the nation are not in attainment with these much lower pollution levels. To assist these counties with coming into attainment and continue our clean air progress, further emission reduction will be needed. The most effective, most flexible, and least burdensome way to achieve these reductions is to build on the most successful part of the Clean Air Act—the Acid Rain program.

On Monday, I introduced with Senator Voinovich the Clear Skies bill, proposed by President Bush. This bill—which cuts sulfur dioxide, nitrogen oxides, and mercury by 70 percent—is the most aggressive emissions reduction initiative ever proposed by an American President.

Multi-emissions legislation is necessary to help states come into compliance with the law and to keep jobs here in America. Coal is our nation's most abundant resource. It provides not only jobs, but keeps energy prices affordable for the elderly and poor. As important, keeping coal as the backbone of our electric grid allows natural gas to be used for more valuable purposes, such as home heating and the manufacturing sector. Natural gas is in a state of crisis due to limits on production. Our bill will not put further stresses on natural gas demand, as competing proposals do.

Rules to address sulfur dioxide, nitrogen oxides, and mercury are due out later this year. But these rules suffer from what all rules suffer from lack of certainty. Litigation of clean air rules in recent years has become an epidemic. The result is that rules provide neither the certainty that we will achieve needed emission reductions nor the certainty industry needs to invest the tens of billions of dollars that will be needed to achieve these reductions. What is needed is legislation. And our legislation will clean the air further, faster, and cheaper than the existing law.

While some have criticized our legislation because it does not address the divisive issue of imposing carbon caps, carbon dioxide is not a pollutant. While some would sacrifice public health on the alter of a political agenda to regulate carbon dioxide, I believe that the time to move forward with making our skies cleaner is upon us.

I look forward to today's hearing. We will have a full committee hearing 1 week from today and it is my intention to hold a full committee markup before the President's Day recess.

Senator VOINOVICH. I would like to call on our Ranking Democrat member, Senator Jeffords. I want to say publicly how much I admire your conscientious effort in this area. I know you have spent hours and hours on a piece of legislation that you promoted and I am anxious to hear what you have to say this morning.

OPENING STATEMENT OF HON. JAMES M. JEFFORDS, U.S. SENATOR FROM THE STATE OF VERMONT

Senator JEFFORDS. Thank you.

I am glad we are here today to discuss the need for multi-pollution legislation. I have been a strong proponent of such bipartisan legislation for years. We need to lock in emissions and reductions as soon as we can to meet our public health and environmental responsibilities on schedule.

Yesterday, I reintroduced the Clean Power Act with 18 bipartisan co-sponsors. Despite great progress in reducing pollution over the last 30 years, science tells us that we still have an enormous challenge now and ahead. We have only barely touched upon many of these challenges. We still must achieve safe air quality for all

Americans to breathe and to live longer lives and finally and fully address acid rain and mercury contamination, clear the Vistas National Park and really begin to deal with the human induced climate change.

Before I go on, I want to provide some historical context on the committee's actions on this important matter. In early 2001, there was a bipartisan dialog to establish principles for the committee to use in developing multi-pollution legislation. That dialog was disrupted by the President's decision to reverse his pledge to control carbon dioxide from the power plants.

In October 2001, we had a widely attended stakeholder meeting on multi-pollutant legislation to restore some type of dialog but without much luck. In early 2002, I started a brief but unsuccessful attempt to resume negotiations on a four pollutant bill but the Administration refused to negotiate or even to provide the full committee with timely assistance. So with no one on the other side to negotiate with or to compromise with, the committee under my chairmanship approved the Clean Power Act in June 2002. If that legislation had been signed into law, we would have been well over our way to reducing the number of people, 25,000 or so, who died prematurely each year from power plant pollution. There were Republican objections to taking up the bill, so it went no where. Gradually, it has become clear that the Administration and most of the utility industry did not and does not want Congress to successfully legislate on this matter.

Legislation would require compromise and a strengthening of the Clean Air Act, not a weakening to get public support. Instead, the Administration has tried to unravel many important clean air programs with special focus on gutting the new source review or NSR Program. Last year, the Administration proposed a Clean Air Act interstate rule using authority already in the law. Unfortunately, the approach is inadequate to help nonattainment areas meet the deadlines in the law on time. Non-attainment areas need reductions in clean air monitoring data by 2009 for ozone and by 2010 for fine particulate matter, not in 2018.

The Clean Air Act has ample authority now and requires the EPA to make sure that all States have adequate implementation plans in place to prevent interstate pollution and to meet the health-based standards on time. Any delay in the schedule is unwise and causes more health and environmental damage. Our legislation avoids such delays. EPA's analysis shows that our bill would prevent 13,000 more premature deaths in 2010 and 18,000 more in 2015 than will Clear Skies. The Administration has proposed several options for controlling the mercury due to the deadline in March. Unfortunately, these options don't appear to be legal and to really ever reduce mercury by any serious amount.

As I have said many times in public and in private, I am prepared to compromise to achieve faster and better public health and environmental benefits than is current law. That even includes some kind of reasonable compromise on controlling carbon dioxide but we cannot legislate responsibly and ignore manmade global warming completely. The U.S. power sector emits one-tenth of the world's total carbon dioxide emission. To ignore this fact defies reason, logic and the peer review work of the National Academy of

Sciences, the American Geophysical Union and the International Panel on Climate Change.

It has surprised me to learn without any consultation beforehand that we will mark up a three pollutant bill in 3 weeks, a bill that is not a product of bipartisan compromise or consensus. We are here to discuss the need for multi-pollution legislation. There is a compelling need for such legislation. This is especially true given the Administration's efforts to delay the implementing and enforcing current law. Unfortunately, there is no process in place to produce or pass bipartisan legislation that could achieve stronger, better and faster benefits than the Clean Air Act already guarantees.

Whether these benefits are attained by the genuine enforcement and compliance, State actions or through litigation, still I am an optimist and I remain hopeful that we can do better and meet the challenges that I have outlined. There is a negotiated compromise to be found, then Senators Carper and Voinovich working together can almost certainly find it.

I look forward to working with you and look forward to the testimony of the witnesses to follow.

[The prepared statement of Senator Jeffords follows:]

STATEMENT OF HON. JAMES M. JEFFORDS, U.S. SENATOR FROM THE STATE OF VERMONT

I'm glad we're here today to discuss the need for multi-pollutant legislation. I've been a strong proponent of such bipartisan legislation for years. We need to lock in emissions reductions soon so we can meet our public health and environmental responsibilities on schedule.

Yesterday, I re-introduced the Clean Power Act with 18 bipartisan cosponsors and just that kind of guarantee. Despite great progress in reducing pollution over the last 30 years, science tells us that we still have enormous challenges now and ahead.

We have only barely touched upon many of these challenges. We still must:

- achieve safe air quality for all Americans to breathe and to live longer lives;
- finally and fully address acid rain and mercury contamination;
- clear the vistas in our national parks; and,
- really begin to deal with human-induced climate change.

But, before I go on, I want to provide some historical context on the Committee's actions on this important matter.

In early 2001, there was a bipartisan dialogue to establish principles for the Committee to use in developing multi-pollutant legislation. That dialogue was disrupted by the President's decision to reverse his pledge to control carbon dioxide from power plants. In October 2001, we had a widely attended stakeholder meeting on multi-pollutant legislation to restore some type of dialogue, but without much luck. And in early 2002, I started a brief but unsuccessful attempt to resume negotiations on a four-pollutant bill. But the Administration refused to negotiate or even to provide the full Committee with timely technical assistance.

So, with no one on the other side to negotiate with or to compromise with, the Committee, under my chairmanship, approved the Clean Power Act in June 2002. If that legislation had been signed into law, we would have been well on our way to reducing the number of people, 25,000 or so, who die prematurely each year from power plant pollution. But there were Republican objections to taking up that bill, so it went nowhere.

Gradually, it has become crystal clear that the Administration and most of the utility industry did not and does not want Congress to successfully legislate on this matter.

Legislating would require compromise and a strengthening of the Clean Air Act, not a weakening, to get the public's support. Instead, the Administration has tried to unravel many important Clean Air programs with a special focus on gutting the New Source Review, or NSR, program.

Last year, the Administration proposed the Clean Air Interstate Rule, using authority already in the law. Unfortunately, this approach is inadequate to help non-attainment areas meet the deadlines in the law on time. Non-attainment areas need reductions and clean air monitoring data by 2009 for ozone and by 2010 for fine particulate matter, not in 2018.

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That even includes some kind of reasonable compromise on controlling carbon dioxide. But we cannot legislate responsibly and ignore manmade global warming completely. The U.S. power sector emit's one-tenth of the world's total carbon dioxide emissions. To ignore this fact defies reason, logic and the peer-reviewed work of the National Academy of Sciences, the American Geophysical Union and the International Panel on Climate Change.

So, it has surprised me to learn, without any consultation beforehand, that we will mark up a 3-pollutant bill in 3 weeks, a bill that is not a product of bipartisan compromise or consensus. We are here to discuss the need for multi-pollutant legislation. There is a compelling need for such legislation. This is especially true given the Administration's efforts to delay implementing and enforcing current law.

But, unfortunately, there is no process in place to produce or pass bipartisan legislation that could achieve stronger, better and faster benefits than the Clean Air Act already guarantees—whether those benefits are obtained by genuine enforcement and compliance, state actions or through litigation.

Still, I am an optimist and I remain hopeful that we can do better and meet the challenges that I have outlined. If there is a negotiated compromise to be found, then Senators Carper and Voinovich working together can almost certainly find it. I look forward to working with them and the testimony of the witnesses.

Senator VOINOVICH. Thank you.

I would like to reiterate that the procedure we are going to follow in this committee is the chairman will speak, the Ranking Member of the subcommittee, we will then recognize the chairman of the committee as a whole and the Ranking Member and that is why we followed that procedure here this morning. Then we are going to follow a rule for the new members, the early bird rule. That basically says that those that show up early get a chance to make their opening statements before those that come later.

Following that rule, Senator Bond, I would call upon you for your statement.

OPENING STATEMENT OF HON. CHRISTOPHER S. BOND, U.S. SENATOR FROM THE STATE OF MISSOURI

Senator BOND. Thank you.

I appreciate your comments about the emissions trading provisions in the Clean Air Act amendments of 1990, sometimes known as the Byrd-Bond Rule. In Missouri, we know it as the Bond-Byrd Rule. I was the most junior member who showed up at the organizing meeting for it and nobody else wanted to do it, so the paper slid all the way down to me but having the strong support of Senator Byrd assured us that the 18 votes we had in that coalition was a majority. I am glad to hear that it is working.

I appreciate your strong comments about the Clear Skies Act, the fact that it is going to use this as well. I think with the Clear Skies

Act, it is obvious we have the opportunity to cut the largest amount of pollution in history from electric utilities. We have the opportunity to cut by 70 percent acid rain producing sulfur dioxide, 70 percent of ozone producing nitrogen oxides, 70 percent of poisonous mercury pollution and we have the opportunity to help families and hundreds of cities, we have the opportunity to help children and pregnant mothers. I think we must take that opportunity.

Unfortunately, there apparently is going to be an effort to change this bill, to add a provision that is absolutely unworkable for those of us in the Midwest and many in the West that would prevent this bill from passing with the 70 percent cuts in SOx, NOx and Mercury. People who want us to expand this bill to include carbon mandates mean well. I understand the arguments they make. I know they believe that carbon controls are the future and we should start now. Tragically, we do not know how to make that work and it would be a poison pill that would kill this bill and leave us with nothing.

Carbon mandates would have a crushing burden on families in my State. Where I come from we get 80 percent of our electricity produced from western coal; 100 percent of that is Powder River Basin coal. I understand the opposite is true in the Northeast. Many Northeastern States get their electricity from natural gas and for them it is not a problem, but for our Nation, for our energy it is a problem to be using natural gas and boilers to generate electricity.

Twenty-five years ago I heard a lecture by Nobel laureate Professor Glen Seabert and he said to use natural gas in combustion boilers to generate electricity was like throwing your best antique furniture in the fireplace to keep the house warm. It is a highly uneconomical and unwise use of it. The use by utilities of natural gas has driven the price of natural gas as we saw on the chart to more than double. To force even greater use of natural gas would put much higher gas and power bills on communities, low income families would be faced with a choice between heating and eating, fixed income seniors would face tough decisions between turning off lights and freezing and Missouri families would also be hurt by job losses. Many employers in my State and across the Nation depend upon natural gas as a feedstock. Fertilizer makers, chemical makers, the car industry, all provide good wages that allow our families to remain strong economically and strong in their health as well.

We are seeing already manufacturers closing down their American plants and moving overseas. You talk about outsourcing, driving the price of natural gas even higher is going to be one of the biggest outsourcing effects we could see. A carbon mandate increasing demand and driving up prices would send jobs overseas.

Let us not kid ourselves, we would be sending pollution overseas. Manufacturers in China and India will not follow U.S. pollution control laws, they will pollute more and much of that pollution will come right back to us in the air, water and through our food supply.

Maybe some day there will be some way we can do it affordably, to extract and sequester carbon without severe economic hardship. Right now we know we can do that by planting more trees. I have planted 10,000 and I challenge all my friends to plant several thou-

sand themselves but there is no feasible way of sequestering it right now. We will when we adopt this Clear Skies bill give a mandate and give a clear demand for the creation of coal gasification plants to substitute coal gas for natural gas and that will allow the carbon to be segregated and when we find the means of sequestering it, we can do that.

A bill to cut pollution from electric utilities right now that includes a mandated carbon cut will not pass the Senate, it will not pass the House, the President will not sign it. The carbon mandates will kill the bill. I don't think there is a purposeful effort to kill the bill but a carbon mandate would.

We have a choice, we take three-quarters of a loaf, SOx, NOx and mercury or take no loaf. I think it is time that we take the three-quarters of the loaf. We have an opportunity in the Clear Skies Act to do great things for the environment and the health of our families and I hope a majority of my colleagues here and on the floor will support this bill.

Thank you.

Senator VOINOVICH. Senator Lautenberg.

Senator LAUTENBERG. Thank you. This is kind of a nostalgic return home for me. I think I am probably the most senior member here by virtue of the time that I spent on the Environment Committee. I missed being here and I am pleased to be able to serve on the committee. As I said to Senator Inhofe when I came in, I came to make his day. That is my primary mission.

Senator INHOFE. I would respond by saying we missed you during your absence.

OPENING STATEMENT OF HON. FRANK LAUTENBERG, U.S. SENATOR FROM THE STATE OF NEW JERSEY

Senator LAUTENBERG. Senator Inhofe and I have always had an interesting exchange. I am pleased to be here and to welcome our newer members. It gives me some encouragement because with 20 years of service in the U.S. Senate, I had to have some junior members to kind of look down on if you don't mind.

I am anxious to get to work on the problems we are looking at. I commend you, Mr. Chairman, for holding this hearing, getting us focused on the task and I know how much you care about it. The question for me is how much are we doing and how much can we do? It has been said around here many times, and I repeat it, that perfection is the enemy of the good and we will never get a perfect piece of legislation. In my eyes, I know that we have a tough fight.

I listened very carefully to Senator Carper and Senator Voinovich's introduction to the hearing and those are very good words and I know they are sincerely meant, to try to work together and get something done that we can all agree upon, but when I listened further, and I know that the job situation is one we really have to pay attention to. I come from a working class family. My father punched a time clock. When the mills closed down in Patterson, New Jersey, the textile miles, silk mills in particular, it hurt like the devil. Whatever we could do to keep him working, we wanted to do.

Then I came out of the corporate world and I know that for the corporate world the best thing is to be able to earn, to be able to keep people working and keep America's economy flourishing.

When we talk about things like heating with natural gas and the implications, what is the alternative, I ask you, to have to absorb all kinds of toxic emissions coming generously to New Jersey from our western neighbors as opposed to using what we can do to fuel our industries, where is American ingenuity. When we talk about job loss and sending jobs overseas, where are we in terms of saying to the automobile industry, hey, your CAFE standards have to be improved. We know it is possible to do it. So instead we blithely go along, more SUVs, bigger cars, you burn it up, shoot it out there. I don't see why the choices have to be made in the manner that they are being discussed now.

My sister died from an asthma attack at a school board meeting one night, she was a member of the school board and she couldn't help herself at the moment of attack. She tried to get to her car to plug in a little respirator that she carried and she didn't make it. I have an 11-year-old grandson who occasionally has to be rushed to the hospital emergency ward because he has an asthma attack. He has had steroids and his face is all blown up and it is a bloody unpleasant sight and a painful thing to witness.

At what point do we say the most important thing are the lives that we can save, or the health that we can protect? Why is the focus exclusively on one side of the equation, the economic side of the equation? I frankly don't get that. My suggestion is we start with what we can do to improve life for our citizens and then work to an end. I don't want to give up any jobs, believe me. It is painful in New Jersey. We have seen so many of the jobs we used to have being accomplished in other places.

When I look at what is happening with asthma, in the last 15 years asthma rates have risen 250 percent. Today, over 7 million kids struggle with asthma and our hospitalized, miss days from school, miss days of fun, miss days of normal living. So I ask unanimous consent that a statement from our Commissioner of Environmental Protection of New Jersey, Mr. Brad Campbell be included in the record as if read.

Senator VOINOVICH. Without objection.

Senator LAUTENBERG. I also ask that my full statement which I have deviated from be included in the record as if read.

[The prepared statement of Senator Lautenberg follows:]

STATEMENT OF HON. FRANK R. LAUTENBERG, U.S. SENATOR FROM THE STATE OF NEW JERSEY

Mr. Chairman:

I'm very happy to be back on the Environment & Public Works Committee. Of course, if I hadn't left four years ago, I would be sitting much closer to you than to this end of the dais, but such is life!

Thank you for holding this hearing on the need for "multi-pollutant" legislation. It's this sort of topic that made me want to get back on the Committee.

Improving air quality is vital for my home State of New Jersey and for the entire country. We have made great progress in the last few decades, but today, over 150 million Americans continue to live in areas that still have hazardous levels of air pollution.

I saw what asthma did to my sister, and I see what it does to one of my 10 grandchildren. I want my children and grandchildren to live in a country where they can breathe clean air.

I helped write the 1990 amendments to the Clean Air Act. Those amendments established innovative ways to improve air quality and protect public health. For instance, we created the "cap and trade" program for cutting sulfur dioxide emissions, which cause acid rain.

The "cap and trade" program has been a big success and serves as a model for cutting the emissions of other air pollutants, such as nitrogen oxides.

We've made progress when it comes to sulfur dioxide and nitrogen oxides, but there's more we need to do, and we have to start getting rid of mercury, too. It's well known that these three pollutants hurt millions of Americans each year, causing thousands of hospitalizations, emergency room visits, and more and more asthma.

As I see it, two of the fundamental questions the Committee needs to address are as follows:

The first question is whether the Clean Air Act needs to be replaced. I think the answer to that question is "no." The Clean Air Act provides the authority and flexibility we need; it just needs to be enforced better.

The second question is whether we need to start cutting the emissions of a fourth pollutant, carbon dioxide. I believe the answer to that question is "yes."

Carbon dioxide is the primary greenhouse-gas pollutant that is causing our atmosphere to trap heat. Scientists from around the world have warned us that greenhouse gas emissions are causing our atmosphere to heat up.

The longer we delay, the harder it's going to be to fix the problems that are beginning to show up now.

Polar ice caps are melting. The oceans are getting warmer, which may be causing harsher weather—like the hurricanes this past fall. Rising sea levels could destroy coastal areas—such as those in New Jersey. This isn't the kind of world I want to leave to my grandchildren!

So, this is a profoundly important hearing today and I look forward to the testimony of our witnesses, and to participating in this ongoing discussion.

Thank you, Mr. Chairman.

Senator VOINOVICH. Thank you.

Senator DeMint.

OPENING STATEMENT OF HON. JIM DEMINT, U.S. SENATOR FROM THE STATE OF SOUTH CAROLINA

Senator DEMINT. Thank you. I appreciate the panelists being here to testify.

It is my opinion at this point, still being a new member, that the Clear Skies Act would be the most effective, clean air proposal that we have ever enacted. I know we all want to improve the quality of the air. I don't think anyone is questioning anyone else's motivation. The question is how. I certainly agree with the Ranking Member that we should not be the lap dog of business and industry and I agree with my colleague that our focus has to be on improving the quality of life of our children and all our citizens. I agree that business and industry should play by the rules.

I think it is important for us to recognize that the current set of rules that we have is a quagmire of antiquated regulations that are open to subjective and arbitrary interpretation, that has clearly done more to promote lawsuits than they have to clean up the air. Judges and lawyers are not going to clean up our air.

In South Carolina, we have seen firsthand the uncertainty of our regulatory system. In several of our counties I used to represent in Congress where BMW is headquartered and Michelin, an area of the State that is known for its clean water and clean air, we have some counties now in nonattainment for ozone. With this bill, our counties in developing a plan to clean up the air could obtain a transitional designation that would bring us into compliance by the year 2015. We could accomplish the goal of cleaner air without

hurting the economy. I think this is just what my colleague was talking about.

I want to just encourage us again as just said not to make the perfect the enemy of the good. This bill clearly is an aggressive move toward cleaner air, toward setting standards, but it is not just business and industry that are asking for this. DEHEC in our State wants a clear set of regulations they can interpret in a very scientific, standard way so the industry, the power plants will know how to move ahead to clean up our air in a responsible way. We must translate our good intentions into a good regulatory system and we need clear rules if we are going to have clear air.

Thank you.

Senator VOINOVICH. Senator Obama.

OPENING STATEMENT OF HON. BARACK OBAMA, U.S. SENATOR FROM THE STATE OF ILLINOIS

Senator OBAMA. Thank you and other members of the committee.

Like Senator DeMint, I am new to this committee and so first of all, I appreciate all the hard work that has been done by members on both sides of the aisle on this difficult issue. I could hear from your introductory remarks, Mr. Chairman, that there have been some frustrations in terms of all the work that has been put in. So I would like to be part of some constructive process to move legislation along that strikes the right balance.

I should note that in my State, the two sides of the coin that have been discussed are very visible. On the one hand, Chicago—I think—ranks second in the country in terms of the impact of power plant emissions and pollution. The metro east and East St. Louis areas that I share with Senator Bond and others, there are almost equally severe problems. I don't need to repeat what Senator Lautenberg expressed so well and that is the human cost of this pollution. My daughter who is 6 years old has asthma as well. We have had those frightening moments where she comes up to my wife and I and says, Daddy, I can't breathe. Until you have rushed a daughter to the hospital in the middle of the night and had them in the emergency room for hours, I think it is hard to recognize the degree to which there is a human cost to this stuff.

Having said that, we also have the Illinois coal industry in southern Illinois that has been extremely hard hit, partly because western coal is easier to extract because we have had problems in terms of some of the existing regulatory regime and how it impacts jobs and economic growth in the area of southern Illinois. When you travel to these areas, these are some of the poorest areas of the State, you are very sympathetic to the fact that these communities need to get back on their feet.

My understanding is there are elements of this bill that might make Illinois coal more competitive. That is something that is of interest to me. Those economic issues don't just relate to the coal industry directly. We have a large chemical industry in Illinois and they use a lot of natural gas, those issues that were raised about the rising cost of natural gas impacts those industries as well. So these are complex issues. There are people on this committee who have studied this much more than I and am looking forward to learning.

I will make one last statement and that is that although regulation has fallen into ill repute in recent years, part of the reason the chart that was presented earlier shows enormous improvement with respect to our air and our water has to do with the fact that industry was regulated. Those gains were not achieved voluntarily because there is always a cost to society and those costs can be localized with particular industries and particular communities and yet I think most of us feel pretty proud even those people who may have resisted those initial regulations feel good about the fact that our water is cleaner and our air is easier to breathe.

So my hope is we approach these issues and there is a bill here that reflects long and hard work on the part of others and I want to keep an open mind, but I do think it is important that this process not be driven by ideology but by science and common sense and a recognition that we only have one environment and sometimes it is hard to reverse some of the mistakes that we make. So we need to be mindful, cautious and humble about what we do.

Senator VOINOVICH. Thank you, Senator.

Senator Isakson.

OPENING STATEMENT OF HON. JOHNNY ISAKSON, U.S. SENATOR FROM THE STATE OF GEORGIA

Senator ISAKSON. Thank you.

I noted in preparing for the hearing that I think this is the 23rd hearing the committee has had since 1998 on multi-emission standards. After listening to the opening statement, I would like to have been at all of them. I am sure they were entertaining. I know the operative word of the day certainly is carbon. I have a lot to learn on those issues, but there are a couple of issues I want to address briefly in the interest of my State with regard to Clear Skies.

First of all, the positive impact that Clear Skies will have on the State of Georgia, Georgia's sources would reduce emissions of SO_2 by 89 percent, NOx by 77 percent, and mercury by 76 percent. The annual savings in positive impact in terms of health would be $5.3 billion and there would be 1,500 less hospital visits a year. That is meaningful.

Second, I want to associate myself with the remarks of Senator DeMint with regard to the transition areas designation. That is a tremendously positive step for my State and many others, to reach attainment but to not be unnecessarily prohibited from reaching that through the overly oppressive regulation that can sometimes take place.

I look forward to working with the committee and the members here on the transition areas proposal because it is a meaningful, positive step for many of us in the South to address what has clearly been a problem.

Later I will get the chance to introduce a distinguished mayor from my State. I appreciate the time that you have given me. I would only ask unanimous consent that you allow the remainder of my prepared statement to be submitted to the record.

Senator VOINOVICH. Without objection.

[The prepared statement of Senator Isakson follows:]

STATEMENT OF HON. JOHNNY ISAKSON, U.S. SENATOR FROM THE STATE OF GEORGIA

Thank you Chairman Voinovich and Chairman Inhofe for holding this hearing. While I and some of my colleagues on the Subcommittee may be new to this Committee, the issue before us certainly isn't new to the Committee. In fact, by my count, this is the 23rd hearing this Committee has held on multi-emissions issues since 1998. I know that I appreciate another opportunity to hear first hand how Clear Skies will substantially reduce emissions of the three most harmful pollutants from power generation, and will do so in a way that is much faster and more efficient than under current law.

I think that when any of us look at a piece of legislation, the first thing we ask is "what is the impact on those whom I represent?" The positive impact that Clear Skies will have on the State of Georgia is very real. Georgia sources would reduce emissions of SO_2 by 89 percent. NOx would be reduced by 77 percent, and Mercury by 76 percent by the year 2020. Georgians would realize health benefits totaling $5.3 billion annually, and visit the hospital or emergency rooms 1,500 less times. These are very tangible results.

I am especially interested in the benefits for Georgia in the section regarding "Transitional Areas". Under Clear Skies, areas that are projected to meet the ozone and fine particles standards by 2015 as a result of Clear Skies would have legal deadline of 2015 for meeting these standards (i.e., will have an attainment date of 2015). These areas would be designated "transitional" areas, instead of "non-attainment" or "attainment," and would not have to adopt local measures except as necessary to qualify for transitional status). They would have reduced air quality planning obligations and would not have to administer more complex programs. Clear Skies will allow many of Georgia's counties to be designated "transitional", and ultimately in attainment.

America has made much progress since 1970 and the passage of the Clean Air Act, however we still face major air quality challenges in many parts of the country. Clear Skies is the most important step we can take to address these challenges. Clear Skies would make great strides towards solving our remaining air quality problems in a way that advances national energy security and promotes economic growth. When fully implemented nationally, Clear Skies would prolong thousands of lives each year, providing billions of dollars in economic benefits, save millions of dollars in health care costs, and increase by millions the number of people living in areas that meet our new, more stringent health-based national air quality standards.

There is no better time for us to be considering multipollutant legislation. Today we begin the process of bringing Clear Skies to the floor of the Senate for a vote. Congress needs to act now so that we may begin achieving emissions reductions and their related health benefits sooner rather then later. I look forward to working with you Mr. Chairman to pass Clear Skies, and improve our nation's air quality. Thank you.

Senator VOINOVICH. Thank the members of the Senate that are here today and we will now call our first witness panel, Bob Young, John Paul and Beverly Gard.

Before we get started, I would like to let everyone know that we had a change in the witness list. Mayor Don Plusquellic from the city of Akron in my home State of Ohio, also President of the U.S. Conference of Mayors, is not able to be here today due to illness. I would really like to thank Augusta, Georgia Mayor Bob Young who is also chairman of the Conference Energy Committee, for coming here on such short notice to testify before this committee. I understand Senator Isakson, you would like to introduce Mayor Young?

Senator ISAKSON. With your permission, I would.

Senator VOINOVICH. Without objection.

Senator ISAKSON. It is really a privilege for me to introduce an old friend, a former TV personality, news anchorman as you can tell from the face and the hair, he looks the part, but now the mayor in his second term of the great city of Augusta, GA and Richmond County and the mayor of that consolidated government

which is among other things the home of the Augusta National Golf Club and the Masters Golf Tournament.

Mayor Young is a member of the Advisory Council of the U.S. Conference of Mayors and chairs the Conference's Energy Committee and is a past chair of the Standing Committee on the Environment.

He is a very active mayor, he is a very progressive mayor. In my years in the State Legislature where I worked with Bob and my years since I have been in Congress on the Transportation Committee in the House where I worked with Bob, I have known him to be a very conscientious and very hard-working person, particularly interested with regard to the environment and its impact. Although I may be reaching here because nobody has told me this, I would imagine the transitional areas provision in terms of the Savannah River area would be of a positive impact in terms of Clear Skies.

It is a real pleasure for me to have the opportunity to introduce a great mayor and a great citizen of the State of Georgia, Bob Young.

Thank you, Mr. Chairman.

Senator VOINOVICH. Mayor Young, Mr. Paul and Senator Gard, I would like to make clear that your testimony is limited to 5 minutes and that you should understand that your statement will be made a part of this record.

STATEMENT OF HON. BOB YOUNG, MAYOR, CITY OF AUGUSTA, GA, ON BEHALF OF U.S. CONFERENCE OF MAYORS

Mayor YOUNG. Thank you, Mr. Chairman. Senator Isakson, thank you for that generous introduction.

On behalf of the U.S. Conference of Mayors' President, Akron Mayor Don Plusquellic, I offer his apologies for not being with you today. As you know, he was supposed to be here to testify but he fell ill yesterday of a severe respiratory ailment. I offer his sincerest apologies to you for his not being able to make it to this hearing. I was described earlier today as his stunt double for this hearing.

The U.S. Conference of Mayors is the official, non-partisan organization that represents cities throughout the United States through their chief elected official, the mayor. First of all, I would like to thank Senator Voinovich not only for his invitation to speak before you today but also for joining with us last week during the Conference of Mayors' winter meeting here in Washington. Your commitment, Senator, to issues such as community development block grant funding and unfunded mandates is greatly appreciated by the mayors of this Nation.

I come before you today not as an expert on clean air policy, not as a scientist, but as a mayor. This means that I am responsible for a wide variety of activities including keeping my citizens safe, keeping their surrounding environment clean and attractive, making sure the roads are maintained and every once in a while in Augusta, GA, even seeing that snow gets ploughed. It also means doing what I can to keep and attract new jobs to our community. When my job is boiled down, I guess you can say that I am responsible for making my city a place that is desirable for both people

and business to flourish. Every mayor strives to create a community that has healthy citizens with a healthy economy. I think with some common sense, you can have both. That is why I am here today.

In order to remain competitive, this Nation needs a steady, reliable and inexpensive source of energy. However, we also need clean and healthy air. Depending upon the type of business, a number of conditions influence their decision to locate or expand in a community. Issues such as work force availability, access to transportation hubs and of course the cost of electricity are factors in their decisionmaking process.

Besides the cost and reliability of electricity, another factor that goes into a business location or expansion decision is a community's attainment status. Many communities throughout the Nation have been designated as nonattainment areas for either ozone or particulate matter. Augusta was originally supposed to be designated in nonattainment for ozone but when the final numbers came out, we were fortunately not included. Many of my other mayoral colleagues though were not as lucky.

When it appeared that my city was going to be designated as nonattainment for ozone, we volunteered for EPA's early action compact. This program allows cities, counties and States to go through a series of voluntary measures to reduce air pollution that causes nonattainment. I want you to know that even though we were fortunate not to get designated, we are still going through this voluntary program to demonstrate our commitment to clean air. This is what we are doing in Augusta.

The reason we are committed to clean air is not only because of the health of our citizens but it is a good business decision as well. Many businesses won't outright admit it but privately they have said that when making a decision to locate or expand in an area, one of the things they do is find out that community's attainment status. If a community is not in attainment, businesses know to get the necessary air permits might be difficult and sometimes it just makes sense to seek out another community to build in.

Both the cost of electricity and a city's attainment status put many communities at a competitive disadvantage to attract businesses from other parts of the United States or even from elsewhere in the world. These factors can have a major impact on jobs and job creation. However, the mayors of this Nation don't want to sacrifice public health for cheap electricity. We are looking for a fair and balanced approach that keeps our air clean while keeping electric costs down, and also keeps our citizens working. We are looking for common sense solutions to help us meet our attainment requirements.

As I mentioned before, many communities have been designated in nonattainment for particulate matter or ozone or even both. These communities and States they are located in are required by the Environmental Protection Agency to meet attainment standards between 2008 and 2015. Programs such as CMAQ, the Congestion Mitigation Air Quality Program, as well as the off-road diesel rules have been developed to assist us with our efforts. These programs should be maintained or in the case of CMAQ, increased to further those efforts.

However, these programs are not enough. For many nonattainment communities, 40 percent of their air pollution comes from coal-fired utilities. That is a major source of pollution. We need a common sense solution that requires these utilities to install pollution control equipment in a manner that is timely and cost efficient. The Conference of Mayors passed a policy resolution in 2003 calling on the Federal Government to address this problem. Our policy asks that the Federal Government set national air emission caps under a multi-pollutant plan at levels strong enough to protect public health and the environment by substantively assisting cities in our efforts to attain the national ambient air quality standards.

We support a comprehensive and synchronized multi-pollutant, market-based program to reduce regulatory costs to maintain reliable energy at a reasonable cost for consumers and to provide regulatory certainty to the electric power sector. We encourage the Congress to pass national legislation which will meet the Conference of Mayors' goals by requiring power plants to reduce their emissions of sulfur dioxide, nitrogen oxides and mercury by an average of 70 percent from 2000 levels by 2020 under a proven, market-based cap and trade program.

It is my understanding, Senator, that you have introduced legislation that reflects many of the concerns of the mayors. We appreciate the opportunity to present before you today and I will be available to answer any questions the panel may have later in this hearing.

Thank you.

Senator VOINOVICH. Thank you, Mayor Young.

Our next panelist is Mr. Paul, supervisor of the Regional Air Pollution Control Agency in the Montgomery County, Dayton area. We are glad to have you here with us today.

STATEMENT OF JOHN A. PAUL, SUPERVISOR, REGIONAL AIR POLLUTION CONTROL AGENCY, ON BEHALF OF STAPPA/ALAPCO

Mr. PAUL. Thank you. Good morning.

My name is John Paul and I am the supervisor of the Regional Air Pollution Control Agency, a six county, local agency located in Dayton, OH. I am testifying today on behalf of STAPPA and ALAPCO, the National Associations of air quality agencies in 53 States and territories in more than 165 metropolitan areas across the country. I currently serve as the vice president of ALAPCO and co-chair of the STAPPA/ALAPCO Energy Committee. We are pleased to have this opportunity to provide our perspectives on the need for legislation to control multiple emissions from electric utilities.

Over the past 30 years, our country has made substantial progress in reducing air pollution while at the same time experiencing strong economic growth. However, our Nation continues to face significant public health and environmental problems as a result of emissions into the air. Each year, air pollution causes tens of thousands of premature deaths and innumerable health consequences. In the past year, EPA designated as nonattainment nearly 500 counties for the 8-hour ozone standard and 225 counties

for the fine particulate standard. In addition, mercury emissions have resulted in the issuance of fish consumption advisories in 45 States. Air pollution also contributes to visibility impairment, eutrophication of waterways and acid rain.

Electric utilities are by far the largest remaining stationary source of air pollution in the United States. They are on the order of magnitude greater than the second largest source which is refineries which is an order of magnitude greater than anything else. According to EPA and others, power plant emissions each year are responsible for over 20,000 premature deaths. Additionally, according to a recent study by the Clean Air Task Force, Power plant emissions annually cause over 38,000 heart attacks, more than 3 million lost work days and in excess of half a million asthma attacks.

The magnitude of emissions from power plants and the serious public health and welfare implications these emissions have make controlling utilities a top priority. This is especially important in light of the fact that today, nearly three-quarters of all utility boilers are over 30 years old and continue to operate without modern pollution control technology.

STAPPA and ALAPCO endorse the concept of a comprehensive, national strategy for reducing emissions of multiple pollutants from electric utilities and have adopted a set of principles which I have attached to my written statement outlining what we believe should serve as the foundation of a viable strategy for power plants.

We call for expeditious schedules that will allow us to reduce emissions consistent with the deadlines by which States and localities are required to meet health-based air quality standards. We firmly believe that such an approach should supplement but not supplant the existing Clean Air Act. In addition, we recommend that the most protective national emission caps feasible be set at levels that reflect installation of the best available controls on all existing units nationwide with each existing power plant required to meet a minimum level of control by the final compliance deadline. Very significantly, States and localities must retain their authority to adopt and implement measures that are more stringent than those of the Federal Government.

We used our adopted principles to evaluate S. 1844, introduced as the chairman's mark in November 2003. After careful study, we concluded that the proposal fails on every one of our association's core principles. The utility compliance deadlines are too protracted. It will prevent the expeditious attainment of air quality based standards. The caps are simply not protective enough and there is no minimal level of control required by each existing power plant.

Additionally, we have very serious concerns with the fact that this proposal strips away many of our most essential Clean Air Act tools and authorities. In fact, that is probably our most significant concern. Accordingly, STAPPA and ALAPCO cannot support this proposal. Further, based on our preliminary review of S. 131, the Clear Skies Act of 2005 introduced just this week, it appears that our concerns have not been resolved.

Although we would prefer that a multi-pollutant approach be established through legislation rather than regulation, given the serious deficiencies of this legislative proposal and S. 131, we believe

that continued implementation of the Clean Air Act will provide far greater and more certain and more timely protection of public health and the environment.

In my written testimony, I have elaborated on each of our key concerns and will be happy to address them in more detail.

On behalf of STAPPA and ALAPCO, I want to thank you for this opportunity to present our associations' views on this very important issue. We look forward to working with you in the days to come.

Thank you.

Senator VOINOVICH. Thank you, Mr. Paul.

Our next witness is Senator Beverly Gard. Senator, we are very happy to hear you. Senator Gard is chairman of the Energy and Environment Affairs Committee, Indiana State Senate.

STATEMENT OF HON. BEVERLY GARD, CHAIR, ENERGY AND ENVIRONMENT AFFAIRS COMMITTEE, INDIANA STATE SENATE

Ms. GARD. Thank you.

Mr. Chairman and members of the subcommittee, thank you for the opportunity to testify. My name is Beverly Gard and I have served as a member of the Indiana State Senate for 16 years. I am chairman of the Senate Energy and Environmental Affairs Committee and the Public Health Subcommittee. I serve on the Environment Committee of the National Conference of State Legislators and previously served as the committee chairman. Previously I worked as a biochemist in the health care industry.

My approach has been to balance the need for a cleaner environment with our responsibility to promote economic growth and jobs. Adoption of multi-emission legislation promotes that balance. In Indiana, approximately 95 percent of the electricity generated comes from coal-fired power plants burning over 48 million tons of coal a year. Since the Clean Air Act amendments of 1990, sulfur dioxide emissions are down 45 percent, NOx emissions have been reduced by roughly 70 percent. Over $3 billion has been spent to reduce emissions since 1990 and it is estimated and additional $3 billion will be spent to comply with new pending EPA regulations.

If the Clean Air has worked, why do we need multi-emissions legislation? The answer is litigation and uncertainty. Current law now includes multiple regulatory approaches to reduce the same emissions, despite the development of new regulations by EPA to control NOx, sulfur dioxide and mercury, we anticipate a protracted court battle before any final implementation. This creates uncertainty for the States and utilities with States increasingly tempted to point up fingers when the secure emissions reductions from outside their economic and geographic boundaries.

Using the NOx cap set in Clear Skies, Indiana utility NOx emissions would be reduced by 60 percent in Phase 1 and 70 percent in Phase 2 based on actual 2003 levels. Using EPA's projections, all 24 counties in Indiana out of attainment now should be in attainment for ozone by the first phase in 2010. Under the new fine particle nonattainment designation of January 2005, 14 full counties and 5 partial counties in Indiana were labeled as nonattainment. With the sulfur dioxide cap set in Clear Skies, Indiana utili-

ties' sulfur dioxide emissions would be reduced by 69 percent in Phase 1 and 79 percent in Phase 2, again based on actual 2003 levels. Using EPA's projections for the impact of Clear Skies, all counties in Indiana should be in attainment for fine particles by the first phase in 2010.

Another benefit that a multi-emissions bill will provide is mercury reductions enabling utilities to integrate all three emission reductions required under Clear Skies and can achieve even more significant reductions in cost savings than we experienced from the acid rain title in the 1990 Clean Air Act amendments which minimizes the financial impact to consumers. Much of the debate around multi-emissions focuses on how much and how fast. Reducing mercury is important, but there is also considerable debate about the role of utility emissions in reducing mercury levels in fish. Mercury is transported far and wide in counties burning coal with no controls and also contributes significantly to mercury levels in the United States. A phased-in reduction over reasonable time periods will provide the appropriate time needed to build scrubbers, SCRs and particulate controls which will help to achieve a large portion of mercury reductions. This approach also provides the time needed to test new mercury specific controls that are necessary to meet the more stringent Phase 2 cap. These reductions are not cost free. We need to ensure that caps are achievable without breaking the bank.

I ask you today to work to make multi-emissions legislation achievable and balanced. Do not disadvantage Indiana coal or the economies that thrive on that industry but I also urge you to enact legislation now. Even today, States must begin the rigorous and time consuming process of crafting State implementation plans even without a final EPA rule. Only Congress can take the guesswork out of this public policy issue by passing legislation that sets us on a schedule which will result in steep reductions in power plant emissions while minimizing the cost to the consumer. Clear Skies meets that goal. Delay only brings with it continued emissions and escalating costs.

I will close by asking that you work together irrespective of political party or geography to pass this vitally important piece of legislation. I look forward to working with you to help make this legislation a reality.

Thank you.

Senator VOINOVICH. Thank you, Senator Gard.

We appreciate our witnesses being here this morning. Our first round will be 5 minutes for each Senator.

Mayor Young, one of the complaints about Clear Skies is that it simplifies and modernizes the Clean Air Act, especially some of its highly litigated and uncertain provisions. In your recent State of the City address, you noted the importance of brownfields redevelopment to Augusta. The Conference of Mayors reported in a 2001 study, some cities have found that the NSR permit process burdens industry with additional costs, uncertain project approval time lines and therefore may not have an effect on business decisions concerning expansion or location in urban areas are designated nonattainment. This situation, in conjunction with the costs involved in cleaning up brownfield sites makes it potentially difficult

to attract manufacturing industries to cities seeking to incorporate them in the redevelopment mix.

I know that urban development remains an important objective for both the economy and ecology of our cities. Does it then make sense to replace our current litigate first, ask questions later approach with a workable multi-emissions trading program that provides certainty to businesses and reduces environmental costs?

Mayor YOUNG. Mr. Chairman, you are absolutely right. The Conference of Mayors supports the multi-pollutant approach as embodied in the bill. One thing that we have to consider is it is not all about bringing new jobs and new businesses to your community because 85 percent of the new jobs are going to be created by businesses already in your community. They have to be able to expand, be able to grow, be able to get the permits they need to produce more. We believe this legislation will get us there.

Senator VOINOVICH. I am glad you raised that issue because I know one of the problems I had when I became Governor was there were a lot of businesses that were talking about expanding and basically said to me, no way, Jose, am I going to do it in nonattainment because I don't know what the costs are going to be to my business. If you looked at the chart I put on the board, there are a lot of communities in this country today that without legislation at this time that are going to have wait until their States come up with a State implementation plan which will be 2008. So we have this long period of uncertainty where everybody is going to be in limbo in terms of what they should not do.

Senator Gard, as we heard today, some claim that the existing Clean Air Act does more than Clear Skies. Some argue that the rules proposed by the Administration, the Clean Air Interstate Rule and the Mercury Rule are better than Clear Skies. How do you respond to that? I know in his testimony, Mr. Paul said, Any multi-pollutant strategy must ensure that regions, States and locations retain their authority to adopt or implement measures that are more stringent than those of the Federal Government. I agree with Mr. Paul on that point. I want to underscore that in the bill nothing in this section shall preclude or deny the right of any State or political subdivision to adopt or to enforce any regulation, requirement, limitation. How do you react to Mr. Paul's claim that this doesn't do more than what we already have on the books?

Ms. GARD. Right now the legislation we have on the books certainly served the purpose during the early years of the Act, but as demographs change, as States' priorities change and technology changes, I think we need to have the regulatory certainty that we would see in Clear Skies. Over the last few years, there has been protracted litigation as you well know dealing with implementation of clean air regulations.

We need to move on with actually doing something that will provide for cleaner air without going through protracted litigation. In Indiana we have a significant loss of manufacturing jobs, over 150,000 manufacturing jobs in the last 3 years. We need to be competitive in attracting those new jobs to Indiana. We need to make sure that the coal industry remains a vital part of our economy in Indiana while having the certainty of regulation and meeting those

goals that Clear Skies lays out which I think will provide for cleaner air and preserve the economies in our State.

Senator VOINOVICH. Mr. Paul, you work for an organization that is a regional enforcement agency. One of the things that perplexes me is that the U.S. Conference of Mayors, the National Association of Counties, the National Conference of Black Mayors and many Governors have all passed resolutions supporting the reduction goals and timelines in Clear Skies. It seems to me that your organization's point of view on this legislation is contrary to the elected political officials in your respective regions. How do you respond to that?

Mr. PAUL. Mr. Chairman, because we represent all the States and all the local air pollution control agencies, the directors of those agencies, we recognized early on when different proposals were coming out that it would be difficult for us to respond to each proposal and take positions, so we decided to adopt principles and then we could compare those principles to any piece of legislation that comes out. That is what we did. I personally am very high on accountability and I recognize the accountability that we have to the legislature. I see that our goal is to let you know what we feel would be the implications of any legislation and that is what we have tried to do here.

Senator VOINOVICH. Senator Carper?

Senator CARPER. It is difficult for one air regulator or one mayor or a Governor or a member of the Democratic Caucus or the Republican Caucus to speak for all of us. We have different views and I really applaud the idea of trying to lay out the principles. In fact, that is probably good advice for us, to say what are the principles we should subscribe to as we attempt to put together a bipartisan clean air bill.

You mentioned the principles that the organizations had developed and felt we should consider as we craft legislation. I understood you to say that Clear Skies fell short on most if not all of those principles. Senator Jeffords has legislation that is an alternative to Clear Skies. I, along with several of my colleagues, alternative legislation. I have no idea if you are familiar with either of our proposals but first of all, can you sort of quickly summarize the basic principles that you think should underlie the work we do in this area and two, if Clear Skies falls short on most or all of those, can you give us any thoughts as to whether or not Senator Jeffords or our bipartisan proposal might come closer to the mark?

Mr. PAUL. Attached to my testimony are our principles. Also attached to my testimony is a chart labeled Attachment No. 3 where we took each of the principles that we are aware of right now, put the caps, put in deadlines and compared those to how our principles would play out. The big concept that we are after here is that we have these 1,166 coal-fired power plants operating in the United States; 70 percent are 30 years old or older. They are facing decision points of where they either need to phase these out and build newer, more efficient, better controlled boilers or they need to renovate those boilers and we think at the same time add air pollution control.

It has always been our position that when you spend money on a source, when you install it or when you modify it, that is the time

to put on the best available control technology. We believe this can be done in an expeditious manner. We believe that the deadlines in the Clean Air Act for meeting the health-based standards are important, that there are lives lost every year those are delayed. So our principles call for stringent caps based on best available control technology and stringent timelines to meet those.

Senator CARPER. Any early thoughts on how Senator Jeffords' proposal or my bipartisan proposal might fare when matched to those principles?

Mr. PAUL. Senator Jeffords' proposal comes the closest to ours. Yours also comes very close. It is interesting, in some the deadlines fit better with ours and some of the caps fit better with ours. Certainly one of the big concerns we have that both of you address, you address it some Senator Jeffords completely, is the stripping away of the new source review regulations, the 126 petitions, the tools that we have if this legislation doesn't go far enough for a particular State or locality. It is a mixture. Obviously both of yours are much closer to ours.

Senator CARPER. Thank you. I want to quote an esteemed climatologist whose name is Steven Stills. He once wrote, "Something is happening here. Just what it is ain't exactly clear. I said earlier in my opening statement there was a time when I didn't put much credence to this notion of global warming. As time goes by, I am more convinced that something is happening here and we need to do something about it.

In my old job dealing with businesses, I talked to them about things they didn't like. I did a lot of customer calls. I still do them with major employers in our State and smaller ones as well. They told me among the things they didn't like were high taxes, elected or appointed officials who wouldn't listen to them, didn't like rigid regulations, didn't like uncertainty. They really didn't like uncertainty. One of the virtues of our developing a bill that not only addresses sulfur dioxide, nitrogen oxide, mercury and carbon is it provides a measure of certainty. If you look at the utilities and the folks in the energy business supporting the approach some of us have embraced, one of the reasons they like it is because of the certainty that it provides.

Let me ask each of you to comment on that certainty and whether you think that is a virtue as well. Mayor Young?

Mayor YOUNG. From the standpoint of the U.S. Conference of Mayors, a bipartisan organization, we reached our resolution by consensus of Democratic and Republican mayors, I would say that we have not taken a position with respect to carbon-based pollution. Although the mayors themselves have expressed concern about the change in the climate as a result and many mayors have established for themselves 10 percent goals of reducing greenhouse emissions in their communities, we would say from our perspective by addressing the NOx, the SOx and the mercury in a comprehensive way, that is a great step forward for our communities.

One issue we always have to look at is affordability. Those of us who are mayors in urban centers typically represent populations of high poverty, 28 percent of the people who live in the city of Augusta, 28 percent of the 200,000 people who live there are categorized at the poverty level or below. We have to be sensitive as

we look at policy as to what cost is something going to have to them. We provide them with indigent health care, so we are dealing with the health effects on one side. Likewise many we are subsidizing through public housing or in other ways and they have energy costs they have to deal with.

With respect to what is on the table today, it works for us. You add carbon to the mix, we haven't taken a position on that.

Senator VOINOVICH. Senator Carper, I think we should move on and if these witnesses want to comment later on about your question, we can do that.

Senator Inhofe.

Senator INHOFE. I often say to my colleagues in the Senate, if you want a tough job, be a mayor. Senator Voinovich and I, 25 years ago, were both mayors and we know when you are a mayor, there is no place to hide, you are closer to the people. I appreciate what you have done.

We had an excellent witness from Ohio, the Catholic Charities, Tom Mullen. He testified before us and the chairman mentioned him in his opening remarks. He said, "The conversion to natural gas from coal would have a devastating effect on the people of Ohio and our country, particularly the poor and the elderly," which he is in the business of protecting. "The most vulnerable of our people economically would see their electric costs in Ohio soar to $494 million by 2010 and to $1.5 billion in 2020." That is in Ohio. Have you done any calculation as to the economic damage done to the poor in your State?

Mayor YOUNG. Senator, not in our community specifically and I haven't seen any national figures as it relates to cities but I think when we look at the cost of what our social programs, what percentage of our local budgets, our city budgets we are paying to support social services to our citizens, we can see that any tick anywhere in any service we are providing is going to one, hurt us and it is going to hurt those consumers at the lowest rung of the ladder. That is something we have to be sensitive to in every policy decision we make.

Senator INHOFE. Senator Gard, what about your State? It is pretty close by and has a lot of things in common with Ohio?

Ms. GARD. I hear from constituents on a regular basis about concern over the rising natural gas prices. As you know, 95 percent of Indiana's electricity is generated through coal-fired generating facilities. We have the ninth lowest electric rates in the country. Those people using natural gas would very much like to be able to see the economic advantage we would have I think approaching a multi-emissions legislation such as you propose in Clear Skies. It would have economic value, certainly have regulatory certainty and provide our industries could remain competitive.

Senator INHOFE. Mr. Paul, in your written testimony, saying this in a very friendly way because I don't have the background that would enable me to determine whether or not this is possible, you say you would propose an interim emissions cap of 15 to 20 tons per year of mercury to be achieved by 2008. We are talking about 3 years out, close to a 60 to 70 percent reduction in that short period of time. Do you really believe this is sufficient time when you consider you would have to enact legislation and regulations, ob-

tain financial approval such as bond approvals, required State permits, design and install equipment, go through all these steps. You mentioned over 1,100 coal-fired power plants that would be affected by this and all of that in 3 years. How can it be done

Mr. PAUL. We put in interim caps to make sure that progress is encouraged and progress is made toward the ultimate caps. We recognize that the current MAC rule, the current regulations in the Clean Air Act there are provisions for extensions should they be necessary. Our goal is to make sure there is good progress.

Senator INHOFE. So these are not hard and fast goals that must be achieved or you are out of business, it closes down?

Mr. PAUL. That is correct.

Senator INHOFE. Give me a general idea on what type of option they would have at the time they find it is impossible for them to comply? You said there are some provisions that allow an exemption from these deadlines?

Mr. PAUL. There are provisions within the Act that allow for an extension. The Administrator can issue an extension for 1 year. Then there are provisions in the Act for the President of the United States also to provide 2-year extensions under the MAC rules, under Section 112 of the Clean Air Act.

Senator INHOFE. I wonder if people, given impossible goals, which I would believe they would be and I think probably most would agree, if that would be as effective as having an achievable goal that is further out. That doesn't require a response.

Senator Gard, one of the fundamental aspects of Clear Skies is not simply that it caps emissions at 70 percent but that it establishes a trading system of allowances based on the Acid Rain Program. My understanding is that there are virtually no violations of this program. I would ask has that been your experience in Indiana and do you believe Clear Skies would work the same way for SOx and NOx and mercury as it did in the Acid Rain Program?

Ms. GARD. Yes, I do. I think the Acid Rain Program has certainly shown, the cap and trade program has shown that it works. There are quantifiable results. I think the cap and trade program would provide the kind of incentives that industry and utilities need to make those sorts of financial commitments to reduce their emissions and provide economic incentives to do so.

Senator INHOFE. The last question would be for each one of you to respond. The Clear Skies initiative as we said before is the most aggressive that any President has ever come forth with in reducing pollutants. There are many who want to get into the debate which we have been in many times before on CO_2. I would ask the question, would we be better off to pass nothing and not have the caps and not have the aggressive reduction in pollutants on NOx, SOx and mercury if we did not include CO_2 as a pollutant? Just yes or no, do you think we would be better off to pass nothing at all or to pass the Clear Skies bill as it is written?

Mayor YOUNG. Again, the U.S. Conference of Mayors has not taken a position with respect to CO_2.

Senator INHOFE. Have they taken a position as far as Clear Skies is concerned?

Mayor YOUNG. We have taken a position with respect to the principles embodied in Clear Skies but not to that specific piece of leg-

islation. We support the multi-pollutant, market-based approach with cap and trade.

Senator INHOFE. Mr. Paul.

Mr. PAUL. STAPPA and ALAPCO also have not taken a position with regard to CO_2, but we do believe that enforcement of the Clean Air Act as written now with CARE, the Utility MAC, would be preferable to Clear Skies.

Senator INHOFE. Senator Gard.

Ms. GARD. Clear Skies provides the kind of guidance that we need to meet those attainment standards that many of our counties are under. With respect to carbon, carbon is not a pollutant that has quantifiable health standards such as the pollutants that are addressed in Clear Skies and Clear Skies needs to focus on the three pollutants.

Senator VOINOVICH. Senator Jeffords.

Senator JEFFORDS. As you know, the Clean Air Act has specific deadlines for areas to achieve attainment of the national health-based air quality standards. For every year we delay that attainment, it causes or contributes to an additional 25,000 premature deaths from fine particles, more than 4,000 premature deaths from ozone exposure, thousands of heart attacks, hundreds of thousands of asthma attacks and millions of lost work days. Do you believe that we should amend the Clean Air Act, delay the attainment deadlines in existing law and suffer these consequences?

Mayor YOUNG. First, let me thank you for your leadership on this issue. You have been a very active player and from the perspective of the mayors, we appreciate your engagement. That is a loaded question, there is no doubt. From our point of view, I don't see that things are going to be delayed from the information presented to us, particularly people from the industry tell me that with a bill like Clear Skies they feel they can meet their attainment levels or compliance levels fairly early, fairly quickly, not waiting until 2018 to do the work.

Probably the best answer I could give you would be we don't feel, from our perspective, that anything is being sacrificed in meeting the clean air standards under the Clean Air Act with the implementation of a bill that embodies the principles of Clear Skies.

Senator JEFFORDS. Mr. Paul?

Mr. PAUL. I think it is a fair question and I think one that you need to consider. Certainly there will be costs to more timely implementation and more timely compliance but there are also costs to delayed compliance and I am glad it is you, the Senate, that has to weigh those and not necessarily us. We feel our obligation is to tell you what we think is achievable and what we think are the implications of that. I think you are correct when you identify the health implications of delay and that is why we advise tighter caps and more timely caps.

Ms. GARD. I think now that litigation is delaying compliance with clean air standards, we need to make sure that we have goals that are achievable and also goals that are affordable. It is not going to make a whole lot of sense to clean up our environment and not have jobs and health care insurance for our citizens. I think Clear Skies provides the kind of timeframe that is achievable, has quantifiable results and is the kind of tool that we, as States, need to

achieve those goals. I think you will see the results are going to be far greater than we have seen under some of the current policies.

Senator JEFFORDS. I would note all the versions of the Clean Air Act allows areas to delay attainment.

A couple of years ago, we had a prestigious panel of scientists tell this committee that increasing greenhouse gas emissions increases the risk associated with global warming. According to EPA modeling, the Clear Skies approach will result in a 13 percent increase of an additional 425 million tons in carbon dioxide emissions as compared with the base case. Do you think it makes sense for Congress to ignore the contribution of power plants to global warming?

Mayor YOUNG. Here again I am not trying to dodge your question but the Conference has not taken any position with respect to legislation that would include CO_2 as a pollutant. Here again the mayors are concerned about the addition of CO_2 and its effect on the environment, global warming and we would welcome engagement in any discussion with respect to dealing with CO_2 emissions.

Mr. PAUL. We do feel it should be addressed. Certainly if I were a CEO of a utility, going back to the issue of certainty, I would want it addressed. To the extent that one of the purposes of this bill is to provide certainty, it should address CO_2 emissions.

Ms. GARD. I think the science of global warming continues to be debatable with a number of questions. Greenhouse gases do need to be addressed, but I would suggest they need to be addressed in a different forum and move forward with three pollutant legislation which addresses emissions that have quantifiable health problems, address the carbon issue in another forum.

Senator JEFFORDS. How would you advise this committee to determine whether the value of existing provisions of the Clean Air Act are worth more in health and environmental benefits than any possible replacement provisions? What kind of information would you use? For example, the National Academy of Sciences told us about 2 weeks ago that it is unlikely that Clear Skies would result in emission limits at individual sources that are tighter than those achieved when NSR is triggered at the same source.

Mayor YOUNG. As a policymaker, I would have to weigh the benefits to health, weigh the costs to the consumer in the end, weigh what effect it would have on the attainment, my community's ability to get into attainment as quickly as possible and in a manner reasonable for the community. I would also have to look at the effect of jobs in my community, would it have a positive or negative effect on the economy. If we are in an environment where we have different States making different decisions that affect communities across the border which is the situation we are in, our environmental issues stem from a coal-fired plant across the Savannah River in South Carolina. Even though we have our early action plan, there is nothing we can do as a community or the State environmental regulators in Georgia can do to impact what goes on at a coal-fired plant in South Carolina. So to us, from my perspective as the Mayor of Augusta and as the energy chairman representing the U.S. Conference of Mayors here today, it appears the multi-pollutant approach under Clear Skies that gives us that 70 percent reduction in the three pollutants at the same time keeping energy af-

fordable, jobs in the community and improving the health benefits to us is the way to go at this time.

Senator VOINOVICH. I would appreciate it if the witnesses would try and make it as quick as you possibly can. We have exceeded our time.

Mr. PAUL. I would remind myself if I were you that a clean economy is a healthy economy and I would look for the best controls, I would look at the National Academy of Science report and use that as evidence that indeed we can do better.

Ms. GARD. The health and environmental benefits cannot be separated from the economic and the cost benefits as well. As long as we continue to debate and litigate and not move forward with well defined standards, the breathing public is going to continue to be at risk. I suggest we move forward with three pollutant legislation with achievable, affordable goals.

Senator VOINOVICH. Senator Lautenberg?

Senator LAUTENBERG. Thank you all for your testimony because one thing happens as this Senator listens, it is very clear that there are those of us who are concerned about the health effects, about what happens with global warming and are so concerned about it only because we read about what is happening in Antarctica. I have been to the South Pole 5 years ago and the diminution of the ice caps there, the reduction of the availability of fresh water, 70 percent of the fresh water available in this world was stored in the ice in Antarctica. Therefore, Mayor and each one of you, I say this with all due respect, you say the organization you are representing here today doesn't take a position on carbon dioxide, how do you feel about it personally? You are a mayor, you are concerned about the well being of your citizens. Do you think it is something we can turn a blind eye to and let it go?

Mayor YOUNG. No, and when I say we don't take a position with respect to it, I mean in the context of this legislation, we have not taken a position. Certainly mayors across this country are concerned about the effects of greenhouse emissions on our environment. We are very concerned about it and I think at the appropriate time perhaps Congress will address it not just as it pertains to one segment of our economy, not just the energy industry, but our country as a whole.

Senator LAUTENBERG. But since the energy industry is the biggest supplier of toxic emission, wouldn't this be an appropriate time to say, this is what my organization says but I really think it is a poor idea not to include it in these discussions that we are having because again, the threats are enormous. Do we want to wind up like Australia where children who go to the beach have to wear full bathing suits, hats and the incidence of melanoma is the highest among the developed countries in the world. To me it seems we should be vitally concerned about it and moving to at least acknowledge that maybe this ought to be included as soon as we can. I think it would be encouraging.

You come with a perspective, you know the business very well and you serve a good community but maybe it is hard to break ranks. We have seen that around here sometimes.

Mr. Paul, one of the things we hear about, and I note in Senator Gard's testimony the fact that we wind up with more litigation if

we don't move on with this legislation but I think if we do, it allows existing Clean Air Act programs to be abandoned and compliance deadlines extended far into the future. Won't this generate more litigation than simply implementing our current law?

Mr. PAUL. I would personally agree with you. The uncertainty that is out there right now is caused by litigation. Most of the litigation is from the utility industry. There is certainty there. If they want to meet the current laws, they could simply meet the current laws and there would go the uncertainty. I heard earlier today that within Clear Skies there are 27 different points that this person who was talking to me feels will be litigated.

Senator LAUTENBERG. So we are looking at more, not less. Senator Gard in your testimony, you say the answer, referring to the 15 years after passage of the 1990 Clean Air Act, so if the Act has worked, why do we need new multi-emission bills? The answer is litigation and uncertainty. Mr. Paul just said 30 of the lawsuits in the last 15 years against EPA have been from industry, not from the environmental community. Are the litigants people we ought to be listening to or do they want to improve the regulation of these emissions?

Ms. GARD. Yes, the people that I represent want to improve regulation of emissions. I think we feel it can be done in a much more consistent fashion by doing a three-p legislation. The Clean Air Act met the goals that were intended when it was passed a number of years ago. Economies change, technology changes, demographics change which I think means we have to go back and revisit those issues which I think Clear Skies does and provides that degree of certainty that is achievable and is affordable and will improve health standards far greater than we have seen ever before.

Senator VOINOVICH. We have a vote coming up now. We have about 7 minutes left. I don't want to keep the panel. I would like to go on and let Senator Obama ask questions and have you respond and we will recess.

Senator LAUTENBERG. And you will keep the record open?

Senator VOINOVICH. Yes, we will. Then we will excuse this panel and tell the other panel we will get back as soon as possible so we can get started.

Senator Obama.

Senator OBAMA. I will be brief.

Senator VOINOVICH. I want to thank you for sticking around.

Senator OBAMA. That is how you learn, I hear, by listening.

I think I just want to clarify a couple points. One, a point I think Senator Lautenberg was alluding to, that when we talk about the desire for consistency and predictability, a goal I think all of us share, that does not in and of itself answer the question of what kind of regulatory regime we set up. You could be very consistent with a very high standard of emission controls or you could be very consistent with no enforcement of any emissions controls. I will start with you, Mr. Mayor, is that a fair statement, that consistency and predictability in and of itself doesn't really tell us what to do, it is a good goal for us to achieve but it doesn't tell us where we set the bar?

Mayor YOUNG. You are absolutely right, Senator, but we feel through our resolution, the goals that we have asked to be met are

achievable are reasonable and are going to give us cleaner air and a healthier population and it is going to give us that 70 percent reduction.

Senator OBAMA. Fair enough but I think it is important for us to recognize that the real argument is not whether anybody wants consistency and predictability, the real argument is what are the standards when we set these things and the argument I think that State Senator Gard, and as a former State Senator, I am pleased to see you, I think the argument you are making is you feel the current clean air standards are sufficiently harsh and/or inflexible, that they compel litigation on the part of utilities and if we had a more flexible and perhaps less Draconian regime, then we'd have less litigation and the utilities would be happier. Is that a fair characterization of your point?

Mayor YOUNG. I would say what you have now are 50 different regimes enforcing it. This legislation gives you a national standard.

Senator OBAMA. My understanding from Mr. Paul is we are all in agreement, Senator Jeffords, Senator Carper, and people agree with the idea of having a national standard. The question is, what is the standard. So for me who is new to this committee, I am very mindful of the local economic concerns. I guess part of what I have to figure out is not whether I want to achieve consistency and uniformity and predictability all of which I think are good things, I want to achieve those things, but rather what kind of national standard do we set and would the national standard presented by this bill be an improvement over the system we have established under the Clean Air Act.

Mr. Paul, I am not a scientist and my understanding when I read your statement was, too protracted, not tough enough, strips away tools like new source review. That is the essence of why your organization is opposed to this bill. Is it your position that if we did nothing and kept the Clean Air Act regimen currently in place that we would see better air quality, more improvements over the next 15, 20 years than we would under this new bill or are you saying the new bill simply is not as good as what you would like to see or others in the environmental community would like to see?

Mr. PAUL. We believe that enforcement of the current Clean Air Act is preferable.

Senator OBAMA. When you say preferable, you are saying our environmental quality will be better?

Mr. PAUL. Yes. Certainty is important. The public wants certainty that the air they breathe is safe, the fish they eat are safe. Companies want certainty that when we go to them and say we want you to control to this extent that is sufficient to provide certainty, that we are not back at them 10 years from now. I think legislatures want certainty that when we say if you pass this bill, this will provide for clean air and we won't be back to you in 10 years. Those are the elements I would look for in a bill if I were you.

Senator OBAMA. Obviously I have just scratched the surface but I know we have a vote. I appreciate your giving me that time despite the fact we are rushed.

Senator VOINOVICH. The question period for these three witnesses is going to be over so we can submit questions and get answers from you. Thank you for being here today.

We will recess this hearing for the next panel. I think your group did a good job of analyzing Clear Skies. Without objection, I am going to insert in the record some memorandum that deals with some of the positions you have taken in terms of this legislation and counteract some of the things you have had to say and perhaps you might have a chance to see it in the record. I would be interested in your getting back to me about your reaction to the reaction this memo has.

Mr. PAUL. I would be very happy to do that.

[The referenced document follows:]

STAPPA / ALAPCO

STATE AND TERRITORIAL AIR POLLUTION PROGRAM ADMINISTRATORS

ASSOCIATION OF LOCAL AIR POLLUTION CONTROL OFFICIALS

S. WILLIAM BECKER
EXECUTIVE DIRECTOR

February 16, 2005

The Honorable George V. Voinovich
Chairman
Subcommittee on Clean Air, Climate Change and Nuclear Safety
Committee on Environment and Public Works
United States Senate
415 Hart Senate Office Building
Washington, DC 20510

Dear Senator Voinovich:

Thank you for inviting me to testify on behalf of the State and Territorial Air Pollution Program Administrators (STAPPA) and the Association of Local Air Pollution Control Officials (ALAPCO) before the Senate Subcommittee on Clean Air, Climate Change and Nuclear Safety at its January 26, 2005, hearing on the need for multi-emissions legislation. STAPPA and ALAPCO are nonpartisan associations of air pollution control officials with many years of experience on the front lines of the effort to produce clean air for our country. We are pleased to provide our objective analysis of the effects of various legislative proposals to assist our elected representatives in choosing options that are in the public interest.

At the end of the January 26 hearing, you provided for the record a document titled, "Analysis of the Testimony of John A. Paul"[1] and asked that STAPPA and ALAPCO provide a response to the issues raised in the document.

STAPPA and ALAPCO support the concept of a multi-pollutant approach for power plants. Our associations have adopted principles that we believe should serve as the foundation for national multi-pollutant legislation. Over the past year, we have reviewed the materials and data EPA has released on the Administration's Clear Skies proposal and have had an opportunity to review the Administration's legislative proposal for Clear Skies and S. 131 to evaluate these bills relative to our multi-pollutant principles.

[1] This document does not identify the author. For convenience, the STAPPA/ALAPCO response refers to this document as the "Analysis."

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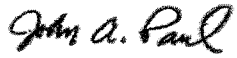
As I testified, STAPPA and ALAPCO have concluded that we cannot support the Clear Skies proposal or S. 131. These proposals fail on every one of our associations' core principles:

- The deadlines are too protracted and well beyond those by which we should be meeting health-based air quality standards.
- The caps are not tight enough. We believe the emission limits should establish the most stringent enforceable national emission reduction goals feasible and reflect BACT or better on all existing sources, and the limits in Clear Skies do not.
- We believe that there should be some minimum level of control required of each existing power plant, and under these bills there is not.
- We have tremendous concerns with the bills' repeal or deferral for many years of some of our most important Clean Air Act tools:
    - New Source Review,
    - the utility MACT rule, including non-mercury hazardous air pollutants,
    - residual risk requirements for mercury,
    - LAER, offset requirements and conformity for most areas of the country,
    - health-based attainment dates (deferred), which allow state and local governments to use SIP authorities to improve air quality, and
    - petitions under Section 126 to abate upwind sources of air pollution (deferred until 2015 or effectively repealed, as it is uncertain that it will be possible to make the demonstration the bills require).
- We are equally troubled that Clear Skies and S. 131 seriously undermine, if not entirely preempt, state and local authority to adopt SIP requirements for power plants and take SIP credit for those measures.
- Though it is critical to us that a multi-pollutant strategy protect against any adverse local health and environmental impacts, Clear Skies provides no mechanism for this and, in fact, relaxes Class I protections, eliminates some important PSD requirements in other areas and allows mercury trading without regard for local impacts.
- Finally, we believe a multi-pollutant approach must address all significant emissions from power plants, yet Clear Skies is silent on CO_2.

STAPPA and ALAPCO believe that the fundamental elements of Clear Skies and S. 131 result in a weak approach that not only will not help us meet our clean air goals, but will almost surely get in the way of our efforts. As the attached detailed response demonstrates, the Analysis you provided on January 26 fails to address the key concerns identified in my testimony and provides no reason for the weak and extended schedules in Clear Skies and S. 131 or for those bills' repeal of state and local authority to protect local air quality.

On behalf of STAPPA/ALAPCO thank you for this opportunity to participate in this important discussion on national multi-pollutant legislation.

Sincerely,



John A. Paul
ALAPCO Vice President

cc: The Honorable Thomas R. Carper
The Honorable James M. Inhofe
The Honorable James M. Jeffords

Senator VOINOVICH. Thank you very much. I appreciate you being here.

[Recess.]

Senator VOINOVICH. Senator Carper is on his way so let us get started.

Our first witness is Ronald Harper, CEO and general manager of Basin Electric Power Cooperative. Our second witness is Conrad Schneider, advocacy director, Clean Air Task Force. Our third witness is Fred Parady, manager, Environmental Services, OCI Wyoming L.P. We will start with you, Mr. Harper.

STATEMENT OF RONALD HARPER, CHIEF EXECUTIVE OFFICER AND GENERAL MANAGER, BASIN ELECTRIC POWER COOPERATIVE

Mr. HARPER. Thank you for the opportunity provided to us to participate in this hearing.

Basin Electric is a member-owned, generation and transmission cooperative located in Bismarck North Dakota. We serve the energy needs of a 120-member distribution cooperative throughout a 9-State region. Member-owned simply means we provide electricity needs to those who own us. As a cooperative, they own us.

They gave us a mission back in 1961 when Basin Electric was formed and that was to provide low cost energy and make it reliable. The visionary leaders back then selected coal to be utilized as the fuel that would fuel the generating stations we have with us today. That was 44 years ago and today we utilize not only lignite coal but also subbituminous.

When we look at the Nation's energy supply, 50 percent of the Nation's energy is supplied by coal and we think that is very important. It is important with respect that we have the continued ability to burn coal in this country, not only from Basin's perspective, but the economy as a whole. We think it is critically important. It not only enhances our energy independence which I know is a great focus of this Congress as well as providing security for that energy independence.

I want to talk about three points. I heard the chairman say earlier that our testimonies would be included in the record, so I am not going to go through those. Environmentally sensitive, we think S. 131 will provide reductions greater than under the current law and we think it will provide them sooner. We look at that from the respect of the studies done by other agencies as a part of this.

We have heard a lot of talk about certainty throughout the earlier discussions. I would tell you we believe by having targets out there on SOx, NOx and mercury, does provide those targets and gives us something to shoot for, if you will. I heard a lot of discussion about legislation versus regulation and we believe if it becomes legislation, that it will remove a lot of the litigation that is currently underpinning some of the issues going on.

Senator VOINOVICH. In other words, you believe that passing legislation will remove some of the litigation in that the litigation is based on regulations?

Mr. HARPER. Yes, sir. I think as we look at the litigation currently, it is really coming about because there are questions as to

how regulations are being applied. Again, it provides us with certainty and will help in our planning efforts.

Last, flexibility gives us options on how to meet the goals with a target set forth under this legislation. It will allow us to look at all forms of technology and to install the appropriate technology or in this case, take advantage of the cap and trade program that has been utilized for many years under the Acid Rain Program and I think is a good tool that could be reviewed. Common sense decisionmaking will also help us to meet that end game.

I want to close by saying that when Basin Electric looks at the proposal of Clear Skies, we support it, we think it gives us that certainty and that flexibility. We also recognize it will be expensive. As I take you back to our mission of providing low cost and reliable energy, that will not come without its challenges but we think it is in the long term the best thing for us to do as an organization as well as the best thing for us to do as a Nation.

Again, thank you for allowing us to come forward and offer testimony. We look forward to working with you and the subcommittee as this process moves forward.

Senator VOINOVICH. Thank you, Mr. Harper.

Mr. Schneider.

STATEMENT OF CONRAD G. SCHNEIDER, ADVOCACY DIRECTOR, CLEAN AIR TASK FORCE

Mr. SCHNEIDER. Thank you. My name is Conrad Schneider. I am the Advocacy Director of the Clean Air Task Force. The Task Force has supported multi-pollutant legislation since we were founded in 1996. We appreciate the opportunity to testify here on the Clear Skies bill.

In our advocacy we represent a host of national, State and local environmental groups including ones in your State and today in addition to our own, I am representing the views of Clear the Air, the National Environmental Trust and also the U.S. Public Interest Research Group.

Why are we here? We are here because power plant pollution is the single greatest contributor to our Nation's air pollution problems, whether death and disease from soot and smog, acid rain, mercury contamination in fish, hazy vistas in our national parks or the threat of global warming. No other source rivals power plants as the cause of a variety of so many serious problems.

We have principals too with respect to how we judge this legislation. Our first principle is do no harm. We should strengthen and not weaken the Clean Air Act. Second, we should begin to address global warming through mandatory emission limits. The so-called Clear Skies Act does neither. We are here to urge that you oppose it. Clear Skies will lock us into a path that guarantees that we will never solve these problems. That is because Clear Skies trades weak, delayed pollution caps in exchange for the repeal of most of our current clean air safeguards and misses a crucial opportunity to begin to deal with global warming.

First, the Clear Skies bill offers only half measures compared to the requirements of current law. It offers pollution reductions that are too little, too late to meet our Nation's clean air objectives. EPA's own analysis demonstrates that the reductions are not fully

effective until 2025 or later. At the same time, Clear Skies would jettison most of the current clean air requirements for power plants, thereby making further progress with this sector impossible.

Specifically, Clear Skies repeals or undercuts title limits on new power plants, requirements that plants meet modern pollution standards when they upgrade their facilities and protections from air toxic risk. With the introduction yesterday of the latest version of the bill, we can see it seems to be a Trojan horse for a broader dismantling of the Clean Air Act. Clear Skies, in our view, would function much as a computer worm sabotaging the inner workings of the Act and nullifying its effectiveness. Most insidiously, Clear Skies would delay from 2010 to 2015 the date by which most areas have to meet health-based air quality standards. EPA has calculated that attainment of the fine particle standard alone would save an estimated 15,000 lives per year. That 5-year delay would mean 75,000 unnecessary premature deaths.

Clear Skies fails to address the threat posed by global warming from the world's single largest source of carbon dioxide, the U.S. power industry which was responsible for 10 percent of the world's CO_2. In fact, Clear Skies locks the power sector into a path of increasing carbon dioxide emissions for the foreseeable future.

It need not be that way. American Electric Power and Synergy very recently described workable programs that could begin to manage carbon pollution without economic dislocation, shifting energy mix from coal to gas or excessive increases in electricity bills for consumers. Similarly, the bipartisan National Commission on Energy Policy recommended mandatory limits on carbon and this was endorsed by the United Mine Workers. Congress should not pass multi-pollutant legislation unless carbon dioxide is part of it.

Fortunately, we are not stuck with a choice between Clear Skies on the one hand and no progress on power plant pollution on the other. The EPA Administrator has on his desk right now three rules that could yield substantial progress in cleaning the air without damaging the underlying Clean Air Act. First, the Clean Air Interstate Rule that addresses soot and smog in the east could if strengthened represent a major step forward. The Pending Clean Air in the Parks rule could address these pollutants in the West. Likewise, EPA has pending before it a regulation to control hazardous air pollutants from power plants including mercury. The weight of the evidence supports a 90 percent reduction.

Legislating on this issue at this time would be premature when the Administrator with the stroke of a pen could finalize strong power plant rules which together would provide a multi-pollutant approach. Right now the caps in Clear Skies and those regulations mirror each other. Given this, one must conclude that the major impetus for this legislation at this time is to ensure that those caps are coupled with the statutory rollbacks in this bill. In fact, the biggest selling point today for Clear Skies is its offer of regulatory certainty for polluters. It is hard to imagine how we could have certainty without CO_2 but even with respect to litigation, here is the bill. It is 250 pages long and although it was released yesterday, a preliminary read does find they would require the EPA Adminis-

trator to make no fewer than 27 separate findings and regulations, most or all of which could be challenged by litigation.

What certainty does that offer for breathers, people who want to eat fish without fear of contamination from mercury or want to see the view when they go to the national parks? Clear Skies offers only the certainty of failure because it fails to achieve sufficient cuts in pollution to solve these problems on the one hand but eliminates the Clean Air Act's tools to solve them on the other.

Let me walk you through a few slides to demonstrate this last point with respect to the certainty of failure. The first map is the risk of mortality from power plants in the United States. According to EPA's own methodology, 24,000 peoples' lives are cut short every year because of power plant pollution. This slide is under the Clean Power Act where 22,000 of those lives could be saved. This is Clear Skies. Take a look at that picture because that is all we will ever get from power plants. That level of mortality risk will remain because Clear Skies puts the power industry in the safe harbor. We can't get additional reductions from the power sector if Clear Skies passes.

Similarly this is the map of nonattainment areas in the United States, in 2010, the data by which States have to reach attainment under Clear Skies. The only way to get this red out because we can't touch the power plants, is to go after other sources, local businesses, drivers, diesels, et cetera, sources that are less cost effective. Power plant pollution is the low hanging fruit.

Senator VOINOVICH. Mr. Schneider, could you move on, we are over your time.

Mr. SCHNEIDER. Clear Skies precludes us from being able to go after further cuts.

Similarly for mercury, only 20 percent of the watersheds in the United States would see any improvement under Clear Skies, 80 percent new improvement. Acid rain, Hubbard, Brook and researchers at Syracuse University have found nothing short of an 80 percent reduction would allow biological recovery in the Adirondacks and New Hampshire's damaged ecosystems before mid-century. Because Clear Skies doesn't get you there, that problem isn't solved because you can't go back after power plants.

Look at these two slides. This is Acadia National Park in my home State of Maine. This is the great Smokey Mountains. In the upper right hand corner of each chart is the improvement under Clear Skies. It is almost no different from a current polluted day. Whereas when we go to a national park, it is the bottom picture that we are there to see. This picture can't get any better because even though further reductions would be required to clear the air there, you can't get them under Clear Skies.

Last, Clear Skies locks in a path of every increasing CO_2 emissions because if it passes, it is going to be very difficult to go back and address the fourth P after the first three P's have been addressed.

Senator VOINOVICH. Thank you very much.

Mr. SCHNEIDER. In conclusion, let me say we would urge members to oppose Clear Skies. Thank you for the opportunity.

Senator VOINOVICH. Thank you.

Mr. Parady.

STATEMENT OF FRED PARADY, MANAGER, ENVIRONMENTAL SERVICES, OCI WYOMING, L.P., ON BEHALF OF THE NATIONAL ASSOCIATION OF MANUFACTURERS

Mr. PARADY. My name is Fred Parady and I am manager of Environmental Services for OCI Wyoming. Since 1962, we have operated a 4 million ton per year underground trona mine and a 2.3 million ton per year soda ash refinery located near Green River, Wyoming. Two of our customers are a glass plant in Toledo, OH and a television tube manufacturer in Columbus, OH, so we are connected to your State as well.

As you are undoubtedly aware, I speak today on behalf of the National Association of Manufacturers in support of the Clear Skies Act of 2005. As I am sure you know, NAM is the Nation's largest industrial trade association representing small and large manufacturers in every industrial sector in all 50 States. Virtually all the members of NAM use electricity as a major source of energy and for the vast majority of them, electricity is their largest energy cost. In fact, the manufacturing sector excluding electric generation uses about one-quarter of the Nation's energy including almost one-third of its natural gas and 30 percent of its electricity.

According to a recent NAM study, external overhead costs including regulation and rising energy prices add approximately 22 percent to United States manufacturers' unit labor costs, nearly $5 per work hour relative to their major foreign competitors. Therefore NAM member companies' ability to compete in the highly competitive international marketplace is directly affected by any legislation that would have a major impact on such a broadly used and insignificant input cost as electricity.

The year 2003 marked a milestone for my industry as China overtook the United States for world leadership in soda ash production for the first time in history. China has quadrupled their soda ash capacity in the last decade from less than 3 million tons per year to more than 11 million tons per year. The plain fact is you can't pass increased energy costs on to the marketplace when you face international competition.

I would like to further address energy costs for the soda ash industry. Energy price volatility for both electricity and natural gas are causing the soda ash industry to lose its ability to reinvest. Natural gas price volatility and annual rate increases from our electrical utility are forcing our site to consider retrofitting our calsigners to coal. The Clear Skies initiative would strengthen our ability to pursue this project thus assuring both investment and long term energy price stability.

Returning to the general energy picture in the United States, should the maze of current clean air requirements and the litigation that inevitably results add uncertainty and delay, they have the effect of forcing electric utilities to switch from coal to natural gas. The consequences to industry and to the general public are devastating and they have already had a significant impact. The 66 percent increase in natural gas volume used to generate electricity since 1990 has contributed to the high cost of natural gas which has had an adverse impact on the manufacturing sector since mid-2000.

Senator, my own company in January 2001 when gas prices spiked, our small plant lost $4 million in 4 weeks. That is hard to bear with a 400-employee operation.

Senator VOINOVICH. When was that again?

Mr. PARADY. In January 2001 when natural gas prices spiked, our small plant lost $4 million in 4 weeks. That is hard to bear with a 400-employee operation.

The chemical industry has gone from the lead net export industry of the United States to a net importer of chemicals. Other industries including plastics, aluminum, steel, soda ash, metal, heat treating glass and paper are struggling to stay afloat in the current natural gas cost environment. Unless there is a rational investment future for coal fuel electrical generation, crude and electricity providers will continue to build units using natural gas or restart many of the idled natural gas units currently not operating because of high natural gas prices.

Business as usual under the current archaeological pile of Clean Air Act provisions and regulations which are almost 35 years old is an unacceptable alternative. These overlapping, conflicting, burdensome single emission provisions of the existing Clean Air Act will continue to result in significant uncertainty, delays for legal challenges, short planning and construction time periods and ultimately higher electric costs and unstable natural gas markets.

Specifically, NAM believes that the Clear Skies Act that is consistent with the following principles provides the best opportunity to make further progress. First, the Clear Skies Act must remain a three emission bill, sulfur dioxide, nitrogen oxide and mercury. NAM does not believe it is appropriate to include carbon dioxide provisions in the legislation since CO_2 is not a pollutant, is not regulated, nor required to be regulated under the Clean Air Act. More importantly, NAM strongly opposes any legislative proposal that would establish CO_2 mandates. We urge the committee to avoid encumbering this vital legislation with such controversy.

Second, the Clear Skies Act should not extend its mandates to either current or future industrial boilers or non-utility combined heat and power systems, CHP systems, but should provide such industrial units the opportunity to voluntarily opt into the benefits and obligations of the cap and trade program.

Finally, the Clear Skies Act must support the continued and increased use of coal for electric power generation.

Mr. Chairman, NAM is particularly concerned about mercury emission levels that would be part of final Clear Skies legislation. Significant reductions of mercury will occur under the bill's current Phase I caps for SOx and NOx. Going beyond this level control to soon would force the premature closing of many existing coal-fired power plants in favor of new natural gas facilities further straining already limited natural gas supplies.

In summary, NAM strongly supports the Clear Skies Act as a way to avoid excessive energy costs while mandating future dramatic reductions in SO_2, NOx and mercury.

Senator VOINOVICH. Thank you very much.

I will begin the round of questions. It will be 5 minutes for each of the Senators.

Mr. Harper, we heard today some claims that Clear Skies requires no more reductions in the existing Clean Air Act. You state it will have significant financial impact. Can you go into greater detail on this point? If that truly is the case, why do you support the bill? I think a lot of people feel if this passes, somehow people are going to get a break. I would like you to go into that because that is not my understanding from our utilities who have indicated they are willing to make investments but also point out it is going to cost the ratepayers more money.

Mr. HARPER. As I have had to step back and take a look at it, I listen to my staff debate the issues. I have people at the plants that know how to run plants who come up with new ideas and thoughts about how to improve efficiencies and then we go to our environmental and legal people and say who can't do it because of concern over NSR, not because that is a bad thing but the clarity is what I am seeing. I am advised the 70 percent reduction in NOx, SOx and mercury is going to be a tremendous benefit to this country. That will give us targets to shoot at. Looking at the history, when given targets we have proven the fact that we can obtain those. Again, all I am asking for in this whole process is certainty.

The expense of, for instance, a scrubber in today's technology I am advised is roughly $230 million. You don't put that thing on overnight. My engineers tell me that it takes 3 to 4 years once you make the decision to go with that installation. On top of that, you also then have the funding issues. For instance, the cooperatives are able to get funding through the Rural Utility Service and in some cases that can take as much as 1 to 2 years to get that. So when you start looking at things, time is money and we could be looking at anywhere from four to 5 to 6 years before you could ever get a scrubber installed. That is really what I am talking about. Give us the targets and enough time to go out there and develop the technology and so on to achieve them and we will go from there.

Senator VOINOVICH. You described the Clean Air Act as actually preventing you from making improvement that would reduce energy emissions?

Mr. HARPER. That is the example that I was explaining.

Senator VOINOVICH. It is the uncertainty of what this is all about.

Mr. HARPER. Yes.

Senator VOINOVICH. Mr. Schneider, contrary to your testimony the Energy Information Administration has found because of their CO_2 emission cap levels, the shifts away from coal toward natural gas are projected to be much larger under the Carper-Jeffords bills. "Natural gas generation is projected to be from 4.4 to 6.3 and 22.4 to 22.7 percent higher in 2010 and 2025 respectively in Senator Carper's legislation. Electricity prices under Senator Carper's bill are expected to increase twice as much as prices estimated under Clear Skies in 2025." The Jeffords bill is much worse. These facts lead me to believe that you want to get rid of coal. On September 17, 2004, Albert Kohl, staff lawyer with the Sierra Legal Defense Fund, said in general, "Our long term objective is to make sure that coal-fired plants get closed. Eventually with enough attacks against coal-fired plants, there will be action to shut them down."

Do you agree with the Sierra Club's lawyer on this issue, that we ought to get rid of coal?

Mr. SCHNEIDER. Getting rid of coal is not the Clean Air Task Force's long term goal. Cleaning up the air and protecting the climate is our goal. That is the principle that we follow and we think it is a false choice to pose the notion that coal and clean air or coal and a healthy climate are incompatible. We have provided briefings to this body and on the Hill to try to demonstrate there are clean coal technologies so-called that allow for coal to be gasified, burned and the CO_2 sequestered in such ways that would allow coal to meet our energy needs going forward but also being compatible with the Clean Air objectives that we have enunciated.

Senator VOINOVICH. You mentioned American Electric Power and Synergy is going forward with integrated gas combined cycle facilities but they both are very, very strongly in favor of our Clear Skies legislation because they say the current situation today is unwieldy. We don't know where we are, we have new source review, we have 126 petitions, we feel we are flying in a plane with all kinds of flak up there and we don't know when we are going to get hit and we want some clarity on this and we are willing to go forward with it.

Mr. SCHNEIDER. I understand they said to their shareholders part of that clarity could include from their perspective reasonable carbon dioxide controls and their analysis showed they could meet reasonable goals without economic dislocation to their companies, their shareholders, their ratepayers or without the impact as you described. I think, Senator Voinovich, you ordered a look at what it would cost and the energy mix ramifications from a 2008 cap along with Senator Smith at that time and Brombeck and determined the same thing that it is possible to meet the President's objections about CO_2 with respect to fuel shifting and cost but nevertheless get started on CO_2 controls.

Senator VOINOVICH. Senator Carper.

Senator CARPER. Thanks to our witnesses for joining us.

EPA year or two ago actually looked at the Jeffords bill, the Administration's bill and a bipartisan proposal and looked at the amount of shifting you would find under either bill, shifting from coal to natural gas. I think they found there would be reduction under our proposal of maybe 50 to 48 percent in terms of coal being used for electricity generation.

In terms of cost, I think they estimated the cost per kilowatt hour of our bill fully implemented of about a cent and a half per kilowatt hour. I think they said the cost in our utility bills each month would be less than $1.50 a month.

I was born in West Virginia. My family are generations of coal miners if you go back far enough and I don't want to do anything to hurt the coal industry and am very much interested in what Mr. Schneider said about coal gasification. Why don't we have more utility companies investing the money for coal gasification operations? Why is that? It has been around for a long time, the technology is there.

Mr. SCHNEIDER. The fastest way to get them to invest would be to set hard limits on carbon dioxide especially when we are on the verge in this country of building a lot of new coal plants. We track

the proposed coal plants around the country. Our feeling is if we are going to begin to turn the great freighter of CO_2 emissions increases, the last thing we need to do is build more conventional coal plants that are going to continue to emit CO_2 into the air when we have the opportunity to build coal plants that don't. Probably one of the things standing in the way of IGCC development, one of the major signals that could help that would be to send a signal that carbon has a value. It is a negative value with respect to the health of the planet but a positive value with respect to the dollars. If we did that, I think you would start to see depending on the levels, more development in that direction. That probably should be part of the consideration of any bill of this type.

Senator CARPER. Let me turn to new source review. Critics of the Administration's proposal say that the Administration would largely gut or eliminate new source review. Critics of Senator Jeffords' proposal say it makes almost no changes in new source review. Senators Alexander and Gregg and Chafee and I have sought to see if there is a third way, somewhere in between basically status quo and find a third way. What might be that third way with respect to new source review even if you are wedded to one of the other approaches?

Mr. SCHNEIDER. As I said, we judge these proposals based on principles but the two principles are we would seek to strengthen not weaken the Clean Air Act and seek to make sure that we begin the process of regulating carbon. We look to what the Clean Air Act would achieve, we are one of those organizations that tries to make sure the letter of the law is followed because we believe that was the intent of Congress when it passed legislation.

In my spare time I teach a course at Boden College in environmental law and policy. I explain to my students that there are different regimes of environmental regulation including one called command and control, one called market mechanisms but sometimes known as cap and trade. The proponents of using market mechanisms or cap and trade generally defend that view by saying they can do more faster, cheaper than under a command and control situation which I think is the way many would characterize the patch work of regulations we have currently under the Clean Air Act.

The starting place for the debate should be what we are getting now, what does the letter of the law require and how can we use the cap and trade to go further faster, cheaper, not half as far or not three quarters as far. When we see the different proposals, we judge them first and foremost on the basis of the stringency of the reduction requirements. We find that the Clean Air Planning Act does not go as far as current law and therefore are reluctant to want to give up a tool such as the new source review provisions that allow us to drive continuous progress in clean air.

Senator CARPER. My question is whether you like the status quo or like the Administration's proposal, if you had to help us craft a third way, a middle ground, what might that be?

Mr. HARPER. I would like to give that one some more thought.

Senator CARPER. Come back to us in writing.

Mr. HARPER. I heard a lot of discussion this morning as each of you were giving your overviews about collaborative processes and I think that would be one of those.

Senator CARPER. Mr. Parady, briefly if you could respond?

Mr. PARADY. I think NSR is a flat concept and it compares current actual emissions to potential emissions and would be a more sound public policy basis to either compare actual to actual or permit to permit.

Senator CARPER. Thank you. I would look forward to your written response. Mr. Schneider, if you want to add to what you said, I would welcome that as well.

Senator VOINOVICH. Senator Jeffords.

Senator JEFFORDS. I ask unanimous consent to enter into the record some statements, articles and written materials from the League of Women Voters, the National Conference of State Legislatures, the CNN, the Northeast States Air Quality Managers, the American Academy of Pediatrics, the American Lung Association, a chart comparing the various multi-pollutant approaches, the Guardian Newspaper and the Maryland House of Delegates.

[The referenced document from the Maryland House of Delegates follows:]

Health and Government Operations Committee
Chairman
Public Health Subcommittee
Health Occupations Subcommittee
Minority Health Disparities Subcommittee
Joint Committee on Children, Youth, and Families
Joint Committee on Federal Relations
Children's Environmental Health and Protection Advisory Council of Maryland
Scientific Advisory Committee for the Mid-Atlantic Center for Children's Health and the Environment
Centers for Disease Control & Prevention Public Policy Advisory Committee
Chesapeake Bay Commission
National Conference of State Legislatures
Chairman
Environment & Natural Resources Committee
President's Committee on Mental Retardation

The Maryland House of Delegates
ANNAPOLIS, MARYLAND 21401-1991
JAMES W. HUBBARD

Legislative District 23-A
Prince George's County
County Affairs Committee
Chair Education Subcommittee
Delegation Liaison to the Prince George's County Board of Education

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January 25, 2005

Hon. George V. Voinovich, Chair
Subcommittee on Clean Air, Wetlands & Climate Change
Senate Environment & Public Works Committee
410 Dirksen Senate Office Bldg.
Washington, DC 20510-6175

Dear Chairman Voinovich,

I am a Delegate in the Maryland General Assembly and current chair of the National Conference of State Legislatures' Environment and Natural Resources Committee. My colleagues from around the country and I are aware that you will soon be conducting hearings on amendments to the Clean Air Act. As you consider amendments to this vital statute, we hope you will take into account our concerns as state legislators.

We urge you and your committee to not weaken the existing Clean Air Act. This law is working and with more aggressive enforcement can achieve cleaner, healthier air sooner.

We encourage you to expand the authority of states to deal effectively with all sources of pollution including vessels, locomotives, and aircraft or in the alternative set a deadline for the United States Environmental Protection Agency to set emissions standards for those sources at least as stringent as have been established for motor vehicles and off-road heavy duty engines. Federal preemption of our authority to regulate these significant pollution sources has meant that we are not able to require the reductions needed to achieve air quality standards.

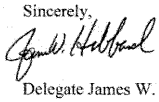
It is essential that Congress also preserve and enhance the authority of downwind states to act against pollution from up-wind states which is contributing to air quality standards exceedances. And the existing law requirement that new investment in old plants which increases pollution emissions be accompanied with new pollution controls needs to be preserved.

The Clean Air Act works and it would work better with strengthened Federal authority to protect public health from air pollution while enhancing state authority to adopt tougher standards or to enforce clean air rules.

In this regard, the attached National Conference of State Legislatures policy on New Source Review and on air quality is instructive. Any reforms to New Source Review should be made "without weakening the requirements intended to reduce emissions from new or modified sources of air pollution…" And any other changes in the law should preserve and expand state authority currently protected in Section 116 of the Act.

Thank you very much for taking into account our concerns.

Sincerely,



Delegate James W. Hubbard

Honorable Beth Kerttula
Alaska House of Representatives

Honorable Sam Ledbetter
Arkansas House of Representatives

Honorable Fran Pavley
California Assembly

Honorable Tom Plant
Colorado House of Representatives

Honorable Harris McDowell, III
Delaware Senate

Honorable Nan Grogan Orrock
Georgia House of Representatives

Honorable Hermina M. Morita
Chair, House Committee on Energy & Environmental Protection
Hawaii House of Representative

Honorable Lawrence Bliss
Chair, Committee on Utilities & Energy
Maine House of Representatives

Honorable Sharon Grosfeld
Maryland Senate

Honorable Elizabeth Bobo
Maryland General Assembly

Honorable Matthew C. Patrick
Massachusetts House of Representatives

Honorable Raymond E. Basham
Michigan Senate

Honorable Liz Brater
Michigan Senate

Honorable Ellen Anderson
Minnesota Senate

Honorable Alice Hausman
Minnesota House of Representatives

Honorable Aaron Peterson
Minnesota House of Representatives

Honorable Deborah Dawkins
Mississippi Senate

Honorable Patrick Dougherty
Missouri Senate

Honorable Jenée Lowe
Missouri House of Representatives

Honorable Sue Dickenson
Montana House of Representatives

Honorable Don Preister
Nebraska Senate

Honorable Reed Gusciora
New Jersey General Assembly

Honorable Mimi Stewart
New Mexico House of Representatives

Honorable Richard Brodsky
New York Assembly

Honorable Joe Hackney
House Majority Leader
North Carolina House of Representatives

Honorable Bob Hagan
Ohio Senate

Honorable Jackie Dingfelder
Oregon House of Representatives

Honorable David Levdansky
Pennsylvania House of Representatives

Honorable Peter Ginaitt
Chair, House Committee on
Environment and Natural Resources
Rhode Island General Assembly

Honorable David Zuckerman
Chair, House Agriculture Committee
Vermont House of Representatives

Honorable James H. Dillard, II
Virginia General Assembly

Honorable Sam Hunt
Washington House of Representatives

Honorable Mark Miller
Wisconsin Senate

STATEMENTS OF THE NATIONAL CONFERENCE OF STATE LEGISLATURES*

NEW SOURCE REVIEW (NSR) PROGRAM

(Joint policy with Energy and Electric Utilities)

The National Conference of State Legislatures (NCSL) urges the Environmental Protection Agency (EPA) to reform the NSR program to achieve improvements that enhance the environment and increase production capacity, while encouraging efficiency, fuel diversity and the use of resources without weakening the requirements intended to reduce emissions from new or modified sources of air pollution. Routine maintenance, repair or replacement activities which are not major modifications should not trigger NSR requirements.

July 2005

AIR QUALITY

The Clean Air Act Implementation

The National Conference of State Legislatures (NCSL) supports the goals embodied in the Clean Air Act Amendments of 1990 (CAAA). The CAAA represent a major step toward addressing important environmental, air quality, and public health issues. NCSL fully supports CAAA goals and urges the U.S. Environmental Protection Agency (EPA) to proceed diligently with full implementation of the law to achieve clean air for our citizens. It is essential that Congress and the EPA fulfill their responsibilities to facilitate implementation by the states.

NCSL makes the following recommendations:

• Implementation of the CAAA is the responsibility of the states, who have a wealth of experience in implementing control programs. NCSL encourages Congress and the EPA to pay particular attention to the voices of that state expertise and experience.

• Communication with state legislators is of utmost importance because only state legislators can enact enabling legislation for state programs and appropriate state funds. Congress and the EPA should regularly and directly work with state legislators during federal action on air quality issues.

• EPA should work closely with states to ensure states have all regulations, technical assistance and funding necessary for compliance.

• Federal grants authorized under the CAAA provide financial resources to the states for development and implementation of air quality programs and other clean air responsibilities. Congress and the EPA must ensure that states continue to receive adequate funding to cover all costs of program management including monitoring.

• Because the states have existing air pollution control programs to administer with current federal funding, any new air quality programs or responsibilities mandated by Congress or EPA should be accompanied by additional federal funding.

• The CAAA contain many sweeping and general mandates which will involve the exercise of broad discretion and interpretation by the EPA for their implementation. NCSL urges EPA to provide as much administrative flexibility as the law allows in order to achieve clean air goals in the most cost effective and efficient manner.

• Cost-effectiveness should be permitted as a factor in state selection of transportation control measures and emissions control strategies.

• Numerous sections of the CAAA require the EPA to develop regulations and technical guidance for the states to follow in their implementation process. The regulations and guidance are essential to state efforts to implement complete and adequate state programs that fully comply with the CAAA. Often the EPA is very late in publishing regulations and technical guidance for state programs and responsibilities. Such delays leave little or no time between the publication of the documents and the statutory deadlines for state compliance. NCSL urges EPA to meet all deadlines for publication of documents required under the CAAA. NCSL urges Congress to amend the law to replace statutory deadlines for state action with language that provides a specific time period for state compliance after document publication.

• EPA should provide training opportunities for states to help develop the skills and understanding needed to properly implement the CAAA. In addition, EPA should provide informational resources to help the public understand its role in achieving CAAA goals.

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*Statements taken from National Conference of State Legislatures' Web site *http://www.ncsl.org/statefed/environ.htm*

• To address ozone nonattainment problems, the CAAA require significant nitrogen oxide (NOx) and volatile organic compound (VOC) emission reductions to be obtained from both stationary and mobile sources. Since any reductions that are not obtained from mobile sources must be obtained from stationary sources, Congress and EPA should take maximum advantage of tools and strategies to reduce emissions from mobile sources including but not limited to promoting alternative fuels and encouraging strict exhaust standards for light duty vehicles.

• Federal highway legislation should be made consistent with CAAA objectives. The EPA and the Department of Transportation (DOT) should work together to ensure coordination of federal policy.

• NCSL urges the adoption of national energy, transportation and other policy that emphasizes energy conservation in order to help achieve the goals of the CAAA. This should include strengthening of emission standards for automobiles as technologies improve, more energy-efficient lighting, buildings, and transportation, and more research and use of alternative forms of energy.

• NCSL urges the federal government to expeditiously apply the same CAAA requirements to federal facilities and motor vehicle fleets that are required for state facilities and fleets.

SANCTIONS

• States should not be sanctioned for non-compliance if state's failure to comply was the result of EPA's failure to adhere to CAAA deadlines for promulgation of regulations or technical guidance that provide details and requirements of state programs.

• EPA should have the authority to waive sanctions on states that EPA determines are making reasonable good faith efforts to comply with CAAA requirements and deadlines.

MOTOR VEHICLE INSPECTION AND MAINTENANCE

• States should be granted flexibility to design inspection and maintenance (I/M) programs that achieve air quality targets and should receive full credit for emissions reductions those programs achieve.

• Congress and EPA should not require the states to use specific I/M technologies. Such rigid federal requirements may fail to account for technological advances in emissions testing programs and equipment.

LOW EMISSION VEHICLES AND ZERO EMISSION VEHICLES

• EPA should maintain national Low Emission Vehicle (LEV) standards, referred to as the 49-state car, that are stricter than the law requires. States should be allowed, but not required, to adopt Zero Emission Vehicles (ZEV) requirements.

TRANSPORTATION CONFORMITY WITH STATE AIR QUALITY PLANS

• NCSL supports the principles underlying transportation conformity provisions of the Clean Air Act that requires new or revised state transportation implementation plans (TIPs) to conform to the purpose of state air quality plans, also referred to as state implementation plans (SIPs).

• Adequate funding should be made available to cover the cost of the resource-intensive requirements for development, revision and implementation of conforming TIPs.

• In evaluating the emissions budgets submitted by states, EPA should ensure state flexibility in balancing the burden of reduction among all air pollution sources.

• Conformity requirements should be limited to nonattainment areas and areas at risk of becoming nonattainment.

July 2006

Senator VOINOVICH. The guardian from London or from where?

Senator JEFFORDS. London.

Do you believe that the Administration has a legal authority under the current Clean Air Act to issue the Clean Air Interstate Rule?

Mr. HARPER. I am not an attorney and I truly have not paid a great deal of attention if you will to the CARE rule because it does not have a direct impact upon our organization. So I really could not answer that question.

Mr. SCHNEIDER. EPA has the legal authority to issue the CARE rule and they have said most recently that they plan to sign it on March 15 along with the mercury rule and the parks protection rule. They are intimately related to each other and earlier I suggested it would be premature for this body to legislate before we have seen the results of those rules.

Mr. PARADY. Yes, I think the Administration has that authority. However, I believe it would lead to quite a substantial cycle of litigation and I prefer legislation to litigation.

Senator JEFFORDS. A couple years ago, we had a prestigious panel of scientists tell this committee that increasing greenhouse gas emissions increases the risk associated with global warming. According to EPA modeling, the Clear Skies approach will result in a 13 percent increase or an additional 425 million tons of carbon dioxide emissions compared to the base case. Do you think it makes sense for Congress to ignore the contribution of power plants to global warming?

Mr. HARPER. As I look at this bill, it is a utility bill and it is addressing three important issues, SOx, NOx and mercury. If you want to bring in the issue of CO_2 and we are truly as a Nation interested in looking at that, I think you have to broaden the scope. I would encourage us as you heard earlier this morning to move forward and take an opportunity we have before us and getting the 70 percent reduction in those three areas and at a later date, let us talk about CO_2.

Mr. SCHNEIDER. The U.S. power industry is the single largest contributor to CO_2 emissions in the world, it makes 10 percent of the world's CO_2 emissions. The global warming issue cannot be addressed without addressing the emissions from this industry. You have an opportunity here when you are discussing multi-pollutant legislation to change the law to be able to include all of the potential regulatory decisions that an industry is going to face at once rather than making them piecemeal and one at a time. That is why I think we all in general support the idea of a multi-pollutant approach. Why would it make sense if you are going to legislate to do three and then one where investment decisions are going to be made to comply with the three which may be inconsistent with a policy that includes the fourth pollutant, CO_2.

We would very much support and believe any multi-pollutant legislation passed in Congress should include CO_2 provisions.

Mr. PARADY. I would like to flip Mr. Schneider's argument. If power plants represent 10 percent, United States power plants represent 10 percent of the world emissions, that means that 90 percent of those emissions aren't affected by this legislation so the core of the matter, you are putting at risk the core of America's industrial infrastructure and backbone and yet you only have the tiniest portion of the tail of the dog. We all know there are strongly held views on global warming, what causes it and what should be done about it.

I am deeply concerned that regulating CO_2 emissions because of multi-pollutant legislation would lead to greater use of natural gas to generate electricity which is going to drive up energy prices in the United States, drive up manufacturing costs and drive jobs off-

shore. It is that straightforward and that is exactly what has happened in our operation.

I also believe that regulating CO_2 in multi-pollutant legislation will lead to a political impasse that will jeopardize passage of this bill which directly addresses three key pollutants I think every person on your committee and every testifier you have had before you supports the reduction in those three major pollutants.

Senator VOINOVICH. Your time is up.

It is interesting that we have had 23 hearings on multi-emissions legislation. I wonder are we in the real world. We are in the fourth world war, we are fighting extreme Muslim fundamentalists which is a whole new deal for us and how we deal with that when it is different from what we have ever done before. I think Americans including all of us don't understand we are in a global marketplace. If you come from a State like Ohio where you have seen the crap kicked out of manufacturing and look at the litigation, look at health care costs and energy costs and see what has happened. The answer is why have we built more energy plants? Eighty-eight percent are natural gas fired. Stupid. Why are they doing it. Why are we doing it? Drive up natural gas costs, twice what they were a couple years ago, driving jobs offshore. Four manufacturers have come to my office saying we are pulling our manufacturing out of the United States, we are going overseas, the chemical industry where we were exporters and now we are importers. It seems to me the environmental and business groups ought to sit down and talk or we are not going to have anything.

The environmental groups have to understand if we don't have the manufacturing, we are not going to have the money to invest in dealing with this. If you walk about 10 percent in the United States, do you know they are building a lot more coal-fired plants in China today. They are eating our lunch. If we don't get our act together in the next several weeks, we are going to do nothing.

For those of you in the environmental, Mr. Schneider, fine, lawsuit after lawsuit, we do nothing. For those in the business community, you don't know what you are doing so you just flounder around and we on both counts don't get anywhere. What about nothing? Say we can't come to an agreement and we can do nothing, I guarantee you as chairman of this committee, we are finished with this. We do something in the next 6 months or it is over. We will stick with what we have and let it go and you live with it, both of you.

What is your reaction? Do you want nothing, something? What?

Mr. HARPER. What I want as the CEO of my organization is ability to meet the demands and requirements of the customers that I serve. I can't do that if it takes 8 to 10 years to get a new plant online. A lot of the reasons why gas was viewed with a great deal of interest is because by the regulations you can get one online quicker. Unfortunately most of the locations that the gas turbines went in was near good transmission. They didn't have to worry about some of the transmissions issues we face. It all wraps itself around one issue, clarity, on what we are trying to get accomplished. Basin Electric owns the only commercial-scale gasification company in this Nation. We understand gasification, we are looking at gasification, trying to find all the different options out there

available to us, not being driven there but we think it is the right thing to do. We have to meet the demands of our customers. When you take the nine States our members serve, it goes from the largest surface coal mine in the United States all the way to the cattle rancher, they all need low cost energy. That is what we are trying to get them. Again, time is money. We are very interested in getting something accomplished.

Mr. SCHNEIDER. The dialog on this issue has been choked off for several years. I remember the last best chance that we had to get it together was when we were in this room 4 years ago. It was 9/11. The chairman had pulled together the stakeholders from the utility industry, governmental parties and the environmental community to try to work out something to meet all the different needs. That is the right type of process to get anywhere.

The wrong process is to come in with a bill and tell everybody it is my way or the highway. All those stakeholders drifted in Washington, DC to hunker down for the next few days and were never reassembled and never had another start at dialog. It is a very important issue. My organization was founded to deal with this issue. If people are willing to come and talk about real reductions that improve the Clean Air Act, that address climate change in a way that meets all the objections and concerns you have, that is great.

We are not interested in a conversation about a bill that rolls back the Clean Air halfway and doubles the time by which we would get clean air in this country. We are willing today any time, any place about a serious effort.

Senator VOINOVICH. I can tell you the disagreement over climate change if it is part of this legislation means it is going nowhere. If there is some compromise that could be made on climate that wouldn't cap it or do something else as an alternative to get started down the road and do some practical stuff, I think there are some people willing to look at that, even some members of the utilities. If the game is emissions or nothing, it is nothing. That ain't going to help the Adirondack Council or any of the others you talk about. The Council today supports the legislation. They say we have to get going. A couple years ago they supported it and the Clean Air Trust gave them the villain of the month award because they didn't stick to the game and go for the four pollutants. This has become politicized to beat the band. In the meantime we are not doing very much on either account, economy or in terms of the environment.

Mr. PARADY. I just wanted to note I just finished 10 years of service in the Wyoming House of Representatives finishing up as Speaker. One of the things I use in talks on this topic is that the root of the words economic and ecology is the Greek word eco or home and you have to have a prosperous economy in order to have a healthy environment. Compare our environment to conditions in China and recognize you have to be able to have people at work and generate taxes and revenue and generate investment funds necessary to achieve pollution control. That takes a balance and I think this bill represents that balance.

Senator VOINOVICH. I want to thank you for being here today. I don't think, Mr. Schneider, you should believe this is take it or leave it. Senator Carper and I have known each other a long time

and we are going to struggle to see if we can't come up with something where we can get something done and move forward, get some certainty and will work at it. To all of you, I have spent hours and hours and hours and so have a lot of us and if we can't come up with some kind of compromise on this, as far as I am concerned as chairman of the committee, it is over. We will just let you fend for yourselves. I think that is a good message to you, Mr. Schneider as a representative of the environmental groups and the National Manufacturers Association. There may have to be some changes here and there between now and then. It is either nothing or we do something. You have to decide is something better than nothing.

Thank you.

[Whereupon, at 1 o'clock p.m., the subcommittee was adjourned, to reconvene at the call of the Chair.]

[Additional statements submitted for the record follow:]

STATEMENT OF HON. BOB YOUNG, MAYOR, CITY OF AUGUSTA, GA, ON BEHALF OF U.S. CONFERENCE OF MAYORS

I am pleased to be with you today. My name is Bob Young; I am the Mayor of Augusta, Georgia. I currently serve as the Chair of the Conference of Mayor's Energy Committee and last year, I served as Chair of the Environment Committee. These positions make me at least somewhat familiar with the topic area of today's important discussion—energy and clean air.

On behalf of the Conference's President, Akron Mayor Don Plusquellic, I offer you his apologies in not being with you today. As you know, he was suppose to be here testifying but fell ill yesterday with a severe respiratory ailment. I offer his sincerest apologies in not being able to make this hearing.

The U.S. Conference of Mayors is the official, nonpartisan organization that represents cities throughout the nation through their chief elected official, the mayor.

First of all I would like to thank Senator Voinovich for not only his invitation to speak before you today but also for joining us last week during the Conference of Mayor's Winter Meeting. Your commitment, Senator, to issues such as Community Development Block Grants and unfunded mandates is greatly appreciated by the mayors of this nation.

I come before you today not as an expert in clean air policy, but as a mayor. This means that I am responsible for a wide variety of activities including: keeping my citizens safe, keeping their surrounding environment clean and attractive, making sure the roads are maintained and that the snow gets plowed. It also means doing what I can to keep and attract new jobs to the area.

When my job is boiled down, I guess that you can say that I am responsible for making my city a place that is desirable for both people and businesses to flourish. Every mayor strives to create a community that has healthy citizens with a healthy economy. And I think with some common sense, you can have both.

That is why I am here today. In order to remain competitive, this nation needs a steady, reliable, and inexpensive source of energy. However, we also need clean and healthy air.

OUTLINE OF PROBLEM

Depending upon the type of business, a number of conditions influence their decision to locate or expand in a community. Issues such as workforce availability, access to transportation hubs, and of course the costs of electricity are factors in their decisionmaking process.

Besides the cost and reliability of electricity, another factor that goes into a business location or expansion decision is a communities' attainment status.

Many communities throughout the nation have been designated as non-attainment areas for either ozone or particulate matter. I was originally suppose to be designated in nonattainment for ozone but when the final numbers came out, I was fortunately not included. Many of my other mayoral colleagues were not as lucky.

When it appeared that my city was going to be designated as nonattainment for ozone, my city volunteered for EPA's Early Action Compact. This program allows cities, counties and states to go through a series of voluntary measures to reduce air pollution that causes nonattainment. I want you to know that even though we

were fortunate to not get designated, we are still going through this voluntary program to demonstrate our commitment to clean air.

And the reasons why we are committed to clean air is not only because of the health of our citizens but it is a good business decision as well.

Many businesses won't outright admit it but privately they have said that when making a decision to locate or expand in an area, one of the things they do is to find out that community's attainment status.

If a community is in nonattainment, businesses know that to get the necessary air permits might be difficult and sometimes it just makes sense to seek out another area to build.

Both the cost of electricity and a city's attainment status puts many communities at a competitive disadvantage to attract businesses from other parts of the United States or even the world.

These factors can have a major impact on jobs and job creation. However, the mayors of this nation don't want to sacrifice public health for cheap electricity. We are looking for a fair and balanced approach that cleans our air while keeping costs down.

We are looking for common sense solutions to help us meet our attainment requirements.

As I mentioned before, many communities have been designated as nonattainment for particulate matter or ozone or both.

These communities and the states they are located in are required by the environmental protection agency to meet attainment standards between 2008 and 2015.

Programs such as CMAQ, the Congestion Mitigation Air Quality program, as well as the off-road diesel rules have been developed to assist us with our efforts. And these programs should be maintained or in the case of CMAQ, increased to further our efforts.

However, these programs are not enough. For many nonattainment communities, 40 percent of their air pollution comes from coal-fired utilities. That is a major source of pollution. We need a common-sense solution that requires these utilities to install pollution control equipment in a manner that is timely and cost-efficient.

OUR POLICY

The Conference of Mayors passed a policy resolution in 2003 calling on the federal government to address this problem.

Our policy asks that the federal government set national air emission caps under a multi-pollutant plan at levels strong enough to protect public health and the environment by substantively assisting cities in our efforts to attain the national ambient air quality standards.

We support a comprehensive and synchronized multi-pollutant, market-based program to reduce regulatory costs, maintain reliable energy at a reasonable cost for consumers, and to provide regulatory certainty to the electric power sector.

We encourage Congress to pass national legislation, which will meet the Conference of Mayors' goals by requiring power plants to reduce air emissions of sulfur dioxide, nitrogen oxides, and mercury by an average of 70 percent from 2000 levels by 2020 under a proven market-based cap and trade program.

It is my understanding, Senator that you have introduced legislation that reflects many of the concerns of Mayors. We support many of the goals of your legislation. We do need national policy to encourage utilities to reduce NOx, SO_2, and mercury by 70 percent and the utilities do need certainty to know what regulations to expect and when to expect them by.

Also, given the success of the acid rain program, we think that a multi-pollutant cap and trade program is potentially the best means of achieving success.

CONCLUSION

I want to applaud you Senator and the members of this committee for holding this hearing on this important issue. The Mayors are pleased that Congress recognizes that power plant emissions are a major source of pollution in our nation, often preventing cities from reaching clean air goals.

The Mayors look forward to working with the committee on legislation that will improve air quality for our nation's cities.

For the nation's mayors, we need as many tools as possible to assist us with our efforts to have reliable and inexpensive energy while meeting our attainment standards and providing our citizens with healthy air.

A national policy is needed to deal with air pollution from utilities. We are asking Congress to address this issue at the national level while at the same time asking

them not take away our ability at the state and local level to implement what may be needed on a more localized basis.

Thank you again for your efforts. I look forward to working with you and the other members of this committee on this important topic.

RESPONSE BY MAYOR BOB YOUNG TO ADDITIONAL QUESTION BY SENATOR VOINOVICH

Question. Several members of the Committee have proposed multi-emissions bills. The Energy Information Administration analyzed the bills proposed by Senators Jeffords, Carper, and Inhofe and found that electricity and natural gas costs are substantially higher in the Jeffords and Carper bills compared to the Inhofe Clear Skies bill. In terms of your city—and cities across the country—what would be the impact of increased electricity and gas costs on businesses? What about those on fixed incomes?

Response. The impact of increased electricity and natural gas costs on businesses as well as those with fixed incomes would have far-reaching consequences. The United States needs a reliable, inexpensive source of energy for both businesses and for people with fixed incomes. Energy costs are just one of the factors that cities and counties need to keep in mind in order to remain competitive for jobs. High energy costs also have the possibility of driving businesses away from a community in favor of other markets throughout the nation or in other parts of the world. However, as I mentioned in the testimony, there needs to be a delicate balance between inexpensive energy and public health and the subsequent costs. It is important to keep energy affordable and clean so that there doesn't need to be a choice between jobs and public health.

RESPONSES BY MAYOR BOB YOUNG TO ADDITIONAL QUESTIONS FROM SENATOR JEFFORDS

Question 1. According to the U.S. Conference of Mayors 2002 resolution, which has not been revised or reversed, the Mayors' position is that until any new programs have been proven over time to be as protective as current Clean Air Act programs, they encourage EPA and Congress to keep those programs in place, with multi-pollutant legislation as an addition to current clean air law. Obviously, S. 131, the Clear Skies Act of 2005, as well as its predecessors, S. 1844 and S. 485 in the 108th Congress, and S. 2815 from the 107th Congress, eliminate many of the current Clean Air Act Programs without providing time to prove that replacement programs are protective. Is the 2002 resolution still operative, and, if so, do the Mayors support legislation that violates the principles in that resolution?

Response. Please note that your question needs to be corrected—the Conference does have a 2002 resolution but another resolution was passed in 2003 that dealt with the same topic. Irregardless, the Conference of Mayors has never officially endorsed the Clear Skies Act. According to the testimony, based on the 2003 resolution, Mayors support some of the goals of Clear Skies; specifically a 70 percent reduction for NOx, SO_2 and mercury, using a proven market-based program. Our 2003 resolution also states that these goals should be achieved by 2020.

Question 2. S. 131 allows "transitional areas" to be exempt from the requirements of the Clean Air Act. What requirements should these "transitional" areas have to ensure that they are not causing or contributing to non-attainment downwind from them?

Response. We are not able to answer that question at this time without further internal discussion.

Question 3. Should downwind states retain their existing ability under the Clean Air Act, with EPA enforcement of that ability, to seek reductions in pollution from all sources in upwind states that are causing or contributing to violations of the ambient air quality standards in parts of the downwind state?

Response. The Conference of Mayors believes it would be prudent for states to retain their existing ability to seek reductions from sources in other states. We also are hopeful that this would not be necessary given the cap and trade program proposed by all of the multi-pollutant legislation.

Question 4. Should we amend the Clean Air Act to delay the existing attainment deadlines therein? If so, why?

Response. The Conference of Mayors is not looking to amend the Clean Air Act as much as looking for the necessary flexibility so that cities can meet their attain-

ment deadlines. If, for example, a city is able to meet their attainment deadline once the utilities finish their pollution-control upgrades, we believe that this factor should be taken into consideration.

Question 5. Do the Mayors believe that it is prudent to increase greenhouse gas emissions?

Response. Given the fact that Mayors have called for cities throughout the United States to voluntary reduce their own greenhouse gas emissions by 10 percent, it is probably not prudent to increase greenhouse gas emissions.

Question 6. The Energy Information Administration has produced an analysis which demonstrates that Clear Skies (S. 1844) does not achieve the "magic" 70 percent reduction in any of the pollutants that you mentioned before 2025, if then. In any event, what good will a 70 percent reduction in 2020 do for cities that need to achieve attainment about 10 years earlier?

Response. The Conference of Mayors is assuming and hoping that the utilities will act sooner than the 2020 deadline and there will be overall reductions. We are also looking for the flexibility that may come with the section on "transitional communities" which will allow cities that are awaiting their utilities to retrofit their facilities the additional time to come under compliance. However, if the utilities do not act sooner than their 2020 deadline and no flexibility is given to those transitional communities, the reduction may not prove useful.

Question 7. Since power plants and all the other major industrial facilities emitting NOx, SOx or mercury can "opt-in" to the regulatory shield in S. 131 and therefore cannot be effectively or easily controlled by states or local governments, what sources of emissions will states and local governments be going after to achieve healthy air?

Response. Our policy only calls for power plants to be included in legislation that reduces NOx, SO_2 and mercury. It does not address other major industrial sources from being included. If, however, they were included, the reduction would obviously depend on state by state and what sources are emitting NOx, SO_2, and mercury. Of course our jobs will be much more difficult since many of these sources have already been controlled which leaves us very few options.

Question 8. Do the Mayors support the exemption of major sources of toxic air pollutants from the existing MACT requirements of the Clean Air Act? Do the Mayors support the exemptions for such sources, other than power plants, included in S. 131?

Response. No we do not support the exemption of major sources of toxic air pollutants from the existing MACT requirements nor do Mayors support the exemptions for other sources other than power plants.

Question 9. What would be the change in the City of Augusta's budget for indigent health care if Congress passed legislation, such as S. 131, to delay the attainment of health-based air quality standards, to exempt major sources of pollution from current requirements, and to allow the designation of "transitional areas" that would have no responsibility to reduce their own pollution even if it were affecting downwind sources?

Response. Given the time and resource constraints that are needed for this question, we can not possibly answer that question at this time.

Question 10. You indicated that ". . . there is nothing we can do as a community or the State environmental regulators in Georgia can do to impact what goes on at a coal-fired plant in South Carolina." That statement is not accurate under current law, since the State of Georgia has the right to petition the EPA under section 126 of the Clean Air Act to control that source of pollution, even if it's a power plant, if it is causing or contributing to nonattainment in the City of Augusta. That right would be severely limited by S. 131 if not completely crippled for many years, and EPA would not have the authority that it has now to stop that pollution. Do you think that states should continue to have the rights they have now, including Federal enforceability, under the Clean Air Act to prevent interstate pollution?

Response. What I meant by my statement is that there is nothing the City of Augusta can do to impact South Carolina's coal-fired plant. I am aware that the State of Georgia can petition South Carolina to reduce their pollution. It is our hope that with a national cap and trade policy that there would be overall reductions in NOx, SO_2 and mercury and that more utilities would be motivated to install pollution control systems. However, if this does not work, we think states should still have the right to petition to prevent interstate pollution.

RESPONSES BY MAYOR BOB YOUNG TO ADDITIONAL QUESTIONS FROM SENATOR LAUTENBERG

(Please note that the questions were addressed to the Mayor of Akron, Don Plusquellic. He, however, did not testify due to illness and Augusta Mayor Bob Young took his place.)

Question 1. The U.S. Conference of Mayors policy states that multi-pollutant legislation should be an addition to current law, why do you support Clear Skies which eliminates key Clean Air Act programs?

Response. The Conference of Mayors has never officially endorsed the Clear Skies Act. We support some of the goals of Clear Skies including a 70 percent reduction in NOx, SO_2 and mercury by 2020 using a cap and trade program.

Question 2. Wouldn't it be prudent to enact multi-pollutant legislation as an add-on to existing law as a way of bolstering EPA's authority?

Response. As long as there is no conflicting policy or confusion that will result with adding on existing law that would delay utilities from installing pollution control equipment, it would probably be prudent to add-on to existing law.

Question 3. The Clear Skies Initiative would extend attainment deadlines for meeting $PM_{2.5}$ and ozone health standards to 2015 and as late as 2022. Why should we allow this?

Response. We do need to allow for adequate time for pollution control equipment to be manufactured and installed. The Mayors' policy simply reflects the understanding that it might take some time for this to happen. If it can be done sooner or if incentives could be provided to encourage utilities to not delay, the Mayors would welcome quicker results.

Question 4. If we can reduce air pollution faster and reduce premature death and hospitalization sooner shouldn't we do so?

Response. As mentioned in the testimony, it is a delicate balance between public health and the economy. Mayors believe that policymakers can and have to balance both. We need a policy that reduces air pollution but not one that drastically increases the costs of electricity that causes jobs to move out or for citizens to have to choose between heat and food, for example. One needs to ask the health impact of a loss of a job and health insurance to a citizen's overall health as well. The reverse is also true. Mayors believe that you do not need to sacrifice public health for inexpensive electricity.

Question 5. The Akron Beacon Journal asserts implementing the CAIR rule is a better strategy for protecting public health than enacting controversial new legislation. Do you agree?

Response. Mayor Plusquellic did not testify. As far as the CAIR rule being a better strategy for protecting public health, it has been said that it will do a good job in reducing NOx, SO_2, and mercury. However, we believe that it is better for legislation to be passed as opposed to a rule since it is developed by Congress and less subject to judicial scrutiny.

Question 6. Clear Skies, as introduced by Senator Inhofe (S. 131), repeals Maximum Available Control Technology standards to control 189 hazardous air pollutants from power plants and possibly a broad variety of industrial boilers simply because they reduce mercury emissions. Knowing the lifelong health problems exposures to toxic chemicals can cause—especially in children—why should Congress support this?

Response. The Conference of Mayors does not support the repeal of the MACT standards.

Question 7. If Congress passes legislation as controversial as the Clear Skies Act that allows existing Clean Air Act programs to be abandoned and deadlines to meet health standards to be extended to 2022, won't this generate more litigation than implementing the existing law?

Response. It is definitely possible that more litigation will result as is typical whenever new laws and rules are passed.

STATEMENT OF JOHN A. PAUL, SUPERVISOR, REGIONAL AIR POLLUTION CONTROL AGENCY, ON BEHALF OF STAPPA/ALAPCO

Good morning, Mr. Chairman and Members of the Subcommittee. My name is John Paul, and I am the Supervisor of the Regional Air Pollution Control Agency, a six-county local agency centered in Dayton, Ohio. I am pleased to testify today on behalf of STAPPA—the State and Territorial Air Pollution Program Administra-

tors—and ALAPCO—the Association of Local Air Pollution Control Officials, the national associations of air quality agencies in 53 states and territories and more than 165 metropolitan areas across the country. I currently serve as Vice President of ALAPCO and Co-Chair of the STAPPA/ALAPCO Energy Committee. The members of our associations have primary responsibility under the Clean Air Act for implementing our nation's air pollution control laws and regulations and, moreover, for providing clean, healthful air for our citizens. Accordingly, we are pleased to have this opportunity to provide our perspectives on the need for legislation to control multiple emissions from electric utilities.

WE HAVE MADE SUBSTANTIAL PROGRESS IN CLEANING UP OUR AIR, BUT SIGNIFICANT CHALLENGES REMAIN

Over the past three and a half decades, since authorization of the first federal Clean Air Act, the United States has made substantial progress in reducing air pollution, while, at the same time, experiencing strong economic growth. In fact, since 1970, aggregate emissions of the six criteria pollutants have decreased by 51 percent. During this same time, Gross Domestic Product has increased by 176 percent, energy consumption by 45 percent, vehicle miles traveled by 155 percent and the U.S. population by 39 percent. However, our nation continues to face significant public health and environmental problems as a result of emissions into our air.

Last year, all or part of nearly 500 counties were designated as nonattainment for the 8-hour ozone standard and earlier this month the U.S. Environmental Protection Agency (EPA) published a notice in the Federal Register designating 225 counties, in whole or in part, as nonattainment for the fine particulate matter ($PM_{2.5}$) standard. Further, fish consumption advisories have been issued for some or all of the water bodies in at least 45 states due to elevated concentrations of the persistent and bioaccumulative pollutant mercury, which can contaminate aquatic life and pose a serious threat to humans who consume the contaminated species. In addition to contributing to tens of thousands of premature deaths and innumerable adverse health consequences, emissions into our air also cause such damage to our environment as visibility impairment, eutrophication of waterways and acid rain.

Emissions From Electric Utilities Are a Key Contributor to Air Pollution

Electric utilities are the largest remaining stationary source of air pollution in the United States, an order of magnitude greater than the second largest category, refineries. According to EPA and others, power plant emissions each year are responsible for over 20,000 premature deaths. Additionally, according to a recent study by the Clean Air Task Force, power plant emissions cause over 38,000 heart attacks, more than 3 million lost work days and in excess of half a million asthma attacks.

Nationally, utilities are responsible for 68 percent of annual sulfur dioxide (SO_2) emissions and 23 percent of nitrogen oxide (NOx) emissions. Further, it is important to note that in some areas of the country, power plant contributions to SO_2 and NOx levels are considerably higher. Add to these no fewer than 67 hazardous air pollutants (HAPs), which power plants also emit in substantial quantities, including mercury, for which electric utilities account for 41 percent of the nation's emissions. In addition, electric utilities are responsible for 39 percent of U.S. carbon dioxide emissions, which contribute to global warming.

The magnitude of emissions from power plants, and the serious public health and welfare implications these emissions have, make controlling electric utilities a top priority. In fact, broad, rigorous control of this sector is crucial to the success of state and local efforts not only to attain health-based air quality standards in a timely manner, but also to ensure maintenance of these standards into the future.

An additional concern is the age of the coal-fired boilers operating across the country. Today, nearly three-quarters of all utility boilers are over 30 years old and most continue to operate without modern pollution control technology; in 10 years, almost 90 percent of all boilers will exceed 30 years of age. Among the most important steps we, as a nation, can take to address air pollution and protect public health is to establish a comprehensive national multi-pollutant approach for cleaning up these outdated power plants and ensuring that new plants are dramatically cleaner.

STAPPA AND ALAPCO STRONGLY SUPPORT AN EFFECTIVE MULTI-POLLUTANT APPROACH FOR POWER PLANTS

STAPPA and ALAPCO endorse the concept of a comprehensive national strategy for reducing emissions of multiple pollutants from electric utilities. Such an approach could enhance opportunities for pollution prevention and sustainability and

promote more expeditious compliance. A comprehensive, integrated approach would also offer important advantages to the regulated community in the form of increased certainty and cost efficiencies. Further, it would increase certainty and efficiency for state and local air quality regulators, both in terms of the development of our programs and in fulfilling our obligation to ensure clean, healthful air to our citizens.

In May 2002, as various multi-pollutant proposals were emerging, STAPPA and ALAPCO adopted a set of principles (copy attached) outlining what we believe should serve as the foundation of a viable national multi-pollutant strategy for power plants.

In our principles we call for an integrated approach based on an expeditious schedule, including interim compliance dates, that will allow us to reduce emissions as quickly as we can and consistent with the deadlines by which states and localities are required to meet health-based air quality standards. We believe firmly that such an approach—which should address all significant emissions from electric power generation—should supplement, not supplant, the existing Clean Air Act. Programs such as New Source Review (NSR), Maximum Achievable Control Technology (MACT) standards and regional haze, as well as other important statutory tools and requirements for achieving and sustaining clean air, must be retained.

In addition, a viable multi-pollutant approach should establish the most stringent enforceable national emission reduction goals feasible. In particular, we recommend that national emissions caps be set at levels that reflect the installation of technology no less stringent than the best available controls on all existing units nationwide, with each existing plant required to meet a minimum level of control by the final compliance deadline. We further believe that in meeting these emission goals, the regulated community should be afforded flexibility, including an emissions trading mechanism for NOx and SO_2, with appropriate limitations and protections against local adverse health or environmental impacts. And, very significantly, any multi-pollutant strategy must ensure that regions, states and localities retain their authority to adopt and/or implement measures—including local offset and technology requirements—that are more stringent than those of the federal government.

STAPPA and ALAPCO used the associations' adopted principles to evaluate S. 1844, the Chairman's Mark of the Administration's Clear Skies proposal, introduced on November 10, 2003. After careful study, we have concluded that the proposal fails on every one of our associations' core principles. The deadlines are too protracted, and well beyond those by which we must, and should, meet health-based air quality standards. The caps are simply not protective enough, and there is no minimum level of control required of each existing power plant. And we have tremendous concerns with the fact that this proposal strips away many of our most essential Clean Air Act tools and authorities. Accordingly, STAPPA and ALAPCO can not support this proposal.

Although we would prefer that a multi-pollutant approach be established through legislation rather than regulation, given the serious deficiencies of this legislative proposal, we believe that continued implementation of the Clean Air Act will provide far greater, and more certain and timelier protection of public health and the environment. Toward this end, we have availed ourselves of every opportunity to provide EPA with our comments and recommendations to improve the two rules it has proposed—the Clean Air Interstate Rule and Utility MACT Rule—using its authorities under the existing Clean Air Act to address NOx, SO_2 and mercury.

STAPPA AND ALAPCO HAVE SIGNIFICANT CONCERNS WITH S. 1844

I would like to elaborate in a bit more detail on some of our key concerns with the multi-pollutant approach established in S. 1844.

Deadlines

S. 1844 would postpone until 2018 the final date for industry compliance with the NOx, SO_2 and mercury caps. Moreover, compliance will be deferred even further—to the mid-2020s—due to the impacts of the bill's credit banking and trading program. For mercury, this protracted compliance schedule is about 15 years later than Congress allowed under the Clean Air Act for utilities and other sources to comply with MACT. And for NOx and SO_2, it is not only nearly a decade later than state and local attainment deadlines, it is also clearly counter to the Clean Air Act requirement for attainment as expeditiously as practicable. Since each year of delay will take an additional and unwarranted toll on public health and welfare, the solution is not to defer public health deadlines but, rather, to accelerate industry compliance dates. For this reason, we are also concerned with the bill's transitional area provisions, which could impede timely implementation of state and local regulatory initiatives and interfere with EPA's recent 8-hour ozone and $PM_{2.5}$ nonattainment designations. In an analysis conducted last year, which I will discuss further in a

moment, our associations concluded that an interim compliance date of 2008 and a final compliance date of 2013 are appropriate and feasible deadlines for the type of national multi-pollutant approach we envision.

Caps

As I have already noted, we believe the caps in S. 1844 are far too lenient and do not reflect what is necessary and achievable for this source sector. Last spring, our associations completed a deliberative analysis (copy attached) of our multi-pollutant principles—specifically, estimating what national caps could result from application of those principles, which call for installation of best available controls on electric utilities. What we found is that application of air pollution control technologies consistent with what various states across the country have committed or proposed to implement over the next decade (i.e., through state permits, court-ordered settlements agreements or state regulations) would achieve NOx, SO_2 and mercury caps that are significantly more protective than those in S. 1844, remain cost effective and still provide a reasonable margin of flexibility and opportunities for increased power generation.

With respect to NOx, our analysis identifies an interim cap of 1.51–1.87 million tons per year (tpy) by 2008 and a final cap of 0.88–1.26 million tpy by 2013, compared to S. 1844's NOx caps of 2.1 million tpy by 2008 and 1.7 tpy by 2018. For SO_2, our analysis identifies an interim cap of 3.0–4.5 million tpy by 2008 and a final cap of 1.26–1.89 million tpy by 2013, compared to S. 1844's SO_2 caps of 4.5 million tpy by 2010 and 3.0 million tpy by 2018. A regional SO_2 cap for Western States should not interfere with the regional haze rule's SO_2 annex. And for mercury, our analysis identifies an interim cap of 15–20 tpy by 2008 and a final cap of 5–10 tpy by 2013, compared to S. 1844's caps of 34 tpy (which is even weaker than the already-too-weak 26-tpy cap originally included in Clear Skies) in 2010 and 15 tpy in 2018.

Our concerns regarding S. 1844's weak caps are further compounded by the inclusion in the bill of provisions for early reduction credits. Although we favor early reductions and encouraging sources to reduce emissions as soon as possible, we firmly believe that if early reduction credits are provided, the use of such credits must be appropriately limited. However, because S. 1844 would provide credits for early reductions above the cap without limit, the already weak emission caps will be further diminished. The bill exacerbates this concern by granting early reduction credits above the cap and without limit to so-called "opt-in" units—non-utility industrial units that may elect to be designated as affected units—thereby ensuring that the bill will not achieve even its own claims regarding the levels of required reductions from the utility sector. This opt-in feature also appears likely to push back achievement of the 70 percent reduction targets even past mid-2020.

EPA has estimated the benefits of Clear Skies to be $110 billion at a cost of $6 billion—a benefit-to-cost ratio of about 20:1. Clearly, then, more rigorous and timely caps would not only yield substantially increased benefits, but could do so while still remaining very cost effective. In contrast, leaving such a significant level of feasible, cost-effective emission reductions behind—as S. 1844 does—comes at a very high cost. It will be difficult to return to the utilities to seek further reductions once the program is put into place, and because air pollution control is a zero-sum calculation, we will be forced to seek those reductions from other sources—including ones that are already well regulated and/or for which controlling emissions is far more costly and less cost effective, such as small businesses—and through strategies that may be publicly unpopular. Such an alternative is not only unfair to those sources doing their fair share to clean up our air, it may well not result in sufficient emission reductions, leaving our nation with a serious environmental and public health problem and few tools to adequately address it.

Statutory Rollbacks

As troubling as these problems are, of even greater concern to us is the fact that S. 1844 abolishes some of the most important statutory tools and requirements for achieving and sustaining clean air.

Contrary to STAPPA and ALAPCO's firm belief that new and existing power plants must continue to be subject to NSR, S. 1844 repeals this important program for affected sources, including requirements for new units to install state-of-the-art Lowest Achievable Emission Rate control technology and acquire emission offsets in nonattainment areas, and install Best Available Control Technology and protect air quality increments to guard against adverse local air quality impacts in attainment areas. Existing sources making major modifications should be required to install the best available controls on affected units at the time of modification, acquire any emission allowances required to address emission increases and ensure against ad-

verse local health or environmental impacts. However, in place of all this, S. 1844 regresses to seriously outmoded New Source Performance Standards (NSPS) and, further, rescinds requirements to update the NSPS on a periodic basis. Further, this bill would allow non-utility units from other industries to qualify for this same regulatory relief, as well.

S. 1844 also eliminates all the requirements of sections 169(A) and (B) of the Clean Air Act, including not only Best Available Retrofit Technology (BART) requirements, which the original Clear Skies bill repealed, but all visibility requirements and regional haze rules. Further, it revokes many Prevention of Significant Deterioration (PSD) requirements and relaxes protections for Class I areas. Moreover, the bill also includes provisions that prevent states from taking credit in their State Implementation Plans for any NSR or PSD requirements they seek to apply to affected units. Opt-in units would also be able to take advantage of these relaxations.

With respect to toxic air pollutants, S. 1844 repeals the utility MACT rule, including the regulation of non-mercury HAPs, and rescinds residual risk requirements for HAPs, which, under current law, protect the public with an additional margin of safety following application of stringent technology requirements. Once again, the bill would allow non-utility opt-in units to escape these requirements.

The bill also seriously undermines states' abilities to protect air quality in their jurisdictions by prohibiting compliance with any petition under section 126 until 2014. Further, it impedes potential use of this important authority by requiring a downwind area to first demonstrate that all more cost-effective measures have been implemented—a process that will surely result in delay and lead to litigation. In addition, EPA is prevented from exercising its authority to issue a SIP call under section 110 until 2014.

CONCLUSION

Once again, I would like to reiterate that STAPPA and ALAPCO endorse a national multi-pollutant approach for power plants. Such a program should institute appropriately rigorous emission reductions on a timely schedule and compel use of state-of-the-art technology. We are disappointed that S. 1844 not only falls far short of our associations' adopted principles, but also strips states and localities of our critical tools and authorities for providing clean, healthful air. On behalf of STAPPA and ALAPCO, I thank you for this opportunity to present our associations' views on this very important issue. We look forward to working with you in the weeks ahead.

STAPPA / ALAPCO

STATE AND TERRITORIAL
AIR POLLUTION PROGRAM
ADMINISTRATORS

ASSOCIATION OF
LOCAL AIR POLLUTION
CONTROL OFFICIALS

S. WILLIAM BECKER
EXECUTIVE DIRECTOR

**ANALYSIS OF STAPPA AND ALAPCO'S
MAY 7, 2002 PRINCIPLES FOR A
MULTI-POLLUTANT STRATEGY FOR POWER PLANTS**

**Prepared by the
State and Territorial Air Pollution Program Administrators
and the
Association of Local Air Pollution Control Officials**

March 15, 2004

As national discussions over multi-pollutant strategies for power plants continue, the State and Territorial Air Pollution Program Administrators (STAPPA) and the Association of Local Air Pollution Control Officials (ALAPCO) have undertaken an analysis to illustrate what nationwide emissions caps for nitrogen oxides (NO_x), sulfur dioxide (SO_2) and mercury could result from application of the associations' *Principles for a Multi-Pollutant Strategy for Power Plants*, adopted on May 7, 2002 in support of "an integrated approach for regulating air emissions from electric power plants on an expeditious schedule with synchronized deadlines." As a result, the associations have concluded that application of air pollution control technologies consistent with what various states across the country have committed or proposed to implement over the next decade (i.e., through state permits, court-ordered settlement agreements or state regulations) would achieve the most stringent caps for NO_x, SO_2 and mercury contemplated in prominent national multi-pollutant proposals, with a reasonable margin for flexibility and opportunities for increased power generation.

Below are the results of the associations' analysis (see Table 1) and an explanation of how the analysis was conducted. The following items are attached:

1) Attachment 1 – a more detailed discussion of the NO_x methodology used for this analysis,
2) Attachment 2 – a more detailed discussion of the SO_2 methodology used for this analysis,
3) Attachment 3 – the results of this analysis presented in comparison to provisions of various national multi-pollutant proposals and
4) Attachment 4 – the full text of STAPPA and ALAPCO's May 7, 2002 *Principles for a Multi-Pollutant Strategy for Power Plants*.

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TABLE 1

Results of Analysis of STAPPA/ALAPCO Multi-Pollutant Principles

	NATIONAL BASELINE EMISSION LEVELS 2001 (tons per year)	NATIONAL INTERIM EMISSION CAPS BY 2008 (tons per year)	NATIONAL EMISSION LEVELS BASED ON BEST AVAILABLE CONTROLS BY 2013 (tons per year)
NO_x	4.7 million	1.51 – 1.87 million	0.88 – 1.26 million
SO_2	10.6 million	3.0 – 4.5 million	1.26 – 1.89 million
Mercury	48	15 – 20	5 – 10

NO_x and SO_2 Emission Caps

According to emission data in EPA's acid rain program data base, in 2001, electric steam generating units (EGUs) emitted 4.7 million tons of NO_x and 10.6 million tons of SO_2. STAPPA and ALAPCO have determined that by applying clearly reasonable levels of today's Best Available Control Technology (BACT), EGU NO_x emissions can be reduced to 0.88 to 1.26 million tons per year by 2013 and EGU SO_2 emissions to 1.26 to 1.89 million tons per year. In the calculations presented in Attachments 1 and 2 (which illustrate how these respective NO_x and SO_2 emission cap ranges were derived) the amount of heat input in fuel burned by power plants in 2001 is multiplied by a range of NO_x and SO_2 emission performance levels that reflect today's BACT for new and existing units.

The lower (i.e., more stringent) end of each emission cap range reflects the application of new source BACT – based on permits for new units – to all new and existing EGUs. The new source BACT selected for this analysis represents a somewhat conservative level that is generally less stringent than the most recent permit applications for coal-fired boilers. The higher (i.e., less stringent) end of each emission cap range reflects the application to all EGUs, new and existing, of the most common emission level for existing sources covered under recent EPA settlement agreements for Prevention of Significant Deterioration cases. Gas and oil BACT levels were conservatively assumed to be the same as for coal.

Because the NO_x and SO_2 emission cap ranges resulting from STAPPA and ALAPCO's relatively conservative analysis are at or below the lowest caps contemplated under various legislative proposals, it is reasonable to conclude that the availability of air pollution control technology is not a limiting factor in enacting any of the caps under consideration. Further, it is important to note that technology will continue to improve over time and, as it does, even lower levels of NO_x and SO_2 emissions will be achievable. Accordingly, the NO_x and SO_2 emission cap ranges calculated by STAPPA and ALAPCO should enable substantial opportunity for emission trading and the addition of significant electric generating capacity. In fact, they would be achievable even if all gas and oil burning in power plants was switched to coal.

STAPPA and ALAPCO did not conduct a quantitative analysis of interim cap levels for NO_x and SO_2. The associations did, however, identify ranges for interim caps (1.51 to 1.87 million tons per year NO_x and 3.0 to 4.5 million tons per year SO_2, by 2008) based upon their principles in support of quick and effective action and upon their firm belief that such levels are reasonably achievable in the given timeframe. The ranges for the interim caps selected will ensure not only progress toward the identified final cap ranges and plant-specific minimum performance standards, but also more expeditious attainment of the health-based National Ambient Air Quality Standards for ozone and fine particulate matter.

Mercury Emission Caps

With respect to mercury, STAPPA and ALAPCO based their analysis on state actions to reduce mercury emissions. State mercury limits proposed or adopted in Connecticut, Massachusetts and New Jersey will achieve control efficiencies on the order of 90 percent or more, while in Wisconsin, where mostly western coal is used, limits are 80 percent. Accordingly, STAPPA and ALAPCO extrapolated such reductions nationwide and arrived at a national mercury emission cap range of 5 to 10 tons per year by 2013; such a range accommodates both eastern and western coal. Further, this range is consistent with STAPPA and ALAPCO's October 2002 recommendation to the EPA Utility MACT Working Group, which, if implemented nationwide, would result in mercury emissions of less than 7.5 tons per year.

The associations also identified a range for an interim mercury emission cap of 15 to 20 tons per year, to be achieved by 2008. Mercury levels in this interim cap range should be largely achievable through the application of the same air pollution control equipment needed to achieve compliance with the interim NO_x and SO_2 caps that STAPPA and ALAPCO have identified in this analysis. Traditional control technologies for criteria pollutants have been shown to be effective for mercury reduction, especially when used in combination; the most effective for mercury is a combination of low-NO_x burner, selective catalytic reduction, baghouse and scrubber technologies. This interim cap range is also intended to encourage the use of mercury-specific control technologies, such as activated carbon injection (ACI), by some facilities. ACI has low capital cost, especially with an existing baghouse, has been proven on incinerators, and has been piloted and demonstrated and is currently available for coal.

The 20-ton-per-year level results if mercury reductions are achieved in the same proportion as NO_x and SO_2 reductions under the recommended interim caps for those pollutants. The 15-ton-per-year level reflects a desire to be more progressive in controlling mercury, because it is a hazardous air pollutant. Approximately twice the level that STAPPA and ALAPCO recommended for MACT, a 15-ton-per-year level for mercury is appropriate in the context of a harmonized strategy addressing multiple pollutants.

Additional Recommendations

In addition to STAPPA and ALAPCO's recommendations in their May 7, 2002 *Principles for a Multi-Pollutant Strategy for Power Plants*, the associations also recommend the following:

1. Include a "birthday" provision for the installation of BACT;
2. Include minimum plant-by-plant performance standards for NO_x, SO_x, Hg, PM and CO by 2013;

3. Implementation of the national SO_2 caps shall not result in emission reductions in the West less than those that would be achieved under the emissions milestones for western states promulgated in the regional haze rules; and
4. All regions, states and localities retain the authority to adopt and implement their own more stringent emission caps for any pollutant (including, but not limited to, a seasonal NO_x cap).

Attachment 1

Analysis of NO_x Caps Based on BACT

EPA's "Emissions Scorecard 2001" (available at www.epa.gov/airmarkets/emissions/score01/index.html) includes emissions data for power plants in the acid rain program. EPA updated the emissions data in April 2003 based on audits, quality reviews and acceptance of re-submissions to correct emissions and heat input reporting issues.

Table B-2 of EPA's "Plant-by-plant Summary Data Organized by State" can be downloaded or viewed as a PDF, Excel or text file. The sample format of Table B-2 is as follows:

State (A)	Plant Name (B)	ORISPL (C)	2001 SO_2 (tons) (D)	2001 CO_2 (tons) (E)	2001 NO_x (tons) (F)	2001 Heat Input (mmBtu) (G)
Alabama	Barry	3	65,902	13,683,577	23,026	147,934,447
Alabama	Charles R Lowman	56	16,726	4,171,010	9,779	40,653,009

2001 NO_x Emissions

Total nationwide NO_x emissions for 2001 (4,699,874 tons/year) are derived by adding all state values reported by EPA in column (F).

EPA's reported nationwide heat input for 2001 (25,223,878,738 mmBtu/yr) is derived by adding all state values identified in column (G).

EPA's reported average NO_x emission rate for 2001 (0.37 lb/mmBtu) is calculated by dividing nationwide NO_x emissions in 2001 by nationwide heat input in 2001, as follows:

$$(4{,}699{,}874 \text{ tons/year} \times 2000 \text{ lb/ton}) \div (25{,}223{,}878{,}738 \text{ mmBtu/year}) = 0.37 \text{ lb/mmBtu}$$

BACT Emission Caps for NO_x

STAPPA and ALAPCO sought to compare this reported average NO_x emission rate to current NO_x BACT levels and to identify appropriate emission rates upon which to base reasonable NO_x emission caps for a multi-pollutant strategy,

The associations first reviewed recent BACT determinations in new source permits. A search of EPA's Clean Air Technology Center RBLC Clearinghouse on the agency's Technology Transfer Network (available at www.epa.gov/ttn/catc) was conducted for utility boilers of more than 250 mmBtu/hr that combust coal, including bituminous, sub-bituminous, anthracite and lignite coal. The last five new source permits issued, and their respective NO_x emission rates, as listed in the RBLC database, are as follows:

Permit Date	RBLC ID	Company and Facility Name	Permitted NO_x Emissions
06/17/2003	IA-0067	MIDAMERICAN ENERGY COMPANY	0.07 LB/MMBTU
10/08/2002	KS-0026	SAND SAGE POWER LLC, HOLC # 2	0.08 LB/MMBTU
09/25/2002	WY-0057	BLACK HILLS CORP, WYGEN # 2	0.07 LB/MMBTU
08/17/1999	MO-0050	KANSAS CITY POWER, HAWTHORN	0.08 LB/MMBTU
06/30/1998	IA-0051	ARCHER DANIELS MIDLAND	0.07 LB/MMBTU

In another example, City Public Service of San Antonio, Texas, has proposed a NO_x emission rate of 0.05 lb/mmBtu annual average for a new 750-MW sub-bituminous coal-fired unit.

In West Virginia, a BACT limit for a new facility was recently proposed at 0.08 lb/mmBtu 24-hour average.

Because of the different averaging times, the Texas and West Virginia permits are likely of approximately equal stringency, despite the difference in numerical values (0.05 versus 0.08 lb/mmBtu). However, because emission limits for long-term averages are most relevant for annual or seasonal trading, the Texas 0.05 annual average limit could be justified as the appropriate choice for a NO_x cap for this analysis. To allow for a more conservative analysis, however, a BACT level of 0.07 lb/mmBtu annual average was selected. This new source emission rate was multiplied by the national heat input for 2001 to calculate the lower end of the NO_x emission cap range, as follows:

(0.07 lb/mmBtu x 25,223,878,738 mmBtu/year) ÷ 2000 lb/ton = **0.88 million tons/year**

Next, the associations reviewed retrofit BACT levels in recent EPA settlement agreements for PSD cases, selecting 0.10 lb/mmBtu for this analysis, because it is readily achievable and represents a typical settlement agreement BACT level for a retrofit (e.g., New Jersey's PSE&G-Hudson SCR).

The upper end of the NO_x emission cap range was then calculated by multiplying this emission rate by the national heat input for 2001, as follows:

(0.10 lb/mmBtu x 25,223,878,738 mmBtu/year) ÷ 2000 lb/ton = **1.26 million tons/year**

It is important to note that the above BACT levels include a compliance margin; that the same BACT levels are used for coal, oil and gas, even though more stringent BACT levels are feasible for gas units and oil units; and that future BACT levels for coal-fired plants will be even lower because of technological advances. Therefore, a NO_x cap within the established range of 0.88 and 1.26 million tons per year by 2013 would still leave significant opportunity for emissions trading and expansion of the amount of electricity generated by coal.

Attachment 2

Analysis of SO_2 Caps Based on BACT

EPA's "Emissions Scorecard 2001" (available at www.epa.gov/airmarkets/emissions/score01/index.html) includes emissions data for power plants in the acid rain program. EPA updated the emissions data in April 2003 based on audits, quality reviews and acceptance of re-submissions to correct emissions and heat input reporting issues.

Table B-2 of EPA's "Plant-by-plant Summary Data Organized by State" can be downloaded or viewed as a PDF, Excel or text file. The sample format of Table B-2 is as follows:

State (A)	Plant Name (B)	ORISPL (C)	2001 SO_2 (tons) (D)	2001 CO_2 (tons) (E)	2001 NO_x (tons) (F)	2001 Heat Input (mmBtu) (G)
Alabama	Barry	3	65,902	13,683,577	23,026	147,934,447
Alabama	Charles R Lowman	56	16,726	4,171,010	9,779	40,653,009

2001 SO_2 Emissions

Total nationwide SO_2 emissions for 2001 (10,634,077 tons/year) are derived by adding all state values reported by EPA in column (D).

EPA's reported nationwide heat input for 2001 (25,223,878,738 mmBtu/year) is derived by adding all state values identified in column (G).

EPA's reported average SO_2 emission rate for 2001 (0.84 lb/mmBtu) is calculated by dividing nationwide SO_2 emissions in 2001 by nationwide heat input in 2001, as follows:

$$(10{,}634{,}077 \text{ tons/year} \times 2000 \text{ lb/ton}) \div (25{,}223{,}878{,}738 \text{ mmBtu/year}) = 0.84 \text{ lb/mmBtu}$$

BACT Emission Cap for SO_2

STAPPA and ALAPCO sought to compare this reported average SO_2 emission rate to current SO_2 BACT levels and to identify appropriate emission rates upon which to base reasonable SO_2 emission caps for a multi-pollutant strategy.

The associations first reviewed recent BACT determinations in new source permits. A search of EPA's Clean Air Technology Center RBLC Clearinghouse on the agency's Technology Transfer Network (available at www.epa.gov/ttn/catc) was conducted for utility boilers of more than 250 mmBtu/hr that combust coal, including bituminous, sub-bituminous, anthracite and lignite coal. The last five new source permits issued, and their respective SO_2 emission rates, as listed in the RBLC database, are as follows:

Permit Date	RBLC ID	Company and Facility Name	Permitted SO_2 Emissions
06/17/2003	IA-0067	MIDAMERICAN ENERGY COMPANY	0.1 LB/MMBTU
10/08/2002	KS-0026	SAND SAGE POWER LLC, HOLC # 2	0.12 LB/MMBTU
09/25/2002	WY-0057	BLACK HILLS CORP, WYGEN # 2	0.1 LB/MMBTU
10/29/2001	PR-0007	AES PURTO RICO, AES-PRCP	0.022 LB/MMBTU
04/08/1999	PA-0176	ORION POWER MIDWEST, LP	0.0857 LB/MMBTU

In another example, City Public Service of San Antonio, Texas, has proposed an SO_2 emission rate of 0.06 lb/mmBtu for a new 750-MW sub-bituminous coal-fired unit.

For this analysis, a BACT level of 0.10 lb/mmBtu was selected, even though it is a conservative BACT level for new plants and, further, the trend is toward taking advantage of technological developments and achieving lower levels. This new source emission rate was multiplied by the national heat input for 2001 to calculate the lower end of the SO_2 emission cap range, as follows:

(0.10 lb/mmBtu x 25,223,878,738 mmBtu/Year) ÷ 2000 lb/ton = **1.26 million tons/year**

Next, the associations reviewed retrofit BACT levels in recent EPA settlement agreements for PSD cases, selecting 0.15 lb/mmBtu for this analysis, because it represents a typical settlement agreement BACT level for a retrofit. Further, worst-case sulfur coal (4% sulfur coal) would yield 6.0 lb/mmBtu SO_2 emissions; with a 97.5-percent efficient wet scrubber, SO_2 emissions after control would be 0.15 lb/mmBtu. In addition, using low-sulfur coal (1% sulfur coal) would yield 1.5 lb/mmBtu SO_2 emissions; with a 90-percent efficient spray dryer, SO_2 emissions after control would be 0.15 lb/mmBtu.

The upper end of the SO_2 emissions cap range was then calculated by multiplying the 0.15 lb/mmBtu emission rate by the national heat input for 2001, as follows:

(0.15 lb/mmBtu x 25,223,878,738 mmBtu/year) ÷ 2000 lb/ton = **1.89 million tons/year**

It is important to note that the above BACT levels include a compliance margin; that the same BACT levels are used for coal, oil and gas, even though more stringent BACT levels are feasible for gas units and oil units; and that future BACT levels for coal-fired plants will be even lower because of technological advances. Therefore, an SO_2 cap within the established range of 1.26 to 1.89 million tons per year by 2013 would still leave significant opportunity for emissions trading and expansion of the amount of electricity generated by coal.

Attachment 3

Analysis of STAPPA and ALAPCO's
May 7, 2002 Principles for a Multi-Pollutant Strategy for Power Plants
Compared to National Multi-Pollutant Proposals

March 15, 2004

	Clean Power Act of 2003 **S 366 – Jeffords (Feb. 2003)** **Clean Smokestacks Act of 2003** **HR 2042 – Waxman & Boehlert (May 2003)**	**EPA Straw Proposal** **(July 2001)**	**Clean Air Planning Act of 2003** **S 843 – Carper, Chafee & Gregg (April 2003)** **HR 3093 – Bass (Sept. 2003)**	**Clear Skies Act of 2003** **S 1844 – Inhofe (Nov. 2003)** **HR 999 – Barton (Feb. 2003)**	**Analysis of STAPPA/ ALAPCO's May 7, 2002 Multi-Pollutant Principles** **(March 2004)**
NO_x	1.51 million tons – 2009	1.87 million tons – 2008 1.25 million tons – 2012	1.87 million tons – 2009 1.7 million tons – 2013	2.1 million tons – 2008 1.7 million tons – 2018	1.51-1.87 million tons – 2008 0.88-1.26 million tons – 2013
SO_x	2.25 million tons – 2009	2 million tons – 2010	4.5 million tons – 2009 3.5 million tons – 2013 2.25 million tons – 2016	4.5 million tons – 2010 3.0 million tons – 2018	3.0-4.5 million tons – 2008 1.26-1.89 million tons – 2013
Hg	5 tons – 2009 (unit-by-unit controls)	24 tons – 2008 7.5 tons – 2012 (70% facility-specific reduction)	24 tons – 2009 10 tons – 2013 (70% reduction at each facility)	34 tons – 2010 (S 1844) 26 tons – 2010 (HR 999) 15 tons – 2018	15-20 tons – 2008 5-10 tons – 2013
Impact on CAA Provisions	Retains CAA provisions	Replaces many major provisions of Act	Replaces several major provisions of Act	Replaces many major provisions of Act	Supplement, but do not supplant, existing provisions of the Act. Allow clean unit-type flexibility for NSR (see S/A principles).

Additional Issues:

1. Include a "birthday" provision for the installation of BACT.
2. Include minimum plant-by-plant performance standards for NO_x, SO_x, Hg, PM and CO by 2013.
3. Implementation of the national SO_2 caps shall not result in emission reductions in the West less than those that would be achieved under the emissions milestones for western states promulgated in the regional haze rules.
4. All regions, states and localities retain the authority to adopt and implement their own more stringent emission caps for any pollutant (including, but not limited to, a seasonal NO_x cap).

Note: EPA's proposed Interstate Air Quality Rule (Jan. 30, 2004, 69 FR 4566) includes NO_x and SO_2 caps applicable to 29 states and D.C.

Attachment 4

STAPPA / ALAPCO

STATE AND TERRITORIAL AIR POLLUTION PROGRAM ADMINISTRATORS

ASSOCIATION OF LOCAL AIR POLLUTION CONTROL OFFICIALS

S. WILLIAM BECKER
EXECUTIVE DIRECTOR

Principles for a Multi-Pollutant Strategy for Power Plants

Adopted by the
State and Territorial Air Pollution Program Administrators
and the
Association of Local Air Pollution Control Officials

May 7, 2002

Introduction

Over the past three decades, since authorization of the first federal Clean Air Act, federal, state and local governments have made significant progress in reducing air pollution in the United States. In the aggregate, emissions of the six "criteria pollutants" for which health-based National Ambient Air Quality Standards (NAAQS) have been established have been reduced by 29 percent while, at the same time, Gross Domestic Product has increased by 158 percent, energy consumption by 45 percent and vehicle miles traveled by 143 percent. Notwithstanding this progress, our nation continues to face substantial public health and environmental problems as a result of emissions into our air.

According to the U.S. Environmental Protection Agency's (EPA's) *Latest Findings on National Air Quality: 2000 Status and Trends* (September 2001), the agency's most recent evaluation of our nation's air quality status and trends, more than 160 million tons of pollution are still emitted into the air each year and approximately 121 million people still reside in areas that exceed at least one of the six health-based NAAQS. This report also points to electric utilities as one of the most significant sources of harmful air emissions, responsible for 64 percent of annual sulfur dioxide (SO_2) emissions, which contribute to acid rain and the formation of fine particulate matter ($PM_{2.5}$), and 26 percent of oxides of nitrogen (NO_x) emissions, which are not only a precursor to ground-level ozone, but also a contributor to such public health and welfare threats as secondary $PM_{2.5}$, acid rain, eutrophication of water bodies and regional haze. EPA also estimates that electric utilities are responsible for 37 percent of the carbon dioxide (CO_2) emissions released in the U.S. (*Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-1998*, April 2000).

Power plants also emit substantial quantities of hazardous air pollutants. EPA's *Study of Hazardous Air Pollutant Emissions from Electric Utility Generating Units – Final Report to Congress* (1998) concludes that electric utility steam generating units emit 67 hazardous air

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pollutants (HAPs), including mercury, arsenic, nickel, hydrogen chloride and dioxins. In fact, electric generating units are the major emitter of hydrochloric acid, which is the HAP emitted in the greatest quantity in the U.S. Electric generators are also one of the largest sources of mercury in this country, responsible for more than one-third of anthropogenic mercury emissions. The persistent and bioaccumulative nature of mercury makes it of particular concern relative to aquatic ecosystems, where it can contaminate aquatic life and pose a serious threat to humans who consume the contaminated species. Based on just such a threat, as of July 2000, at least 41 U.S. states and territories had issued fish consumption advisories for mercury for some or all water bodies in their jurisdictions (*National Air Quality and Emissions Trends Report, 1999*).

Given the significant contribution of power plant emissions to public health and environmental problems in the U.S., the State and Territorial Air Pollution Program Administrators (STAPPA) and the Association of Local Air Pollution Control Officials (ALAPCO) believe that, if properly structured, a comprehensive, integrated control strategy for electric utilities is an appropriate approach that will offer multiple important benefits.

First, such a multi-faceted approach for power plants will provide an excellent opportunity to address multiple pollutants in an integrated and holistic manner, thus increasing and accelerating environmental and public health protection by yielding far greater environmental gains than those achieved by the various existing programs to which power plants are subject. Such an approach will also enhance opportunities for pollution prevention and sustainability, as well as promote more expeditious compliance.

Second, a comprehensive, integrated approach could offer important advantages to the regulated community in the form of increased certainty and cost efficiencies. Today, the power generation industry is subject to almost a dozen separate programs to reduce air pollution. Many of these programs regulate different pollutants and impose varying compliance deadlines and requirements. An integrated approach could not only provide far greater certainty for the regulated community, it could promote enormous cost efficiencies in developing and implementing control measures for multiple pollutants. For example, EPA has estimated that harmonizing control strategies for NO_x, SO_2 and CO_2 in an integrated fashion could save approximately $4 billion, compared to controlling these pollutants separately (EPA presentation to STAPPA/ALAPCO, October 2000).

Finally, a comprehensive, integrated approach could also increase efficiency and certainty for state and local air quality regulators. These efficiencies would extend not only to devising strategies for addressing air pollution control problems from power generators, but also to reviewing and revising operating permits. Further, litigation that could delay emission reductions and environmental improvements would likely be reduced.

Currently, proposals for multi-pollutant strategies for power plants are under consideration in Congress, as well as in a number of states. As discussion ensues regarding these proposals, STAPPA and ALAPCO offer the following principles upon which the associations believe a viable multi-pollutant approach should be based.

STAPPA/ALAPCO Principles for a Multi-Pollutant Strategy for Power Plants

1. Establish an integrated approach for regulating air emissions from electric power plants on an expeditious schedule with synchronized deadlines.

2. Address all significant emissions from electric power generation.

3. Supplement, but do not supplant, the existing Clean Air Act.

4. Cap emissions from power plants to establish the most stringent enforceable national emission reduction goals feasible, and to reflect the installation of technology no less stringent than best available controls on all existing units nationwide, with each existing power plant required to meet a minimum level of control by the final compliance deadline.

5. Equitably allocate any required emissions allowances to all existing sources; include provisions for new sources.

6. Encourage sources to reduce emissions as soon as possible; if early reductions credits are provided, use of such credits should be appropriately limited.

7. Establish interim and final deadlines to ensure steady progress, with the first interim compliance requirements taking effect quickly.

8. Require new units to acquire any required emissions allowances and to comply with existing New Source Review control technology requirements (i.e., Lowest Achievable Emissions Rate in nonattainment areas and Best Available Control Technology in attainment areas), as well as other existing NSR requirements, including, but not limited to, those for offsets in nonattainment areas and for protection of air quality increments to guard against adverse local air quality impacts in attainment areas.

9. Allow existing sources to make major modifications to existing units, provided best available controls are installed on affected units at the time of the modification, the source acquires any required emissions allowances to address emission increases and there are no adverse local health or environmental impacts.

10. Afford the regulated community flexibility in meeting their required emissions reductions, including an emissions trading mechanism with appropriate limitations and protections against any adverse health or environmental impacts.

11. Establish measures that strongly encourage the most efficient use of any fuel used as input to electric generation or process energy sources, including combined heat and power applications.

12. Encourage energy efficiency, energy conservation and renewable electric energy, such as output-based standards and/or allowance allocations.

13. Support efforts to develop consistent approaches for distributed resources and encourage the use of such approaches by jurisdictions interested in regulating the impacts of small units not otherwise covered by a national multi-pollutant strategy.

14. Retain the authority of regions, states and localities to adopt and/or implement measures that are more stringent than those of the federal government, including retention of local offset requirements.

STAPPA / ALAPCO

STATE AND TERRITORIAL AIR POLLUTION PROGRAM ADMINISTRATORS

ASSOCIATION OF LOCAL AIR POLLUTION CONTROL OFFICIALS

S. WILLIAM BECKER
EXECUTIVE DIRECTOR

STAPPA/ALAPCO Response of February 16, 2005
to the
Analysis of the Testimony of John A. Paul
Supervisor, Regional Air Pollution Control Agency
On behalf of the State and Territorial Air Pollution Program Administrators (STAPPA) and the Association of Local Air Pollution Control Officials (ALAPCO)

Subcommittee on Clean Air, Climate Change and Nuclear Safety
Hearing to discuss the need for multi-emissions legislation.
Wednesday, January 26, 2005

Executive Summary

On January 26, 2005, John A. Paul testified on behalf of the State and Territorial Air Pollution Program Administrators (STAPPA) and the Association of Local Air Pollution Control Officials (ALAPCO) before the Senate Environment and Public Works Subcommittee on Clean Air, Climate Change and Nuclear Safety at its hearing on the need for multi-emissions legislation. STAPPA and ALAPCO are nonpartisan associations of air pollution control officials with many years of experience on the front lines of the effort to produce clean air for our country.

At the end of the January 26 hearing, Subcommittee Chairman Voinovich noted that he had a document titled, "Analysis of the Testimony of John A. Paul,"[1] and asked that STAPPA and ALAPCO respond to the issues raised in the document. Accordingly, below is STAPPA and ALAPCO's detailed response to the Analysis. Our concerns with S. 131 are based on the fact that this bill asks the public to agree to eliminate current requirements that have led to significant pollution reduction over the past 35 years and, in our view, will, if they are faithfully enforced, continue to move us towards clean air – in exchange for a promise to reduce emissions much later. Additionally, on February 15, 2005, North Carolina Attorney General Cooper expressed his concern and provided the Committee a legal analysis demonstrating that S. 131 significantly

[1] This document does not identify the author. For convenience we refer to this document as "Analysis." S.131 and S. 1844 are similar in most relevant respects. Comments addressed to S.131 in this document are applicable to both bills. Finally, because Mr. Paul's testimony was not limited to his personal views, but represented the position of STAPPA and ALAPCO, we refer to his January 26, 2005, testimony as the "STAPPA/ALAPCO testimony."

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undercuts efforts by states that are concerned with pollution from coal-fired power plants to implement multi-pollutant emission reduction programs in their states.

We do not oppose trading programs, nor do we oppose programs that will provide the country with cleaner air sooner. However, in our view, S. 131 would effectively strip state and local governments of their authority under current law to decide whether and when a particular source must reduce its emissions to meet local air quality needs. Under S. 131, decisions about which power plants, refineries and other large polluters would reduce emissions, and when, if ever, those emissions would be reduced at specific plants in impacted communities are to be made by corporate executives who are not accountable to the voters and who, quite naturally, will be guided by their desire to maximize corporate profits rather than health benefits. We believe that elected officials at the federal, state and local levels must retain the authority to decide whether pollution reductions are needed in their jurisdictions to protect their constituents. This overriding principle can only be accomplished by eliminating the numerous provisions in S. 131 that repeal or defer current Clean Air Act (CAA) requirements.

Proponents of the President's Clear Skies bill acknowledge that cleaning up power plant emissions offer significant health benefit to children and the elderly who now suffer premature mortality and asthma from SO_2 and NO_x emissions and to mothers and infants who currently are adversely affected by mercury emissions. These same proponents acknowledge that cleaning up these power plants will save us $130 billion each year in avoided health care costs. In the several years of debate and discussion of multi-pollutant legislation, no credible argument has been offered as to why these health and economic benefits should not occur as quickly as possible. Based on our members' many years of experience we are convinced that power plants can be cleaned up far more quickly, and will be cleaned up further and more quickly under current law, than the schedules and emission levels contained in S. 131. Having said that, we continue to urge Congress to pass multi-pollutant legislation – legislation with greater emission reductions and shorter time frames than S. 131 – to complement existing authorities and provide faster emission reductions than will occur under today's law.

The Analysis claims that the Acid Rain program is the most successful[2] clean air program and asserts that S. 131 should be adopted because it is like the Acid Rain program. However, S. 131 is not like the Acid Rain program in several important ways. In contrast to S.131, the Acid Rain program did not provide for banking and trading of all covered pollutants. Rather, the Acid Rain program made intelligent choices and only provided for trading of SO_2, while requiring unit specific emission limits for NO_x. STAPPA and ALAPCO have recommended trading programs for SO_2 and NO_x, but facility-specific emission limits for toxic pollutants such as mercury. Importantly, the 1990 Clean Air Act Amendments specified that the Acid Rain program would serve as an additional obligation to address a regional problem and not serve to displace existing CAA programs. Indeed, rather than eliminating or delaying NSR, air toxics and SIP programs, the legislation that established the Acid Rain program strengthened existing programs and added the MACT program for air toxics that S. 131 would eliminate for power plants and numerous

[2] We point out, below, that several CAA programs that did not involve banking achieved results that are at least as significant as the Acid Rain program. We also point out several errors in the Analysis, including the assertion that early banking under the Acid Rain program was a clear benefit to the environment.

other sources. These differences are at the core of many of STAPPA and ALAPCO's objections to S. 131.

At various points the Analysis seems to make conflicting arguments: 1) S. 131 would provide faster and greater emission reductions than current law (but would cause no economic harm) and (2) current law requires unrealistic cuts in emissions that would cause great economic harm. The apparent contradiction in these arguments is, however, irrelevant since neither argument is correct. We believe that the combination of SIP changes to meet current NAAQS implementation dates and regional haze programs, promulgation of a utility MACT standard that meets the requirement of the CAA and continued enforcement of NSR and other existing CAA programs will provide greater and quicker emission reductions than S.131, without significant cost to the public.

The Analysis cites to a study by the Energy Information Agency ("EIA"), comparing Senator Carper's bill to Chairman Inhofe's bill to suggest that the emission reduction program recommended by STAPPA and ALAPCO will cause significant economic harm. However, the Analysis ignores an EIA study that considered the emission reduction program that STAPPA and ALAPCO recommended and instead cites to an EIA study of a different emission reduction program[3]. The EIA study ignored in the Analysis concluded that the program that most closely matches STAPPA and ALAPCO's recommendations would provide earlier and greater emission reductions, at a lower cost to the public, than the Inhofe bill. The Analysis also fails to include any discussion whatsoever of the very substantial benefits associated with the emission reductions recommended by STAPPA and ALAPCO.

The Analysis claims that S. 131 will eliminate litigation about clean air compliance obligations and will provide greater certainty that emission reductions will occur. However, S.131 provides for numerous agency determinations that would have to be made over the next decade for it to be implemented. Each of those determinations is an opportunity for protracted litigation. The history of the CAA and of environmental regulation in general, demonstrates that any program that imposes significant costs on an industry will face court challenges designed to reduce and/or delay emission reductions. Each of the major clean air programs over the past 35 years have been challenged by industry – including the Acid Rain program, which was the subject of three separate industry challenges.

As one might expect, litigation challenging the most fundamental and important provisions of current programs tends to arise in the early years of these programs, with subsequent lawsuits focusing on narrower issues as the program matures. For this reason, we believe it is more reasonable to expect that there would be a greater probability of challenge to the fundamental provisions of a new program – such as Clear Skies or S. 131 – than in established programs such as the SIP, NSR and MACT programs where those issues have already been fought out and resolved. Indeed, the degree of controversy over current multi-pollutant proposals should be taken as a strong signal that ongoing litigation should be anticipated, irrespective of which proposal is adopted.

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[3] STAPPA and ALAPCO's testimony did not address regulation of CO_2 and thus, our recommendations are closest to those in the Carper bill, without greenhouse gas regulation. In the study cited in the Analysis, EIA also evaluated the costs of the Inhofe bill as against a three-pollutant version of the Carper bill.

The Analysis argues that S. 131 will provide clarity and certainty not found in existing CAA programs that cannot guarantee a specific level of emissions reductions. We respectfully submit that S. 131, which is 265 pages in length and contains numerous inter-related provisions and references to other provisions of the CAA, is far from clear, especially where the bill relies on administrative determinations to be made many years after passage of the law to determine its ultimate impact.

An emissions program that provides for a national cap-and-trade mechanism may be easier for sources to meet and may result in cost savings that would justify such an approach, but these programs do not provide more certainty for either the public or the source as to the specific obligations of the source than an established limit applicable to each plant. Indeed, it would appear that there is a trade-off to be considered between the cost savings associated with trading programs and certainty of emissions reductions as the source is at the mercy of the market and the public is forced to rely on the market and on decisions made by industry[4].

S. 131 does not provide more certainty that emission reductions will occur where and when they are needed to improve public health – under this bill no one can tell a local air agency what local air quality will be in 2007, 2010 or 2015 and the ability of state and local authorities to provide for cleaner air in their jurisdictions is significantly diminished. The increased uncertainty associated with cap-and-trade programs is greatly exacerbated by the protracted schedules of S.131 and by its elimination of the safeguards against local harm that were a hallmark of the Acid Rain program.

As the Congress moves forward in its deliberations we strongly urge that the public interest, including that of small, medium and large businesses that will bear a substantial part of the $130-billion-per-year cost of delaying cleanup of power plants, be the sole determining factor, not the interest of a single industry. Toward that end we believe there are two questions that must be answered:

1. Has the utility industry presented such a compelling case of financial disaster as to overcome the clear, documented, public health and economic cost of delaying power plant cleanup for more than a few years?

2. Has the utility industry presented a compelling case that proves, beyond any doubt, that longstanding CAA provisions that allow federal, state and local authorities to protect local air quality must be jettisoned here, where they were not abandoned in the Acid Rain program, in order to improve air quality?

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POINT-BY-POINT RESPONSE TO
THE ANALYSIS OF STAPPA AND ALAPCO'S TESTIMONY

[4] For example, as we understand them, the provisions of S. 131would allow a source to "borrow" allowances indefinitely and never repay them – thus never reducing emissions to the levels promised in the legislation.

In the following section, STAPPA and ALAPCO provide a specific response to the points raised in the Analysis of the associations' January 26, 2005 testimony provided by Senator Voinovich. Following the format of the Analysis, we provide the portion of the STAPPA/ALAPCO testimony cited in the Analysis, followed by a summary of the Analysis that appears to address that portion of the STAPPA/ALAPCO testimony and then provide STAPPA and ALAPCO's response to that portion of the Analysis.

Testimony of STAPPA/ALAPCO[5]

"S. 1844 would postpone until 2018 the final date for industry compliance with the NO_x, SO_2 and mercury caps... And for NO_x and SO_2, it is not only nearly a decade later than state and local attainment deadlines; it is also clearly counter to the Clean Air Act requirement for attainment as expeditiously as practicable."

Analysis of STAPPA/ALAPCO's Testimony

"The Acid Rain program, the most successful Clean Air Act program, allows banking."

STAPPA/ALAPCO Response

Synopsis: The Analysis does not dispute STAPPA and ALAPCO's testimony concerning the overly long compliance deadlines in S. 131. Nor does it provide a justification for delaying the health, environmental and economic benefits of cleaning up power plant emissions for half a generation. Instead, the Analysis offers an incomplete and irrelevant observation concerning the Acid Rain program.

Instead of addressing the core issues in STAPPA and ALAPCO's testimony, the Analysis picks up a thread – the associations' observation that the overly long statutory compliance dates of S. 131 are exacerbated by the trading provisions of the bill – and seeks to defend the entire schedule by noting that the Acid Rain Program, which it asserts is "the most successful Clean Air Act program," contained banking provisions. It is true that the Acid Rain program allows banking for SO_2 emissions. However, it did not allow banking for NO_x emissions, providing instead an emission limit to be met by each emissions unit – much as STAPPA and ALAPCO are now advocating for mercury emissions. Moreover, the 1990 CAA Amendments strengthened other CAA programs, including the NSR, SIP and air toxics (MACT) programs and were designed to supplement, not replace those programs. One of the strengths of the Acid Rain program was that it did no harm to state and local programs. S. 131 fails to follow the lead of the Acid Rain program in terms of making intelligent choices about the form of regulation, preserving existing successful programs and respecting the role of state and local governments in ensuring clean air for their residents.

The Analysis does not provide a reason for its assertion that the Acid Rain program is "the most successful Clean Air Act program." We believe the most appropriate measure of an

[5] The Analysis referred to selected portions of STAPPA and ALAPCO's testimony; therefore, in this response we address only those portions of the STAPPA/ALAPCO testimony referenced in the Analysis.

environmental program is whether it achieves its environmental goals – not whether it costs industry less than was feared.

The Acid Rain program was intended to correct the problem of acid rain in this country. Sadly, it has not. Studies done by the federal government to date show that even with the emission reductions called for in the Acid Rain program, sensitive areas in the Adirondacks will continue to degrade. The 1998 National Acidic Deposition Assessment Program (NAPAP) report, "Biennial Report to Congress: An Integrated Assessment," found that 24 percent of Adirondack lakes are seriously acidic and nearly 50 percent are sensitive to acidic deposition. The NAPAP report further stated that, even with the reductions required by the Clean Air Act, the number of acidic lakes in the Adirondacks will double by 2040. In October 1995, EPA issued the "Acid Deposition Standard Feasibility Study: Report to Congress." Both the October 1995 EPA report and NAPAP report concluded that, to realize the protection of sensitive ecosystems, additional reductions of SO_2 and NO_x emissions in the range of 40 to 50 percent or more were needed.

In 2000, the U.S. General Accounting Office ("GAO") issued a report on acid rain emission trends and effects on the eastern United States.[6] *The GAO report concluded that years of acid deposition in the Adirondacks have depleted the capacity of soils and vegetation to neutralize acids and as a result nitrates are able to flow freely into streams and lakes and render them lifeless. The GAO report also concludes that it could take decades or even centuries for the soils and water bodies in the Adirondacks to recover from the effects of acid deposition (and that some may never recover) without further reductions in NO_x emissions.*

The Hubbard Brook Research Foundation, a noted research organization working in cooperation with EPA, the Forest Service and other organizations, reports that "only modest improvements in ANC [Acid Neutralizing Capacity], an important measure of water quality have occurred in New England. No significant improvement in ANC has been measured in the Adirondack or Catskill Mountains of New York." The Foundation echoes the views of others who have studied this issue when it calls for emission reductions well beyond those required by the Acid Rain program"[s]pecifically, with an additional 80 per cent reduction in sulfur emissions from electric utilities streams such as those at HBEF [the Hubbard Brook Experimental Forest] would change from acidic to non-acidic in approximately 20-25 years." http://www.hubbardbrook.org/hbrf/publications/Acid_Rain_Revisited.pdf.

This problem is not limited to the Northeast. Indeed, a recent study by the National Park Service concludes that visibility, ozone levels and acid rain in the Great Smoky Mountains National Park had not improved between 1994 and 2003. Indeed, according to this study, only three of 49 national parks experienced statistically significant reductions in sulfate deposition. Performance with respect to other forms of acid rain was even worse, as only two parks showed a statistically significant improvement in nitrate deposition, while four parks experienced a statistically significant increase in this period; no park showed a statistically significant improvement in ammonium deposition, while five parks experienced a statistically significant increase in ammonium deposition. Only three of 49 parks experienced a statistically significant

[6] Acid Rain: Emissions Trends and Effects in the Eastern United States, U.S. GAO, Report NO. RCED-00-47, March 9, 2000

decrease in ozone concentrations (8-hour maximum), while 10 parks were subjected to statistically significant increases. At eastern parks, only one showed an increase in clean visibility days. http://www2.nature.nps.gov/air/who/GPRA/GPRA2004review02042005.pdf. The limited scale of environmental improvement during this period is also evident in the West, as many western parks, including Yellowstone and Grand Canyon, show increases in ozone concentrations, no decline in sulfate deposition, but increased deposition of nitrates and ammonium. http://www.ncseonline.org/NLE/CRSreports/05Jan/RL32420.pdf.

Moreover, the Acid Rain program still has not reduced utility emissions to the promised levels. At no time since full implementation of the Acid Rain program have annual SO_2 emissions been equal to or less than the allocation for that year. SO_2 emissions are not projected to be below cap levels for several more years – almost a decade after the date when most would have assumed that actual emissions would be below the cap. Indeed, the general recognition that the Acid Rain program will not achieve its environmental goals is one of the factors that prompted a number of states, as disparate as New York and North Carolina, to enact their own multi-pollutant programs limiting power plant emissions.

Other Clean Air Act programs that do not involve banking can lay claim to emissions reductions that exceed those of the Acid Raid program. These include the SIP programs administered by state and local authorities that reduced PM_{10} emissions in this country by over 80 percent in 10 years[7], the lead phase-down program that reduced lead poisoning in children by 90 percent in its first decade[8] and the mobile source program that now achieves over 99 percent reduction in pollutants from vehicles. Indeed, recent analysis has shown that the rate of decline in SO_2 emissions remained the same in the years after passage of the Acid Rain program as it was (due to SIP, NSR and NSPS programs) before that program. See, Likens, et al, cited in http://www.hubbardbrook.org/hbrf/publications/Acid_Rain_Revisited.pdf at p. 10.

The Acid Rain program was certainly a useful step, but success will not be achieved until there are greater emission reductions from the utility sector. For this reason, among others, STAPPA and ALAPCO support multi-pollutant legislation with the rates and compliance dates set out in our January 26, 2005 testimony.

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[7] Indeed, "command-and-control" SIP programs implemented by state and local governments reduced PM_{10} emissions from utilities from 1.6 million tons per year to less than 250,000 tons per year – a reduction of 89 percent. http://www.netl.doe.gov/coal/E&WR/pubs/IEP%20Program%20Summary%20Final%20Feb%202005_2.pdf.

[8] Compared to the acid rain program, other programs have been far more successful in achieving environmental results. The elimination of lead in gasoline reduced mobile source lead emissions from greater than 40,000 tons per year to zero in a relatively short period of time. EPA reports that lead emissions dropped by 93 percent in the period from 1982 to 2002, resulting in a 94-percent reduction in lead in the ambient air from 1983 to 2002. http://www.epa.gov/airtrends/lead.html. Along with other federal programs aimed at reducing lead poisoning in children, the phase out of leaded gasoline produced significant health benefits. At the time of the start of federal lead abatement programs (1976-1980) 13.5 million children under the age of five (88.2 percent of the population) had blood lead levels above the 10ug/dl that is the level of concern established by CDC; by 1988-1991 lead in gasoline had been totally eliminated and the number of children with elevated blood lead levels had been reduced to 1.7 million (8.6 percent of the population). This progress has been sustained in other programs – for the 1991-1994 time frame, only 890,000 children (4.4 percent of the population) had elevated blood lead levels, while in the 1999-2000 time frame, these figures were further reduced to 434,000 children (2.2 percent of the population). The Department of Health and Human Services has established a goal of eliminating lead poisoning in children within the next five years. http://www.cdc.gov/nceh/lead/research/kidsBLL.htm#National%20surveys.

Testimony of STAPPA/ALAPCO

"Moreover, compliance will be deferred even further – to the mid-2020s – due to the impact of the bill's credit banking and trading program."

Analysis

"According to the Environmental Protection Agency, 'The banking aspect of the trading program creates incentives for electricity generators to reduce their emissions further and more quickly than the law requires.' The results have been impressive: 'Reductions in the early years of the program averaged 25% below allowable levels, resulting in early benefits to human health and the environment.'"

STAPPA/ALAPCO Response

Synopsis: Again, the Analysis does not dispute STAPPA and ALAPCO's testimony that compliance with caps will be deferred to the mid-2020s. Nor does it demonstrate that any early emission reductions under S. 131 would be greater than effective enforcement of current law.

While banking creates incentives for early reductions, those reductions come at the expense of higher emissions in later years and create the potential to mislead the public as to when the promised emission reductions will occur. Banking provides no net gain to the environment. STAPPA and ALAPCO are not opposed to the concept of banking or to the flexibility that banking provides industry in the early years of a program. However, the possibility of banking should not provide an excuse to enact overly lenient compliance deadlines. S. 131 could easily achieve greater health benefits by moving the compliance dates forward – and still allow banking.

We do not view the allowance banking that occurred in the early years of the Acid Rain program as an unqualified success. A close look at how some of the "emission reductions" occurred in the early years of the program shows one of the risks of banking programs – the creation and use of excess allowances that do not benefit the environment. In those years, the banking provisions created a fund of allowances – in excess of 10 million tons of allowances were banked in the first five years of the program – allowances that permit higher emissions today and in the future. While the majority of those allowances represent legitimate emission reductions that were an environmental benefit, others were created without any early benefits to human health and the environment.

How did this occur? The Acid Rain program designated "Phase I" units that were subject to an emissions cap effective 1995 and "Phase II" units whose emissions were not capped until 2000. SO_2 emissions from Phase I units declined by 18 percent – several million tons – in one year. Much of that reduction was the result of burning lower sulfur coal and some SO_2 scrubbers were installed, but one of the Acid Rain compliance strategies in those early years was "load shifting," where the utility industry simply shifted some generating load from Phase I units to Phase II units. In that way the Phase I units could stay below their caps and bank

allowances for later use at almost no cost to the company. However, that practice also generated allowances without reducing real world emissions, since the Phase II unit's emissions would increase. This load shifting became more pronounced in the years after 1995 as emissions from utilities increased for several years following their 1995 low point, even as Phase I emissions remained constant and allowances were banked. Once the Phase II units were included in the program in 2000, utilities stopped banking emissions and each year since that time utility emissions have been greater than Acid Rain caps. http://www.epa.gov/airmarkets/cmprpt/arp03/summary.html.

Testimony of STAPPA/ALAPCO

"For mercury, this protracted compliance schedule is about 15 years later than Congress allowed under the Clean Air Act for utilities and other sources to comply with MACT."

Analysis

"The Clean Air Act does not require a specific regulatory approach, such as MACT, nor does it require a specific level of reduction. Under the MACT framework EPA must determine what reduction levels are achievable by analyzing emission controls used by similar sources of pollution. The law requires EPA to set a minimum reduction, determined by averaging the emission control achieved by the best performing 12 percent of an industry."

STAPPA/ALAPCO Response

Synopsis: Once EPA made its regulatory determination in 2000 that regulation of mercury emissions under the MACT program was feasible, the CAA provides a specific timetable for promulgation of MACT standards and a specific timetable for compliance with those standards – 2007. Moreover, as the Analysis states, the minimum emissions reduction required by MACT standards is to be based on an evaluation of specific, objective data. For this reason, the level of emission reductions to be expected in 2007, if EPA complies with the requirements of the CAA in setting standards, can be projected with reasonable certainty.

We assume the comment in the Analysis is meant to argue that EPA was not required to make its finding in 2000 finding that mercury is a toxic air pollutant, irrespective of how compelling the science demonstrating mercury's toxicity. This is simply incorrect; section 112(n) of the CAA specifically required EPA to study whether control of toxic emissions from electric utilities was appropriate and necessary. Given the compelling public health data and reasonable cost of mercury removal, EPA could not lawfully have reached a conclusion not to regulate utility mercury emissions. Irrespective of this point, EPA did make a finding in 2000 in the affirmative, thus triggering the nondiscretionary control requirements and timetables established in section 112 of the CAA for the MACT program. Section 112(n) provides that EPA "shall establish [112] standards" [emphasis added] for utilities upon making its finding. 42 U.S.C. 7412(n). Since section 112(b)(3)(c) establishes specific delisting provisions for air toxics, EPA cannot simply reverse the 2000 determination and delist mercury unless it can show that these emissions "may not be reasonably anticipated to cause any adverse effects to the human health or adverse environmental effects." 42 U.S.C. 7412(b)(3)(c). EPA concedes that utility

emissions of mercury are, indeed, a major health concern and has not attempted to make a contrary showing.

EPA has not come forward with specific emissions data for the years after 2025, but its projections for early banking suggest that there will be significant banked emissions. Thus, STAPPA and ALAPCO's testimony that the final mercury emission reductions will not occur until 15 years after the MACT deadlines – or 2022 (2024 if section 112 waivers are provided) is reasonable and even generous regarding the timelines of S. 131.

While a specific reduction level is not set out in section 112 for electric utilities, EPA's discretion in establishing the required reduction level is quite narrow. Although EPA has discretion to establish more stringent control requirements, the CAA is quite specific in requiring that the MACT requirement be no less stringent than that achieved by the best performing 12 percent of the industry. If EPA faithfully adheres to this requirement, the data concerning existing units should lead to a fairly predictable control level. The recent determination by the EPA Inspector General that the proposed MACT levels were not set in accordance with this requirement[9] gives us great concern that EPA may not comply with the law in setting the final utility MACT standards. In our judgment, however, this concern does not provide a justification for supporting a statute that would eliminate the MACT requirement – since there is no compelling reason to believe that an agency would feel any more obliged to enforce and comply with Clear Skies or S. 131 than the MACT requirements.

Testimony of STAPPA/ALAPCO

"For mercury, this protracted compliance schedule is about 15 years later than Congress allowed under the Clean Air Act for utilities and other sources to comply with MACT."

Analysis

"No commercially available technologies can reduce mercury emissions, from all coal types, on a consistent basis, by 90 percent in three years. According to the Energy Information Administration: 'With currently available technologies, it is not known whether this level of removal is achievable for all plant and coal types'. This is particularly true for plants using subbituminous and lignite coals. Technologies for removing SO2 and NOx are not as successful at removing mercury from these lower rank coals and mercury specific control technologies that can achieve greater than 90-percent removal have not been demonstrated." (Energy Information Administration, "Analysis of S. 1844, the Clear Skies Act of 2003; S. 843, the Clean Air Planning Act of 2003; and S. 366, the Clean Power Act of 2003," May 2004)"

"Imposing an unrealistic, 90 percent command-and-control reduction by 2008 would cause severe economic harm to the coal industry, which provides 52 percent of the nation's electricity. According to the Energy Information Administration, this approach would cut coal-fired electric generation by 55 percent, coal production by 50 percent, and destroy 32,000 coal

[9] Additional Analyses of Mercury Emissions Needed Before EPA Finalizes Rules for Coal-Fired Electric Utilities, Office of the EPA Inspector General, Report No. 2005-P-00003, February 3, 2005.

jobs. (Energy Information Administration, "Analysis of S. 1844, the Clear Skies Act of 2003; S. 843, the Clean Air Planning Act of 2003; and S. 366, the Clean Power Act of 2003," May 2004)."

STAPPA/ALAPCO Response

Synopsis: STAPPA and ALAPCO did not testify as to the specific control requirements that should be established in the utility MACT. Further, the Analysis does not dispute that EPA is currently obliged to promulgate a mercury MACT standard that has a compliance date of 2007, which is at least 15 years earlier than the projected dates for reaching the mercury emission caps in S.131. Finally, while the Analysis argues utilities cannot attain a 90 percent reduction in mercury emissions by 2007, it does not dispute or provide any reason to fail to adopt the emission reduction schedule that STAPPA and ALAPCO recommended as part of a reasonable multi-pollutant bill.

While STAPPA and ALAPCO's testimony did not address specific mercury MACT control levels, we will take this opportunity to correct some errors in the Analysis and set out some factors that lead us to believe that, if EPA sets the MACT standards as the law requires, we would anticipate significant reductions of mercury and other toxic air pollutants.

Under the MACT program, the issue of whether a technology is "commercially available" does not arise. EPA's role is limited to determining the best performing 12 percent of the industry and averaging the emission reduction performance of that group. EPA also has the authority to determine reasonable subcategories of an industry and base its requirements on the performance of the best performing units within each of those subcategories[10].

The data we have reviewed show that there are a number of units that burn bituminous coals and are equipped with FGD (wet scrubbers) or spray dryers (dry scrubbers) and fabric filters (baghouses). These units have very high (approximately 98 percent) mercury reduction performance[11]. *If EPA does not establish subcategories, these units should drive the average of the top 12 percent of the entire industry to a very stringent control requirement. If EPA establishes subcategories as proposed, these units should at least drive the average for the top performers in the "bituminous coal burning" subcategory, which represents about half of the coal burned, to very stringent requirements. As to the subbituminous and lignite burning categories, the mercury emissions data also show that a number of existing units, either because they are also equipped with baghouses, or for other reasons, have much higher mercury reduction performance than the average or poor performing units within the group. For this reason, we would also expect to see significant reductions in mercury (and other toxic) emissions if EPA follows the requirements of section 112 in setting the utility MACT standards.*

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10. While there would appear to be reasonable justification for establishing separate subcategories for conventionally fired units and IGCC units, there is substantial controversy as to whether EPA may establish subcategories based on the type of coal the unit is currently burning. In STAPPA and ALAPCO's experience, many units have the capability of burning different rank coal and often burn blends of coal. Moreover, many units changed the type of coal they combusted in response to the Acid Rain program and would be expected to make further changes in response to multi-pollutant legislation or EPA's proposed CAIR rule.

11. U.S. EPA Performance and Cost of Mercury and Multipollutant Emission Control Technology Applications on Utility Boilers, prepared for the Office Of Research and Development, EPA-600/R-03-110 (October, 2003).

The Analysis seems to claim that the MACT standard-setting process would impose "an unrealistic 90 percent command and control requirement by 2008" that would cause severe economic harm to the coal industry. We find it difficult to understand how requiring the industry to reach a control level that has already been achieved by one-eighth of the industry is "unrealistic."

While section 112 is specific in setting the MACT compliance dates, EPA is authorized in certain circumstances to extend the compliance dates for individual units with specific problems. EPA's rulemaking designating mercury as a toxic air pollutant was commenced in 1990 and concluded in 2000[12]*. Thus, the utility industry has been on notice and has had the opportunity to prepare for these requirements for over a decade. We believe that this industry has been provided ample time to meet MACT requirements. The FGD and SCR technologies mentioned above have been commercially available for more than 35 years and 10 years, respectively. All that is required for units that are burning bituminous coal is to place an order for these controls. Since many units that are now burning subbituminous coals previously fired bituminous coal and retain the capability to burn the latter, they may also utilize proven technologies to meet their obligations especially if they are also planning to reduce SO_2 and NO_x emissions to meet a SIP requirement, CAIR rule or a federal or state multi-pollutant cap.*

For units burning other coals a technology called Activated Carbon Injection (ACI), sometimes in conjunction with installation of a baghouse (also a well-demonstrated technology), may be the most economical way to meet MACT limits. Others may require inexpensive pretreatment systems that oxidize elemental mercury before introducing the gas stream into conventional treatment devices. ACI is currently used to meet mercury removal MACT requirements for municipal waste combustors and some modest research efforts have been completed in some electric generating units to evaluate its effectiveness. In other rulemaking actions, industry frequently comments that it requires greater permitting flexibility since the time to bring new products to market has been dramatically reduced. We see no reason to believe that the pollution control industry needs a decade or more to bring products such as ACI to market. Indeed, if one looks at the actual research reports, these technologies do not appear to be "unrealistic," even in the short term. With respect to ACI, which is currently used to control mercury emissions in other industries, the researchers report:

> *"[s]ince the [ACI] technology is relatively simple and well proven on a similar scale; the process contingency was set at 5%. ACI equipment can be installed in a few months, therefore, no adjustment was made for interest during construction."*
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> *Final Report for Pleasant Prairie Power Plant Unit 2, Report No 41005 R11, p. 43.*
> *http://www.netl.doe.gov/coal/E&WR/mercury/controltech/pubs/Final%20Report%20Pleasant%20Prairie.pdf*

With respect to the use of pretreatment oxidizers to facilitate mercury removal at lignite fired boilers, the researchers state:

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[12] Indeed, the 1990 Clean Air Act Amendments required EPA to complete its study by November, 1993. After being sued for missing that deadline, EPA signed a settlement agreement in 1995 obligating it to complete its study and issue final MACT regulations by 2000. EPA is currently obligated to complete its rulemaking by March, 2005.

"[t]he oxidation process is proven at the pilot-scale and in short term full scale tests. Additional optimization is continuing on oxidation technologies and this project focuses on month long full scale testing."

Quarterly Report, "Large-Scale Mercury Control Technology Testing for Lignite-Fired Utilities – Oxidation Systems for Wet FGD" for the period of July 2004-September 2004.
http://www.netl.doe.gov/coal/E&WR/mercury/control-tech/pubs/41991%20Q093004.pdf
Energy and Environment Research Center
University of North Dakota

Thus, it would appear that the ongoing research is aimed at "optimizing" existing systems that can "be installed in a few months." Further, the Analysis offers no support for its assertion that mercury controls are not commercially available and is apparently incorrect. Several vendors of mercury control equipment have recently testified that they either have effective controls on the market now or will introduce such controls in 2005.

We strongly disagree with the suggested test of "commercial availability" for determining when a technology should be required since this allows the industry, not the Congress or the states, to determine when emission reductions should occur. This test presents "the chicken or the egg" issue – which comes first, the rule or commercial availability? There is no real doubt that effective mercury controls are feasible and can be introduced in the next few years, but until there is a market for a product (i.e., willing customers) it may not be in anyone's interest to invest the capital necessary to make the product "commercially available." If regulation can only occur after a market is established, then such laws can only confirm what an industry is already doing. Moreover, this approach puts industry, not the Congress, in the position of deciding when to move forward with emission reductions under the CAA. If EPA, through the MACT process, or Congress in multi-pollutant legislation, establishes rigorous requirements for mercury controls, the history of the CAA teaches us that industry will find a way to achieve the "unachievable" – and at less cost than has been predicted.

Testimony of STAPPA/ALAPCO

"With respect to NO_x, our analysis identifies an interim cap of 1.51-1.87 million tons per year (tpy) by 2008 and a final cap of 0.88-1.26 million tpy by 2013, compared to S. 1844's NO_x caps of 2.1 million tpy by 2008 and 1.7 tpy by 2018. For SO_2, our analysis identifies an interim cap of 3.0-4.5 million tpy by 2008 and a final cap of 1.26-1.89 million tpy by 2013, compared to S. 1844's SO_2 caps of 4.5 million tpy by 2010 and 3.0 million tpy by 2018. A regional SO_2 cap for western states should not interfere with the regional haze rule's SO_2 annex. And for mercury, our analysis identifies an interim cap of 15-20 tpy by 2008 and a final cap of 5-10 tpy by 2013, compared to S. 1844's caps of 34 tpy (which is even weaker than the already-too-weak 26-tpy cap originally included in Clear Skies) in 2010 and 15 tpy in 2018."

Analysis

"The levels recommended by Mr. Paul are very similar to those called for in the Carper bill. The Carper bill, according to the Energy Information Administration, is not cost-effective and would seriously harm the economy."

STAPPA/ALAPCO Response

Synopsis: Contrary to the representations in the Analysis, when EIA evaluated the emission reduction program recommended by STAPPA and ALAPCO as set out above, it concluded that the costs of that program <u>to the consumer</u> would be less than the cost of the Inhofe bill.

STAPPA and ALAPCO have not endorsed any bill, did not testify in favor of any bill and did not address the question of greenhouse gas reductions. Further, EIA did not say that the Carper Bill "is not cost effective and would seriously harm the economy."

The EIA statements cited in the Analysis largely reflect EIA's view of the impacts of the CO_2 reductions required by the Carper Bill and therefore do not provide an "apples-to-apples" comparison of the cost and impact of the 3-p portion of the Carper Bill, the Inhofe Bill or the levels and timeframes recommended by STAPPA and ALAPCO. Further, the EIA analysis does not attempt to quantify the benefits (or benefits foregone) of the competing legislative proposals or the control requirements recommended by STAPPA and ALAPCO.

The same EIA report contained an analysis of the 3-p components of the Carper Bill that would have permitted a fair evaluation of the adverse impacts of the control levels recommended by STAPPA and ALAPCO. This evaluation was ignored in the Analysis, even though it concluded that the cost differences between the two proposals were quite small. Notably, this evaluation concluded that the earlier and more aggressive reductions in NO_x, SO_2 and mercury of the Carper bill would be accomplished with lower electric costs to the consumer than the Inhofe Bill.

Analysis

According to EIA under the Carper bill, the amount of electricity generated from coal would drop 24.2 percent by 2025, coal production would drop 302.2 million tons by 2025 and coal mines would lose 12,000 jobs by 2025. The Carper bill would also increase natural gas use thereby increasing natural gas prices for consumers by $2.9 billion in 2020, more than three times the increase under the Inhofe bill, at $0.8 billion.

Net natural gas imports would increase 4.7 percent by 2020 and net natural gas imports would account for 24.3 percent of the total gas supply; dependence on natural gas imports would increase 8.8 percent by 2025. EIA likely has underestimated the increase in natural gas prices because the current price of natural gas is higher than used in EIA's estimate.

The Carper bill restricts mercury trading, making the trading program less effective. The most successful emission trading programs, such as EPA's Acid Rain program, do not restrict the ability of a source to trade so long as overall cap levels are met. The Carper bill's restricted mercury trading would lead to higher industry costs, and therefore more fuel switching, than would occur with unrestricted trading under the Inhofe bill. The cost of complying with the Carper bill's mercury cap is likely to be even greater than EIA's estimate. This is because the cost of certain mercury control technologies is 60 percent higher than estimates used by EIA.

STAPPA/ALAPCO Response

Synopsis: Much of the discussion in the Analysis respecting the use of coal versus natural gas to generate electricity is based on EIA's assumptions about the availability of greenhouse gas allowances generated outside of the United States and is not related to STAPPA and ALAPCO's testimony. The Analysis does not quantify the differential costs of allowing mercury trading at the 5- to 10-tpy level compared to unit-specific costs at that level. At that level of emissions, we believe the differential costs would be small and not commensurate with the public health risk.

As pointed out above, the Acid Rain program does not allow unrestricted trading of all covered pollutants. We believe that mercury, which has been shown to be deposited within a relatively short distance from its emission point in many instances, is susceptible to the creation of locally high areas of concentration and harm, and should not be traded. The Analysis ignores this point in STAPPA and ALAPCO's testimony. Moreover, to the extent that mercury trading reduces the health benefits of the program while still imposing control costs on the industry its effectiveness is reduced, not increased.

The history of CAA regulation strongly suggests that the cost of mercury controls will be far less than early estimates. Finally, the Analysis fails to claim, let alone demonstrate, that the costs for mercury control are beyond its means, given its expected future revenue stream, or not in the public interest, given the current health care costs associated with mercury poisoning.

Testimony of STAPPA/ALAPCO

"Contrary to STAPPA and ALAPCO's firm belief that new and existing power plants must continue to be subject to NSR, S.1844 repeals this important program for affected sources, including requirements for new units to install state-of-the-art Lowest Achievable Emission Rate control technology and acquire emission offsets in nonattainment areas, and install Best Available Control Technology and protect air quality increments to guard against adverse local air quality impacts in attainment areas. Existing sources making major modifications should be required to install the best available controls on affected units at the time of modification, acquire any emission allowances required to address emission increases and ensure against adverse local health or environmental impacts. However, in place of all this, S. 1844 regresses to seriously outmoded New Source Performance Standards (NSPS) and, further, rescinds requirements to update the NSPS on a periodic basis. Further, this bill would allow non-utility units from other industries to qualify for this same regulatory relief, as well."

"S.1844 also eliminates all the requirements of sections 169(A) and (B) of the Clean Air Act, including not only Best Available Retrofit Technology (BART) requirements, which the original Clear Skies bill repealed, but all visibility requirements and regional haze rules. Further, it revokes many Prevention of Significant Deterioration (PSD) requirements and relaxes protections for Class I areas. Moreover, the bill also includes provisions that prevent states from taking credit in their State Implementation Plans for any NSR or PSD requirements they seek to apply to affected units. Opt-in units would also be able to take advantage of these relaxations."

"With respect to toxic air pollutants, S.1844 repeals the utility MACT rule, including the regulation of non-mercury HAPs, and rescinds residual risk requirements for HAPs, which, under current law, protect the public with an additional margin of safety following application of stringent technology requirements. Once again, the bill would allow non-utility opt-in units to escape these requirements."

"The bill also seriously undermines states' abilities to protect air quality in their jurisdictions by prohibiting compliance with any petition under section 126 until 2014. Further, it impedes potential use of this important authority by requiring a downwind area to first demonstrate that all more cost-effective measures have been implemented – a process that will surely result in delay and lead to litigation. In addition, EPA is prevented from exercising its authority to issue a SIP call under section 110 until 2014."

Analysis

All of the above programs lack the certainty and clarity of Clear Skies and cannot guarantee a specific level of emissions reductions. These command-and-control programs encourage confrontation and litigation, which can seriously delay progress in cleaning the air.

New Source Review provides a clear-cut example of the problems associated with the existing act. Currently there are two conflicting legal interpretations of NSR. The Clinton EPA's 1999 "enforcement interpretation" essentially concludes that many routine maintenance projects trigger NSR. Yet in its August 26, 2003 decision, the United States District Court for the Middle District of North Carolina rejected the Clinton EPA's enforcement interpretation. In fact, EPA has admitted that under the court's analysis, none of the projects undertaken in that case would violate NSR. The NSR program, then, would apply to few facilities, and therefore would not come close to besting the reductions achieved by Clear Skies.

The Section 126 process is unwieldy, time-consuming, and prone to litigation, according to former EPA Administrator Whitman, "[w]hen compared to Clear Skies, this approach will almost certainly involve years of litigation and uncertainty about reduction targets and timetables."

Clear Skies will require coal-fired power plants to install $50 billion in new pollution control technologies, thus obviating the need for states to file Section 126 petitions.

STAPPA/ALAPCO Response

Synopsis: S. 131 does not provide either certainty of securing emission reductions when and where they are needed, or clarity. Further, S. 131 will not reduce litigation over the obligations of coal-fired power plants.

We have seen no language in S. 131 that would preclude industry challenges to the numerous determinations that would have to be made over the next decade for it to be implemented. Absent such language we believe it is naïve to assume that any program that imposes significant costs on an industry will not face court challenges designed to reduce and/or

delay emission reductions. While the current NSR enforcement actions and any industry challenge to a properly promulgated MACT standard could take two or three years to resolve, litigation over the DOE and EPA determinations under S. 131 could go on for many years.

Each of the major clean air programs over the past 35 years has been challenged by industry – including the Acid Rain program, which was the subject of three separate industry challenges[13]. As one might expect, litigation challenging the most fundamental and important provisions of current programs tends to arise in the early years of these programs, with subsequent lawsuits focusing on narrower issues as the program matures. For this reason, we believe it is more reasonable to expect that there would be a greater probability of challenge to the fundamental provisions of a new program – such as Clear Skies – than in established programs such as the SIP, NSR and MACT programs where those issues have already been fought out and resolved. Indeed, the degree of controversy over current multi-pollutant proposals should be taken as a strong signal that ongoing litigation should be anticipated, irrespective of which proposal is adopted.

The theory of the NSR enforcement cases against the coal-fired utilities was re-examined by the Justice Department at the beginning of the current Administration and found to be sound. Settlements to date have already resulted in substantial emission reductions. Further, the majority of the courts that have addressed the "routine maintenance" issue have ruled in the government's favor and trials in the remaining major cases are scheduled to occur in the next year. The routine maintenance issue was decided in the government's favor at the appellate level in the WEPCO case over 10 years ago. The Duke decision cited in the Analysis is the only decision in the industry's favor. It has been briefed on appeal and should be resolved in the near future. Petitions under section 126 to abate emissions from upwind sources have provided substantial environmental improvement in the past few years.

The Analysis argues that Clear Skies will provide clarity and certainty not found in existing CAA programs that cannot guarantee a specific level of emissions reductions. S. 131 is 265 pages long. We respectfully submit that no legislation that is 265 pages in length can be considered clear, especially where that legislation relies on administrative determinations to be made many years after passage of the law. Nor can it be considered certain that the caps will ever be met where the bill allows sources to borrow against future allocations of allowances with no specified date when such loans must be repaid. Significantly, the EIA study cited in the Analysis concludes that, because of the safety valve provisions of the bill that allow a company to "pay to pollute," the promised mercury reductions will not occur. S. 131 also exempts many coal-fired pants from its coverage – mercury emissions from those plants are actually allowed to increase.

An emissions program that provides for a national cap-and-trade mechanism may be easier for sources to meet and may result in cost savings that would justify such an approach, but these programs do not provide more clarity or certainty for either the public or the source as

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[13]See, *American Mun. Power-Ohio v. EPA*, 98 F.3d 1372 (D.C. Cir. 1996); *Indianapolis Power & Light v. EPA*, 58 F.3d 643 (D.C. Cir. 1995); *Madison Gas & Elec v. EPA*, 25 F.3d 526 (7th Cir. 1994).

to the specific obligations of the source than an established limit applicable to each plant. Indeed, it would appear that there is a trade-off to be considered between the cost savings associated with trading programs and certainty of emissions reductions as the source is at the mercy of the market and the public is forced to rely on the market and on decisions made by industry[14]. The increased uncertainty associated with cap-and-trade programs is greatly exacerbated by the protracted deadlines of S.131.

S. 131 does not provide more certainty that emission reductions will occur where and when they are needed to improve public health – under this bill no one can tell a local air agency what local air quality will be in 2007, 2010 or 2015 and the ability of state and local authorities to provide for cleaner air in their jurisdictions is significantly diminished.

The Clean Air Act provides that

> *"...air pollution prevention (that is, the reduction or elimination, through any measures, of the amount of pollutants produced or created at the source) and air pollution control at its source is the primary responsibility of States and local government..."*
> *42 U.S.C. 7401(a)(3) [emphasis provided]*

S. 131 contains numerous provisions that are contrary to this fundamental principle. It significantly and dramatically undercuts the right of state and local government to protect local air quality. S. 131 effectively removes decision-making about where and when specific emission reductions will occur from elected officials (assisted by unbiased civil servants) and turns it over to traders and industry managers. These new decision makers will never be held accountable to the public for their decisions and can be expected, quite naturally, to base their decisions on what will maximize profits for the company rather than what the public interest requires.

It also undercuts the right of states, either individually or acting in concert, to address state-wide or regional concerns by enacting state or regional cap-and-trade programs. On February 15, 2005, North Carolina Attorney General Cooper expressed his concern over this issue and provided the Committee a legal analysis demonstrating that S. 131 significantly undercuts efforts by states that are concerned with pollution from coal-fired power plants to implement multi-pollutant emission reduction programs in their states. S. 131's impact in this regard is not limited to North Carolina, a number of other states either have enacted or are in the process or developing multi-pollutant emission legislation to curb emissions from coal-fired utilities.

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[14] For example, as we understand them, the trading provisions of S. 131 would allow a source to "borrow" allowances indefinitely and never repay them – thus never reducing emissions to the levels promised in the legislation.

RESPONSES BY JOHN A. PAUL TO QUESTIONS FROM SENATOR VOINOVICH

Question 1. Your testimony states that ". . . continued implementation of the Clean Air Act will provide far greater and more certain and more timely protection of public health and the environment [than S. 131]." Has litigation ever delayed implementation of any Clean Air Act requirements? Please explain how your statement takes into account the possibility of implementation delays due to litigation. Do you expect litigation over EPA's final regulations in the Clean Air Interstate Rule, Clean Air Mercury Rule, and Regional Haze Rule? Do you think litigation could delay the implementation of these rules?

Response. STAPPA and ALAPCO are concerned about any delays that would impede successful achievement of our primary goal of attaining, as expeditiously as practicable, and maintaining health-based air quality standards. Delays due to protracted compliance dates are of key concern relative to S. 131. Litigation can also cause delay and, with respect to S. 131, is likely, given the controversial nature of this program and its complexity. Further, under S. 131, EPA is required to make a number of "determinations" over the next 15 years; each of these determinations will he subject to judicial challenge at the time they are made, with the possibility for delay each time.

Question 2. Your testimony states that ". . . mercury emissions have resulted in the issuance of fish consumption advisories in 45 States." Please provide a detailed comparison of the number of fish consumption advisories expected under the bills proposed by Senators Jeffords and Carper with the number of advisories under Clear Skies.

Response. The reference in STAPPA and ALAPCO's testimony to the number of fish consumption advisories due to mercury contamination was obtained from EPA's National Listing of Fish Advisories (please refer to *http://epa.aov/waterscience/fish/advisories/index.html* for additional information). We have not analyzed the impact of proposed legislation on the number of fish advisories expected nor are we able to make such a projection.

Question 3. Your testimony states that "most of the litigation is from the utility industry." Would you please provide detailed information to support your statement, including a list of non-utility litigants in each of those cases?

Response. My comment regarding litigation and the utility industry, which was part of my response to a question from Senator Lautenberg during the question and answer session, was in reference to the level of litigation involving utilities, particularly related to New Source Review.

Question 4. In a 2004 report ("Air Quality Management in the United States") the National Research Council—part of the National Academy of Sciences—stated: "The implementation of air quality regulations should be less bureaucratic—with more emphasis on results than process . . ." Do you disagree with Council?

Response. No, we do not disagree with the National Research Council's statement—the ultimate success of state and local air pollution control agencies' efforts to achieve as expeditiously as practicable and sustain clean air will be determined by results. However, the process in which we engage as we work toward our goals will have a significant bearing on our ultimate success. We note that much of the bureaucracy that frustrates implementation efforts is due to the complexity of regulations that seek to provide the regulated community with flexibility.

RESPONSES BY JOHN A. PAUL TO ADDITIONAL QUESTIONS FROM SENATOR INHOFE

Question 1. In previous appropriations measures, members of both the House and Senate Appropriations Committees have expressed concerns over the U.S. Environmental Protection Agency's misappropriation of Clean Air Act §105 grant funds to "activities and national associations" taking away from grant funds statutorily designed to be awarded to state and local governmental air agencies. Prior concerns have been expressed in at least the following two reports.

> "The Subcommittee is concerned that EPA has been inappropriately setting aside and spending portions of Section 105 air grants to support activities that were historically funded and should continue to be funded through EPA's own budget (i.e., not federal grant funds intended for state and local air agencies). In the fiscal 2001 budget, EPA was intending to use Section 105 grants to support training activities, an emission inventory improvement program and a heavy-duty truck and bus idling study, for example. These are very important activities that should be funded; however, the resources to support them should not be taken from state and local air grants.

EPA's practice of setting aside and spending Section 105 grants, rather than distributing them to state and local air agencies, is particularly troublesome because the Agency has decided to make these expenditures unilaterally. There are certainly instances in which it is expeditious for EPA to withhold grant funds from state and local agencies to be spent at the national level, including making equipment purchases on behalf of state and local air agencies or to pay for projects or activities that state and local agencies have decided to support collectively and for which it is administratively more advantageous to have EPA fund directly. However, the decision to withhold state and local grant funds for expenditure directly by EPA should only be made after conferring with state and local air agencies and obtaining their concurrence. This should be done only for activities that are the responsibility of state and local air agencies.

In this fiscal year and in the future, the Committee directs EPA to fund activities such as those identified above (i.e., training, the emission inventory project, the heavy-duty bus and truck idling study), and similar activities that are federal responsibilities, from within the agency's own budget and to allow state and local agencies to use the funds that Congress has earmarked for the many important responsibilities facing them. Additionally, in fiscal 2001 and in the future, EPA should withhold state and local grant funds at the national level to pay for activities or programs only if such activities are efforts that will benefit state and local air agencies, if the activities are the responsibility of state and local air agencies and if state and local air agencies have provided their concurrence." (Emphasis added).

H.R. REP. NO. 106–674, DEPARTMENTS OF VETERANS AFFAIRS AND HOUSING AND URBAN DEVELOPMENT, AND INDEPENDENT AGENCIES APPROPRIATIONS BILL, AT 61–62 (2001).

"In addition, the Committee directs the EPA not to use any of the funds appropriated or otherwise made available in this Act to make a direct assistance grant to a national association or group of associations whose membership includes State program administrators without such association or group of associations first obtaining written approval from each member State. If one or more member States do not give their advance approval, EPA may make the direct assistance grants to the association with an amount deducted from the total available direct assistance grant amount based on the States' population as a percentage of the total membership's population times the available amount and direct those deducted funds to the individual States." (Emphasis added).

S. REP. NO. 108–353, DEPARTMENTS OF VETERANS AFFAIRS AND HOUSING AND URBAN DEVELOPMENT, AND INDEPENDENT AGENCIES APPROPRIATIONS BILL, AT 111 (2005).

Question 1a. Please provide copies of all written approvals from each member state and local governmental agencies indicating permission to withhold financial assistance under any environmental statute to be directly provided to STAPPA–ALAPCO.

Response. STAPPA and ALAPCO are familiar with the House and Senate Appropriations Committee language that was quoted in the question. The excerpt from H. Rept. 106–674 (2001) was not related specifically to funding for national associations, but, rather, was in response to the fact that EPA was setting aside and spending portions of Section 105 air grants on activities that the state and local air agencies did not wish EPA to fund through federal air grants and that EPA should have been using its own budget to support. These included certain training activities, an emission inventory project and a mobile source study, as identified in the report language. The language was designed to ensure that EPA obtained the concurrence of state and local air agencies prior to setting aside funds for those types of activities.

The second excerpt, from S. Rept. 108–353, pertained to fiscal year 2005 appropriations. However, the Conference Committee subsequently superseded that passage in its report, stating "The conferees have not included language that directed EPA to deduct from grants to state associations for a state that does not wish to participate in the association, as proposed by the Senate. The conferees believe that current recipients of such grants have administratively addressed this issue." (H. Rept. 108–792).

Question 1b. Please provide copies of all documentation from STAPPA–ALAPCO to member agencies disclosing their rights in providing funding and dues to STAPPA/ALAPCO.

Response. On August 24, 2000 (and updated on December 15, 2003) STAPPA, ALAPCO and EPA jointly developed a comprehensive document explaining how the STAPPA/ALAPCO headquarters is funded and providing details on how contribu-

tions from individual agencies are determined and handled. This document, entitled "Policy Statement on Funding the Secretariat of the State and Territorial Air Pollution Program Administrators and the Association of Local Air Pollution Control Officials," which was shared with the Senate Environment and Public Works Committee last summer, is enclosed for your convenience. This document has been provided to the members of STAPPA and ALAPCO on several occasions, most recently in November 2004.

Additionally, in May 1999, the members of STAPPA and ALAPCO adopted a resolution instructing EPA to provide federal grants each year to help support and operate the STAPPA/ALAPCO Secretariat and specifying that the funds should be reserved from the national grant total, prior to allocation to the EPA regions. This resolution is also enclosed for your information.

Question 1c. Please disclose a listing of all STAPPA/ALAPCO member agencies and the dues paid by each member agency to STAPPA/ALAPCO.

Response. The membership of STAPPA includes 48 states (Colorado and South Dakota are not members), the District of Columbia and four U.S. territories. Their financial support of STAPPA varies based on their respective populations. ALAPCO includes more than 165 local air agencies around the country. EPA maintains a listing of each state and local agency's individual financial contribution to STAPPA and ALAPCO.

Question 2. Please disclose information regarding all federal funding and assistance agreements including grants, cooperative agreements, and contracts (herein after simply referred to as assistance agreements) provided from any federal agency to STAPPA/ALAPCO for the present fiscal year and five prior fiscal years. Such information shall include copies of the assistance agreements, the terms of the assistance agreements, the amounts of the assistance agreements, documentation of expected deliverables, all documentation indicating compliance with the terms of each assistance agreement, and all documentation indicating whether each assistance agreement was subject to competition prior to award.

Response. Please see enclosures.

Question 3. Please disclose all annual filings with the Internal Revenue Service including annual Form 990 filings for STAPPA–ALAPCO and the State and Territorial Air Pollution Program Administrators and Association of Local Air Pollution Control Officials individually for the most recent tax period and previous five tax periods. Such disclosure shall include annual schedules of contributors and grants.

Response. Please see enclosures.

Question 4. Please disclose all annual financial statements for STAPPA–ALAPCO and State and Territorial Air Pollution Program Administrators and Association of Local Air Pollution Control Officials individually for the previous five years.

Response. Please see enclosures.

Question 5. Please disclose copies of all STAPPA–ALAPCO by-laws governing the "rights of member agencies and explain the process by which STAPPA–ALAPCO involves its member agencies in developing organization positions and policy statements.

Response. Please see enclosures.

Question 6. Does STAPPA–ALAPCO have a position on regulating CO_2?

Response. STAPPA and ALAPCO do not have a position on regulating CO_2. One of STAPPA/ALAPCO's Principles for a Multi-Pollutant Strategy for Power Plants, adopted in May 2002, is to "address all significant emissions from electric power generation." STAPPA and ALAPCO have two resolutions related to greenhouse gas emissions: a Resolution on Early Reduction of Greenhouse Gas Emissions, adopted in October 1998, and a Resolution on Global Climate Change, adopted in October 1997. These principles and resolutions are enclosed.

RESPONSES BY JOHN A. PAUL TO ADDITIONAL QUESTIONS FROM SENATOR JEFFORDS

Question 1. Should we amend the Clean Air Act to delay the existing attainment deadlines therein? If so, why?

Response. No.

Question 2. Based on the States' experience and data, what are the lowest cost control options available to achieve attainment with the ozone and fine particulate matter air quality standards by the deadlines in the Clean Air Act?

Response. As noted in our testimony, utilities are responsible for 68 percent of annual SO_2 emissions and 23 percent of NOx emissions. By an order of magnitude,

they are the most cost-effective category of sources to control because of their contribution to pollution, their size and the ready availability of control technologies. Local control measures are not as cost-effective—nor will they be sufficient to attain the health-based ozone and fine particulate matter air quality standards by the deadlines in the Clean Air Act. As EPA explained in its analysis for the Clean Air Interstate Rule, "a substantial part of local emissions is attributable to mobile sources, small business, and household activities for which practical, large-reduction, and quick-acting emissions reductions measures could not be identified at this time" (69 Federal Register 4599, January 30, 2004). A strong national program to control electric utility steam generating unit emissions is needed for states and localities to attain the ozone and fine particulate matter air quality standards by the deadlines in the Clean Air Act.

Question 3. EPA estimates that the 1990 Clean Air Act Amendments may have already reduced some 70 million tons of pollution. Could you compare the pollution that would be reduced by application of the STAPPA principles and the amount reduced by S. 131 (or S. 1844) over the course of the next 20 years?

Response. The difference in annual emissions between application of the STAPPA/ALAPCO principle of best available controls and Clear Skies can be estimated using the associations' analysis dated March 15, 2004, which was attached to my written testimony and enclosed with this response. Attachment 3 of that analysis summarizes the caps proposed in key legislative proposals and EPA's 2001 straw proposal, and caps achievable with today's best available controls as estimated in STAPPA/ALAPCO's analysis. These technology-based cap ranges were calculated by the associations using a range of reasonable best available control technology determinations for retrofits of existing units. Focusing on the final caps, following is the relevant comparison requested. In general, today's air pollution control technology can achieve caps that are about one-half the final caps in Clear Skies.

Pollutant	Clear Skies Final Cap	Best Technology Cap Range
NOx	1.7	0.88–1.26 million tons/yr
SO_2	3.0	1.26–1.89 million tons/yr
Hg	15*	5–10 tons/yr

*Note that if the new Clear Skies de minimis exemption of 50 lbs of mercury per year per unit is adopted, the resultant cap would be greater than 27.5 tpy since there are about 1,100 coal-fired electric generating units.

Following is the annual difference between Clear Skies and the average of today's best retrofit technology range and what would be the cumulative difference over a 20-year period:

	Annual Difference in Caps	20-Year Difference in Caps
NOx	0.63 million tons/yr	12.6 million tons
SO_2	1.43 million tons/yr	28.6 million tons
Hg	7.5 tons/yr	150 tons
Hg*	over 20 tons/yr	over 400 tons

* Difference in mercury emissions with the 50 lb/yr/unit Clear Skies exemption.

Question 4. What impact is S. 131 likely to have on visibility and regional haze?

Response. S. 131 dramatically weakens current provisions in the Clean Air Act designed to improve visibility and reduce regional haze. It would repeal not only the current Clean Air Act requirement that affected facilities apply the Best Available Retrofit Technology to protect visibility in national parks (retaining it only for sources within 50 kilometers of a Class I park area), but all the requirements of sections 169(A) and (B), pertaining to visibility and regional haze. Congress in the Clean Air Act recognized that sources all over the country—not just near Class I park areas—contribute to regional haze and affect park visibility. Thus, the Clean Air Act requires, among other things, that 26 categories of major sources put on control technology if they emit any air pollutant which may reasonably be anticipated to cause or contribute to any impairment of visibility in a Class I area.

Question 5. Do you think it's appropriate for the EPA to go back in time to reverse regulatory determinations, like they are proposing to do on the mercury finding from 2000?

Response. No, we do not believe it is appropriate. The regulatory determination was based on, among other things, the Mercury Study Report to Congress (December 1997) and the Utility Air Toxics Study (February 1998). These studies and other information the agency gathered confirmed that it was "appropriate and necessary"

for EPA to establish regulations under Section 112 to control emissions of hazardous air pollution from electric utility steam generating units. Nothing has changed since December 2000 to make the establishment of standards under Section 112 no longer "appropriate and necessary."

Question 6. What impact will S. 131 have on the States ability to protect their citizens from transported pollution and unhealthy air quality?

Response. S. 131 expressly rescinds important tools states and localities have to address unhealthy air quality and transported pollution. All sources participating in the emissions trading scheme are exempted from NSR requirements until 2015, regardless of whether or not these sources impact air quality in the area or downwind. States are also prohibited from applying NSR to modified sources under their EPA-approved SIPs, and even if they are able to retain a program as a matter of state-law only, they cannot take credit for it in their attainment or maintenance plans. This preempts more stringent state programs. Section 3(a)(3) bars the application of any §126 interstate air pollution remedy to affected facilities before 2014, thus preventing states and localities from addressing transported air pollution in sufficient time for attainment deadlines. More importantly, it requires EPA to make a nearly impossible showing before it can apply such a remedy—the remedy would only be available if EPA determined that there were no other possible cost-effective measures to apply to any other source category. S. 131 also prohibits states from restricting electric steam generating units (EGUs) in their jurisdiction from selling their allowances out-of-state. Accordingly, if a state adopted more stringent emission caps instate, there is nothing to prevent the EGUs from selling allowances to upwind EGUs, thereby exacerbating transported air pollution.

Question 7. What impact could or would the "transitional" area classification have on the existing system aimed at achieving the health-based NAAQS?

Response. The "transitional" area classification will delay achievement of the health based NAAQS. The Clean Air Act requires attainment as expeditiously as practicable, with an outer date of 2010 (with the possibility of a five-year extension) for $PM_{2.5}$ and with dates between 2007 and 2014 for most areas under the 8-hour ozone standard. S. 131 provides that an area can be labeled "transitional" rather than "nonattainment" if it can use modeling to show that it will attain these standards by 2015. Therefore, S. 131 automatically delays achievement of the NAAQS for several years at the outset. In addition, labeling these areas "transitional" rather than "nonattainment" has the following implications: (1) these areas are exempted from the statutory requirement to attain as expeditiously as practicable; (2) these areas will have less stringent NSR requirements, exempting all sources in the area—not just those participating in the cap-and-trade scheme—from more stringent control and offset requirements; and (3) there is no meaningful remedy for nonattainment—if a state fails to attain by 2015, it merely needs to submit a SIP showing it will attain by 2020 and is given until 2022 to attain. Furthermore, to the extent these "transitional" areas are transporting pollution downwind, less stringent cleanup requirements in these areas and longer attainment deadlines will impede downwind areas' ability to achieve the health-based NAAQS on a timely basis.

Question 8. What changes to the Clean Air Act would you recommend to enhance the ability of areas to achieve attainment of the NAAQS more quickly than the current path?

Response. STAPPA and ALAPCO's Principles for a Multi-Pollutant Strategy for Power Plants (enclosed), adopted by our associations on May 7, 2002, outline what we believe should serve as the foundation of a viable integrated national approach for regulating air emissions from electric power plants on an expeditious schedule with synchronized deadlines.

RESPONSES BY JOHN A. PAUL TO ADDITIONAL QUESTIONS FROM SENATOR LAUTENBERG

Question 1. Can you explain why it is so important that a multi-pollutant program for power plants be enacted that supplements existing law and not as a substitute?

Response. A number of tools and requirements provided for by the Clean Air Act—including those related to New Source Review, visibility, the control of hazardous air pollutants from utilities and states' abilities to protect air quality in their jurisdictions—have proven to be essential to state and local air agencies in their efforts to achieve and sustain clean air; these tools and requirements must be retained. In addition, we believe that, given the deficiencies of the multi-pollutant control program established under the proposed Clear Skies legislation, a program

based instead on the existing law will provide far greater, and more certain and timelier protection of public health and the environment.

Question 2. S. 1844 would repeal many provisions of the existing Clean Air Act in order to "simplify" it. Isn't this essentially returning to the failed approaches of the past before 1990?

Response. We do not believe it is necessary to repeal provisions of the Clean Air Act in order to "simplify" it for the purposes of controlling emissions from utilities, particularly if repealing provisions will compromise our ability to protect public health and the environment, which we believe the rescissions in S. 1844 will do. Instead, as the Acid Rain Program established in the 1990 Clean Air Act Amendments demonstrates, it is possible to establish and implement a viable new pollution control strategy within the framework of the existing law.

Question 3. All of New Jersey's counties are currently out of attainment for $PM_{2.5}$. EPA is claiming all these counties will be brought into attainment under Clear Skies—do you agree? If so, by what date would they reach attainment?

Response. All of New Jersey's counties are out of attainment for the 8-hour ozone National Ambient Air Quality Standard (NAAQS) and 13 of New Jersey's 21 counties are out of attainment for the $PM_{2.5}$ NAAQS.

Ozone—Clear Skies will not bring any additional New Jersey's counties into attainment for ozone. This is because Clear Skies achieves little, if any, further NOx reductions during the ozone season than is being achieved with existing rules (the NOx SIP call). Also, there is the possibility that NOx emissions could increase during the summer ozone period, because the Clear Skies cap is annual, and non-ozone season decreases in NOx could be used to increase NOx emissions during the ozone season.

$PM_{2.5}$—While Clear Skies would improve air quality in New Jersey, it is not clear whether these improvements will be sufficient to attain the NAAQS. It is clear that Clear Skies would not result in New Jersey's attainment of the $PM_{2.5}$ NAAQS by the deadlines established in the Clean Air Act: 2010, with the possibility of an extension to 2015. We understand that New Jersey is reluctant to seek an extension to 2015, because of the adverse health effects of $PM_{2.5}$. Further, attainment by even the 2015 extension date is unlikely because trading allowed for under Clear Skies will push compliance with the Clear Skies' 2015 cap well beyond 2015. Since sulfates from coal-fired power plants are the largest category of $PM_{2.5}$ emissions and reductions of SO_2 emissions from power plants are the most cost-effective way of reducing $PM_{2.5}$ emissions, it is economically efficient and environmentally appropriate that all reasonable emission reductions (not just the least expensive) be achieved from coal-fired power plants.

STATEMENT OF SENATOR BEVERLY GARD, CHAIR, ENERGY AND ENVIRONMENT AFFAIRS COMMITTEE, INDIANA STATE SENATE

Mr. Chairman and members of the subcommittee: Thank you for the opportunity to testify. My name is Beverly Gard and I have served as a member of the Indiana State Senate for 16 years. I am chairman of the Senate Energy and Environmental Affairs Committee, and the Public Health Subcommittee. I serve on the Environment Committee of the National Conference of State Legislators and previously served as the committee chairman. Previously, I worked as a biochemist in the healthcare industry.

My approach has been to balance the need for cleaner air and water with our responsibility to promote economic growth, jobs and opportunity for the citizens of my state. I believe very strongly that such a balance can be found. It is possible to both promote a cleaner environment and ensure a healthy economy. I'm pleased to testify today on legislation that I believe strikes that appropriate balance and I appreciate the opportunity to share my views.

I am pleased to see that the committee is, again, considering a multi-emissions approach which, if properly crafted, would result in the largest power plant emissions reduction program in history. Multi-emissions legislation enjoys the support of a diverse group of organizations such as the National Governors Association, the National Association of Counties and the Environmental Council of States. It has also garnered support from labor organizations such as the International Brotherhood of Electrical Workers and the United Mineworkers of America and business groups such as the U.S. Chamber and the National Association of Manufacturers.

This range of support indicates to me that the multi-emissions approach hits that "sweet spot"—it's both good for the environment and the economy. That's critical to

a state like Indiana where our opportunity to grow economically is directly linked to the ability of our state's electricity providers to keep costs competitive.

In Indiana, approximately 95 percent of the electricity generated comes from coal-fired power plants, second only to West Virginia. This compares to 70 percent for all upper Midwest States and 52 percent for the national average. Indiana has the 9th lowest retail electricity prices in the nation and 24 percent below the national average. Indiana utilities consume over 48 million tons of coal a year with over 32 million tons of that coal coming directly from Indiana mines.

Yet, since the Clean Air Act was last amended in 1990, SO_2 emissions are down over 45 percent, and NOx, have been reduced by roughly 70 percent. The state's utilities have spent in excess of $3 billion to reduce emissions since 1990 and the utilities in the state have recently estimated that they may have to spend $3 billion more to comply with new pending EPA regulations.

Today, nearly 15 years after the passage of the 1990 Clean Air Act, Americans are enjoying significantly better air quality, not at an insignificant cost, but at a price our economy has been able to bear. So, if the Act has worked why do we need a new multiemissions bill?

The answer is litigation and uncertainty. The Act includes multiple regulatory approaches to reduce the same emissions. In addition, despite the onset of regulations, those regulations will be in court—creating uncertainty for the states that must comply with nonattainment designations already made and for the utilities that must comply with whatever the final outcome might be. There is even a question in the regulations as to whether certain coal types will gain favored status over others.

But let me tell you what else is at risk. The longer rules are fought over in court, the longer the breathing public remains at risk. And, the longer the rules are in court, the more difficult the task of meeting new EPA air attainment guidelines will be—with states battling each other to secure emission reductions from sources outside their region.

However, with legislation, states are provided the roadmap to reaching these reductions. In fact, using the NOx caps set in Clear Skies Indiana utility NOx emissions would be reduced from 262,260 tons annually to 106,000 tons in Phase I and less than 79,000 tons in Phase II. This represents a 60 percent reduction in Phase I and a 70 percent reduction in Phase II from actual 2003 levels. Using EPA's projections for the impact of Clear Skies all counties in Indiana should be in attainment for ozone by the first phase in 2010.

And, under the new fine particles nonattainment designations of January 2005, 14 full counties and five partial counties in Indiana were labeled as nonattainment. Using 2001 to 2003 data from fine particle monitors in the state most counties were no more than 10 percent above the standard. With the SO_2 caps set in Clear Skies Indiana Utility SO_2 emissions would be reduced from 805,000 tons annually to 253,000 tons in Phase I and less than 171,000 tons in Phase II. This represents a 69 percent reduction in phase I and a 79 percent reduction in Phase II from actual 2003 levels. Using EPA's projections for the impact of Clear Skies all counties in Indiana should be in attainment for fine particles by the first phase in 2010.

I would also like to spend a couple of minutes talking about another benefit that a multiple pollutant bill will provide in the form of mercury reductions. As presented, the emissions reductions required under the Clear Skies initiative will provide companies with a clearly defined and efficient market based trading program for all three pollutants. This creates planning certainty for utilities as they integrate all pollution control retrofits for all three pollutants. More importantly, from my perspective, it minimizes the financial impact to consumers. In addition, it allows mercury emissions to be addressed on a national basis, providing uniformity and consistency among the many states under a trading program run by EPA.

Multi-emissions legislation saves States environmental agencies large personnel and budget resources which would otherwise be required to develop 48 individual state programs which could be more efficiently implemented by EPA. I have heard that it takes less than 20 people at EPA to run the entire SO_2 and NOx trading program. That level of efficiency could not be duplicated by a piecemeal approach to emissions reductions.

I realize that much of the debate around multi-emissions focuses on how much and how fast. I have already outlined the significant emission reductions that will be achieved through this bill in a key coal burning state. And, while I believe that reducing mercury is extremely important, it is also imperative for Congress to recognize that there remains a debate about the role of utility emissions in reducing mercury levels in fish. Mercury as you know is transported far and wide and counties burning coal with no controls also contributes significantly to the mercury levels in the United States.

Therefore, I am convinced that a phased in reduction over a reasonable time period will provide the impacted utilities to get the reductions they can from SO_2 and NOx controls while providing the time needed to test new mercury specific controls. The adoption of the SO_2 and NOx caps in Clear Skies will help Indiana remove the stigma of nonattainment and help Indiana businesses remain competitive and encourage new economic development.

Again, let me emphasize that these reductions do not come cost-free. Indiana has already experienced significant economic losses as many of you on this committee have felt in your own states. I want to emphasize that we need to ensure that caps which are enacted, are achievable without breaking the bank. I live in this state, my family lives in this state. I plead with you today that approaches to set in motion all of these controls be fair, be balanced, do not disadvantage Indiana coal or the economies that thrive on that industry, and are enacted sooner rather then later.

The planning certainty provided by a 3P legislation also sends the signal to power companies and coal companies that coal will be an important and reliable long term source of energy for our country. We have over a 250-year supply of useable coal reserves in our state alone. A manageable implementation of emissions reductions gives new clean coal technology, like IGCC and other new and clean ways to burn coal a chance to develop and mature. This will help reduce the country's reliance of foreign energy sources, improves our energy security and has the added benefit of keeping natural gas prices down.

Only Congress can take the guess work out of this public policy issue by passing legislation that sets a long-term emissions reduction schedule to make the deepest reductions in power plant emissions at the lowest possible cost to the consumer.

I would hope that the irony of arguing over specific cap levels beyond 70 percent reductions is not lost on the members of this committee nor Congress as a whole. Delay only brings with it, continued emissions and escalating costs. Those are not things that I want to bring home to Indiana citizens. I close by asking that you work together, irrespective of political party or geography, to pass this vitally important piece of legislation.

I look forward to working with the Committee, the Administration and other key members of Congress to help make this legislation a reality.

Thank you.

Supporting Documents for the Testimony of

Indiana State Senator Beverly Gard

Before the

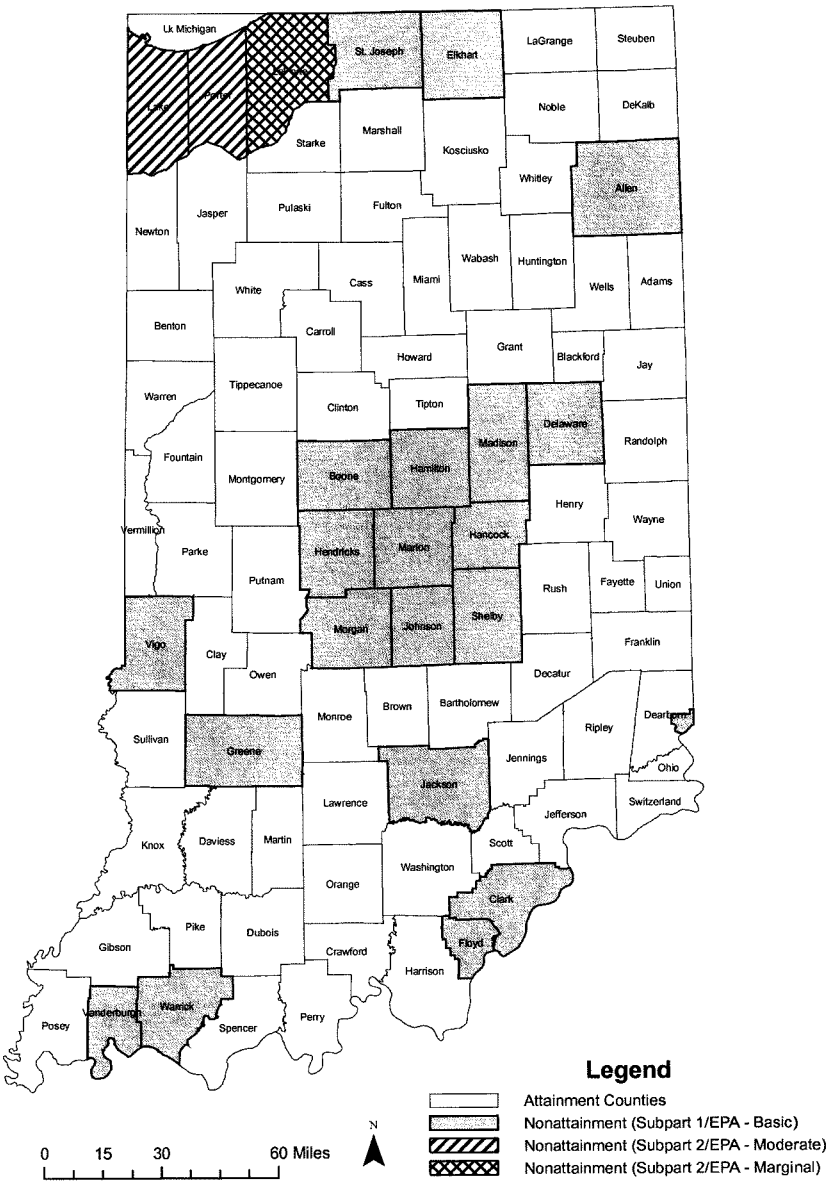
Clean Air, Climate Change, and Nuclear Safety Subcommittee

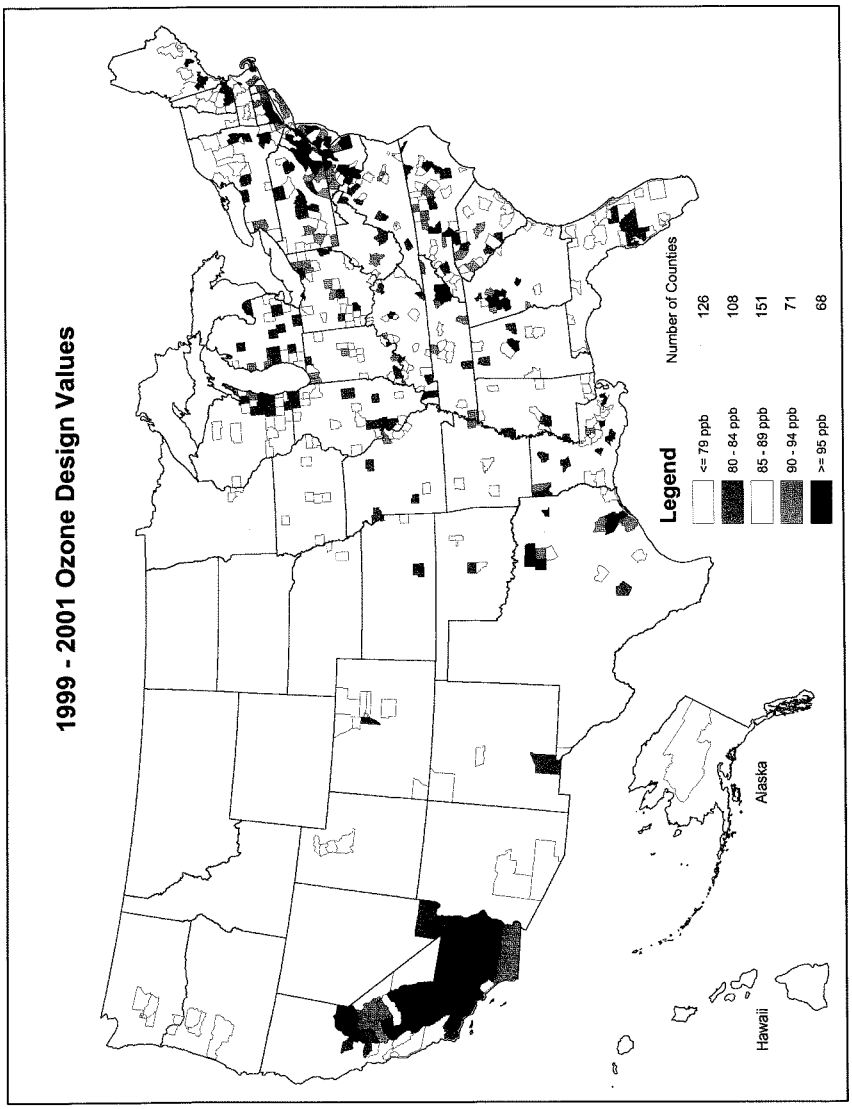
Committee on Environment and Public Works

United States Senate

January 26, 2005

Indiana Nonattainment Counties for the 8-Hour Ozone Standard

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Number of Counties
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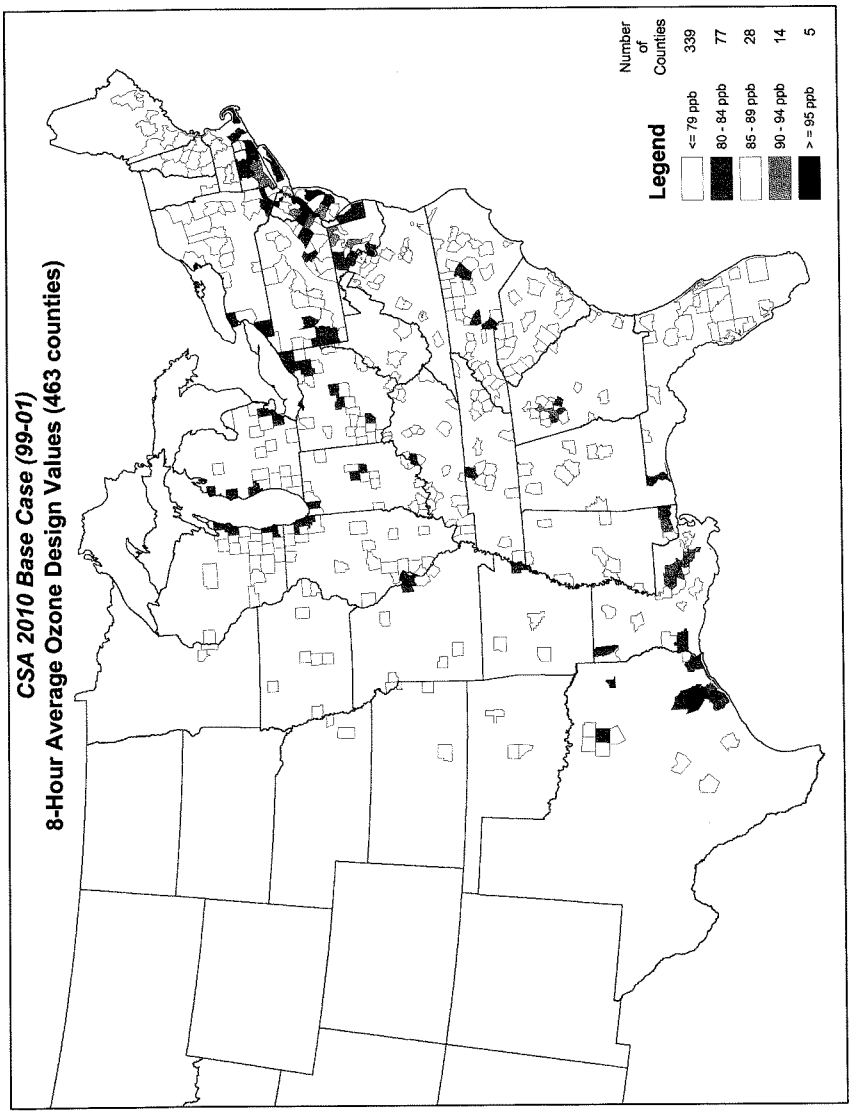
151
71
68
Alaska
Hawaii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8-Hour Average Ozone Design Values (463 counties)
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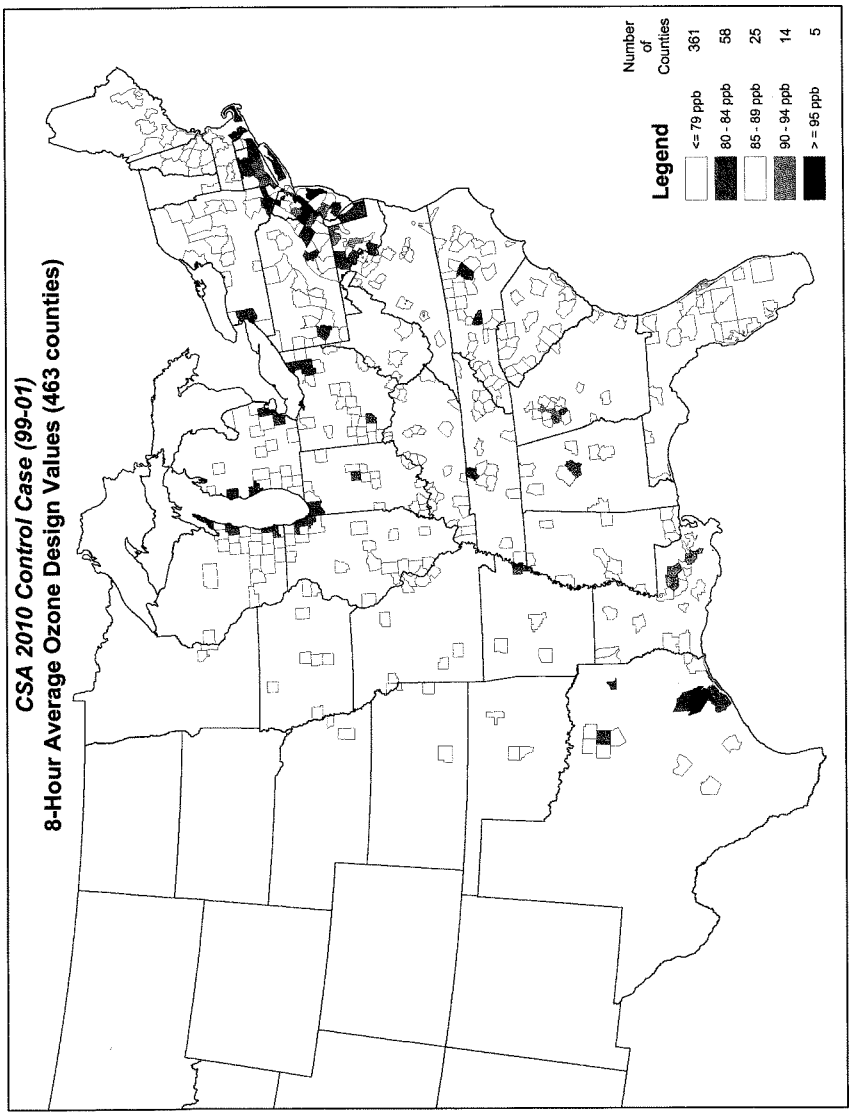
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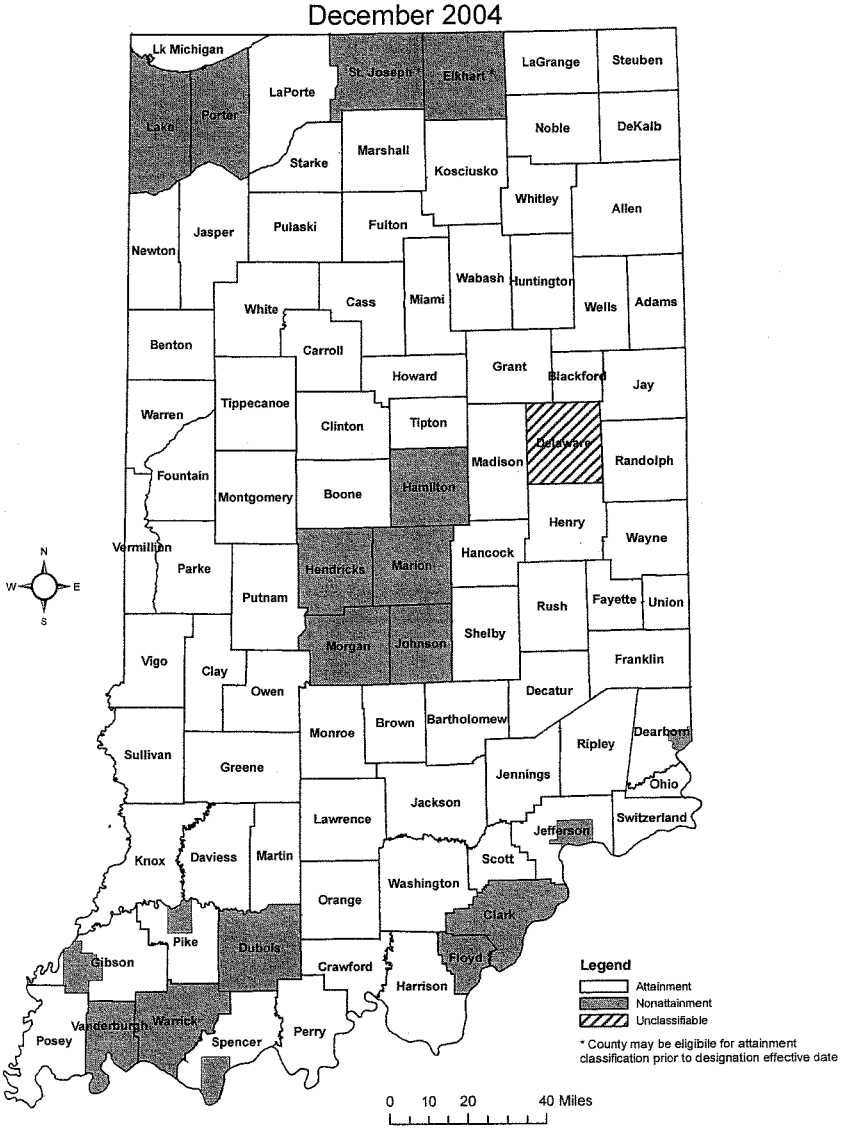
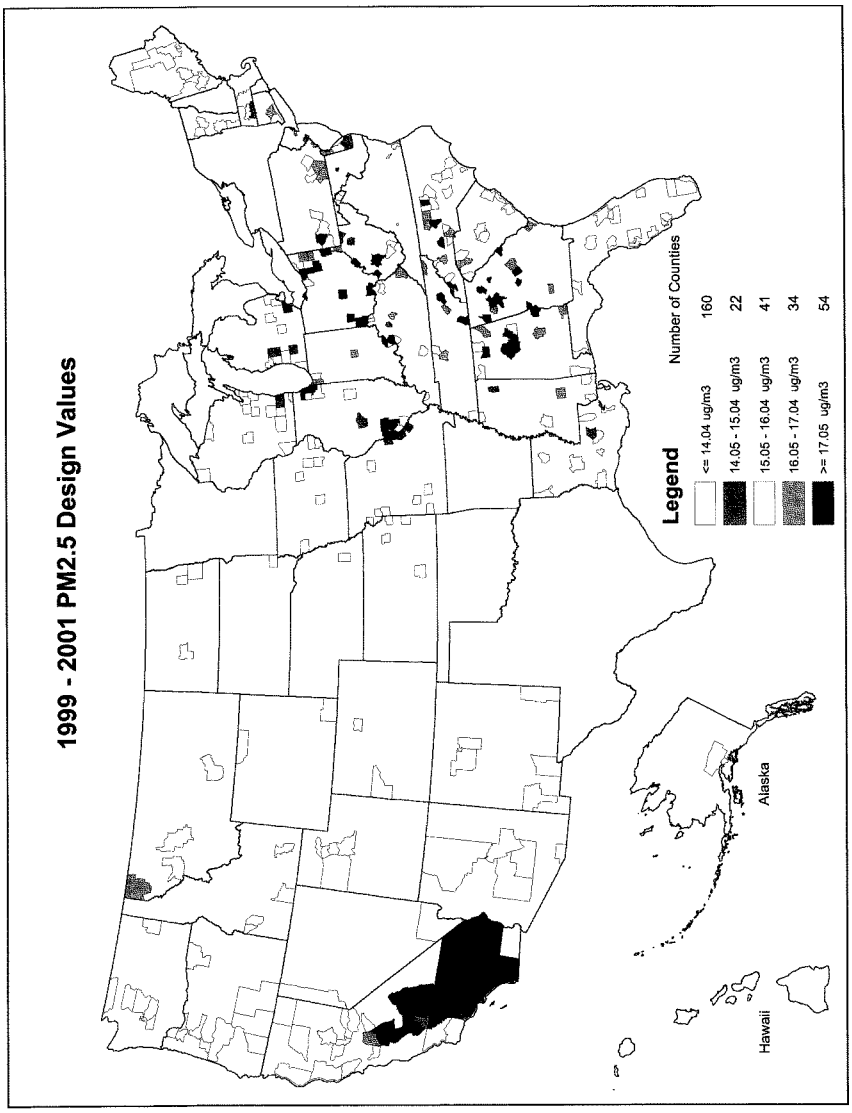
U.S. EPA Final Designations for Fine Particle "PM 2.5" Standard
December 2004

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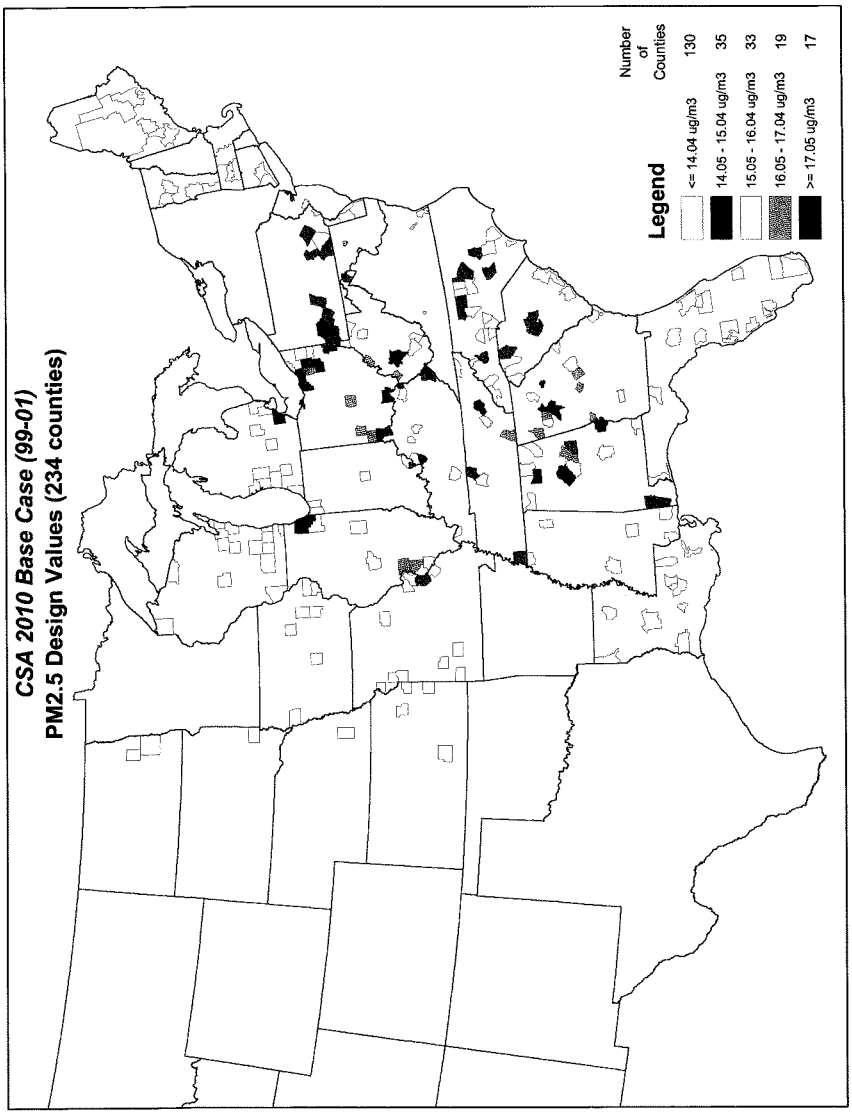
Alaska
Hawaii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PM2.5 Design Values (234 counties)
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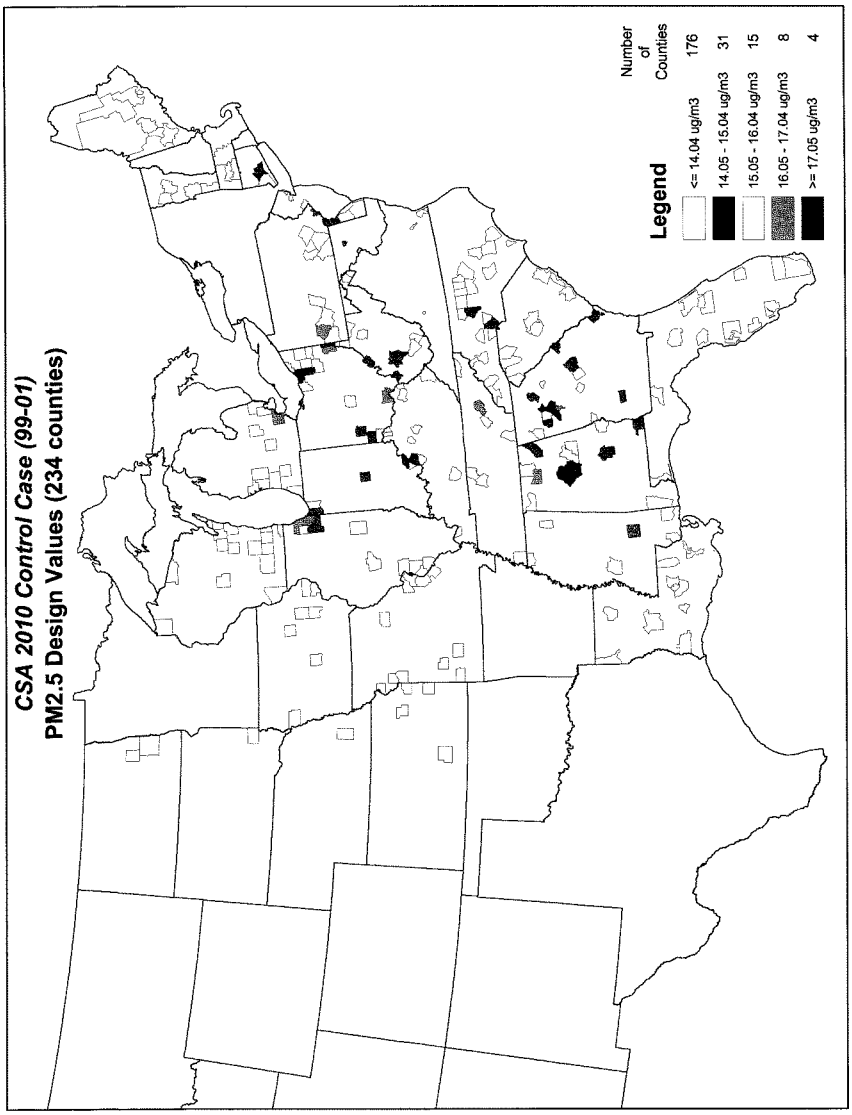
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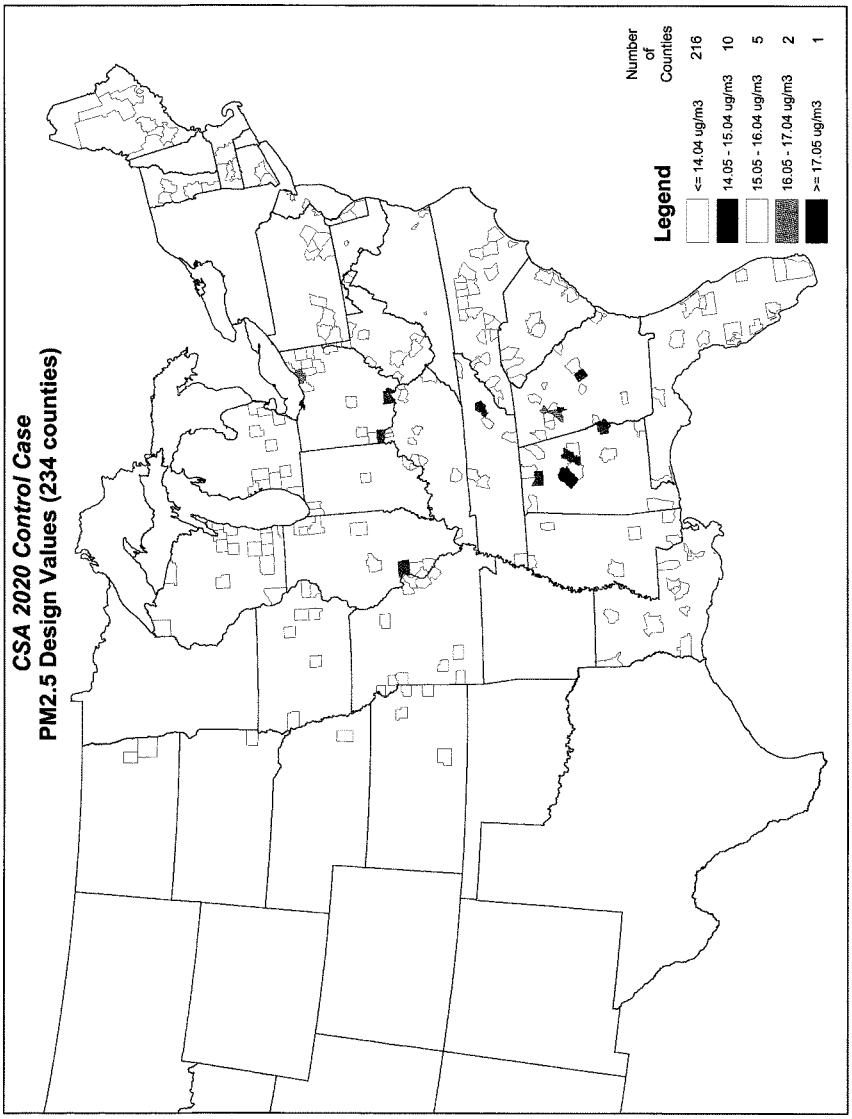
CSA 2020 Control Case
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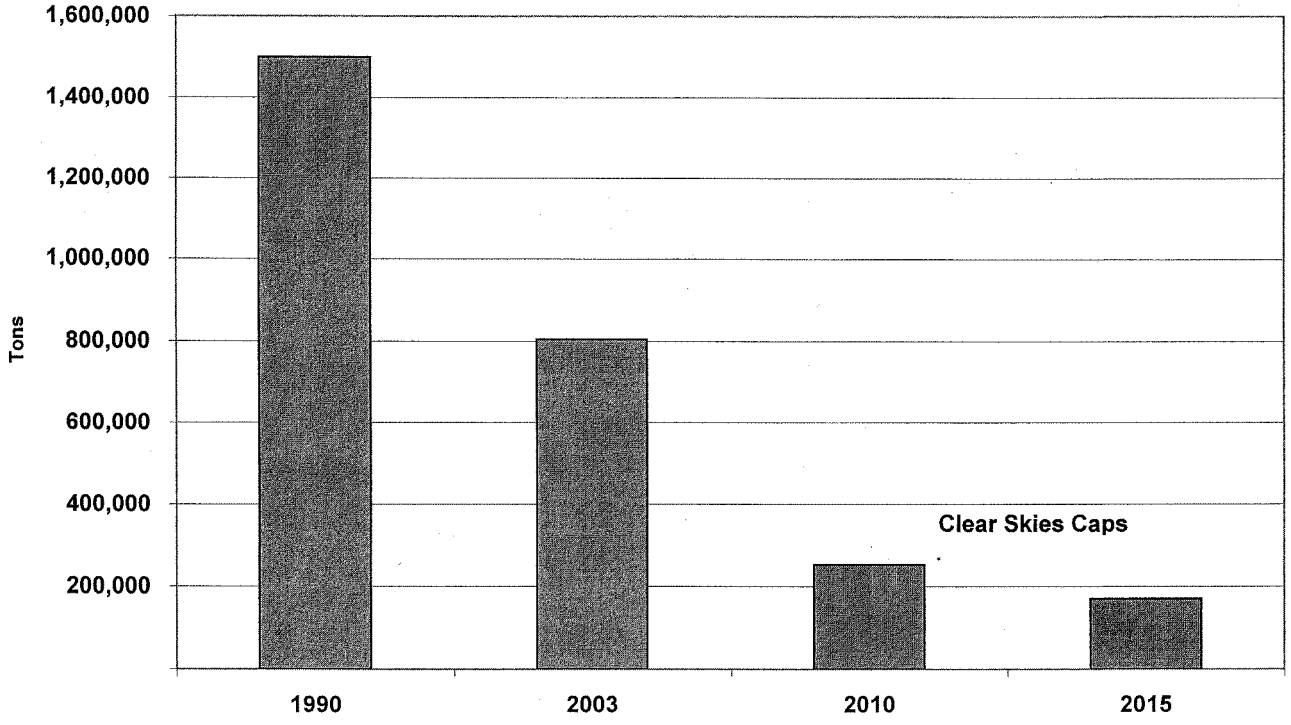
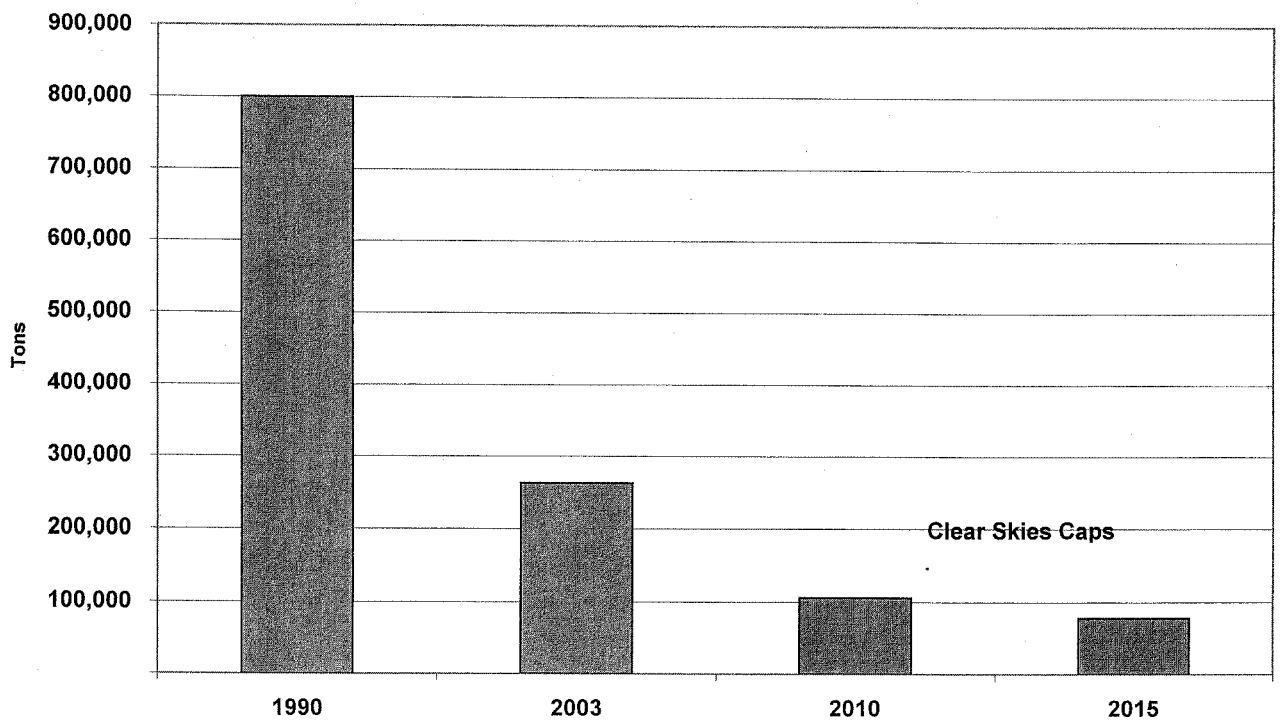
Indiana Electric Utility Sulfur Dioxides Emissions
Historical and Projected



Indiana Electric Utility Nitrogen Oxides Emissions
Historical and Projected



INDIANA UTILITY EMISSIONS

	so2	NOx	MMBtu	Ozone season (t)	Ozone MMBTU
1990	1,499,176	800,000	1,037,325,900	333,333	432,219,125
2003	804,828	262,260	1,265,070,711	98,226	530,130,358
	694,348	537,740	(227,744,811)	235,107	(97,911,233)
delta	46.3%	67.2%	-22.0%	70.5%	-22.7%

clear skies allocations

2010	252,998	105,775
2015	170,681	78,688
2010	-69%	-60%
2015	-79%	-70%

	Sulfur Dioxides	Nitrogen Oxides
1990	1,499,176	800,000
2003	804,828	262,260
2010	252,998	105,775
2015	170,681	78,688

RESPONSES BY BEVERLY GARD TO QUESTIONS FROM SENATOR JEFFORDS

Question 1. Should we amend the Clean Air Act to delay the existing attainment deadlines therein? If so, why?

Response. I don't have evidence that Clear Skies would delay implementation of the Act. Even under the existing CAA structure, both the 8-hour ozone and $PM_{2.5}$ standards are new health standards that present new challenges to the EPA as it develops new guidance documents for the states to use in developing attainment strategies. The EPA has been slow in getting guidance documents out and more time will be needed before the states know what the final guidance will require. In the case of $PM_{2.5}$ in particular the states must start from scratch in developing the analytical tools and data needed to evaluate the large number of sources of fine particles, how much of the problem is local versus from regional sources, and then how to control those sources that ultimately will bring their states into attainment.

As the states, EPA and Congress learned with the one-hour ozone standard it took decades of hard work and scientific research to understand how best to control ozone pollution for the varying mixes of sources in different regions of the country. All the while the states continued to develop and modify attainment SIPs and sources installed controls as expeditiously as they could. It is possible that we are facing a similar situation with the new $PM_{2.5}$ standard. Many believe that solving the $PM_{2.5}$ health standard around the country will be more difficult than the ozone experience.

Protecting the public's health is important to all of us but states and affected sources would be burdened with an immensely complicated process and there is no way to predict if deadlines will or can be met. This would all be simplified under a multi-emissions approach.

Question 2. Do you think that it is prudent to increase gas emissions?

Response. No, it is important to continue the long term trend since 1990 of steadily reducing SO_2 and NOx emissions which is precisely what would happen under Clear Skies legislation. I know that Senator Jeffords voted for the 1990 Clean Air Act amendments which called for only a 50 percent reduction in emissions and included the very popular Acid Rain provision on which Clear Skies is modeled. As I noted in my testimony, since the Clean Air Act was last amended in 1990, SO_2 emissions are down 45 percent, and NOx have been reduced by roughly 70 percent. The state's utilities have spent in excess of $3 billion to reduce emissions since 1990 and the utilities in the state have recently estimated that they may have to spend $3 billion more to comply with new pending EPA regulations.

With the SO_2 caps set in Clear Skies Indiana utility SO_2 emissions would be reduced from 805,000 tons annually to 253,000 tons in Phase I and less than 171,000 tons in Phase II. This represents a 69 percent reduction in phase I and a 79 percent reduction in Phase II from actual 2003 levels (and almost 90 percent below 1990 levels). Using the NOx caps set in Clear Skies Indiana utility NOx emissions would be reduced from 262,260 tons annually to 106,000 tons in Phase I and less than 79,000 tons in Phase II. This represents a 60 percent reduction in Phase I and a 70 percent reduction in Phase II from actual 2003 levels.

Question 3. How would you advise this Committee to determine whether the value of the existing provisions of the Clean Air Act are worth more in health and environmental benefits than any possible replacement provisions? What kind of information would you use?

Response. As I noted above, my written testimony provided estimates the emission reductions that would be achieved in my state alone if S. 131 is enacted. Beyond the 70 percent reduction in utility NOx emissions already achieved since 1990, another 60 percent reduction will occur by 2010. And beyond the 45 percent reduction in utility SO_2 emissions achieved since 1990, another 69 percent reduction will occur by 2010. These percentages are the equivalent of nearly 700,000 tons of NOx and over 1.2 million tons of SO_2. The cap-and-trade systems in S. 131 are modeled on the Acid Rain Program, which produced the largest and most cost-effective emission reductions ever achieved under any Clean Air Act program. The benefits are easily calculable because of the statutory emissions caps, and will extend far beyond Indiana's borders.

In contrast, the recent interim report from the National Research Council demonstrates the difficulty of attempting to quantify the relative benefits of just one Clean Air Act program—the New Source Review program—when the statutory prerequisites are not clear emissions goals, but regulatory consequences that are triggered by periodic investment decisions and other independent factors. The benefits of the proposed legislation are certain in both quantity and timing, and deserve

careful consideration by this Congress so that further progress is not unduly delayed.

Question 4. What are the lowest cost control options available to achieve attainment with the ozone and fine particulate matter air quality standards on the existing schedule in the Clean Air Act?

Response. The EPA and the states have been working on these problems for many years and will continue to work to find the best balance between achieving air quality goals and minimizing the cost of compliance on its businesses and citizens. Since the sources of precursor emissions for both the ozone and fine particulate standard are comprised of a local and a regional source component the lowest cost controls will vary in different regions of the country. There is no silver bullet that will solve all air quality problems in all areas of the country.

Large reductions from the electric power sector as contained in Clear Skies will help lower the regional component of ozone and fine particulate and will likely bring the vast majority of the American heartland into attainment with ozone and fine particulates. But reductions in the Midwest will have little or no affect on achieving attainment in the heavily urbanized areas in the Northeast. Pollution reductions targeting local sources in large urban areas will be needed if these areas are ever expected to reach attainment.

Question 5. You used the phrase ". . . as demographics change, as states' priorities change and technology changes . . ." to suggest that the Clean Air Act needs to be modernized. What exactly does that phrase mean?

Response. In response to a question regarding my opinion of the power industry's support for improving air quality, I referred to changes in economies, demographics and technology, subsequent to the enactment of the Clean Air Act. I believe that the power industry wants to improve air quality. But from my perspective as a legislator interested in achieving environmental improvements at costs that are affordable to the citizens of my state, S. 131 is a policy that will employ economic and technological efficiencies far better than the current approach we are using. Much progress has been made to improve air quality, but it will be increasingly costly to improve it even more. I trust that all of the committee members are as concerned as I am about increases in the price of energy and the real impact this has on particular demographic groups. According to the U.S. Department of Energy, families with annual incomes under $10,000 spend 29 percent of their income on energy while families with incomes over $50,000 spend just 4 percent. Emission reductions that are faster and deeper than S. 131 requires will disproportionately affect lower income families.

Question 6. According to EPA modeling of the Clear Skies approach, there are ten coal-fired power plants in Indiana that EPA believes will not put on advanced NOx or SOx controls before 2020. These represent one-third of the electric plants in Indiana. They generate about 5,000 megawatts, have an average age of 49 years, and in 2001 about 70,000 children with pediatric asthma lived within 30 miles of them. Since Clear Skies will not clean them up any time soon, what should we do?

Response. There are two answers to this question. First, what is important for Indiana and the country as a whole, are the levels of air emissions and emission reductions attained overall, not the specific levels of controls at each specific power plant unit. As I have noted above, Clear Skies will reduce emissions substantially and continue the long-term emission reduction trend for SO_2 and NOx in our state.

Second, it is anticipated that by 2020 the vast majority of coal-fired generation will be scrubbed in the state. Consider that the average allowance emissions rate assuming no growth in demand in coal use in Indiana is less than 0.3 lbs. SO_2 per million Btu by 2018 and about 0.4 lbs. in 2010. These rates simply cannot be achieved without the vast majority of coal fired power plant capacity being scrubbed. A similar picture emerges regarding the installation of SCRs given the large NOx reductions required under Clear Skies.

Question 7. Should downwind states retain all of their existing rights under the federally enforceable Clean Air Act to ensure that upwind sources of pollution are not significantly contributing to or causing nonattainment in the downwind states? If not, why not?

Response. Federalism is at the very foundation of the Clean Air Act. The Act expressly preserves the right of States to make decisions regarding the nature, extent and scope of the emissions reductions and controls necessary to achieve and maintain the national ambient air quality standards within their states and in downwind areas. States should be free to develop and implement a suite of emission reductions and control measures that are based on the specific factors and criteria set forth in the state legislation authorizing the development of their state implementation

plans. Each State has a unique inventory of emissions sources, particular geographic features, and specific economic and energy concerns that must be accommodated in the design and implementation of a successful air pollution control program.

The existing Clean Air Act authorities for addressing interstate air quality problems were initially utilized to deal with multi-state urban areas or large sources whose downwind impacts were direct and quantifiable. More recently, these authorities have been utilized to deal with smaller and smaller increments of "regional contributions," whose total elimination would have no impact on the attainment status of the downwind area. The massive reductions required by the proposed legislation should be accompanied by a period of repose, to allow an opportunity to determine in fact whether these reductions and other existing Clean Air Act programs will be sufficient to eliminate any "contribution" from identifiable utility sources to a downwind nonattainment area.

Question 8. How many major sources of toxic air pollution in Indiana would be exempt, for any period, from the current requirement in the Clean Air Act to use maximum achievable control technology, if S. 131 were signed into law?

Response. S. 131 establishes a mercury cap-and-trade program that includes an emissions cap for all coal-fired electric utility units that goes far beyond the levels proposed by EPA as the maximum achievable control technology (MACT) standard. Consistent with the effective cap-and-trade programs developed for the Acid Rain Program and the NOx SIP Call, very low emitting units (under 50 pounds per year) are not included in the program. Discussions with electric company representatives in the state indicate that several dozen electric facilities emit below this level, and make up a small percentage of total mercury emissions. The only other hazardous air pollutant that EPA considers to be a health concern at present for electric power generators is nickel from oil-based plants. Such plants are a very small percentage of the electric generation in Indiana, and EPA is working on a regulation for this source.

In addition, some non-electric sources could "opt-in" and, while reducing mercury to a required level, could be exempted from reducing emissions of other hazardous air pollutants. It is not possible to estimate the number of "opt-in" facilities or how this might affect their emissions of hazardous air pollutants.

Question 9. The cap-and-trade program for SOx emissions created in 1990 handed out permits to pollute, also known as allowances, to coal-fired power plants for free or at zero cost to them. A 2004 report from the national Academy of Science said that the social cost of an allowance auction is expected to be dramatically less than allocation at zero cost. So, an auction results in greater value to society and the consumer, but it obviously costs power generators more. Which system do you favor, or would a hybrid system be best?

Response. Under the current Clean Air Act Amendments of 1990, SO_2 allowances are for the most part allocated directly to power plants as opposed to being auctioned. This system has worked very well and has achieved significant reductions at a relatively low cost to customers. It is the most equitable system with electric power companies and their customers that are incurring the added costs to comply with the emission reduction requirements receive the emission allowances in order to continue running their plants at significantly reduced emission levels. I support the continuation of this type of allocation system in the future as embodied in Clear Skies legislation.

Some have noted that auctions provide lower costs to society than allocation to generators. However, this is usually predicated on how the proceeds from the auctions are redistributed by the federal government and assumes that the government would redistribute the proceeds "efficiently" in economic terms. (One method of reallocating proceeds that would increase economic efficiency would be cutting marginal income tax rates, for example.) Unfortunately, I am not very convinced that this would happen based on past Congressional actions and would be concerned that we would be creating another federal agency and another set of federal costs to collect and redistribute the auction proceeds and these proceeds could total in the tens of billions of dollars.

Most importantly, I am concerned how this system would affect electricity customers in Indiana. We continue to have regulated electricity rates, so the higher costs to electric companies to buy the auctioned allowances would result in still higher costs to Indiana customers.

Question 10. What effect has the 29 or more legal actions filed by the utility industry against EPA Clean Air Act standards and regulations since 1990 had on certainty?

While your question refers to legal actions filed by the utility industry, I am also aware that many (perhaps more) legal actions challenging Clean Air Act standards and regulations have been filed by environmental organizations, states, and others. As you are doubtless aware, such litigation is brought to resolve uncertainties created by ambiguous or conflicting statutory directives, or to challenge new or innovative methodologies developed by EPA in the exercise of its administrative discretion, and generally involves questions about the nature and scope of EPA's regulatory authority. The proposed legislation would address the proliferation of Clean Air Act litigation by providing clearer statutory directives and resolving conflicts among overlapping statutory programs.

Question 11. You suggest that 3P legislation sounds a signal to invest in IGCC and cleaner ways of burning coal. Please explain that, referencing any supporting economic data or analyses.

Response. Properly designed multi-pollutant legislation can help play a role in promoting the continued use of the nation's abundant and low-cost coal resources which will alleviate pressure on the US natural gas demand. Over the past decade most new power plants have relied on natural gas to produce electricity. This has helped to drive up natural gas prices for all customers and lead to many companies making decisions to leave the country and take those jobs with them.

As utility companies plan their approach on how to comply with the significant SO_2, NOx and mercury reductions over the upcoming decade they must also meet the ever increasing demand for more power. This means that new base load coal fired power plants that are inexpensive to operate as well as having the lowest possible emissions profile will need to be available to fill the gap otherwise utilities will have to pick more expensive power generation options meaning more natural gas units.

Question 12. You indicated that you would support the deepest reductions at the lowest possible cost to the consumer. The Clear Skies bill is designed to be the lowest cost to the producers, not the consumers. If we can make deeper cuts in emissions without appreciably increasing the costs to consumers, would you support it?

Response. First of all, I don't agree that Clear Skies is designed to be lowest cost to producers and not consumers. In fact, producer costs are typically passed through to consumers through regulated rates such as in Indiana or indirectly in fully deregulated states through power market prices. This means that lower costs to producers is generally synonymous with lower rate impacts for consumers.

Second, I don't believe we can make significantly deeper cuts in emissions without appreciably increasing the costs to consumers. In the near term (the next five years), there are already massive pollution control construction plans for scrubbers, SCRs and other equipment ongoing. (For scrubbers alone, some 50 to 60 thousand megawatts have already been announced for completion by the end of the decade. Already, there are shortages in raw materials, equipment, and workers. Further, the lead time for constructing a scrubber is three to five years given permitting needs as well as engineering and construction schedules. Longer term in Phase II of Clear Skies, as I noted the reduction requirements would already require that the vast majority of coal fired generation in Indiana would be installing scrubbers and SCRs. Significantly greater reductions would require that coal units be retired or mothballed and replaced with much more expensive natural gas in many cases leading to significantly higher consumer costs.

As I indicated in my answer to Question 5, higher energy costs disproportionately impact low and lower income families. Every dollar spent on emission reductions is an appreciable increase in cost that especially harms these families.

Question 13. Do you think it's appropriate for the EPA to go back in time to reverse regulatory determinations, like they are proposing to do on the mercury finding from 2000?

Response. As I understand it, the determination made by EPA in 2000 was merely the first step in a detailed investigation into utility emissions and control technologies—and that detailed investigation has not yet been concluded. I believe it is both necessary and appropriate for regulatory agencies to continue their investigations and re-evaluate preliminary decisions as additional information becomes available, so that all relevant information is included in the final determination.

Question 14. Would you support a binding global treaty that required all nations to reduce their mercury use and emissions?

Response. I could support an international treaty that implements U.S. law but goes no further. First ever regulations to significantly reduce electric power company mercury emissions are due to be finalized by March 15, 2005. Other sources such as municipal solid waste incinerators have already been regulated. I have been

briefed that the United States is already complying with the existing international "Long Range Transport of Air Pollutants" treaty, which requires mercury reductions. Regardless of what we do here at home, sources outside our borders will continue to be the dominant source of mercury deposition in the United States. Recent research indicates that up to 75 percent of the mercury deposited over most of the United States comes from outside our country (almost 700 tons of mercury from China is annually transported through the atmospheric across the Pacific Ocean towards the US according to EPRI scientists who have taken the measurements); U.S. emissions of mercury are only 1 percent of the total global pool; and the Americas (North Central and South) contribute only 11 percent of the total anthropogenic emissions of mercury in the Northern Hemisphere (compared to 34 percent from China and 14 percent from Central Asia). The United States is a leader in global efforts to control mercury use and emissions.

Question 15. A recent Florida study showed that when power plant emissions were stopped the deposition of mercury in waterways radically dropped. Are you at all concerned that toxic hot-spots might develop if we use a cap-and-trade system for toxics like mercury and don't require at least some minimal reductions at each unit?

Response. It is my understanding that the Florida study you are referring to tried to link reduced mercury emissions from local municipal and medical waste incinerators to reduced mercury levels in fish in the Everglades. It did not pertain to power plants. Significant scientific questions have been raised regarding the validity of the study's conclusions According to EPA, mercury emissions from these incinerators are different from emissions form power plants. Incinerators release mercury in short bursts from much shorter stacks whenever material containing mercury is combusted. The Everglades is a unique water body, with distinctive water chemistry and ecological processes. The atmospheric transport model used by the state of Florida does not account for chemical reactions in the atmosphere and global sources of mercury outside the state. Studies show that the amount of mercury being deposited in Florida has changed very little, despite emissions reductions from in-state incinerators. The attached comments from EPRI discuss more of the study's errors and misconceptions.

From what I've read and heard, no one can agree as to what a "hot-spot" is. It seems like anyone can describe a lake or water body as a "hot-spot" if it has a state fish advisory. I do not believe that a cap-and-trade program for mercury like the one proposed in the Clear Skies Act or in EPA's proposed mercury rule would cause so-called "hot spots." Studies of the acid rain allowance trading program and many years of real-world experience show that trading does not significantly affect where decreases in sulfur deposition actually occur. The overall success of the acid rain SO_2 trading program leads me to believe that localized effects will not occur with a mercury cap-and-trade program. Also, I understand that cap-and-trade programs promote economically efficient decisions to reduce emissions from power plants, so that plants with higher mercury emission rates will find it more cost-effective to control mercury right away. No matter what, Clear Skies would dramatically reduce power plant mercury emissions (to a level well below the estimated 40 percent reduction in mercury emissions from power plants due to the installation of conventional control technologies to reduce sulfur dioxide, nitrogen oxide and particulate matter).

Question 16. How much will Indiana's utility NOx emissions be reduced by the NOx SIP Call in 2010? How does this compare to the reduction required by S. 131 in the same year?

Response. Based on readily available information from EPA all electric utility sources in the state of Indiana emitted 334,100 tons of NOx in calendar year 2000. Under the NOx SIP call utilities are projected to emit approximately 236,000 tons annually in the year 2010. With the implementation of Clear Skies Act utilities are projected to emit approximately 97,400 tons annually in the year 2010. These reductions work out to be a 29 percent reduction in 2010 with just the SIP Call and a 71 percent reduction by 2010 with Clear Skies, with additional reductions continuing to occur after 2010.

Question 17. How would Indiana coal production be disadvantaged by a mercury reduction requirement of 70–90 percent to be achieved by 2010?

Response. Indiana electric rates are some of the lowest in the nation. A primary driver for the low rates that are enjoyed by our customers, businesses, and industries is that 95 percent of our generation is produced from an abundant, reliable resource—coal. In fact, it is estimated that Indiana has a 300 year supply of coal.

Any mercury regulation that would require a 70–90 percent reduction by 2010 presents two major issues. First, I am unaware of any mercury specific commercially available technology that has been proven to be available at this time. There have been a number of pilot projects that have provided promising results, but, once again, have not been proven on large coal-fired units. Therefore, it is not technologically feasible to meet this reduction requirement at this time without significant disruptions to the electric power system. This is documented in the January 2005 study by the Energy Information Administration study entitled "Analysis of Alternative Mercury Control Strategies" where they projected over a 30 percent increase in electricity prices in the Midwest if a 90 percent reduction was required.

Second, even if the technology were generally available, not every power plant may be able to reduce mercury emissions by 90 percent and continue to afford to operate. Such a sudden and major requirement to reduce mercury emissions may force specific power plants to seek alternative fuels. One option for alternative fuels could be a further push toward an already strained gas supply option. This increased pressure on gas utilization could lead to higher gas prices that would negatively impact all sectors of the economy including those on fixed incomes.

It should be pointed out that a major mercury reduction requirement that is not reasonably phased in would not only disadvantage Indiana but the fuel diversity for the nation. It is imperative that any future environmental regulation, including mercury regulations, must allow regulated entities the opportunity to plan for the required reductions so as to not unduly impact the fuel diversity of the nation.

Question 18. You suggested that greenhouse gases should be addressed in a different forum, not in multi-pollutant legislation regarding power plants. What would be a more appropriate forum?

Response. Greenhouse gas issues are complex and they are not easily resolved. However, I have observed that the power industry already has voluntarily taken substantive actions to address emissions and is committed to doing more while the science continues to evolve. Indiana is rich in coal and Cinergy and American Electric Power are national, perhaps world leaders in pushing the design envelope for gasifying coal and commercializing large scale IGCC plants by the end of this decade. It should be easier and less costly to remove CO_2 from the flue gas of these new plants compared to pulverized coal units once the removal technology is perfected. AEP is supporting research to dispose of the gas underground at its Mountaineer Plant in West Virginia.

As a legislator dedicated to improving the welfare of the citizen of my state, I prioritize my work to bring results to my constituents on issues that are having an immediate and real impact on them. I'm urging you and your colleagues to pass S. 131 now because I believe that the emission reductions for NOx, SO_2 will address nonattainment areas for fine particulates and ozone and substantial emissions reductions for Hg will be made very cost effectively as a co-benefit of the harmonized NOx, SO_2 and Hg reduction programs. I don't believe that there is such urgency on the greenhouse gas issue. In my experience trying to pass legislation, loading bills with too many provisions usually causes them to die or be terminally delayed. I fear that trying to force the greenhouse gas issue into this bill will deny all of us healthier air to breathe when this bill dies.

In my opinion, the proper place to debate this issue is in a global forum. But all of the countries that emit greenhouse gases should be required to participate and not be exempted. My understanding is that China, for instance, emits more CO_2 than the United States, but isn't required to make reductions under the Kyoto Protocol.

RESPONSES BY BEVERLY GARD TO ADDITIONAL QUESTIONS FROM SENATOR LAUTENBERG

Question 1. Senator Gard, we have made good progress in reducing air pollution under the Clean Air Act Amendments of 1990, why not implement the existing law?

Response. As noted in my testimony, the primary advantage of the proposed legislation is the certainty associated with statutorily establishing a clear timetable and emissions cap for utility sources of SO_2 and NOx. The unparalleled success of the Acid Rain Program provides assurance that the proposed reductions will be achieved in a timely fashion at the lowest cost for energy providers and their customers.

Question 2. I understand that Indiana has higher rates of cancer, relative to the national average. So you think CSI should repeal the application of Maximum Achievable Control Technology requirements that apply to cancer-causing pollutants for those facilities that reduce mercury?

Response. I do not believe that experts in the health field would agree that mercury causes cancer. My understanding is that mercury is a potential neurotoxin and women who eat fish containing large amounts of methylmercury during pregnancy can put their fetuses at risk for the brain and nervous system damage it can cause. The FDA has issued guidelines regarding fish consumption by pregnant women and young children. On average, less than 10 percent of the fish eaten in the United States comes from freshwater sources.

The mercury cap and trade program in S. 131 is appropriate to reduce this risk.

In the short time available to respond to the questions, my limited investigation suggests that Indiana's cancer rate is lower than the national average. As a cancer survivor myself I am very sensitive this issue.

Question 3. According to the Energy information Administration (EIA) CSI would not reach the SO_2 reduction goals of the bill until after 2025 because of "early reduction" banking. Isn't this too long to wait?

Response. In "From Obstacle to Opportunity: How acid rain emissions trading is delivering cleaner air", a 2000 report by Environmental Defense, a leading national, New York-based nonprofit organization, represents 300,000 members, states that it has been "widely credited for advancing the cap and trade proposal to reduce acid rain." The report discusses the basics of emissions trading and also the concept of "early reduction" banking. It explains the environmental benefits of early reductions in detail. On page 8, ED states:

"The common understanding of the adverse ecological effects of acid deposition strongly suggested both that reducing cumulative SO_2 emissions should be the goal of the program, and that early reductions were of significant environmental value. The earlier the reductions, the sooner the ecosystems affected by acid deposition could begin to recover their acid-neutralizing capacity. As a result, the economic dynamic created by an emissions cap with banking favored the environmental benefit of early, extra emissions reductions.

Question 4. Don't we need to reach health standards sooner than 2025?

Response. As explained in the response to question 3, substantial environmental benefits will accrue due to early reduction banking. The principle of market based trading programs is that sources are given economic incentives to reduce emissions early and this encourages companies to install and operate control equipment earlier. In contrast a command and control program provides no such incentives because companies just have to have to equipment operating by the compliance deadline and not before since it will cost them money to operate the controls before the requirement actually starts with no corresponding economic benefit for the reductions.

In fact, in Indiana the early reduction program included in the recent NOx SIP call resulted in the states power plants reducing their NOx emissions by thousands of tons prior to the May 2004 deadline. Thus a large part of the emissions reductions from the trading programs in Clear Skies will occur early than they would otherwise and thus provide better air quality earlier as well. And as my written testimony cited, the EPA's Clear Skies results showed that the nonattainment areas in the state would be achieved by 2010.

STATEMENT OF RONALD R. HARPER, CHIEF EXECUTIVE OFFICER AND GENERAL MANAGER, BASIN ELECTRIC POWER COOPERATIVE

My name is Ron Harper and I serve as the CEO and General Manager of Basin Electric Power Cooperative. I appreciate the invitation to testify today, and I am here to provide you with Basin Electric's views concerning the Clean Air Act's current regulatory framework, how that framework impacts decision making within the energy industry and how that process might be improved upon. Specifically, I am here to support the passage of the Clear Skies Act.

Basin Electric is an electrical generation and transmission cooperative with 120 member cooperatives located in nine states. Our generation sources include approximately 3,400 megawatts of coal, gas, oil and wind, but we are primarily a coal-based utility. The three base-load coal plants we own or manage are located in North Dakota and Wyoming and use both lignite and subbituminous coal.

Basin Electric is growing and we are looking at developing new base-load generation. After reviewing all of our options, it became clear to us that to meet our needs for low cost base-load power, the best choice was coal. Both North Dakota and Wyoming have ample supplies of coal and we have considerable knowledge of building and operating coal-based generation plants. We have built gas generation for peaking purposes and will build more. However, we do not believe it is prudent to build

base-load gas generation and expose our membership to the rapid fluctuations in natural gas prices. Further, we hope to grow our wind portfolio but due to the intermittent nature of wind generation, it is not base-load generation.

To provide base-load power, Basin Electric is developing two coal-based facilities, one to be developed in Wyoming and the other located either in North Dakota, South Dakota or Iowa. Planning is proceeding. However, building a coal plant takes long-term commitment. It takes 8 to 10 years to build a coal generation plant. The confusion surrounding the current regulatory programs makes any business decision made today risky. The planning horizons of the regulations and the regulated industry simply do not match.

The development of any facility is predicated on the new plant meeting the necessary emission levels required to be compliant with the regulation of the Clean Air Act. Industry must know what the emission level targets are going to be once the plant is commissioned to make the correct choices today. I believe that Clear Skies will give us those targets and give industry the regulatory certainty that is missing today.

ELEMENTS OF CLEAR SKIES

That being said, I would like to discuss Clear Skies and its impact to industry. The current patchwork of regulations is duplicative and inconsistent, often with conflicting compliance objectives and deadlines. Clear Skies would improve this situation by providing a clear program to improve our nation's air quality. Even so, it should be noted that this legislation would have a significant financial impact on Basin Electric. As I mentioned, Basin Electric runs three base-load coal facilities. Two of them have advanced environmental controls while the other, Leland Olds Station, meets all current regulatory requirements but is not scrubbed.

Under Clear Skies, we would need to substantially upgrade our Leland Olds facility. Further, because of the structure of the emissions allocations under Clear Skies, it is likely that we would also need to buy allocations for our units that are already scrubbed. This is an expensive prospect for our members that will be paying the bill. We are willing to take that risk because it allows us to be more flexible in addressing future power needs. However, we believe that coal-based units having emission controls as required under the present New Source Review (NSR) and Prevention of Significant Deterioration (PSD) provisions of the Clean Air Act should not be subject to new and onerous emissions reductions.

The current regulations also prevent us from making prudent business decisions. We have the opportunity to upgrade two currently scrubbed facilities with new steam turbines. These new turbines would be capable of producing up to 45 megawatts more energy at our Wyoming plant and 30 megawatts more at one of our North Dakota plants with no additional fuel requirement or added emissions. We have not upgraded these turbines because of our concerns over the NSR program. Due to the present structure of NSR, reasonable decisions to maintain and upgrade facilities with no adverse impact to the environment are not being made. We believe the ability to upgrade these units should be clearly allowed under the Clear Skies Act without further emission reduction penalties.

The issue of protecting clean units from further reductions is something that is important to Basin Electric. One way to address this issue is to recognize some of the proactive and long-term planning that has already taken place on this issue. For example, the Western States, through the Western Regional Air Partnership (WRAP), have developed their own goals for a viable process. This effort should be recognized and kept intact through Clear Skies.

Another issue of importance is coal sub-categorization for mercury. As the committee is aware, the various types of coal have properties that make regulating them with absolute uniformity very difficult. Applying regulations in blanket form without sub-categorization by coal classification would adversely impact the use of coal across the country for future energy development.

The development of new units is also of concern. The current legislation creates a small pool of allocations for new units, and we appreciate that improvement upon the original legislation. This will lessen the barriers facing new units and encourage newer, cleaner plants to come on-line.

In short, Mr. Chairman and members of the committee, for Basin Electric, Clear Skies provides the opportunity to make difficult decisions with a higher degree of certainty, whereas the current regulatory process is extremely cumbersome and uncertain for us to plan with the knowledge and foresight necessary to make an informed decision. The passage of the Clear Skies Act is important to Basin Electric and I look forward to working toward its passage with the help of the committee.

I want to thank Chairman Voinovich for taking the time to hold this hearing and the Committee members for their attention to this issue.

RESPONSES BY RON HARPER TO QUESTIONS FROM SENATOR VOINOVICH

Question 1a. The Energy Information Administration estimates that the bills proposed by Senators Jeffords and Carper would reduce coal production and generation much more than Clear Skies. In your opinion, is that an impact that the coal industry, specifically miners, can withstand?

Response. Basin Electric does not own or operate any coal mines; therefore we do not have specific knowledge regarding the impact of the Clear Skies Act, Senator Jeffords or Senator Carper's bills on the coal industry, specifically miners.

I would suggest that information be solicited from the National Mining Association or a coal mining company who would be better able to provide both quantitative and qualitative responses to your question.

Question 1b. What would be the impact of decreased coal use on the consumers you serve—businesses and those on fixed incomes?

Response. We would anticipate that the decrease of coal as the fuel source for our electrical generating units would result in the increase of other fuel sources, such as natural gas—a fuel that is much more volatile in price than coal. Coal reserves are normally dedicated for a specific project and for the life of the project. This results in very long-term source and price stability for fuel supply. Natural gas prices experience a great deal of volatility depending on the time of year, the month and even the week of the sale. Natural gas prices are simply not as predictable as coal. Therefore, we would anticipate the decreased use of coal would (1) result in greater volatility and (2) greater cost of electricity to our consumers.

Question 2a. Some of the Members on the Committee and witnesses argue that every power plant should be required to reduce mercury emissions by 90 percent in the next several years. Is this possible?

Response. No, 90 percent reductions in mercury emissions from lignite and subbituminous coals are not possible with today's available technology.

Question 2b. What would happen to your existing coal-fired plants and to the consumers that rely on it for electricity?

Response. The result would be less generation from coal, more generation from natural gas and increased cost to our consumers.

RESPONSES BY RON HARPER TO ADDITIONAL QUESTIONS FROM SENATOR JEFFORDS

Question 1. Should we amend the Clean Air Act to delay the existing attainment deadlines therein?

Response. No

Question 2. Do you think it is prudent to increase gas emissions?

Response. No

Question 3. Would you support a binding global treaty that required all nations to reduce their mercury use and emissions?

Response. I do not think it is possible to have a "binding" global treaty regarding mercury emissions. Many countries would not be able to undertake this type of obligation given their current economic status.

Question 4. A recent Florida study showed that when power plant emissions were stopped the deposition of mercury in downwind waterways radically dropped. This should give us serious concern about trading toxics. Are you at all concerned that toxic hot-spots might develop if we use a cap-and-trade system for toxics like mercury and don't require at least some minimal reductions at each unit?

Response. Although I am not familiar with this report, I have seen other reports that have a different conclusion on deposition of mercury and hot spots. I understand that there is considerable research being conducted by government agencies and private research institutes that addresses this issue over a broad region. I would defer any opinion on this issue until the research is completed and conclusive.

Question 5. If S. 131 were to become law, how would that change your organizations' pattern of investment over the following time frames: 1 year, 3 years, 5 years?

Response. If S. 131 became law and we were certain of New Source Review reform, our cooperative would upgrade the turbines in two of our existing plants resulting in greater generation without the creation of increased emissions. I would expect these upgrades to occur within 5 years.

Question 6. You indicated that Clear Skies will be expensive. How expensive will it be for your organization and your ratepayers?

Response. It is our projected estimate that to comply with the Clear Skies Act, Basin Electric would need to invest approximately $270 million at our existing generation stations. In addition our annual operating costs would increase by approximately $55 million. Significant rate increase to our membership would be required.

RESPONSES BY RON HARPER TO ADDITIONAL QUESTIONS FROM SENATOR LAUTENBERG

Question 1. Your testimony stresses the importance of regulatory certainly. But S. 1844 significantly re-writes the Clean Air Act which is likely to provoke litigation over the interpretation of the new law. Won't this create greater uncertainty than implementing current law?

Response. If S. 131 is enacted and incorporated into the Clean Air Act with greater clarity and greater certainty than current rules and regulations, I would expect less litigation to occur. After 20 years the current law is still producing litigation not only with respect to what constitutes "a major modification" under the New Source Review provisions, but also constantly producing questions regarding what constitutes Best Available Control Technology. It is not likely that greater uncertainty would occur with new legislation.

Question 2. According to Mr. Schneider's testimony, if the existing Clean Air Act were fully enforced, we would obtain greater reductions in air pollution sooner than under S. 1844 and save thousands of additional lives each year. Why shouldn't we do this?

Response. I do not agree with Mr. Schneider that greater reduction in air pollution will occur with the existing Clean Air Act. In my opinion, I believe that S. 131 would achieve greater reductions in a shorter time frame.

Question 3. Senator Inhofe's bill repeals existing Maximum Available Control Technology standards applicable to facilities in several major industries, if they cap and trade any pollutants under the bill, and requires only an EPA study instead. Is this wise public policy? Does it make more sense to study the effects of removing these controls for toxic chemicals before they are enacted?

Response. I can only respond as a coal-based generation cooperative, there is no relief from MACT for us in the Clear Skies Act.

STATEMENT OF CONRAD G. SCHNEIDER, ADVOCACY DIRECTOR, CLEAN AIR TASK FORCE

Mr. Chairman and distinguished members of the Subcommittee, my name is Conrad Schneider, and I am the Advocacy Director of the Clean Air Task Force, a nonprofit organization dedicated to restoring clean air and health environments through scientific research, public education and legal advocacy. The Task Force appreciates the opportunity to appear before you today and offer our views on the President's proposed Clean Skies Act (referred to hereafter as "CSA").[1] Today, I am also representing three other organizations: Clear the Air, the National Environmental Trust and the United States Public Interest Research Group.

OVERVIEW

We strongly urge you to oppose CSA for the following reasons:

1. CSA offers pollution reductions of sulfur, nitrogen and mercury that are too little and too late to adequately protect human health and the environment in a timely way. Faster and deeper cuts are necessary, feasible, and cost effective, as the Administration's own models and methodologies—and in some cases its own written analysis—demonstrate.

2. CSA is inadequate even as a "down payment" towards attainment of the nation's soot and smog standards. By EPA's own models, CSA leaves 33 million people

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[1] Two versions of the "Clear Skies Act of 2003," the Bush Administration's multi-pollutant legislative language, were introduced in Congress in 2003. The first set of bills, S. 485 and H.R. 999, appeared on February 27, 2003. The bills were then revised and reintroduced as S. 1844 on November 10, 2003.

The two Clear Skies bills introduced in 2003 are collectively referred to in this testimony as "CSA." In instances where it is necessary to distinguish between the February and November versions of Clear Skies, the bills will be referenced by their Senate designations, S. 485 (February) and S. 1844 (November).

in 27 counties in Georgia, Ohio and Illinois and other states breathing air that flunks those standards at the attainment date of 2010.

3. CSA fails to address global warming pollution from the nation's and the world's biggest single source of that pollution—U.S. power plants—despite the opportunity to take action at what the Administration's own analysis demonstrates is in some cases a very modest to negligible cost.

4. Finally, in addition to setting targets that fail to adequately protect human health and the environment, CSA would strip away virtually all existing provisions of the Clean Air Act that could potentially require future emission reductions beyond these weak targets. These include provisions to protect local air quality, clean air in our national parks, apply maximum available control technology to reduce hazardous air pollutants from power plants, and abate interstate pollution that prevents downwind states from assuring their own attainment of clean air standards. Even worse, CSA would effectively move back the attainment deadlines for national clean air standards themselves—in effect, delaying the standards to accommodate the weak emissions requirements of CSA. In short, CSA trades nearly all the protections of the current Clean Air Act and its promise of continuous progress in cleaning the air for a set of half-measures that will not achieve the Act's air quality objectives.

Speaking for the Clean Air Task Force, I should note that I do not come to this hearing room today opposing in principle the concept of multi-pollutant power plant legislation. To the contrary, my organization was one of the earliest and most vocal proponents of such legislation and has twice testified before this subcommittee that such legislation, if it provides the maximum available and cost-effective protection of health and the environment, is worthy of consideration.

However, CSA does not meet that standard. (And, unfortunately, despite bipartisan criticism of CSA, it is highly unlikely that multi-pollutant legislation that meets that standard will see approval in the current Congress or be signed into law by this President.)

Fortunately, this subcommittee, and America's citizens, are not stuck with a choice between flawed multi-pollutant legislation such as CSA and no progress on cleaning up power plant pollution. For example,

• The EPA has proposed the Clean Air Interstate Rule, or CAIR, that would address soot and smog pollution from power plants in two dozen Eastern and Central States. My organization and many states and others have urged EPA to tighten that rule and move forward its effective dates.[2] If EPA does so, this will be a major step forward for clean air.

• In addition, EPA has before it a remand from the courts to issue a new rule to protect clean air in the nation's parks; if EPA does its job properly, we can substantially reduce power plant pollution in the West as well as the East.

• The EPA has pending before it a rulemaking concerning Maximum Achievable Control Technology to control the hazardous pollutant mercury, in which the weight of evidence supports a 90 percent reduction in the nation's power plant mercury emissions, as well as other hazardous air pollutants from power plants.[3] As with the CAIR rule and the national parks rule, the Administration could, with the stroke of a pen, embrace the evidence of technical feasibility, as it recently did with diesel emissions from new on and off-road diesel engines, and effectively take this mercury issue off the table for the foreseeable future.

• Finally, the EPA and Department of Justice have brought cases for New Source Review violations affecting more than one-quarter of the nation's coal-fired generating capacity. Several of these cases have been settled in a way that significantly improves regional and local air quality. Diligent prosecution of the remaining cases, and others that can likely be brought—rather than undercutting the regulations themselves, equivocation on the existing cases, and failure to prosecute new ones—would further improve air quality.

With real and tangible clean air opportunities like these pending, one could conclude that it is effectively a waste of time for this subcommittee—and even more so the Senate—to even consider such a flawed and controversial piece of legislation such as CSA.

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[2] Comments on Proposed Rule to Reduce Interstate Transport of Fine Particulate Matter and Ozone (Interstate Air Quality Rule), 69 Fed. Reg. 4566 (January 30, 2004). Docket No. OAR–2003–0053.

[3] Comments on Proposed Emission Standards for Hazardous Air Pollutants; and in the Alternative, "Proposed Standards of Performance for New and Existing Sources: Electric Utility Steam Generating Units," 69 Fed. Reg. 4652 (January 30, 2004) and Supplemental Notice, 69 Fed. Reg. 12398 (March 16, 2004), Docket No. OAR–2002–0056.

Accordingly, I first urge you to reject CSA. And, second, because EPA has all the authority it needs to make major strides forward on power plant pollution, and the prospects are dim for legislation that will achieve greater, faster gains, I urge you to use your energy and influence to secure a tightening and swift issuance of the CAIR, clean air in the parks, and mercury rules.

Let me now turn to the evidence in support of each of my major criticisms of CSA.

1. CSA Offers Too Little, Too Late And Feasible and Cost-Effective Alternatives Are Available

First, let me address the evidence that the Clear Skies offers too little, too late as compared with feasible and cost effective alternatives. To do so, let us compare several multi-emission proposals against Clear Skies for costs and benefits.

Below is a chart outlining the major legislative proposals and their major cap and deadline features. This chart includes CSA, as proposed to date; the Jeffords/Lieberman/Collins Clean Power Act; the Carper/Gregg/Chafee Clean Air Planning Act; and the EPA's own "Straw" proposal of 2001.

(Let me note at the outset that I do not intend to get into a discussion of whether certain presentations of EPA's position in the past represented the agency's view of current regulatory requirements under the Clean Air Act or, as some EPA staff now claim, were instead simply a tactic to "scare" industry into accepting multi-pollutant legislation. The undeniable fact is that, in a very deliberate interagency review process, EPA submitted a "Straw" proposal for legislation on power plant emission reduction targets and timetables that presumably represented its best view of what was necessary and achievable to protect human health and the environment. The "Straw" proposal is thus surely at least one appropriate benchmark against which to compare CSA, as we have done.)

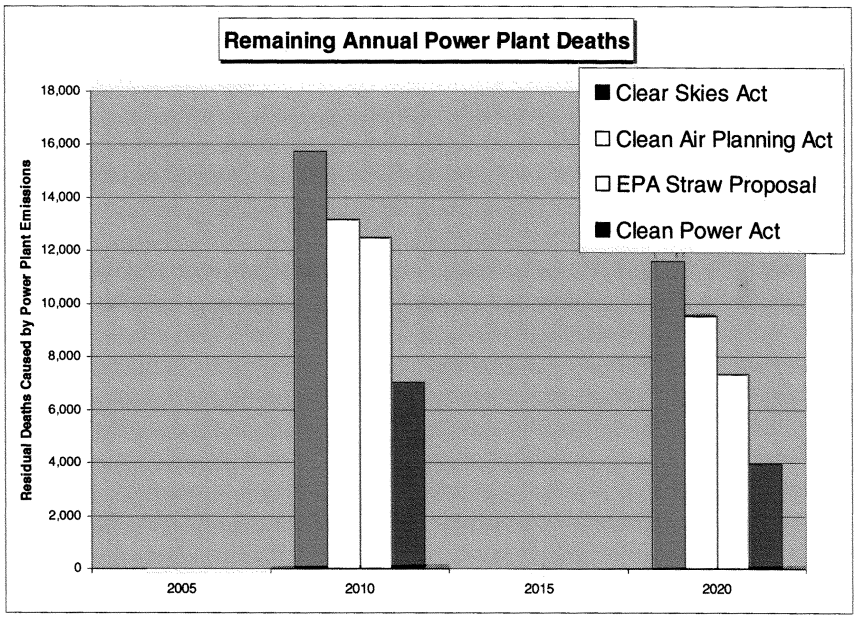
Comparison of Major Provisions of S. 366 (Jeffords/Lieberman/Collins), S. 843 (Carper/Gregg/Chafee), S. 485 (Bush Administration), EPA 2001 Proposal, & EPA Proposed Interstate Air Quality, Regional Haze, and Mercury MACT Rules

	Nitrogen Oxides (NOx)	Sulfur Dioxide (SO2)	Mercury (HG)	Carbon Dioxide (CO2)	New Source Review	Effect on other CAA Programs
Jeffords/ Lieberman/ Collins Clean Power Act S. 366	1.51 million ton cap by 2009	2.255 million ton cap by 2009	5 ton cap by 2009 Each plant limited to 2.48 grams of mercury per 1000 megawatt hours, or less as determined by EPA	2.05 billion ton cap by 2009	No Change to existing law	No changes to visibility or air toxics sections of existing law
Bush Clear Skies Act S. 485	2.1 million ton cap by 2008 17 million ton cap by 2018	4.5 million ton cap by 2010 3 million ton cap by 2018	34 tons per year by 2010 (trading allowed) 15 tons per year by 2018. Sources can avoid emission reductions through mercury emission credit trades	No limit on CO2 emissions	Would practically eliminate new source review for new and existing power plants	Would eliminate visibility and interstate air pollution protections, delay attainment of NAAQS and repeal power plant air toxics controls
Carper/ Gregg/ Chafee Clean Air Planning Act S. 843	1.87 million ton cap by 2009 1.7 million ton cap by 2013	4.5 million ton cap by 2009 3.5 million ton cap by 2013 2.25 million tons by 2016	24 tons by 2009 10 tons by 2013 Each unit must cut emissions to 50% of the mercury in delivered coal by 2008 and 70% of Hg in coal by 2013, or meet an alternative output emission rate. Limited mercury emission trading and banking is allowed.	Power plant emissions capped at year 2006 level for calendar years 2009-2012 Power plant emissions capped at year 2001 level by 2013 and beyond	Retains NSR for new plants, but eliminates offsets for new sources with reductions from other sources; also limits cost of new source controls Performance standards for all plants in 2010 with 4.5 lbs/MWh SO2 and 2.5 lbs/MWh NOx	Would eliminate the requirement for a mercury MACT standard for power plants Would grant a 20 year exemption from BART requirements in the visibility provisions of existing S 169A
EPA 2001 Proposal	1.87 million ton cap by 2008 1.24 million ton cap by 2012	2 million ton cap by 2010	24 ton cap by 2008 7.5 ton cap and a 70% facility-specific reduction requirement by 2012	No limit on CO2 emissions	Would repeal new source review for existing power plants	Would replace nearly every CAA program applicable to power plants except NAAQS
Proposed Interstate Air Quality Rule, Regional Haze/Best Available Retrofit Technology (BART) Rule, and Mercury Rule	2.4 million ton cap by 2010 2.1 million ton cap by 2015	4.6 million ton cap by 2010 3.5 million ton cap by 2015	MACT proposal: 34 tons by 2008 Section 112(n) trading alternative: 34 tons by 2010 Section 111 cap and trade alternative: 34 tons by 2010 and 15 tons by 2018	No limit on CO2 emissions	Final rule may include NSR rollbacks	N/A

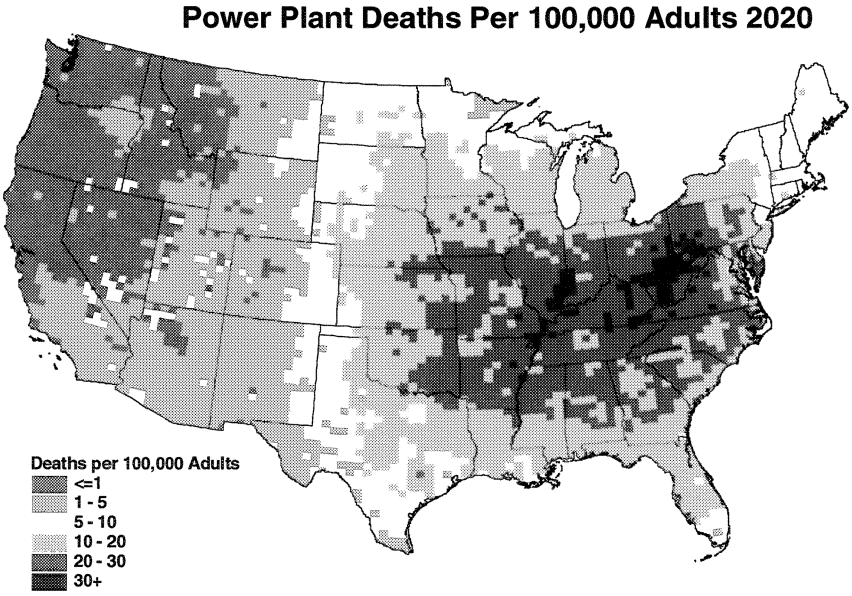
CATF has commissioned a comparison of these proposals using EPA's own traditional power system cost modeling, emission dispersion modeling and cost-benefit methods, and employing consultants routinely retained by EPA to do this work. In all cases, the model assumptions were calibrated to run "apples to apples" comparisons with EPA's 2003 modeling of CSA.

The results are instructive: Each one of the competing proposals provides significantly greater health benefits than CSA and those additional benefits far outweigh the additional costs. This analysis is very conservative because it completely ignores the added environmental benefits from the added acid rain reduction, added visibility gains, reduced nitrogen saturation, additional reduced mercury deposition and constraint of global warming pollution that CSA lacks.

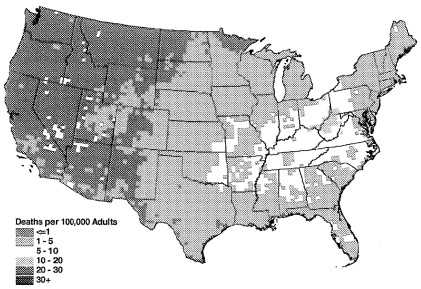
For example, each of the alternative proposals results in significantly fewer deaths per year in 2020 as compared with CSA—roughly 2,000 fewer in the case of the Clean Air Planning Act and nearly 8,000 fewer in the case of the Clean Power Act:



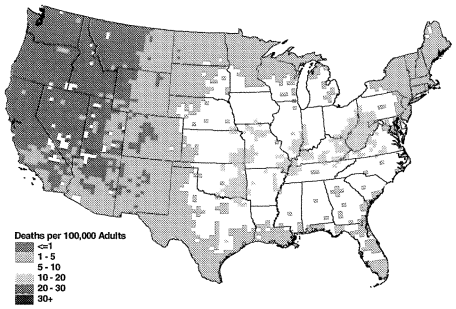
These data can be seen geographically in the following maps illustrating mortality shrinking in the central United States with each more stringent proposal:


Power Plant Deaths Per 100,000 Adults 2020
Deaths per 100,000 Adults
<=1
1 - 5
5 - 10
10 - 20
20 - 30
30+

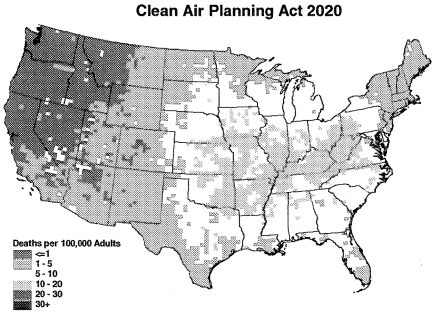
Clean Power Act 2020



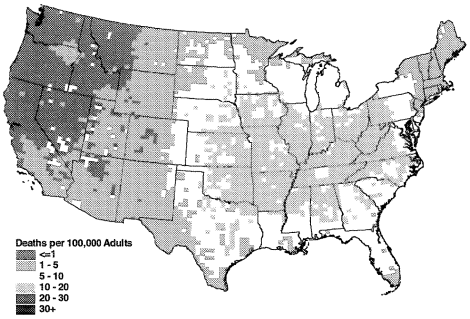
EPA "Straw" Proposal 2020



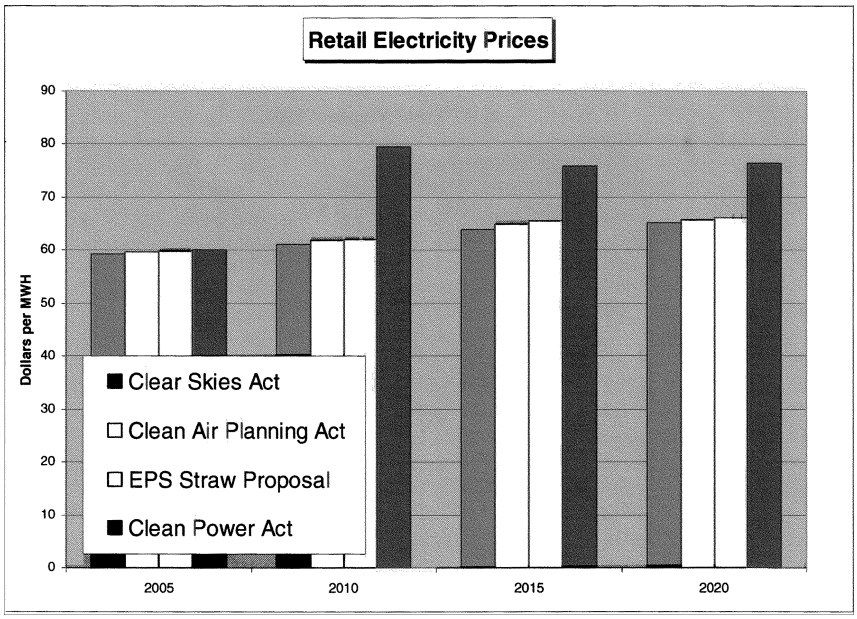
Clean Air Planning Act 2020



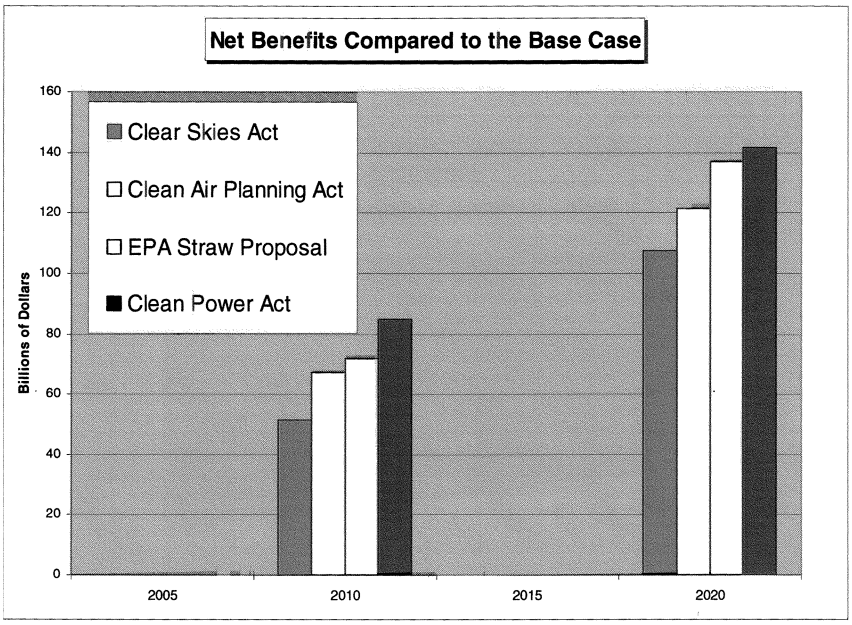
Clear Skies 2020



On the cost side, the analysis shows that the alternative, tighter caps and timetables result in very little additional retail cost of electricity, essentially in the "noise" level of the models. This result is especially notable since the Clean Air Planning Act and Clean Power Act also include carbon caps that CSA and the "Straw" proposal do not:



Finally, putting both costs and benefits together, and comparing the alternative proposals to CSA, it is clear that the additional benefits in human health and life from the alternative proposals substantially outweigh their additional costs (including the carbon cap and added mercury control costs, for which no benefits are counted), by anywhere from $14 billion to $34 billion annually. Put another way, the health benefits of additional improvements beyond CSA exceed the additional costs by as much as 8-to-1:

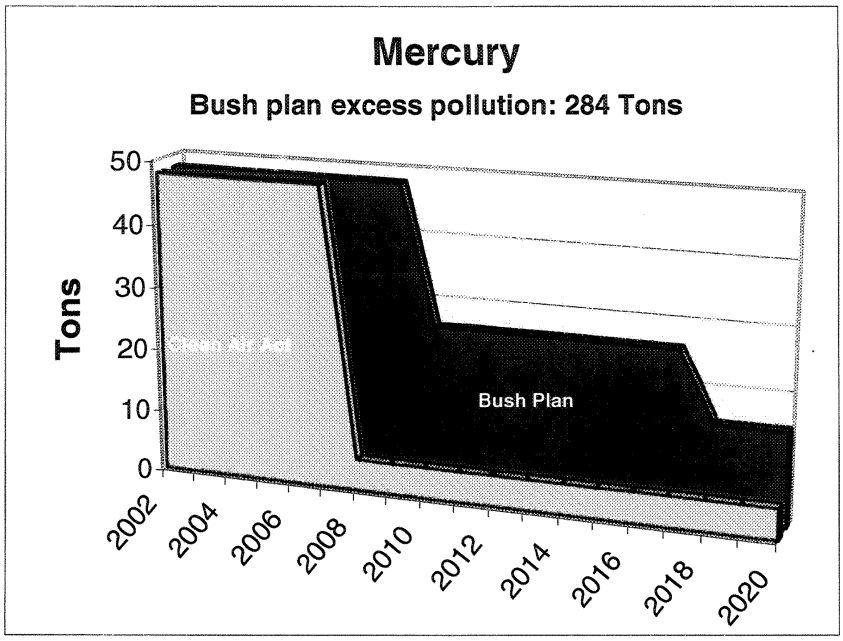


These results are quite consistent with EPA's own analysis comparing CSA to the Clean Air Planning Act, which found roughly $50 billion in additional annual health benefits in 2020 from the latter as compared with CSA, with a little bit over $2 billion in added annual costs:

	Preliminary Estimate Carper Proposal (*S.3135*) [3]		Clear Skies (*S. 2815*) [2]	
	2010	2020	2010	2020
Premature Mortality, Chronic	9,600	17,800	6,400	11,900
Chronic Bronchitis	5,800	10,900	3,900	7,400
ER/Hospital Admissions	8,400	15,500	5,600	10,400
Minor Illnesses/Symptoms	11,000,000	20,000,000	7,200,000	13,500,000
Total Health Benefits Value (millions of 1999$)	$65,000	$140,000	$43,000	$93,000

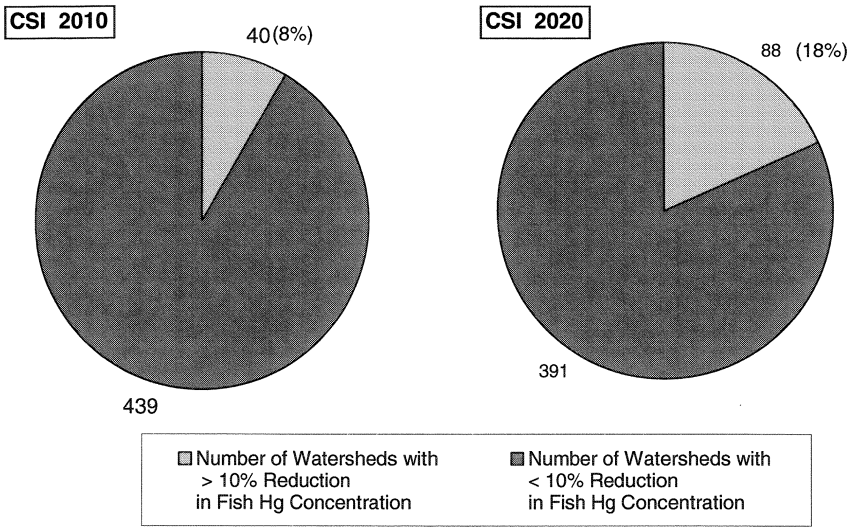
Chart and data from EPA Powerpoint Presentation, "S. 3135, The Clean Air Planning Act of 2002 Presentation for Jeff Holmstead," November 2002.

CSA fails to deliver adequate ecological and aesthetic protection to natural resources as well. For mercury, CSA will result in 284 more tons of mercury emitted into the environment than the 90 percent reduction required by a faithful reading of the Maximum Achievable Control Technology (MACT) requirements of the Clean Air Act (See graph below):



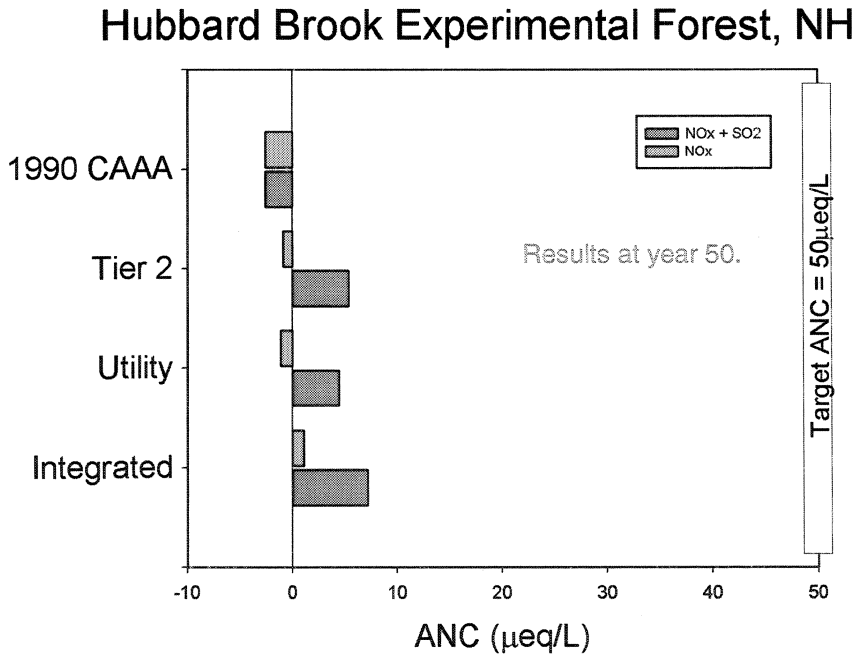
According to EPA's Mercury MAPS tool which predicts how watersheds will respond to changes in mercury deposition, CSA by 2020 would result in measurable improvement in only 18 percent of modeled watersheds.

Effect of CSA on Mercury Concentration in Fish in 2010 and 2020

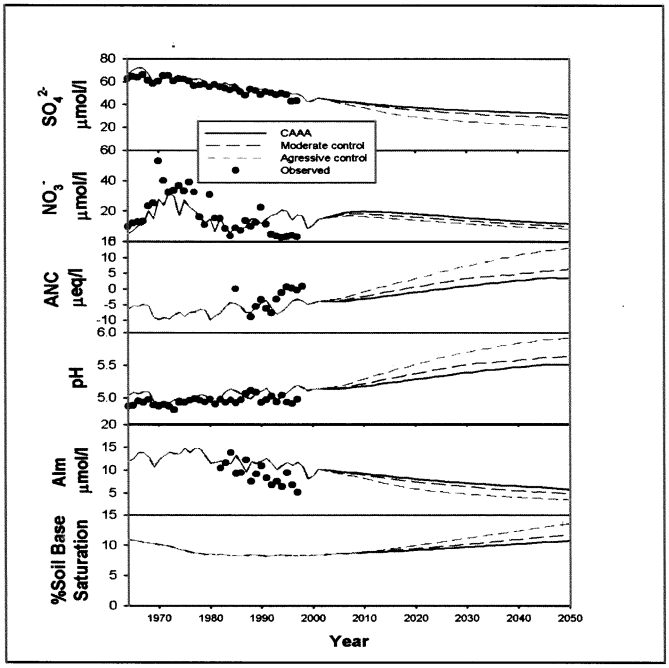


With respect to Acid Rain, CSA's nitrogen and sulfur caps are too weak and late to allow recovery of damaged ecosystems even to begin by 2050! At the Hubbard Brook Experimental Forest in New Hampshire, reductions in sulfur and nitrogen emissions from electric utilities comparable to those in CSA have been evaluated.

These results show improvements in the pH and acid neutralizing capacity of surface water, as well as soil percent base saturation and aluminum. However, given the acid-sensitivity of this site, these emissions reductions would not achieve full recovery even 50 years after their implementation. The graph below shows the results for acid-neutralizing capacity relative to a target of 50 micro-equivalents per liter. These results suggest that additional reductions in atmospheric deposition of nitrogen and sulfur would be required to mitigate ecosystem stress due to acid inputs at the Hubbard Brook Experimental Forest by 2050. A similar analysis was conducted looking at the current 1990 Clean Air Act, moderate, and aggressive emission reductions. As shown in the second graph below, these results also show that chemical recovery would not be fully achieved under these scenarios at the Hubbard Brook Experimental Forest.

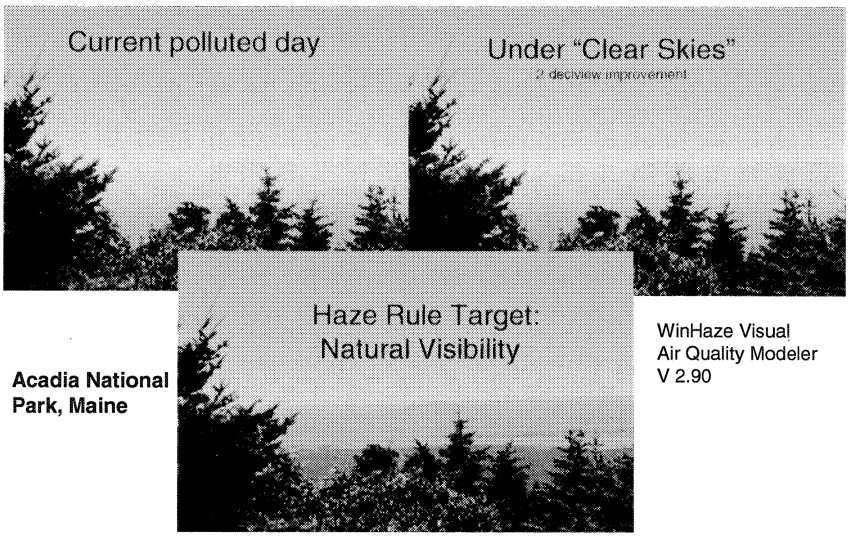


Results from the Hubbard Brook Experimental Forest, NH

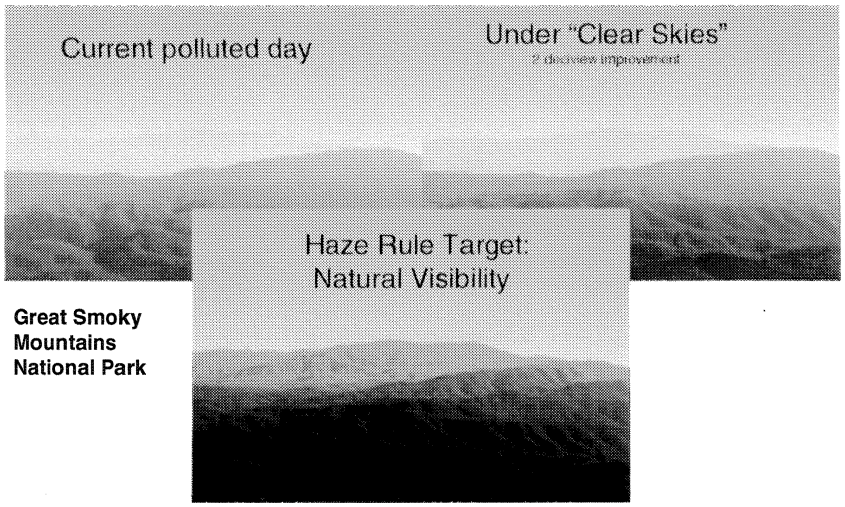


Likewise, the CSA caps are too lax to yield any noticeable improvement in visibility in our nation's national parks. The images below demonstrate the lack of improvement in polluted vistas at two of our most visited parks: Acadia National Park in Maine and Great Smoky Mountains National Park between North Carolina and Tennessee.

Acadia National Park



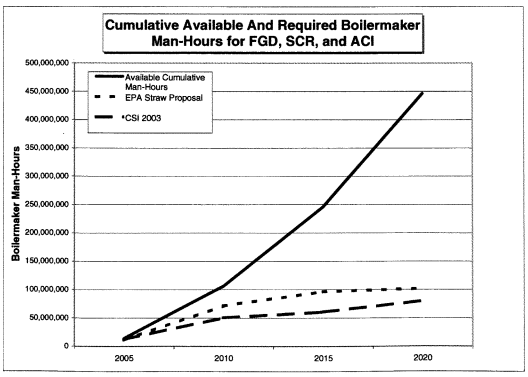
Great Smoky Mountains National Park



In sum, it clearly cannot be said that CSA provides as much human health preservation of life and environmental protection as can be cost-benefit justified. To the contrary, on this score, CSA well underperforms all the other proposals.

But what of feasibility? Critics of more stringent proposals do not contend that technology to reduce sulfur dioxide emissions (flue gas desulfurization) or nitrogen oxide emissions (selective catalytic reduction) are not available to meet the more stringent caps associated with the "Straw" proposal. These are proven, off-the-shelf technologies. Instead, they contend a bottleneck of labor will prevent meeting the deadlines of tighter legislation such as the straw proposal due to a bottleneck of labor availability—chiefly of skilled boilermakers.

As shown in Appendix 1 to my testimony, and as summarized in the chart below, this claim does not withstand scrutiny. Using EPA's own estimates and analysis, the available labor supply is more than sufficient to meet the deadlines outlined in the "Straw" proposal (which is similar in timing and levels to the Clean Power Act and more stringent than the Clean Air Planning Act):



Source: See Appendix 1

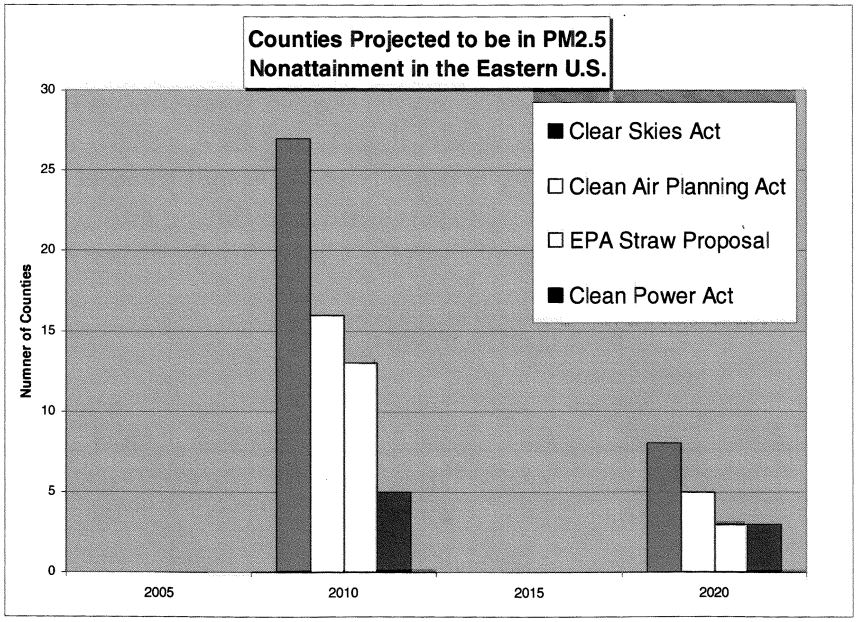
In sum, CSA offers far too little, too late by way of human health and environmental protections, while much better alternatives are available and cost effective. On this ground alone, the subcommittee should reject CSA.

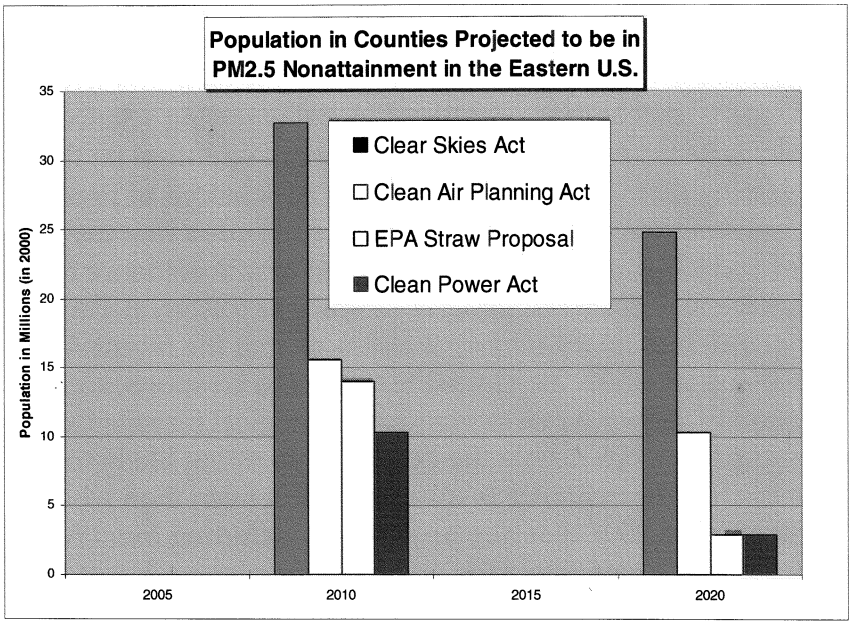
2. CSA Provides Too Little, Too Late to States Seeking Attainment of National Soot and Smog Standards

There is another measure by which we can judge the adequacy of CSA: how well it assists states and cities in meeting their legal obligations to comply with the 2010 deadlines for attainment of national soot and smog standards. By this measure, CSA also fares poorly in comparison to alternative proposals.

Clean Air Act soot and smog attainment is not a theoretical issue for Governors and Mayors in the South and Midwest. It is one with important and immediate economic implications. When a region does not meet clean air standards, it must additional clean-up burdens on new and existing industrial facilities and can be denied federal highway funds. At a minimum, nonattainment can—rightly—stigmatize a region for people who would live or establish businesses there.

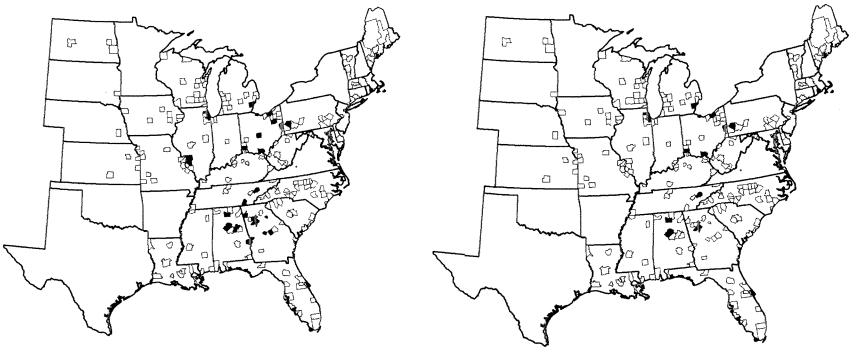
Because of CSA's looser caps, and delayed implementation, however, CSA offers the least help to states and regions seeking attainment, as shown by the charts below, again from analysis commission by CATF using EPA's models and methodologies:





As the charts demonstrate, CSA leaves 27 counties and 33 million people breathing unlawfully dirty air in 2010, double the number of people and a 60 percent increase in counties and left with dirty air by even the next least stringent bill, the Clean Air Planning Act. Worse, even in 2020, CSA leaves some 25 million people still in non-attainment areas—their health and economies unnecessarily threatened. The adjacent maps below, comparing non-attainment counties (in red) under CSA and the "Straw" proposal in 2010, show that Ohio, Georgia, and Illinois are among

the states that face a noticeably bleaker attainment situation due to CSA's laxer, slower power plant emission curbs:



PM2.5 Non-attainment 2010 under CSA . . . and under "Straw" proposal

3. CSA Fails to Address Global Warming, Despite the Availability of a Variety of Policy Approaches That Address the President's Concerns

This is not the place to debate the details of global warming science. This subcommittee has heard extensively from a range of scientists on this issue. I only note in passing that the National Academy of Sciences, at President Bush's request, has reviewed the available science and concluded that the Intergovernmental Panel on Climate Change had ample evidence for its conclusion that we may see a warming of as much as 5 degrees Fahrenheit by 2100 due substantially to human influence.[4] I also note that the recent Arctic Climate Impact Assessment, of which the United States was a co-sponsor, concluded that the Arctic is already showing real evidence of ecological distress due to human-induced warming.[5] We can debate the degree of warming likely to occur, and its ultimate impacts, but the evidence is surely stronger even than when President Bush first took office in 2001 that human activity, including fossil fuel combustion from power generation, is warming the planet.

America's power plant fleet accounts for roughly 40 percent of the nation's anthropogenic CO_2 emissions, and 10 percent of the world's total anthropogenic CO_2 emissions. Clearly, addressing global warming will require the US power sector to do its share.

In his 2000 election campaign, President Bush acknowledged this evidence and called for capping of CO_2 from U.S. power plants. In March 2001, the President reneged on that pledge. His stated reasons were that capping of power sector carbon dioxide would "lead to an even more dramatic shift from coal to natural gas for electric power generation" and "significantly higher electricity prices compared to scenarios in which only sulfur dioxide and nitrogen oxides were reduced."[6] Presumably reflecting those concerns, CSA contains no CO_2 limits.

This omission is not only inexcusable as a matter of environmental policy; it is also unexplainable by the President's own logic. By the President's own rationale, the authors of CSA should have been open to discussing power sector CO_2 policies which do not lead to a "dramatic shift" from coal to natural gas, or "significantly higher electricity prices."

Several such policies have been proposed, either in legislation or in public debate, whose effects would not include appreciably greater gas use or higher electricity prices. For example:

• EPA concluded that the price effects of the CO_2 limits contained in the Clean Air Planning Act were likely to be "negligible" assuming availability of worldwide carbon offsets, and the combined effect of all the Act's requirements, including CO_2,

[4] "Climate Change Science: An Analysis of Some Key Questions," Committee on the Science of Climate Change, Division on Earth and Life Studies, National Research Council National Academy Press (2001).

[5] See Arctic Climate Impact Assessment, Impacts of Warming Arctic, Cambridge University Press, 2004. p. 8.

[6] Letter March 13, 2001 from President George W. Bush to Senators Craig, Roberts, and Hagel.

would be a mere 6 percent increase in the country's natural gas-fired generation by 2020 with coal retaining a 45 percent market share.[7]

• The McCain-Lieberman bill and other CO_2 constraint policies were recently evaluated by American Electric Power, the largest user of coal in the Western hemisphere, and Cinergy Corporation, the fourth largest. While neither utility endorsed a specific bill, Cinergy stated its view "that under a ″moderate' scenario for GHG emission reductions, the necessary rate increases would not place our region at a competitive disadvantage within the United States or among most industrialized countries."[8] And AEP concluded from a similar review that CO_2 curbs in the range of the McCain-Lieberman bill would not uneconomically strand investment in existing coal plants.[9] Both utilities have begun to undertake voluntary CO_2 reduction programs in the range of those required by the Clean Air Planning Act and the McCain-Lieberman bill.[10]

• In a response to a request from Senators Voinovich and others, EIA estimated the cost of a 2008 power sector carbon cap at roughly $630 million annually in 2020—a small fraction of 1 percent of power sector revenues in that year.[11]

• In December 2004, the National Commission on Energy Policy, an expert panel representing the electric, oil, labor, academic, government and environmental sectors recommended a gradually implemented economy-wide CO_2 cap, reflecting a reduction in carbon intensity, with a safety valve and future parameters depending on developing country measures.[12] The United Mine Workers International President welcomed the proposal as "responsive to the prior objections of the UMWA and other labor groups concerning the Kyoto Protocol and other recent climate change legislation circulating in Congress." [13]

I do not mean specifically to endorse these alternative CO_2 proposals or analyses. I cite them merely to illustrate how inexcusable it is that CSA's proponents have not even engaged in a discussion of potential CO_2 policies based on the President's own articulated principles. In this respect, CSA reflects a stance on this important issue well outside the policy and even electric industry mainstream. For this reason alone, CSA should not be even seriously considered as a starting point for debating reformed power sector emissions law.

4. CSA Would Repeal or Undercut Key Protections and Policies in the Clean Air Act Without Adequate Substitute Safeguards

In general, CSA repeals or significantly weakens many provisions of existing law that have protected health and the environment since the enactment of the 1970, 1977, and 1990 Clean Air Act (CAA) amendments, including:

• Interstate air pollution protections;
• New Source Review requirements;
• Air Toxics controls applicable to the electric power industry;
• Provisions designed to bring air quality into attainment with national standards and to protect areas from air quality degradation;
• The deadlines by which states must attain national air quality standards; and
• Visibility protections for National Parks.

For example:

• CSA would effectively repeal New Source Review (NSR) for power plants by:
  • Changing the definition of the term "modification" to mean a change that "increases hourly emissions at the unit's maximum capacity." (§483(d)(3))

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[7] As EPA stated, "Offline analysis showed that the costs of compliance for the CO_2 constraint would be low due to the wide availability of inexpensive GHG offsets. The net cost of the CO_2 cap is negligible." EPA Powerpoint Presentation, "S. 3135, The Clean Air Planning Act of 2002 Presentation for Jeff Holmstead," November 2002, p. 8. For generation figures, see page 13.

[8] Cinergy Corp. "Air Issues: An Analysis of the Potential Impact of Greenhouse Gas and other Air Emissions Regulations on Cinergy Corp." (December 2004) at p. 41.

[9] American Electric Power Inc., "An Assessment of AEP's Actions to Mitigate the Economic Impacts of Emissions Policies," (August 31, 2004).

[10] Bruce H. Braine, "AEP's Strategy for Managing Climate Change Risks: The Value of GHG Reductions, EPA's SF6 and the Environment Conference", December 1, 2004, p. 10; The Cincinnati Enquirer, Wednesday, September 10, 2003, "Cinergy to reduce airborne emissions: Voluntary effort aims at greenhouse gases".

[11] Energy Information Administration, "Reducing Emissions of Sulfur Dioxide, Nitrogen Oxides, and Mercury from Electric Power Plants," Office of Integrated Analysis and Forecasting U.S. Department of Energy (September 2001) SR/OIAF/2001–04.

[12] National Commission on Energy Policy, "Ending the Energy Stalemate: A Bipartisan Strategy to Meet America's Energy Challenges," (December 2004).

[13] United Mine Workers International Press Release, "United Mine Workers of America Commends Newly Released Report by The National Commission On Energy Policy," December 8, 2004.

The Clean Air Act currently applies NSR to a facility if it undergoes a physical or operational change that causes its annual emissions to increase significantly. The approach taken in CSA would allow power plant operators to keep plants operating for a 100 years without applying modern emission controls. This is a regulatory immortality provision.

• Prohibiting states from applying NSR to modified sources under their EPA-approved State Implementation Plans. Even if they are able to retain a program as a matter of state-law only, see the Savings Clause of §483(e), they cannot take credit for it in their attainment or maintenance plans. This preempts more stringent state programs. (§483(a) ("An affected unit shall not be considered a major emitting facility or major stationary source . . . for purposes of compliance with Part C and Part D of Title I.")

• Effectively ignoring the effect of emissions from new facilities on non-attainment areas. Under language inserted into S. 1844, regulators must "deem" that a new facility will not interfere with attainment efforts in areas with dirty air, regardless of the data, as long as those areas have been in "full compliance" with the Clean Air Act for the preceding three years (non-attainment designations notwithstanding). (§483(c)(2))

• Requiring only "reconstructed units"—and not "modified units"—to "comply with the either the performance standards of Section 481 or best available control technology as defined in Part C of title I for the pollutants whose hourly emissions will increases at the unit's maximum capacity." Compare §483(c) of S. 1844 (preconstruction review requirements applicable only to "reconstructed units") with §483(c) of S. 485 (preconstruction review requirements applicable to "modified units").

• CSA would repeal the requirements that certain power plants apply Best Available Retrofit technology (BART) to protect visibility in National Parks. The requirement is only retained for sources within 50 kilometers of a Class I park area.[14] (§483(a) and (b))

• CSA would repeal the requirement that EPA establish a Maximum Achievable Control Technology (MACT) standard for air toxics emission from power plants. EPA is left with establishing controls for non-mercury toxic pollutants with the residual risk provisions of CAA §112(f) in the period 2010–2018. See Section 3(a)(5) of CSA. The effect is to delay power plant MACT for at least 10 years. Furthermore, new language inserted into Section 3(a)(5) of S. 1844 establishes additional criteria that EPA must meet before it can determine whether it should regulate the emission of non-mercury toxics from power plants.

• Section 3(a)(3) of CSA would eliminate protections against interstate air pollution by barring the application of any CAA §126 interstate air pollution remedy to power plants before 2012. More importantly, it creates an impossible showing—the remedy would only be available after all more cost-effective measures have been applied by the petitioning state.

• CSA would repeal the existing New Source Performance Standard (NSPS) program (which is designed to evolve with technology) for new power plants and replace it with a one-shot statutory standard (essentially foregoing benefits of advances in pollution control technology) §481. EPA would have no mandatory duty to review and upgrade the standard to reflect technological advances in pollution control. CSA would also exempt modified units from NSPS. This section can be read to exempt new power plants from current NSPS even if EPA misses deadline for promulgating §481 standards.[15]

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[14] The language of S. 485 would have indirectly repealed the current case-by-case BART performance standards for new power plant units. See §483(a) and (b) (new sources located within 50 km of a Class I area are subject only "to those provisions under part C of title I pertaining to the review of a new or modified stationary source's impact on a Class I area"). The repeal of BART is made clear in S. 1844. See §483(a) ("nor shall [an affected unit] otherwise be subject to the requirements of [Clean Air Act] section 169A or 169B").

[15] §481(c) of CSA would establish the following emissions standards for new power plants (in lieu of NSPS):

(A) sulfur dioxide in excess of 2.0 lb/MWh;

(B) nitrogen oxides in excess of 1.0 lb/MWh;

(C) particulate matter in excess of 0.20 lb/MWh;

(D) if the unit is coal-fired, mercury in excess of 0.015 lb/GWh, unless:

(i) mercury emissions from the unit are reduced by 80 percent;

(ii) flue gas desulfurization (FGD) and selective catalytic reduction (SCR) are applied to the unit; or

(iii) a technology is applied to the unit and the permitting authority determines that the technology is equivalent in terms of mercury capture to the application of FGD and SCR.

Continued

• Section 3(a) of CSA would relax the deadlines by which areas must attain the revised ozone and $PM_{2.5}$ standards by providing non-complying areas with an automatic extension of their attainment date to 2015. Current law (CAA §172) requires attainment as expeditiously as practicable but not later than 5 years after designation (subject to another 5-year extension, again conditioned on passing the "expeditious as practicable test"). Because designations for the new 8-hour ozone and $PM_{2.5}$ standards were made in 2004 and 2005, respectively, the Clean Air Act currently allows citizens to compel their states to adopt measures that will ensure attainment no later than 2009 (for ozone) or 2010 (for $PM_{2.5}$). The current law also allows downwind states to use CAA §126 to petition for more timely pollution abatement and attainment planning in upwind states. In contrast, CSA would in effect insulate states from having to attain before 2015. This is a change made "necessary" by the Administration's acceptance of the electric industry's preferred weak targets and timetables for SO_2 and NOx controls. By choosing weak cleanup requirements, the Administration would set in motion a guaranteed delay in meeting health standards from what would otherwise be feasible (resulting in thousands more premature deaths, asthma attacks, etc.).

• CSA would weaken requirements in existing law designed to bring areas into attainment with national standards. Section 3(a)(3)(B) repeals the requirement for application of Lowest Achievable Emission Rate (LAER) and offset requirements for all sources in areas that get a new "transitional" designation. Under CSA, a nonattainment area can qualify for the "transitional" designation by submitting modeling that purports to demonstrate that the area will come into attainment by 2015. Facilities in "transitional" areas would be subject to the requirements of the Prevention of Significant Deterioration program (e.g., BACT), rather than the requirements of the more stringent nonattainment NSR program (e.g., LAER). In addition:

> • Under CSA there is no meaningful remedy for continued nonattainment—if an area is still violating a NAAQS in 2015, the area is merely required to submit another attainment plan in 2019. (Section 3(a)(3)(B))
>
> • The bills would also weaken requirements that keep clean air areas from being degraded by repealing the PSD Class II program as it relates to power plants. Class II PSD areas today protect the entire country (outside nonattainment and Class I areas). Instead of having to show protection of Class II PSD increments (in the law since 1977), a new or modified plant would only have to show noninterference with NAAQS. As a result, a new or modified power plant could increase emissions that degrade air quality all the way up to the level of the NAAQS health standards.

It would be hard to imagine a more thorough evisceration of existing Clean Air Act protections than would be performed by CSA.

CONCLUSION

CSA is the wrong policy at the wrong time. It offers too little, too late in emission reductions to meet key environmental and health concerns. It strands too much of the country in violation of clean air standards. It ignores global warming entirely without even attempting to find a cost effective way forward. And it strips away the procedural heart of the Clean Air Act while offering only weak and unacceptably delayed emission caps in return.

Despite the inevitable bureaucratic and legal implementation challenges of the current Clean Air Act, America would be far better served by tightening and finalizing the current power sector emission rules currently in progress than by enacting CSA. We urge the subcommittee to support that task, and refrain from serious consideration of CSA as a basis for future power sector policy.

Thank you for your kind attention. I would be happy to answer any questions the subcommittee may have.

APPENDIX 1

AVAILABILITY OF BOILERMAKER LABOR TO RETROFIT POWER PLANTS WITH EMISSION CONTROL EQUIPMENT TO MEET THE REQUIREMENTS OF THE STRAW PROPOSAL

David Schoengold
MSB Energy Associates, Inc.

The performance standards for mercury set forth in the bills were weakened when the requirements in S. 485 that controls be "operated so as to optimize capture of mercury" were deleted from S. 1844.

January 17, 2005

Analysis of the available labor pool suggests that under reasonable assumptions, sufficient boilermaker labor should be available to implement these scenarios.

The main source of data on labor availability and requirements is the EPA's "Final Report—Engineering and Economic Factors Affecting the Installation of Control Technologies for Multi-Pollutant Strategies," October 2002 (EPA–600/R–02/073). This report analyzes the need for boilermaker labor to install FGD, SCR, and ACI on a per MW basis. It also analyzes the availability of boilermaker labor, including those currently in the work force, the projected increases in availability of boilermaker labor, and other needs for this resource. EPA also reported on labor availability and requirements in its materials in support of the Clear Skies Initiative—specifically in "Section F—Engineering and Economic Factors Affecting the Installation of Control Technologies"—however, Section F is less detailed than the October 2002 report.

According to the EPA report, building an SO_2 scrubber requires approximately 304 boilermaker man-hours per MW[16], building an SCR for NOx removal requires approximately 350 boilermaker man-hours per MW[17], and building an ACI for mercury control requires about 5 boilermaker man-hours per MW[18]. Thus, a total of 664 boilermaker man-hours per MW will provide SO_2, NOx, and mercury control.

The EPA report also goes through a calculation of the number of boilermaker man-hours available for the addition of emission controls (after adjusting for the availability of boilermakers, and the other needs for boilermaker labor). According to EPA, there were 17,587 boilermakers in 2000 of which 60 percent are available for utility projects. This number is projected to grow at 5.3 percent per year. To quote the EPA report,

> "Since boilermakers earn more money than most other craft trades and the demand for boilermakers should be steady and increasing, it is reasonable to expect that the growth in boilermaker numbers experienced these last few years should continue for many more years. To assess the impact of this, it was assumed that the boilermakers in the United States continued to grow at the 5.3 percent pace that the International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths, Forgers, and Helpers have set as a minimum growth target." [19]

The EPA report assumes that there will be other requirements in the utility industry for boilermakers (for maintenance and other construction) of approximately 13.5 million man-hours per year.[20]

Based on the current and projected availability of boilermaker labor and the other demands for that labor, the projected availability of boilermaker labor for the purpose of constructing emission control equipment is 13.8 million man-hours in 2005 growing to 21.9 million man-hours in 2010 and continuing to grow from there. This is enough boilermaker labor to build add FGD, SCR and ACI to 160 GW by 2010 and 375 GW by 2015. This is shown in Figure 1 below.

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[16] A total of 760 man-hours per MW are required, of which 40 percent are boilermakers (page 41 of EPA–600/R–02/073).

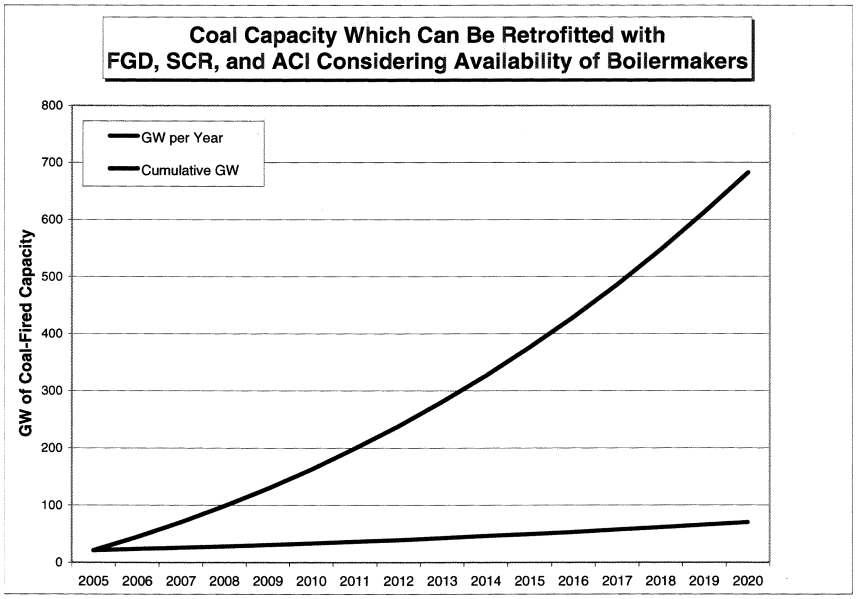
[17] A total of 700 man-hours per MW are required, of which 50 percent are boilermakers (page 41 of the EPA report).

[18] A total of 10 man-hours per MW are required, of which 50 percent are boilermakers (page 41 of the EPA report).

[19] EPA Report at page 45.

[20] EPA Report at page 44–45.

Figure 1. Capability to Add Control Equipment



In contrast, the requirements of the Straw Proposal would mean the installation of 94 GW of FGD and 123 GW of SCR by 2010, and 133 GW of FGD and 158 GW of SCR by 2015. By 2020, the Straw Proposal would require the installation of 145 GW of FGD and 164 GW of SCR.[21] This is far less than the projected capability of boiler maker labor to install control equipment.

Figure 2 below shows the comparative availability of boilermaker labor for adding emission control equipment with the need for this equipment under both the Straw Proposal and Clear Skies.

[21] Requirements for new FGD and SCR equipment to meet the emission limits of the Straw Proposal and Clear Skies come from the outputs to the EPA's Integrated Planning Model (IPM) which is used for analyzing different emissions standards. Modeling of Clear Skies was done by the EPA, while modeling of the Straw Proposal was done for the Clean Air Task Force by ICF using the EPA's IPM model.

Figure 2. Requirements for Emission Control Equipment

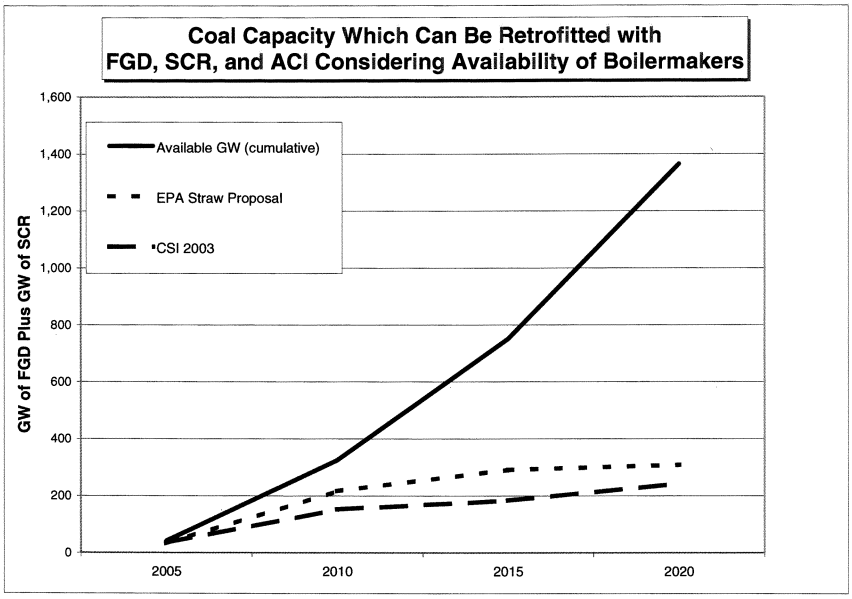
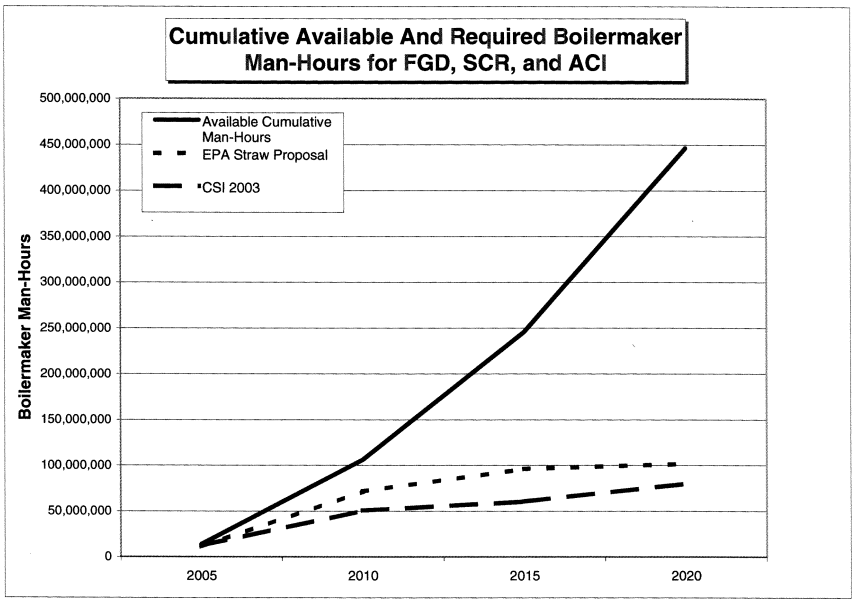


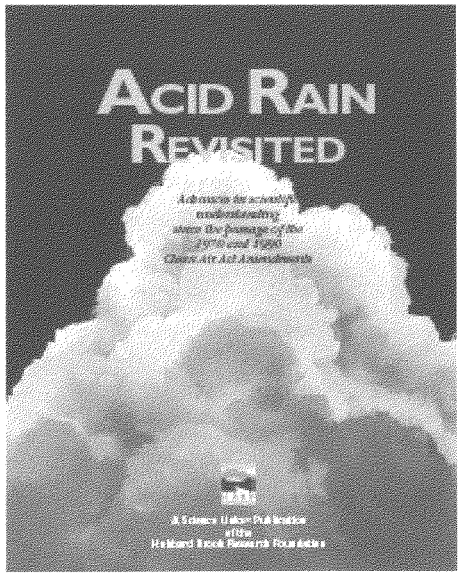
Figure 3 below shows the equivalent data expressed in boilermaker man-hours.

Figure 3. Required and Available Boilermaker Labor



In conclusion, Figures 2 and 3 show clearly that there is expected to be sufficient boilermaker labor available to meet the requirements of either the Clear Skies Initiative or the Straw Proposal.

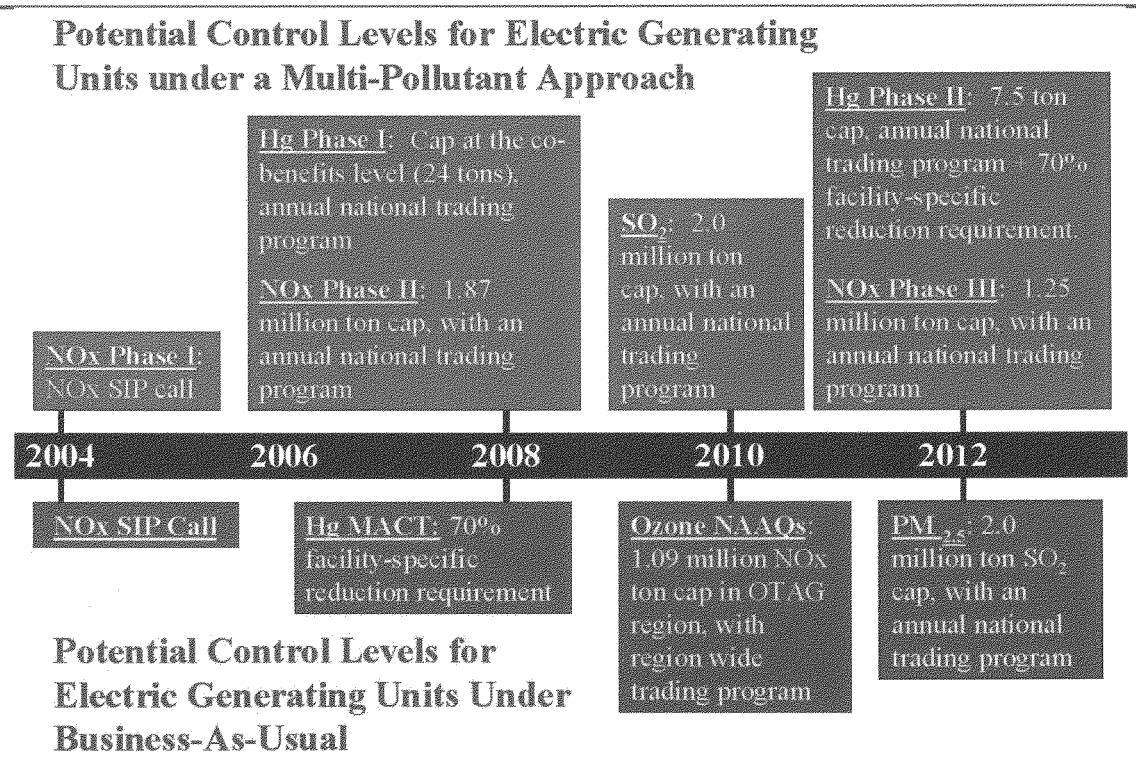
The Bush Plan Fails to Solve the Acid Rain Problem



Hubbard Brook study found that *<u>nothing short of 80% reduction</u>* in power plant SO2 would allow biological recovery in damaged NE ecosystems to begin before mid-century.

CSI falls short, so problem remains unsolved.

COMPARISON OF REQUIREMENTS UNDER BUSINESS-AS-USUAL AND THE STRAW PROPOSAL



Clear Skies < Clean Air Act

Under CSA you get . . .

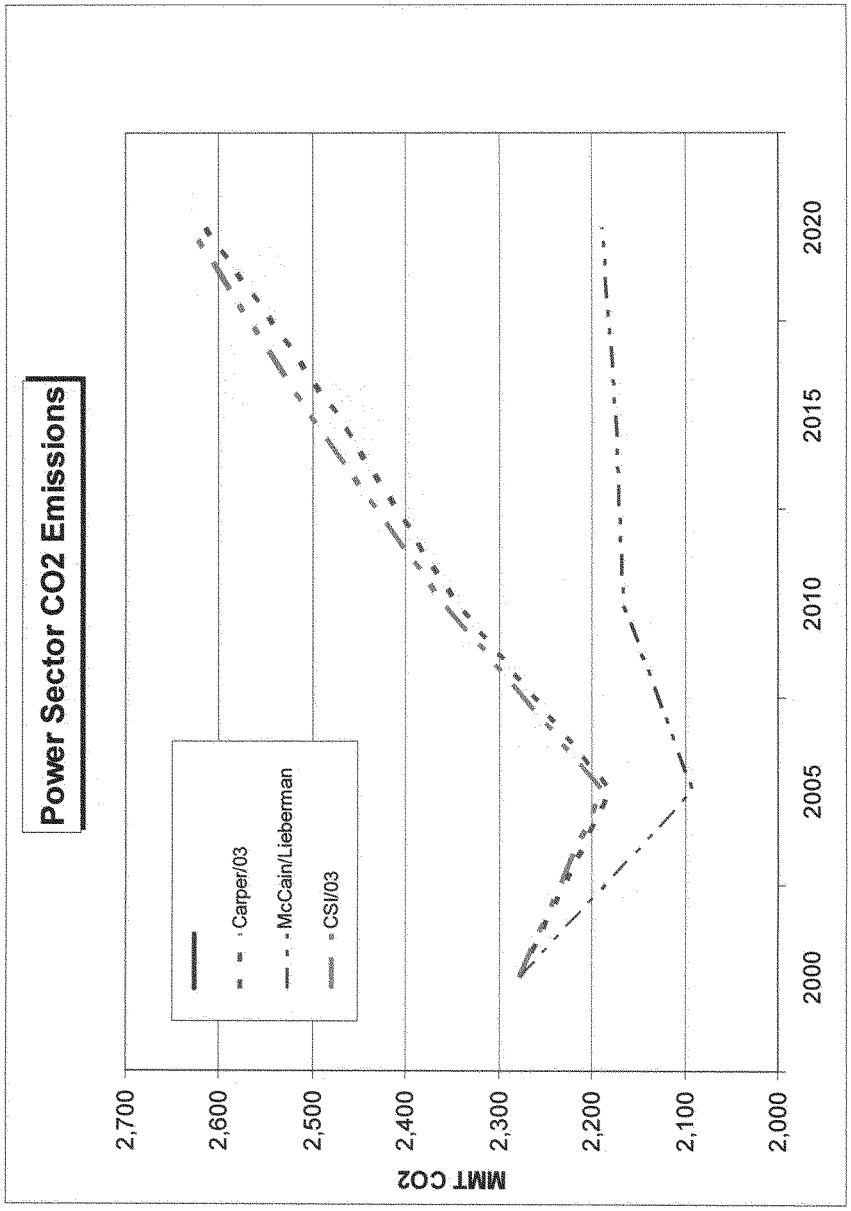
Pollutant	Tons	Year
SO2	3.5M	2018-25
NOx	1.7M	2018-25
Hg	15	2018-25

But you *lose* . . .

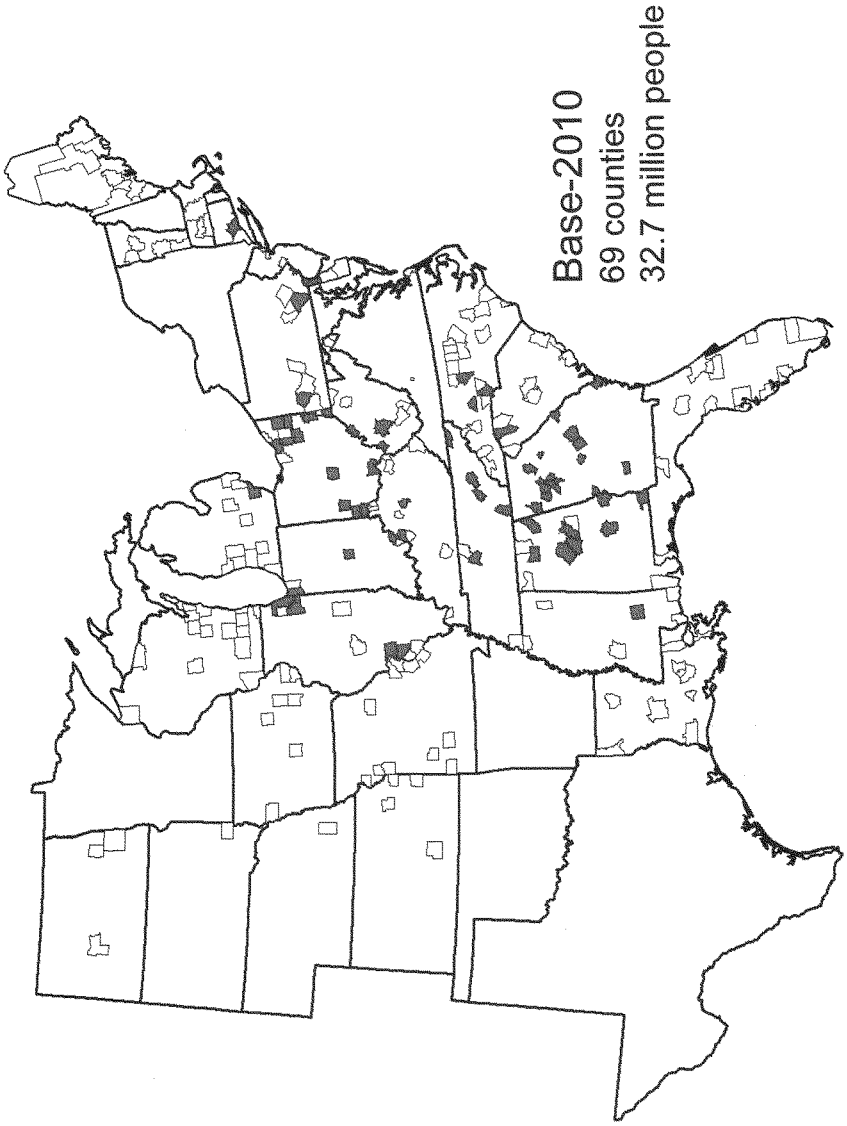
- Tight emissions limits for new plants.
- States' rights to get reductions from upwind states.
- Special protections for air quality in national parks.
- 2010 deadline for clean air standards attainment.
- Federal protections requiring modern emission controls on plants when they modernize (New Source Review).
- Residual Mercury risk and other toxic emission control requirements.

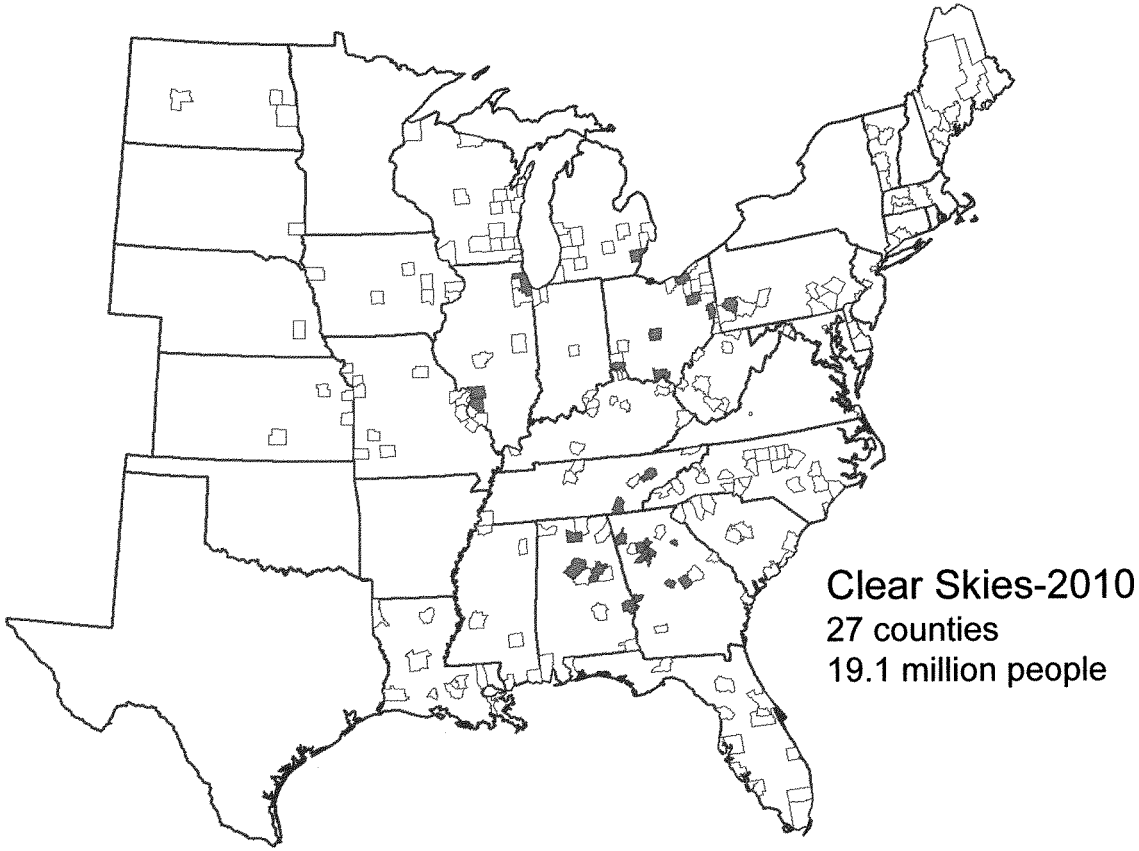
The Clean Air Act requires . . .

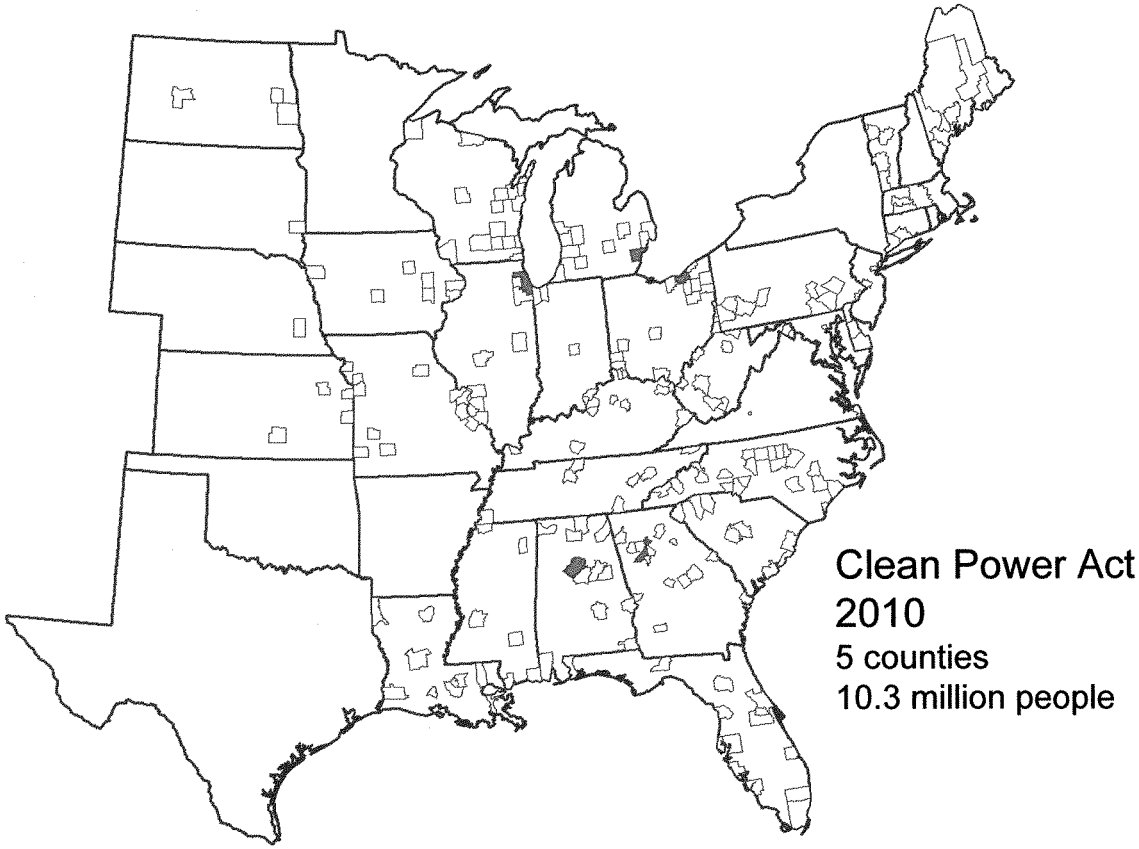
Pollutant	Tons	Year
SO2	2.0M	2010-12
NOx	1.25M	2009-10
Hg	5	2008


Power Sector CO2 Emissions
Carper/03
McCain/Lieberman
CSI/03
MMT CO2
2,700
2,600
2,500
2,400
2,300
2,200
2,100
2,000
2000
2005
2010
2015
2020

Counties in Projected to be in Nonattainment for
Either PM2.5 or Ozone in 2010 Under Clear Skies


Base-2010
69 counties
32.7 million people


Clear Skies-2010
27 counties
19.1 million people


Clean Power Act
2010
5 counties
10.3 million people

Natural Gas Update

Prepared by

Energy and Environmental Analysis, Inc.

September 2003

EEA Background

- Founded in 1974. Nationally recognized analyst/modeler of natural gas resources, markets and prices.
- Clients include major gas producers, LDCs, pipelines, electric generators, DOE, EPA, FERC.
- Currently completing third gas supply analysis for National Petroleum Council.

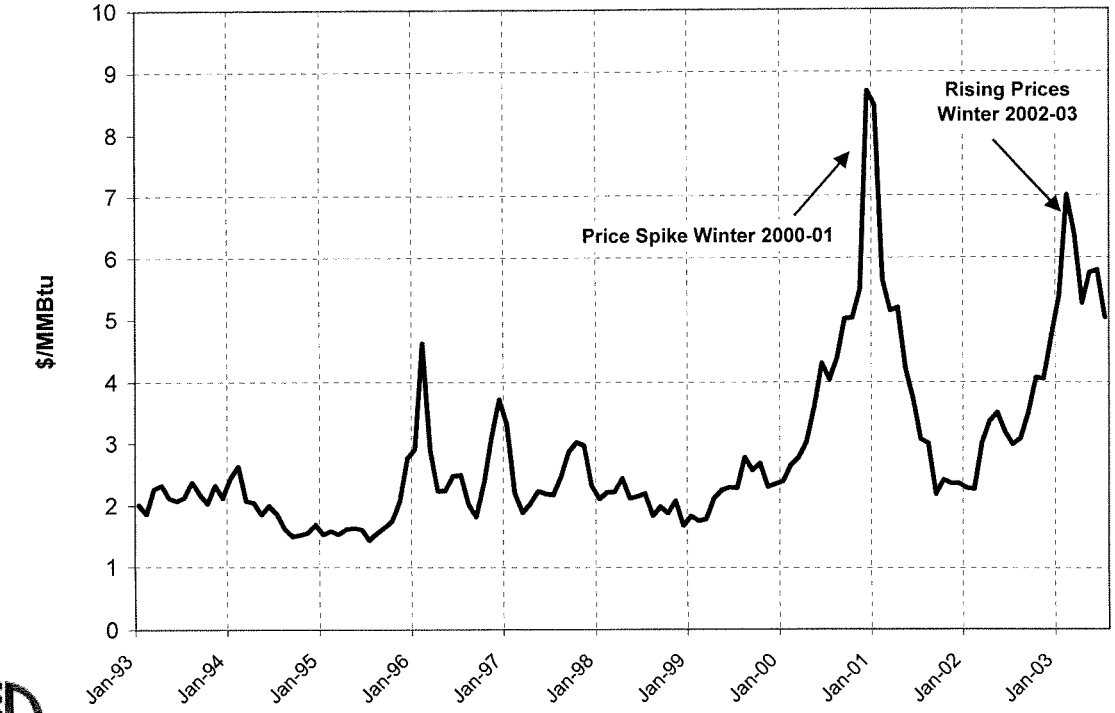
Overview

- Natural gas prices are higher than in the recent past.
- They are likely to remain at these levels.
- Supply disruptions ("curtailments") are unlikely unless caused by very cold winter.
- Alternative sources of supply need to be pursued along with conservation and efficiency improvements.
- We are not "running out" of natural gas.

The Bottom Line

- Wellhead gas prices are $4.50 to $5.50/MMBtu today compared to $2 to $3 (nominal dollars) in past years.
  - Adjusted for inflation, roughly in the same range as they were 20 years ago.
- Prices are unlikely to return to recent low levels under any plausible scenarios.
- Additional efficiency and supply actions required to maintain the current level.

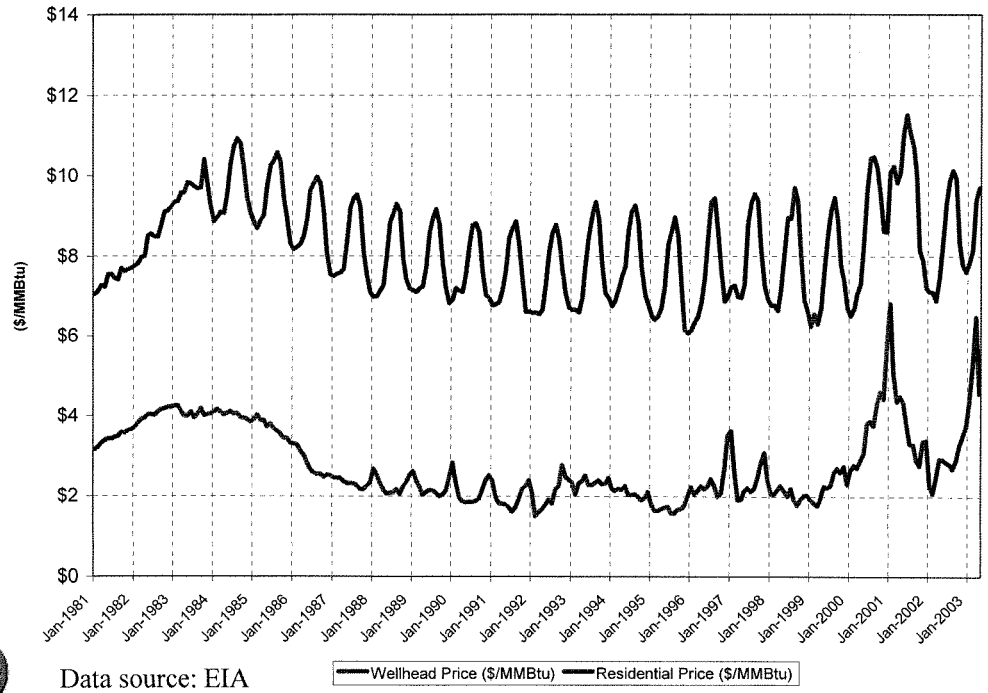
Gas Prices at Henry Hub ($/MMBtu)



Source: Platts Gas Daily

Real Wellhead and Residential Gas Prices

($2002/MMBtu)

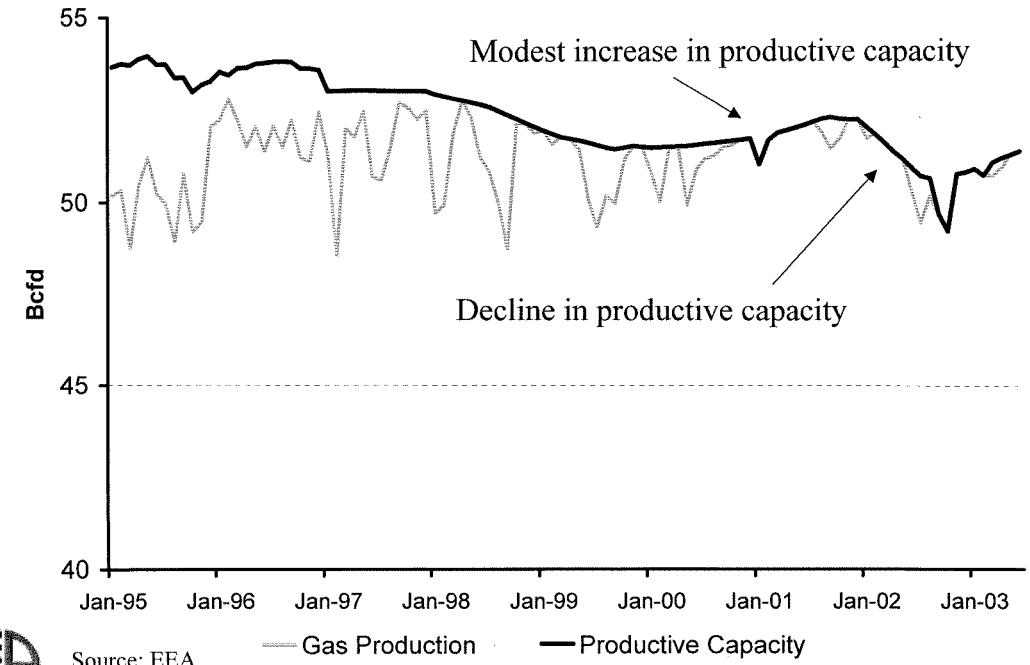


Data source: EIA

Current Market Conditions: Causes

- Tighter balance of demand and productive capacity.
  - "Productive capacity" is the capability to remove gas from the ground and supply it to the pipeline system (existing gas wells, collection systems, etc.)
  - Productive capacity has declined in recent years for a variety of reasons while demand has increased.
  - We need to invest in the facilities (production wells, LNG terminals, etc.) necessary to produce or import more gas on a day-to-day basis to meet demand.
- *Not* primarily a problem of gas transportation infrastructure.
- *Not* an indication of insufficient gas resource base.

Lower-48 Dry Gas Production vs. Dry Gas Productive Capacity



Source: EEA

Tight Supply/Demand Balance

- No spare productive capacity the rule, not the exception; "gas bubble" is gone.
- Market adjustments through combination of price-induced demand adjustments and storage.
- Storage may be held back to serve "core customers", and not fully utilized at all times.
- Storage refill competes with summer consumption (electric generation).
- Prices relatively high and volatile.

Determinants of Gas Supply
Short Term

- The productive capacity (maximum flow) of existing wells.
- The amount of gas in storage.
- The amount of LNG (liquefied natural gas) imports from overseas.

Determinants of Gas Supply
Intermediate Term

- Drilling activity in existing basins
  - Time lag: 6 - 9 months
  - Quality of drilling prospects (average production per new well)
- Change in LNG imports, determined by:
  - Liquefaction capacity at the source
  - Tanker availability
  - Regasification and receipt capability at the import terminal

Determinants of Gas Supply
Long-run

- The decline in production from mature basins
- The development of new frontier basins
  - Alaska
  - Northern Canada
  - Deepwater Gulf of Mexico
- The construction of new LNG infrastructure

Possible Reasons for Tight Supply

- Declining availability of good drilling prospects
  - Texas on-shore and shallow Gulf "picked over", need to go into deeper water, less productive formations, coalbed methane.
- Need more gathering lines in some areas and interstate pipeline capacity to access some reserves.

Rig Count a Poor Indicator

- Small rigs drilling shallow coalbed methane wells may not be captured in Baker Hughs Rotary Rig counts.
- Directional drilling more productive than vertical drilling.
- *But new wells may be less productive in general.*

Possible Reasons for Tight Supply

- Financial/capital constraints
  - "Enron effect" spilling over
  - Poor stock performance
  - Need to pay down debt
- Risk aversion
  - Producers burned last time (2002) prices spiked and then fell
  - Uncertainty in the weather and economy

Possible Reasons for Tight Supply

Major oil companies (Exxon, BP/Amoco, ChevronTexaco, Shell)

- Need to justify U.S. drilling over overseas spending.
- Areas recently opened up in Russia and West Africa are taking up much of the worldwide budget.
- Drilling plans less flexible, slow to react.

Possible Reasons for Tight Supply

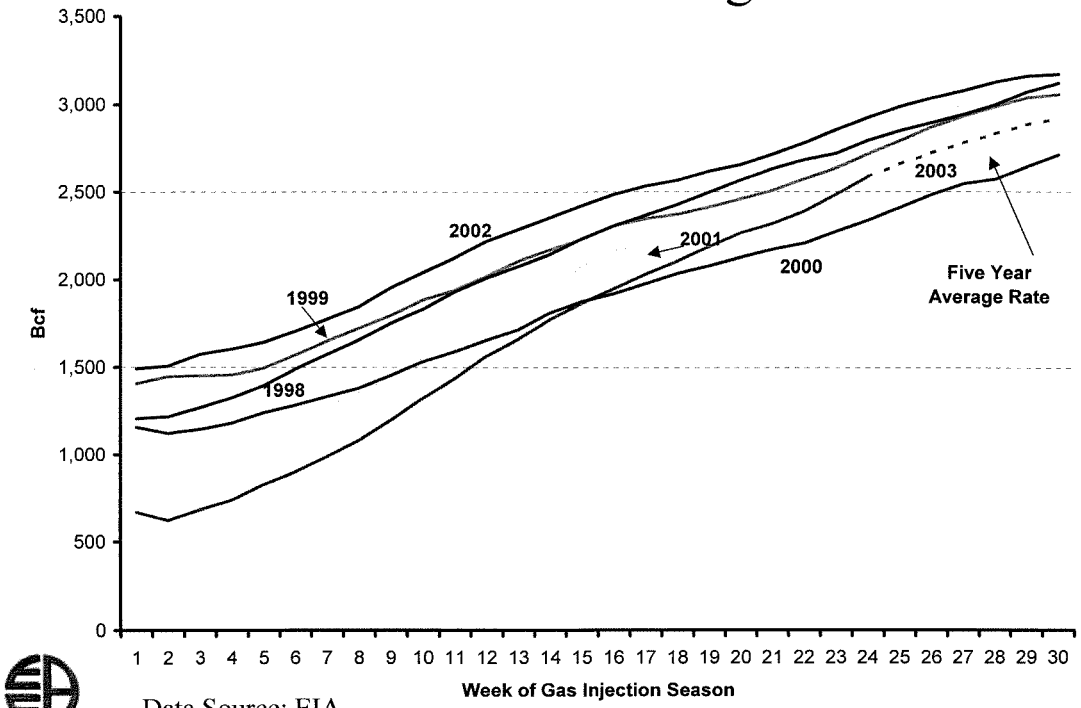
- Large independents (El Paso, Anadarko, Marathon)
  - Capital constraints from problems in the energy merchant business
- Small independents (historically over 50% of U.S. rigs)
  - Many owners near retirement age and becoming inactive
  - Do not drill new high tech unconventional wells needed in many new areas

Today: Short-Term Issues

- Gas storage this summer is likely to reach "normal" range of refill levels.
- Even so, a cold winter could cause high prices/volatility and temporary shortages.
- Wellhead deliverability (productive capacity) is the issue, not storage.
- Industrial demand is reduced today. An economic rebound could increase demand.

Storage Is Likely to Be "Full"

Gas In Storage

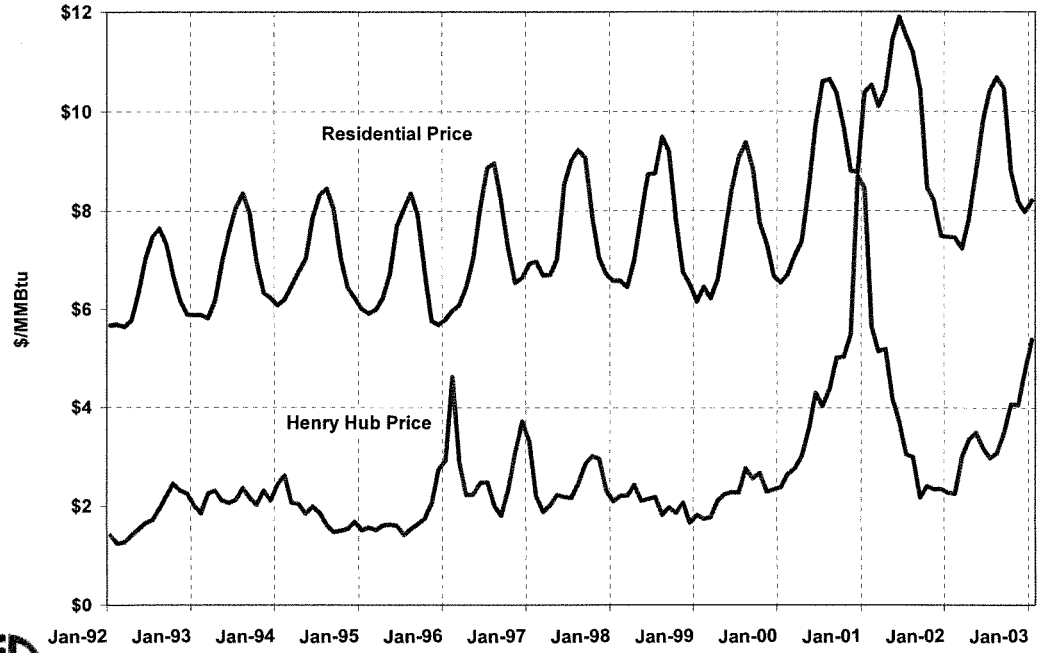


Data Source: EIA

Current Market Conditions: Winter Outlook

- Average gas prices will be higher for all customers.
- There may be short-term spot price spikes.
  - Spot price spikes will primarily affect *large industrial and power generation customers*.
  - *Residential and commercial customers* are largely insulated from daily volatility by gas company contracting/ hedging/storage practices.
- Actual shortages unlikely unless caused by local bottlenecks and/or very cold weather.

Residential Customers Generally Protected from Wellhead Price Volatility



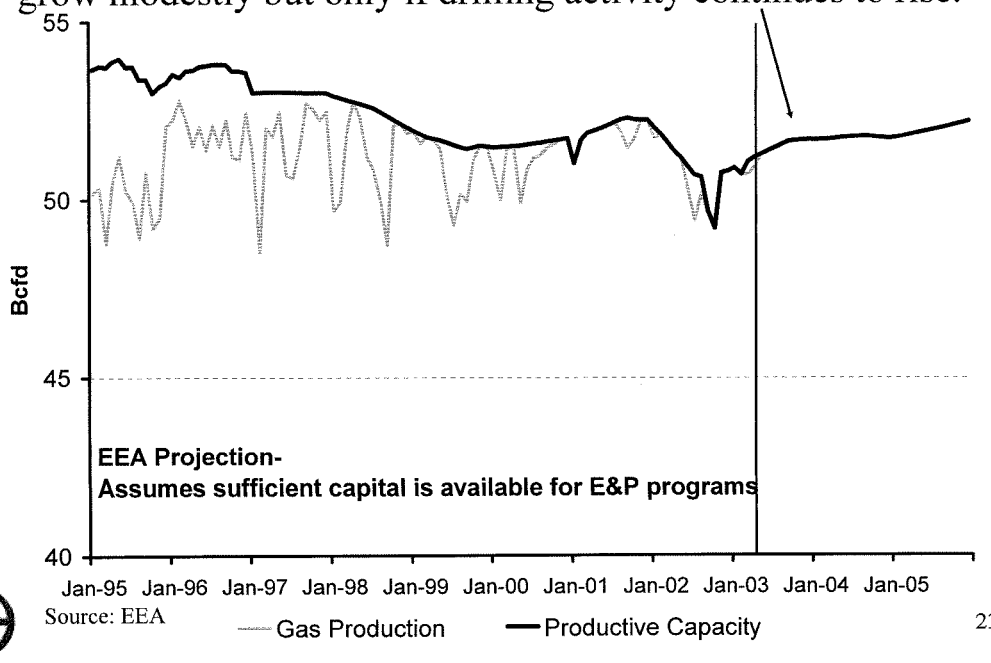
Data Source: EIA

The Supply / Demand Balance Will Take Time to Improve

- Drilling activity in existing mature basins has and will continue increase in response to higher prices
  - May offset declining production
- Drilling activity in growing basins will continue
  - Needed pipeline expansions out of the Rockies have been built (Kern River) or are planned (Cheyenne Plains - 2005)
  - Capital will be available for the deepwater Gulf of Mexico and offshore Eastern Canada at higher natural gas prices
- LNG Imports will increase
  - U.S. import capacity doubled in 2003 with the reopening of two dormant terminals
  - Worldwide tanker capacity growing by 15-20 new ships per year
  - The four existing terminals have planned expansions
  - Many new terminals are planned for later this decade

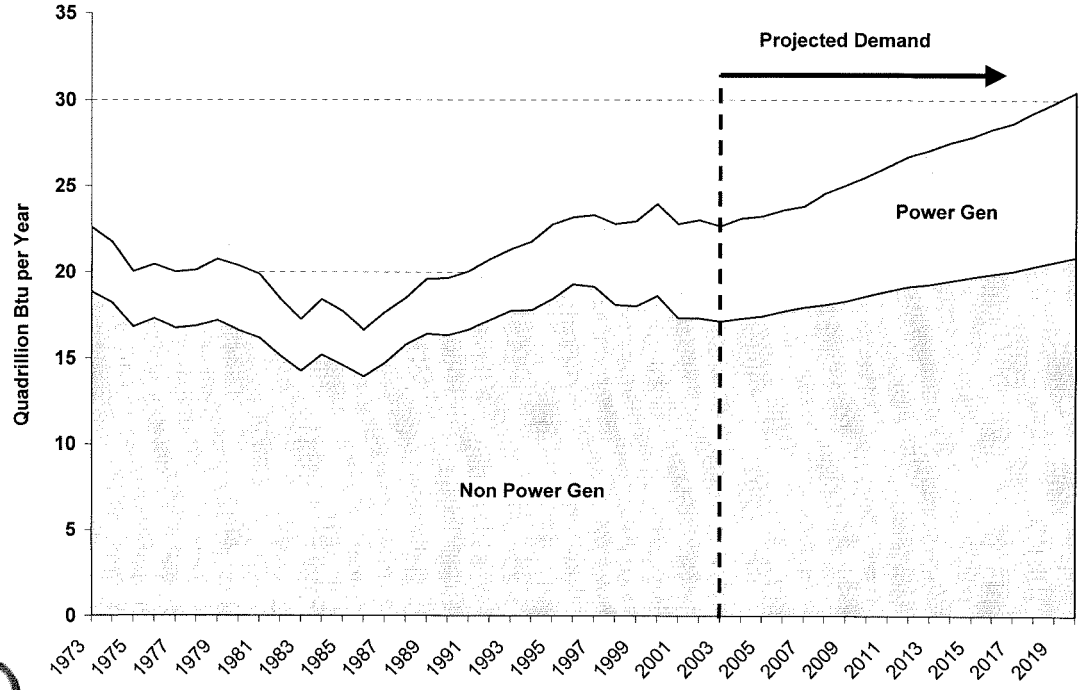
Lower-48 Dry Gas Production and Dry Gas Productive Capacity Projection

Both production and productive capacity will stabilize and grow modestly but only if drilling activity continues to rise.



Source: EEA

Demand Will Grow



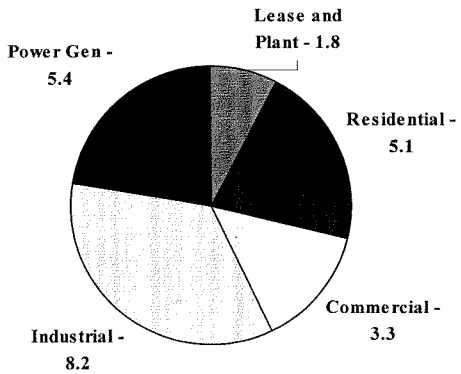
Data Source: EIA

Impact of New Gas Plants

- Over 240 GW of new gas generation expected between 2000 and 2004, *but...*
- About 1/3 peakers - very little gas use.
- Some new baseload plants displacing older, less efficient gas plants in western and southwestern markets.
- However, power generation is still the biggest growth sector for gas.

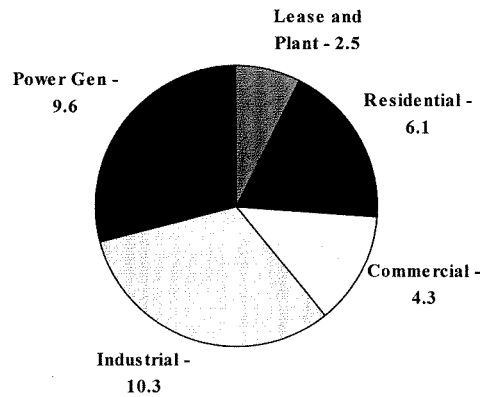
Natural Gas Consumption by Sector (Tcf)

2002



Total = 23.8 Tcf

2020



Total = 32.9 Tcf

Data Source: EIA

Future Supply Options Require New Choices

U.S. Gas Supply Sources for 2015 - 2020

(Tcf/Year)

Traditional U.S. Production Areas	18 – 21
Open Reduced Access Areas	1 – 2
Canadian Imports	2.5 – 4.5
Existing LNG Terminals	0.7 – 0.9
Alaskan Gas	0.5 – 2.7
Mexican Imports	0 – 0.7
One Large New LNG Terminal	0.4

Requires large investments, major infrastructure development and possible policy changes.

Cost of New Frontier Gas

	Tcf Delivered in 2020	Cost ($/MMBtu)	Capital Required Through 2020 ($ Billion)
Deepwater Gulf of Mexico	3.5	$4.30	$300[1]
Rocky Mountain Gas	3.8	$3.80	$130
LNG Imports	4.8	$4.50	$77
Alaska	2.8	$3.80	$52
Eastern Canada Offshore	0.7	$4.00	$28
MacKenzie Delta	0.4	$3.60	$14
Total New Frontiers	16.0		601

Source: EEA

[1] Two thirds of cost is for oil well development.

LNG Development is Critical

- There is a lot of low-cost gas in the world.
  - Proved world gas reserves are over 200 times U.S. annual consumption.
- Long-term U.S. LNG prices likely in $4 to $5/MMBtu range, slightly above competing oil products.
- Large number of LNG tankers is under construction.
- Expanding LNG capacity requires willingness to site and develop import facilities. More than 20 North American projects currently in various stages of development.
  - If all are built (unlikely) they could add well over 10 Bcf/day of delivery capacity.

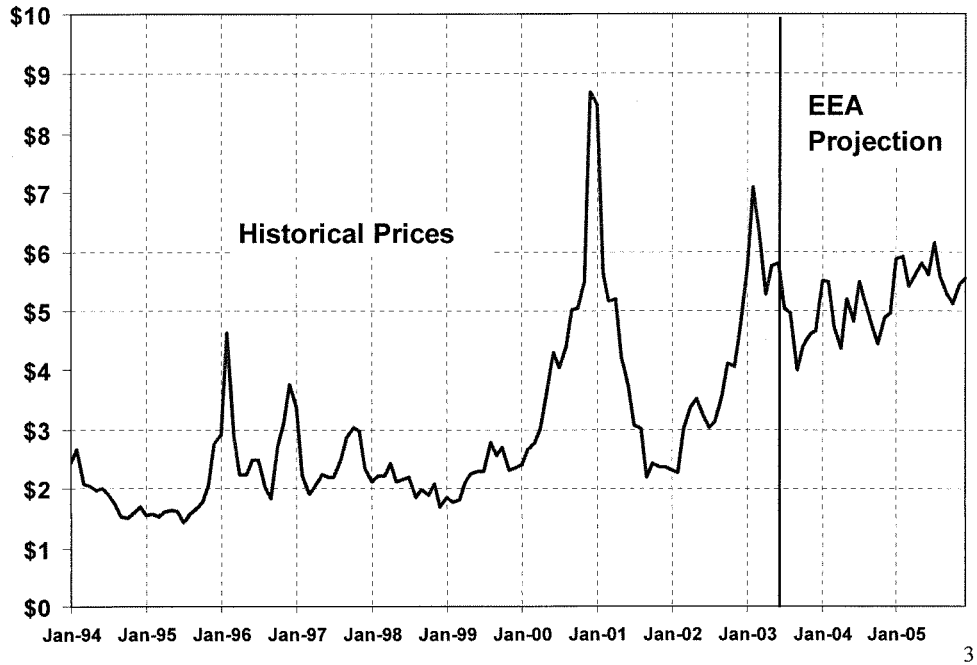
Tomorrow:
Longer Term Solutions

- Expanded LNG development is essential to break out of current deliverability problems.
- Reasonable development of new North American gas resources.
- Increased supply and end-use conservation and efficiency improvements.

Natural Gas Price Projection:

Gas Prices at Henry Hub ($/MMBtu)

Prices will remain above historical range



Source: EEA

Efficiency and Renewables

- Recent ACEEE study[1] examined impact of reducing gas and electricity demand through efficiency and renewables.
- Predicts potential 20% reduction in gas prices through aggressive near and medium term actions.
  - Relatively small changes in demand can yield large price effects due to inelastic market.

[1] "Impacts of Energy Efficiency and Renewable Energy on Natural Gas Markets", ACEEE, September 2003

Summary of ACEE Study

	2004	2008
Gas Conservation	-1.9%	-4.1%
Electricity Conservation	-2.2%	-3.2%
Electricity from Renewables	-	+4.0%
Reduced Natural Gas Price	- 20%	-22%

Conclusions

- Higher gas prices are a reality. There is no path back to a "$2 gas world".
- Short term responses should focus on improved gas/electricity use efficiency, load reduction and fuel-switching (primarily to oil).
- High prices and price volatility can be limited in the medium to long term by development of new supply options including LNG.
- With sufficient LNG import capacity, long term gas supplies should be adequate.

BEFORE THE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
UNITED STATES SENATE

SUBCOMMITTEE ON CLEAN AIR, CLIMATE CHANGE, AND NUCLEAR SAFETY

HEARINGS ON POWERPLANT MULTIPOLLUTANT LEGISLATION

TESTIMONY OF JOEL BLUESTEIN

MAY 8, 2003

Summary of Testimony

Natural gas prices are likely to be higher in the future than in the last 15 years and power generation is the fastest growing component of natural gas demand. New multipollutant regulations are not a primary driver for the increase in gas prices, however. In addition, higher gas prices are likely to reduce the potential for wide-spread switching from gas to goal as a result of increased regulation. Finally, a gradually implemented multipollutant program that rewards the development and implementation of new technology could promote a more balanced mix of power generation assets and help avoid over-reliance on gas.

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
UNITED STATES SENATE
SUBCOMMITTEE ON CLEAN AIR, CLIMATE CHANGE, AND NUCLEAR SAFETY
HEARINGS ON POWERPLANT MULTIPOLLUTANT LEGISLATION
TESTIMONY OF JOEL BLUESTEIN
May 8, 2003

Introduction
Thank you Mr. Chairman and members of the Subcommittee for the opportunity to testify today. My name is Joel Bluestein and I am the President of Energy and Environmental Analysis, Inc. EEA is located in Arlington, Virginia and has been providing energy and environmental consulting services since 1974. Among our major areas of expertise are:

- Analyzing and forecasting the supply, demand and price of natural gas
- Analyzing the impacts of regulatory policy on energy markets
- Analyzing new energy technologies in the context of environmental regulations.

We have done this work for natural gas producers, pipelines, local distribution companies, power generators, technology developers, the U.S. Department of Energy, the U.S. Environmental Protection Agency and other public, private and institutional clients. I have been at EEA for 14 years and have over 20 years of experience in the energy and environmental field.

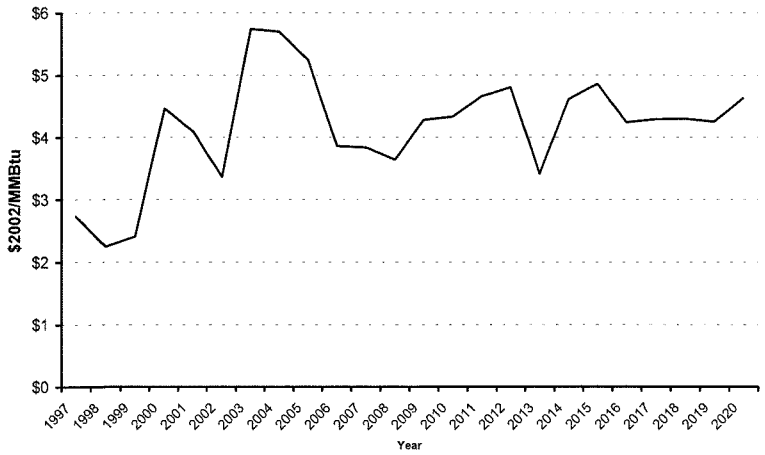
Today I'd like to briefly share with you our current outlook on supply and price of natural gas in North America and some views on the relationship between that outlook and multipollutant legislation.

Gas Price Forecast
EEA quarterly prepares a 20 year forecast of North American natural gas supply, demand and price that we call our Natural Gas Compass. Figure 1 summarizes our current view of the price for natural gas over that period. It shows that we expect gas prices at the Henry Hub to average about $5.70/MMBtu (in constant 2002 dollars) for the next two years and decline to a level around $4.50/MMBtu for the remainder of the period except for brief periods later in the forecast.

This is a significant increase from gas prices over the last 15 years, which have mostly stayed below $2.50/MMBtu. The roots of this change have been quite visible in the last few years and reflect the end of the "gas bubble" of the 1990s or more precisely the fact that the balance of supply and demand for natural gas has been growing tighter in recent years. A tighter balance between supply and demand results in higher prices and increased volatility. This does not mean that we are "running out" of natural gas, it does mean that gas producers need to look further afield and spend more money to meet the demand for gas, and that is reflected in the price.

Figure 1

EEA Forecast of Natural Gas Price at Henry Hub



Our forecast includes new development of natural gas in several U.S. areas including Alaska, the deep Gulf of Mexico and the Rockies as well as imports from the Mackenzie Delta in Western Canada and the Maritimes area off of Canada's east coast. We also project increased imports of liquefied natural gas (LNG) through the four existing LNG terminals and the addition of several new LNG terminals in the later part of the forecast. Finally, we project that adequate pipeline capacity must be constructed to bring the gas to places where it is needed.

This scenario reflects what we see as a realistic though challenging period of growth for the natural gas industry. It requires very large investments of capital, though not more than has been invested in the past. It also requires a variety of positive policy decisions such as support for an Alaskan gas pipeline, development of LNG terminals, construction of other new pipelines, etc. If any of these does not occur, the price forecast is higher. One might say that there is more upside potential than downside on gas prices.

This price forecast is driven by the consumption of natural gas growing from 22.3 trillion cubic feet (Tcf) in 2002 to 28.2 Tcf in 2015 and 30.4 Tcf in 2020. The largest portion of this growth is in the power generation sector, growing from 4.3 Tcf in 2002 to 8.4 Tcf in 2015 and 9.5 Tcf in 2020. While there is some variation, these consumption projections are not significantly different from those developed by other forecasters, including the U.S. Energy Information Administration.

So I agree with the basics of much of what has been said on this topic:

- The gas supply/demand balance has gotten tighter and will remain tight.
- Gas prices will be higher than in recent history, perhaps significantly higher.
- Power generation will be the major growth sector for gas demand.

Relationship to Multipollutant Regulation

The question of how we can best and most appropriately ensure an adequate gas supply is a complex and important one that is already being addressed in other forums. I think the question for today is: "What does this gas price outlook say about environmental regulation of the power generation sector?"

The EEA forecast does not include any significant switching from coal to gas in the power generation sector. We do include the large amount of new gas-fired generation that has been built in recent years, about 150 GW from 1998 through 2002, and continued construction of new gas capacity in the near future. We also project new coal capacity coming on line, mostly after 2010.

It must be pointed out that, in certain areas, this new gas capacity actually reduces gas consumption by replacing older, less efficient gas generation. We have seen old gas plants retired in Texas because they cannot compete with the new, more efficient gas plants. It's been estimated that replacing all of the old gas plants in Texas with new, state-of-the-art gas combined cycle plants could reduce gas consumption for power generation by over 200 Bcf per year. The use of even more efficient combined heat and power (CHP) can make this reduction even greater. The same is true in other parts of the Southwest, as well as parts of the West, South and Northeast. In some states where markets have not opened up yet, this potential is currently being lost because incumbent utilities can choose to dispatch their old less efficient plants rather than the new plants.

There seems to be a lot of concern that, either on its own or due to various environmental restrictions, the demand for gas for power generation will inexorably grow until it threatens our economy. I think this concern is overstated and unfounded, certainly as regards the power generation sector. Although we see continued growth in new gas-fired generation, we do not expect massive switching from coal to gas under any 3-P regulatory scenario currently being discussed.

At the gas prices we are forecasting, switching to gas will not be the most economic choice except for the least economic, highest cost-of-control coal plants. The capital cost of a new combined cycle plant is much less than a new coal plant, but still much more than the cost of even a complicated control retrofit at most coal plants. And then, the cost of fuel for even an efficient new combined cycle gas plant at $4.50/MMBtu is over $30/MWh. This is almost three times the fuel cost for even an inefficient coal plant burning coal at $1/MMBtu or less. There is a lot of money to be made on the coal side of that competition. This is reflected in the U.S.

EPA's extensive modeling of regulatory scenarios in which they are hard-pressed to show any significant switching to gas even with gas prices two or three times lower than the prices we are forecasting.

The higher gas prices go, the better the economics of coal look. We might have greater concern over switching if there were no way to burn coal efficiently and cleanly. But this is not the case. There are many coal plants today that efficiently and economically limit their SO_2 and NO_x emissions and are highly competitive in the market. New coal plants being built are even cleaner. New coal technologies being developed, such as integrated gasification combined cycle plants, are cleaner and more efficient yet.

New technology is vital to addressing control additional pollutants such as mercury or even CO_2. The concern then becomes whether the appropriate technologies will be available to provide adequate reductions. In the history of pollution control programs, industry has always found ways to control pollution more effectively and less expensively than originally thought possible. But that may be little comfort to plant owners who face a new set of pollution control challenges.

Multipollutant programs like the Clear Skies Act and those proposed by Senator Jeffords and Senators Carper, Chafee and Gregg, despite differences in detail which I don't propose to address, all will likely help the development of new, clean coal generation by providing increased regulatory certainty and flexibility to find effective compliance solutions. Emission cap and trade programs provide a variety of tools to address the problem, including: the timing and stringency of the cap, cost mitigation measures and availability of off-sector trading.

One shortcoming of the Clear Skies Act in supporting new technology is that the "grandfathering" approach to allowance allocation disadvantages new plants in general and new coal plants in particular. The failure to allocate allowances to new coal plants creates a disincentive for companies to develop these plants and drives the power sector more towards gas. An allocation approach that includes new plants and rewards efficiency is one way to help ensure that we can continue to rely on our substantial coal resources.

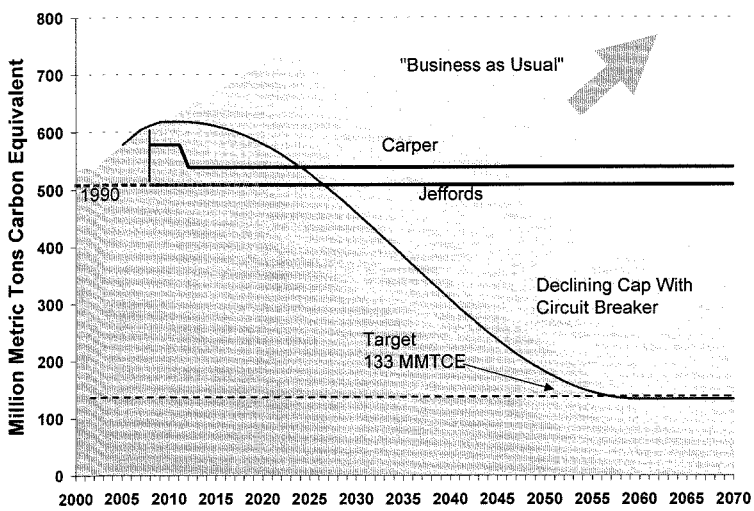
I agree with those who endorse phased implementation of emission caps. However, I would add that starting the programs earlier and phasing them in more gradually is critical to ensuring the availability of appropriate technology. Development of new technology requires a driver, which in this case is regulation. Then technology development needs money and time for research, development and commercialization. Command and control programs and cap and trade programs with large reduction steps don't provide enough time for technology development. However, delaying the imposition of the regulation doesn't provide a sufficient driver for development. A series of gradual steps can jump-start technology development and keep it moving.

This can be illustrated for the topic that probably creates the greatest concern for over-reliance on natural gas - CO_2 reduction. I think it's clear that switching to gas alone is not an adequate

approach to CO_2 mitigation. CO_2 reduction will require a mix of gas, renewable, and advanced coal technologies such as integrated gasification combined cycle with sequestration or coal-based hydrogen production, combined heat and power and other efficiency measures. Overly aggressive near-term reduction requirements will not help us promote the development of new technologies. On the other hand, neither will continued delay of regulation. The point was made at the last hearing on this topic that delay in addressing CO_2 regulation is one more reason that companies are reluctant to construct new coal capacity today. Finally, the long-term reduction goals required to address climate change are much greater than the levels currently being discussed even in 4-P legislation and must be recognized early to provide the right direction.

Figure 2 shows a cap and trade approach that applies gradual CO_2 reductions to jump-start technology development and promote long-term solutions while avoiding near-term economic disruption, including excessive switching to gas. In fact, in this approach, the emission cap increases for the first several years, then levels off and begins a very gradual decline. It is designed to reach an 80 percent CO_2 reduction by 2060, which is calibrated to meeting a 450 part per million (ppm) atmospheric CO_2 level. An economic "circuit breaker" could be used during the declining portion of the program to adjust the rate of decline and avoid economic disruptions.

Figure 2
Example of a Gradually Declining Cap on Carbon Emissions from the Power Generation Sector



This approach would send an immediate signal that new technology is required and provide financial support for new technology through an immediate, active market in CO_2 allowances, even though reductions are not immediately required. It would provide immediate financial return for "no regrets", voluntary actions while reducing the transaction cost and verification concerns. The schedule would also avoid any immediate devaluation of existing assets, since major reductions don't start until 2015. At the same time it makes a commitment to meet the long-term goals. More information on this approach is included as Attachment A. A similar, less gradual approach could be used to promote new technology for mercury control.

Conclusion

In conclusion, we do see higher gas prices in the future, regardless of what regulations are imposed on the power generation sector. This increase and its implications need to be addressed separately from their implications on multipollutant regulation. However, higher gas prices will increase the value of new, clean, efficient coal technologies. We need to continue the use of coal as a major component of our power generating mix. However, the future of coal-based generation should not be the continued use of 50 year old plants but rather the construction of new, more advanced coal technologies. That, in fact, is probably the long-term path to wider use of coal in our economy through the development of coal-based liquid fuels or hydrogen. Multipollutant legislation can encourage the development of those technologies by providing equitable allowance allocations for new plants and by setting gradually declining emission caps from an early starting point.

Thank you again for this opportunity to speak and I'll be happy to respond to any questions at the appropriate time.

Testimony of Joel Bluestein
Attachment 1

CO_2 Reduction with a Declining Cap/Circuit Breaker

CO_2 Reduction with a Declining Cap/Circuit Breaker

Joel Bluestein
Energy & Environmental Analysis, Inc.
May 8, 2003

What Are We Worried About?

- The cost will be huge.
- The primary compliance path will be coal-to-gas switching.
- Coal producers and users will be harmed.
- High gas and electricity prices will harm all consumers.
- The economy will crater.
- Etc.

2

An Alternative Outlook

- Compliance will be achieved through a mix of fuels and technologies, including renewables, sequestration and advanced coal technology.
- Phased implementation will avoid stranded investments.
- The U.S. will maintain a balanced energy mix, including coal.
- Costs to industry and consumers will be minimized.

3

Principles for CO_2 Regulation

- Climate change is a long-term problem. We need to look for long-term solutions.

Renewables	Clean coal
Efficiency	Sequestration

- We need the right structure to promote these technology solutions.
- Getting started with the right structure is more important than knowing exactly where we are going.

4

The Technology Solution

- Cost-effective carbon mitigation will rely on technologies that we can't clearly foresee today.
- New technology requires:
  - A clear driver - the push has to be there.
  - Money - the capital and the market must be there.
  - Time - even then, new technology takes time.
- We need to start early with clear but gradual regulatory and economic drivers.

5

Things We Don't Know

- Will the technology work?
- How much will it cost?
- Will the market work?
- How much will the allowances cost?
- How much reduction do we need?

We can't predict for sure.

6

Some Things We Know

- Our predictions aren't very good.
- Compliance costs turn out lower than we think expect.
- The cap levels aren't low enough.
- In the end, the markets work.

But how much are we willing to bet?

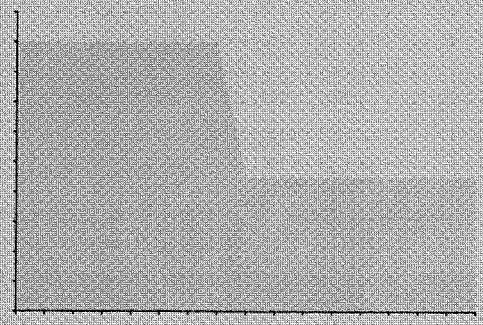
7

Cap and Trade Design Toolbox

- Cap timing
- Cap level
- Cap coverage
- Allocation

8

Traditional Emission Cap Profile



9

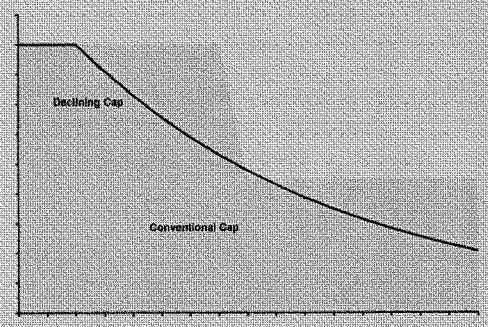
Declining Cap

The ramp, not the cliff.

- The cap decreases by a fixed percent each year. Glide slope defined in advance.
- Test the markets and technologies gradually, with low risk.
- Provide immediate price discovery and monetization.
- Provide a clear driver for new technology and long-term results.

10

Classic Declining Cap

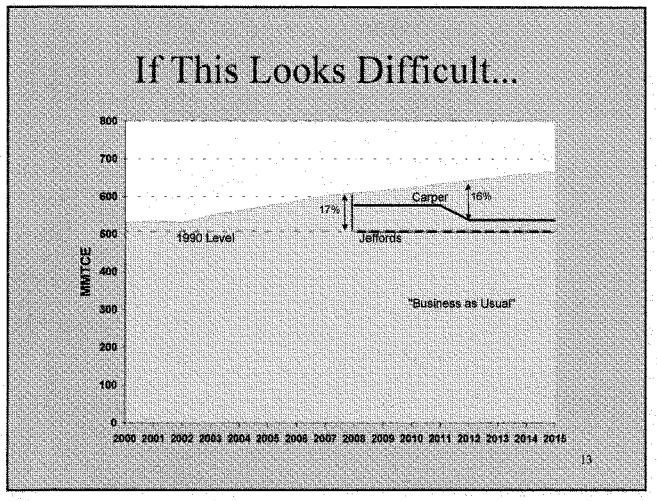


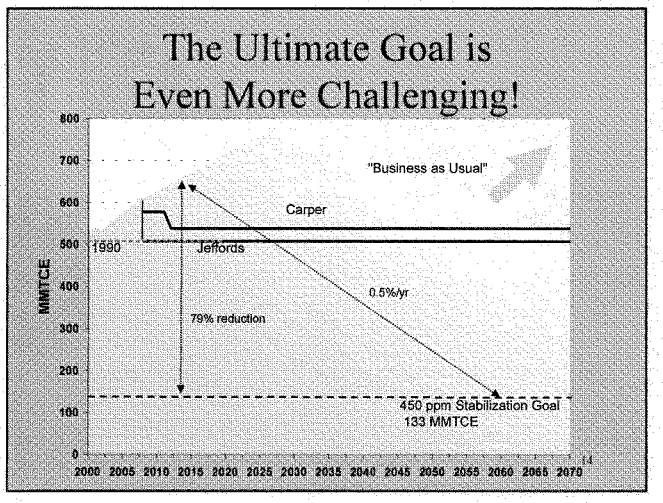
11

A Workable CO_2 Cap Approach

- Near-term cap *levels* are not important.
- Implementing an immediate, gradual cap creates the driver and the economic value.
- Limit near-term risk.
- Encourage long-term technology solutions.
- Meet long-term goals.

12


If This Looks Difficult...
MMTCE
800
700
600
500
400
300
200
100
0
1990 Level
17%
Carper
16%
Jeffords
"Business as Usual"
2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015
13


The Ultimate Goal is
Even More Challenging!
MMTCE
800
700
600
500
400
300
200
100
0
"Business as Usual"
Carper
1990
Jeffords
0.5%/yr
79% reduction
450 ppm Stabilization Goal
133 MMTCE
2000 2005 2010 2015 2020 2025 2030 2035 2040 2045 2050 2055 2060 2065 2070
14

Current Approaches

- Too scary.
- Don't promote the right technology answers.
- Don't reach the goal.
- Don't provide certainty.

15

3-Step CO_2 Reduction Plan

- Phase I - 2005-2008 cap *with no reductions*
- Phase II - 2009-2012 zero growth transition period
- Phase III - very gradual reductions with economic circuit-breaker

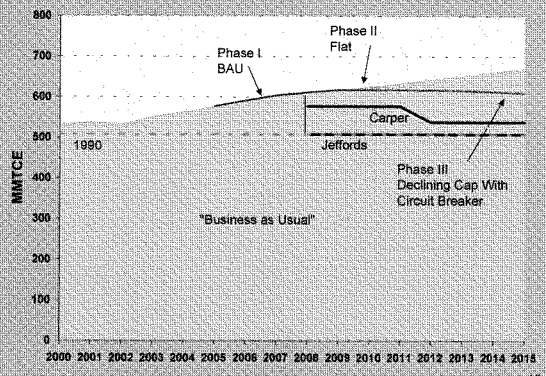
16

Phase I - "immediate" cap *with no reductions*

- Cap based on "business as usual" projection.
- Does not force reductions but:
  - Creates a clear economic value for early reductions and new technology.
  - Enables verifiable "voluntary" reductions.
  - Reveals cost/value of reductions.
  - Maintains value of existing assets.
  - Avoids disruptions and uncertainty.

17

Phases I and II



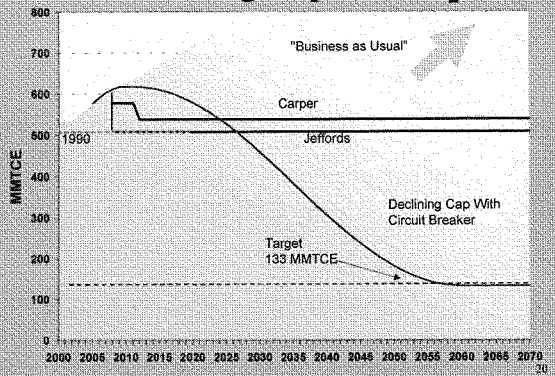
18

3-Step CO_2 Plan (Cont.)

- Phase II - zero growth transition period.
- Phase III - very gradual reductions with economic circuit-breaker.
  - Sets commitment to long-term goal.
  - Provides economic driver/value for new technology.
  - Limits economic impact.

19

Declining Cap for CO_2



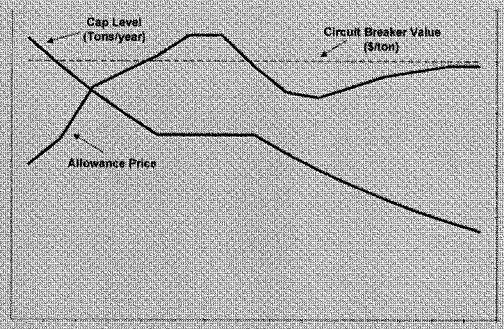
20

Circuit Breaker

- Decline stops if annual average allowance cost exceeds predetermined cost threshold ($/ton).
- Decline starts again when the annual average cost is below threshold.
- Cap is never exceeded.
- Cost can exceed circuit breaker price.

21

Circuit Breaker Operation



22

Setting the Circuit Breaker

- The "correct" answer is a function of technical issues that we can't forecast.
- The acceptable answer will be:
  - What level does not disrupt the electric industry/fuel choice balance (gas/coal spread)?
  - What cost is reasonable for consumers?
- If history is a good guide, setting it too low won't be a problem.

23

Refinements

- Accelerator - converse of circuit breaker, accelerates decline if allowance price is low.
  - Probably related to new technology.
- Backstops - Reset circuit breaker if progress is stalled.

24

Possible Program Parameters

- Base on electricity cost impact - say $0.005/kWh=$5/ton CO_2.
- Backstop - reset circuit breaker if it is tripped for 5 years straight.
- Accelerator trips if price less than 50 percent of circuit breaker for three years.

25

Allocation Approach

- Allocation does not affect cap but can promote beneficial technologies.
- Need to allocate allowances to new sources - updating
  - Then output-based allocation.
- Alternatives that provide same driver are possible.

26

Impact of Allocation

- Emission cap literally applies to combustion-based generation.
- Allocation of allowances can help encourage alternative solutions:
  - Renewable generation
  - End-use efficiency
  - Sequestration

27

Potential for Gaming

Will generators increase control cost to trigger circuit breaker?

- First incentive is to reduce generating cost, increase sales, not increase cost of allowances.
- Not clear that it is economically beneficial to purposely trigger circuit breaker - emissions still capped.
- Obvious gaming can be controlled.

28

Off-Sector Reductions

- Gradual implementation and safety value reduce need for off-sector reductions.
- Off-sector sequestration should be included.
- Off-sector reductions could be considered in the future if cost is high.
  - Must be surplus, verifiable, measurable.

29

Application to Other Sectors

- Has same limitations as other downstream cap and trade programs.
- Could be applied for large industrial/ commercial boilers.
- Possibly applicable to other homogeneous industries.

30

Benefits of Approach

- Meets long-term emission goals.
- Avoids near-term economic disruption, stranded investments.
- Promotes new technologies of all kinds.
- Better driver for balanced energy mix.
- Provides greater environmental and economic certainty

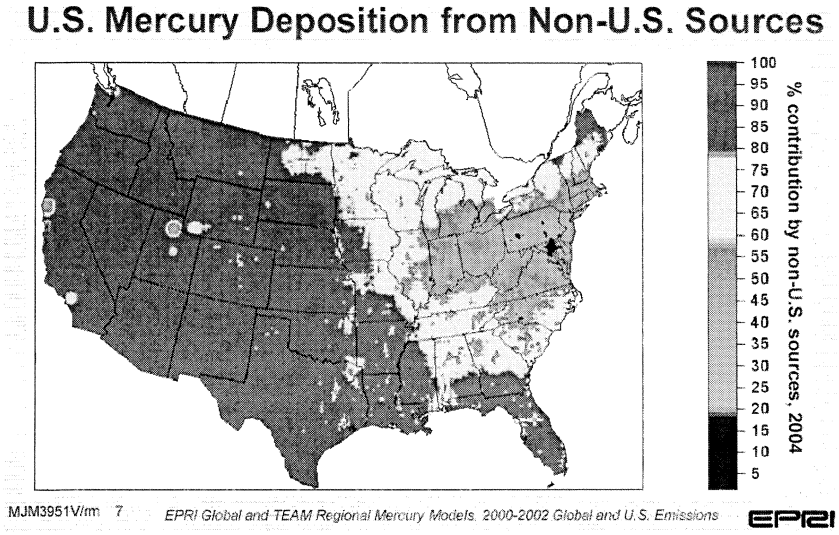
31

RESPONSES BY CONRAD G. SCHNEIDER TO ADDITIONAL QUESTIONS FROM SENATOR VOINOVICH

Question 1. You claim in your testimony that Clear Skies would not sufficiently improve watersheds with regard to mercury. We know that the exposure pathway of concerts is the amount of mercury contained its fish consumed by women of child-bearing age. Studies such as that conducted by the Energy Information Administration indicate that mercury reductions from U.S. power plants will not significantly decrease the amount of mercury found in fish, given that the amount of mercury emitted by U.S. power plants is a very small percentage of total global mercury emissions from man-made and natural sources. Please provide a list of studies that lead you to conclude that reductions from U.S. power plants would significantly lower the amount of mercury contained in fish consumed by woven in the United States of child-bearing age.

Response. The Clean Air Task Force performed an analysis of the impact Clear Skies would have on fish mercury concentrations. We utilized EPA's REMSAD model to estimate mercury deposition under Clear Skies in 2010 and 2020. The REMSAD results were then used in conjunction with EPA's Mercury Maps tool to estimate how fish concentrations would decrease in response to decreases in deposition. We found that even under the 15-ton cap in 2020, 80 percent of the modeled watersheds had a reduction in fish mercury concentration of 10 percent or less. This implies that deeper cuts in mercury emissions, beyond those required by Clear Skies will be needed.

We are aware that the Electric Power Research Institute (EPRI) has conducted an analysis that concludes that a 70 percent reduction in power plant mercury emissions would not significantly decrease human exposure to mercury in the United States. We disagree with many of the assumptions EPRI uses in this modeling analysis as described below, but even EPRI's analysis illustrates that for the Midwest and Mid-Atlantic States, the primary source of mercury deposition is from U.S. sources.



The primary driver for EPRI's modeling results which indicate reducing U.S. power plant emissions would not result in decreases in U.S. deposition, are EPRI's assumptions concerning the magnitude, atmospheric transport and ultimate deposition of global emissions in the United States. Basically, EPRI's analysis is driven by assumptions concerning the contribution of mercury emissions from China. These assumptions have not been vetted by the broader scientific community and others, using different assumptions have come to different conclusions. For example, as shown below, Cohen, et al. in conducting a similar analysis concluded that the impact of local and regional sources to mercury deposition in the Great Lakes is far

greater than those of global sources—in contrast to EPRI's findings that global sources play a larger role in this region.[1]

Lake	Model 1: Cohen et al. Regional Component to Deposition	Model 2: Seigneur et al. (EPRI) % USA Sources
Superior	51%	26%
Michigan	60%	33%
Erie	93%	60%

Similarly, Nelson, et al. have concluded in a recent analysis that sources within the U.S. play a far greater role than global sources in U.S. deposition than EPRI estimates.[2] The fact is that the use of global models is highly dependent on the assumptions within those models and there remains considerable scientific uncertainty as to the validity of those assumptions.

In addition, the use of national scale models to assess fish consumption patterns in the U.S. population and mercury exposure masks the impact of decreased deposition at the local level. This discrepancy in predicted impacts is readily apparent when studies using measured data are consulted. These extensive studies have shown that the primary source of mercury to aquatic ecosystems is atmospheric deposition. Reducing mercury emissions will reduce mercury deposition, which in turn reduces fish concentrations. Two recent studies support a quantitative link between decreases in mercury deposition and mercury levels in fish.

• In South Florida, incinerator mercury emissions have declined more than 90 percent since the mid-1980s as a result of pollution prevention and the issuance of stringent State emission limits. As a result, mercury in the fish and wildlife of the Everglades has declined by more than 75 percent since the mid-1990s—a recovery that the researchers called "remarkable" (for both the extent of the recovery and how quickly it occurred).[3]

• In Wisconsin, researchers found that changes in atmospheric mercury deposition can have rapid effects on fish mercury concentrations. A 10 percent decline in mercury deposition correlated with a 5 percent decline in fish mercury concentration over a period of 1 year.[4] A 30 percent decline in fish mercury concentration was measured over a 6-year period. In addition, a concurrent reduction in acid rain deposition contributed to an additional 30 percent decline in fish mercury concentrations over the same time period.

As we note in our response to Senator Jeffords' question infra concerning hotspots, we agree that different mercury species deposit locally to varying degrees. However, as explained below we disagree with the assertion that the elemental mercury emissions emitted by U.S. power plants do not affect waterways in the continental U.S. The fact is that coal-fired power plants are the largest source of mercury emissions in the U.S. They are a significant part of the mercury contamination problem and therefore must be part of any solution. To reduce fish contamination in U.S. waters, it is evident that mercury reductions from domestic sources—and power plants in particular—are required.

Question 2. You indicated in your testimony that you prefer EPA's rules under the existing Clean Air Act to the requirements in Clear Skies. However, your preference for EPA rules appears to be predicated on those rules being "strengthened" before they are finalized. If EPA's proposed Clean Air Interstate Rule, Clean Air Mercury Rule, and Regional Haze Rule are finalized without changes that you believe are necessary, will you or other environmental groups litigate the rules? Do you think litigation could delay the implementation of those rules?

Response. The Clean Air Task Force represents a number of environmental organizations in each of the three pending regulatory proceedings relating to the power sector: the Clean Air Interstate Rule, Clean Air Mercury Rule, and Regional Haze

[1] Cohen et al., in press. Seigneur et al., 2004. As summarized in Mercury Science Briefing for U.S. EPA, June 23, 2004. Briefing coordinated by Hubbard Brook Research Foundation.

[2] Nelson, S. Mercury Transport and Deposition: Alternate Data Sets. Presented at the 2005 Electric Utility Environmental Conference. Tucson, Arizona.

[3] Florida Department of Environmental Protection, 2003. Integrating atmospheric mercury deposition and aquatic cycling in the Florida Everglades: An approach for conducting a Total Maximum Daily Load analysis for an atmospherically derived pollutant. Integrated Summary: Final Report. October.

[4] Hrabik, T.R. and C.J. Watras, 2002. Recent declines in mercury concentration in a freshwater fishery: isolating the effects of de-acidification and decreased mercury deposition in Little Rock Lake. The Science of the Total Environment, 2002.

Rule. Because no final rules have yet been issued in any of these proceedings, no decision has been made to challenge them if, and when, they become final. However, if the rules are finalized in a form that fails to meet the requirements of the Clean Air Act, as the current proposals fail to do, we are confident they will be challenged.

Our position is that under the law, a Maximum Achievable Control Technology (MACT) rule for utility air toxics must be fully implemented by 2008 and that the Clean Air Interstate Rule (CAIR) must be fully implemented by 2010. It is possible that challenges to any final rules could delay implementation beyond those dates. But the real question being asked here is whether Clear Skies will deliver superior environmental performance compared to enforcement of the current Clean Air Act? In our view, passage of the proposed "Clear Skies" legislation would guarantee that the power sector achieves much less pollution reduction than required under current law much later in time, even assuming any reasonable delay due to litigation. In fact, Clear Skies' weak emission targets are not fully achieved until after 2025 (see answer to Senator Lautenberg's Question 1 infra). So, the question for the environmental community boils down to whether we: (a) fight in court to achieve pollution cuts twice as deep as those in Clear Skies achievable potentially by 2010; or (b) lock-in pollution levels twice as high as allowed under current law and not fully effective until after 2025? Not surprisingly, our answer is that we will take our chances in court to achieve the pollution reductions necessary to protect human health and the environment rather than guarantee failure by agreeing to Clear Skies' weak and delayed caps.

RESPONSES BY CONRAD G. SCHNEIDER TO ADDITIONAL QUESTIONS FROM SENATOR JEFFORDS

Question 1. Should we amend the Clean Air Act to delay the existing attainment deadlines therein? If so, why?

Response. No. Clear Skies would delay the dates by which areas must attain the national ambient air quality standards for $PM_{2.5}$ and 8-hour ozone from 2010 to 2015. Additional flaws in the legislation could allow the delayed 2015 deadline to be pushed back to 2022. According to U.S. EPA, attainment of the annual $PM_{2.5}$ standard nationally could save the lives of 15,000 people each year.[5] Thus, Clear Skies 5-year delay in attainment of the $PM_{2.5}$ standard could mean up to 75,000 unnecessary premature deaths. Add an additional 7 years of delay and the toll could be over 150,000 preventable premature deaths.

Question 2. Do we have a natural gas crisis and will a multi-pollutant bill that includes carbon dioxide cause it to continue or start anew?

Response. There is no natural gas "crisis". Instead of a crisis, we have a supply/demand imbalance that needs to be resolved by the natural gas industry over the next decade.

Natural gas prices today are much higher than prices over the 15-year period through 2000. The roots of this change have been quite visible in the last few years and reflect the end of the "gas bubble" of the 1990s or more precisely the fact that the balance of supply and demand for natural gas has been growing tighter in recent years. A tighter balance between supply and demand results in higher prices and increased volatility. This does not mean that we are in crisis or are "running out" of natural gas; it does mean that gas producers need to look further afield and spend more money to meet the demand for gas, and that is reflected in the price.

Resolving our current supply/demand imbalance will require realistic, though challenging period of growth. It will require large investments of capital, though not more than has been invested in the past. It also requires a variety of positive policy decisions such as support for an Alaskan gas pipeline, development of LNG terminals, construction of other new pipelines, etc.

More extensive discussion of how our natural gas supply/demand imbalance evolved and steps the natural gas industry needs to take to address this imbalance are provided in the following attachments:

A. "Natural Gas Update", Energy and Environment Analysis, Inc., September, 2003.

B. Testimony of Joel Bluestein, before the Committee on Environment and Public Works, United States Senate Subcommittee on Clean Air, Climate Change and Nuclear Safety, Hearings on Power Plant Multi-pollutant Legislation, May 8, 2003.

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[5] U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, 1996 Staff Papers on Smog and Soot Pollution: "Review of the National Ambient Air Quality Standards for Ozone and Particulate Matter." (1996).

Moreover, a multi-pollutant bill should have little or no impact on natural gas prices and availability. Analyses by the EIA and analyses by EPA and the Clean Air Task Force (using EPA's IPM model as set up for EPA's analysis of Clear Skies) show that several proposed power plant multi-pollutant proposals have little or no impact on natural gas consumption and prices, as shown in the tables below:

Table A.—Selected results from EIA's ''Analysis of S. 485, the Clear Skies Act of 2003, and S. 843, the Clean Air Planning Act of 2003 September 2003 Energy Information Administration, September 2003.''

Category	Base Year (2001)	CSI 2025	Carper 2025
Natural gas prices	$4.12/mmbtu	$4.14/mmbtu	$4.16/mmbtu
Gas-fired power generation	411 billion kwh	1452 billion kwh	1637 billion kwh
National natural gas consumption	23.26 TCF	35.55 TCF	36.64 TCF

Table B.—Projected natural gas generation in 2020 from IPM model analyses of S. 485, S. 843 and the EPA ''Straw Proposals'' [6]

	CSI	Carper	EPA Straw
Natural gas and oil power generation	1531 billion kwh	1560 billion kwh	1590 billion kwh
Natural gas consumption for power generation	11617 TBTU	11836 TBTU	11617 TBTU

Joel Bluestein's testimony (Attachment A) provides an explanation of why power plant multi-pollutant policies will have little impact on natural gas prices.

Question 3. Would you support a binding global treaty that required all nations to reduce their mercury use and emissions?

Response. Yes. Such a global treaty must complement—not replace—our national efforts to reduce mercury emissions in this country as required by the Clean Air Act. The U.S. is currently party to such a treaty, albeit one that needs to be strengthened, as discussed below.

The U.S. is one of 49 members of the 1979 Geneva Convention on Long-range Transboundary Air Pollution, and one of 24 countries currently party to the 1998 Aarhus Heavy Metals Protocol to the Convention. That Protocol, which became effective in December 2003, initially targets emissions of mercury, lead and cadmium. Among other things, it requires each party to reduce its national mercury emissions to 1990 levels, and to set emission limits reflecting best available control techniques on new sources by 2005 and existing sources by 2011. The Executive Body for the Convention has recently established a Task Force to review the effectiveness and adequacy of the Protocol. Metals may be added and existing requirements strengthened by amendment to the Protocol.

We support the work of the Convention (although we note that the U.S. is not a party to a majority of the Convention's substantive protocols). We believe, however, that the application of best available control techniques can produce substantially greater reductions in mercury emissions than presently required under the Heavy Metals Protocol. Therefore, we believe that the Protocol must be strengthened, and we would urge the U.S. to propose, or at the least support, an amendment to accomplish that. We would also urge the U.S. to ratify those protocols that it has not yet ratified.

We strongly also believe, however, that the Heavy Metals Protocol should not serve as an excuse to avoid reducing mercury from U.S. power plants and other sources to the maximum level of achievable reduction as required by the CAA.

Question 4. A recent Florida study showed that when power plant emissions were stopped the deposition of mercury in downwind waterways radically dropped. This should give us serious concern about trading toxics. Are you at all concerned that toxic hot spots might develop if we use a cap-and-trade system for toxics like mercury and don't require at least some minimal reductions at each unit?

Response. Yes. We are concerned about toxic hotspots in the context of a cap and trade system for mercury. First of all, many regions of the U.S., particularly the eastern seaboard, are already experiencing high levels of mercury contamination as evidenced by widespread fish consumption advisories. At this point in time we are

[6] Clear Skies results are from EPA's IPM analyses; results for the EPA Straw Proposal and the Carper Bill are from IPM runs conducted by ICF, Inc for CATF using the same model "set-up" assumptions as used by EPA for their analysis of the Clear Skies Initiative.

already faced with "hot regions" of mercury contamination, not isolated hotspots. The cleanup of these regions is dependent on reducing the deposition of mercury.

The local deposition of mercury is highly influenced by the mixture of different chemical species of mercury emitted by the power plant because each of these chemical species are deposited locally to a varying degree.[7] It is well established that mercury emitted by coal-fired power plants is a mixture of 3 chemical species: elemental (Hg^0) oxidized (Hg^{2+}) and a very small fraction of particulate-bound mercury. The types of mercury most likely to deposit close to the source are oxidized mercury and particulatebound mercury. Elemental mercury is more likely to circulate in the global atmosphere, however, at some point even elemental mercury is oxidized (e.g., by ozone) and deposits. Some argue that the elemental mercury emitted by coal-fired power do not contribute to mercury deposition in the U.S. However, significant conversion between mercury species may occur during atmospheric transport, and elemental mercury emitted in the Western U.S. could well deposit in the eastern U.S. The notion that elemental mercury emissions simply disappear into the global atmosphere and never affect the U.S. is incorrect.[8]

In addition, other factors besides mercury species also influence deposition including the physical characteristics of the power plant and its location. Characteristics of the boiler, such as the quantity of coal burned, stack height and the type of air pollution control device in place, all influence the amount and type of mercury emitted, and when and where it is deposited. The location of the boiler is important for a number of reasons:

- The climate will affect the wet deposition of air toxics with a wet climate generally having higher deposition than a dry climate. Also the predominant wind direction and surrounding terrain influence where pollutants are deposited.
- Watershed characteristics such as erosion potential affect how much mercury enters the aquatic environment. Erosion potential is influenced by topography, extent of plant cover, soil erodibility, etc.
- The air quality in a region can affect mercury deposition. Ozone and acid gases (e.g., hydrogen chloride (HCl)) can promote mercury oxidation, which increases local deposition. High particulate concentrations could increase dry deposition of mercury.
- The health or environmental impact of the emissions will depend on where people or sensitive ecosystems are located relative to the power plant, how many people or sensitive organisms are in that location and whether they are exposed (e.g., to contaminated fish).

The following table summarizes how each of these different variables may increase or decrease local deposition.

Effect of Various Factors on Local Deposition and Human Exposure

Factor	Effect on Local Mercury Deposition or Human Exposure
Air pollution control device	Generally decrease; more likely to decrease oxidized Hg emissions.
High stack height	Decrease.
Terrain	Variable. Increase where air dispersion is minimal.
Climate	Increase in humid climate; decrease in arid climate.
High ambient ozone concentration	Potential increase.
High HCl concentration	Potential increase.
Reduction reactions in clouds or plume	Potential decrease.
Coal type	
Bituminous	Increase.
Subbituminous	Decrease.
Lignite	Decrease.
Proximity to water body	Increase.
Consumption of locally caught fish	Increase.
Poorly buffered or acidic water body	Increase.

The point is that there are multiple factors that influence when and where mercury deposits and the subsequent impacts on public health and wildlife. EPA simply cannot model with certainty whether or where hotspots will occur. EPA can only predict with a high degree of uncertainty the likelihood of hotspots and this, in our

[7] EPA, 1997. Mercury Study Report to Congress. Volume III: Fate and Transport of Mercury in the Environment. 452/R–97–005. December.

[8] See Mercury Science Briefing for U.S. EPA, June 23, 2004. Briefing coordinated by Hubbard Brook Research Foundation.

view is insufficient for the protection of public health and welfare. Furthermore, it is particularly troubling that the Clear Skies legislation effectively removes the authority a state may have to address local issues with a tighter cap or reduced allowances. The only way to ensure that deposition is reduced in the most sensitive areas is to require, as the current CAA does, emission reductions at every plant. At a bare minimum, any cap and trade legislation should have a requirement that ensures there are no emission increases at any power plant from the current year's emissions.

Question 5. What are the costs of not attaining the health-based NAAQS on the schedule in the current Clean Air Act?

Response. U.S. EPA in its regulatory impact analyses and cost benefit analysis of Clear Skies values each premature death at roughly $6 million.[9] As described above in answer to your first question, Clear Skies would entail a minimum 5-year delay in attainment of the annual $PM_{2.5}$ ambient air quality standard. EPA calculates that attainment of that standard would result in 15,000 fewer premature deaths per year. Thus, the 5-year delay could result in as many as 75,000 unnecessary premature deaths. Failure to meet the attainment date on time will lead to costs of tens of billions of dollars for each year of delay.

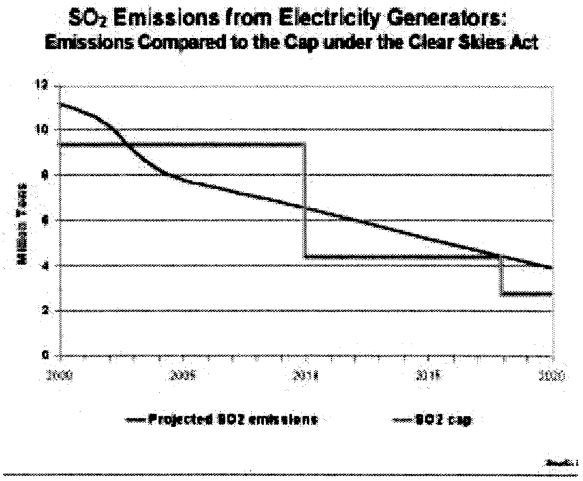
RESPONSES BY CONRAD G. SCHNEIDER TO ADDITIONAL QUESTIONS FROM SENATOR LAUTENBERG

Question 1. I understand that under the Clear Skies Act the reduction goals for SO_2, NOx, and mercury which are set out for 2018 aren't actually achieved until after 2025. Can you explain how power plant operators can delay compliance for such a long time?

Response. The Clear Skies Act allows power plant operators who reduce their emissions (below the limits set forth in the current Acid Rain law) ahead of the deadlines in the Clear Skies Act to "bank" (i.e., collect) additional emission allowances for those reductions. Then, they can use those additional allowances after 2018 to cover emissions which are above the levels set forth in the Act. Only when the additional emission allowances are used up will the plant operators actually have to reduce their emissions to the levels set forth in the Clear Skies Act. The computer models used by the EPA to analyze the Clear Skies Act (and other approaches to emission reductions) keep track of the accumulation of allowances for early reductions and show the expected delay in meeting the preliminary and final goals accordingly. EPA's own modeling analysis of the Clear Skies bill predicts that the bill's nominal caps will not be reached until after 2025. See EPA's graphic of sulfur dioxide emissions vs. the cap under Clear Skies below:

[9] Source of $6 million figure—EPA Technical Addendum: Methodologies for the Benefit Analysis of the Clear Skies Act of 2003, September 2003, page 35.

Clear Skies Does Not Achieve a 70% Reduction by 2018



Effect of banking on reaching cap

Question 2. Your testimony discusses a wide variety of weakening changes found in Senator Inhofe's bill. S. 1844. Do these apply to industries and pollution sources besides the electric utility industry?

Response. Yes. A wide range of industrial facilities other than power plants can opt into Clear Skies under §407 of the bill. According to the bill, "any unit"—that is, any stationary source of SO_2, NOx, or mercury emissions—can opt into Clear Skies through §407 as long as: (a) it is not an "affected EGU" and (b) its SO_2 and/or NOx emissions are discharged "through a stack or duct."[10] If an industrial facility meets those criteria, its application to opt into Clear Skies cannot be denied by the EPA Administrator, even if the Administrator determines that approving the application would be harmful to public health.[11] In return for their compliance with Clear Skies' caps on SO_2, NOx, and mercury (if applicable), industrial sources that opt in will be exempt from critical Clean Air Act provisions that limit toxic air emissions, require new and modified sources to install modem pollution controls, and reduce the pollution that contributes to visibility-impairing haze in national parks and wilderness areas.

Specifically, Clear Skies could substantially reduce the number of industrial facilities that are subject to the following pollution programs:

MACT. Toxic air pollution is addressed under the Clean Air Act through the establishment of industry-specific pollution control standards that require facilities to install the "maximum achievable control technology" (MACT).[12] Under Clear Skies, MACT standards that regulate toxic emissions from four major industries[13] would no longer apply to facilities that opt into the bill's emissions program for SO_2, NOx, or mercury. Indeed, even if an opt-in facility emits only one of the three pollutants regulated under Clear Skies, that facility would be exempt from MACT requirements that apply to numerous toxic pollutants. Facilities that are currently subject to those regulations would not have to control their emissions of any toxic air pollutant other than mercury.[14] The list of pollutants for which this provision of Clear

[10] See S. 131 §§407(a), 402(30), 402(32). Industrial facilities that opt in under §407 would be subject to Clear Skies' mercury limits if they burn solid fuel and vent mercury emissions through a stack or duct. S. 131 §407(a)(2).

[11] S. 131 §407(c).

[12] CAA §112.

[13] If an industrial facility opts into Clear Skies, it will be exempt from MACT standards that apply to the following industries: industrial, commercial, and institutional boilers and process heaters; plywood and composite wood panel manufacturers; reciprocating internal combustion engines; and stationary combustion turbines. S. 131 §407(j)(1)(A).

[14] S. 131 §407(j)(1)(A).

Skies would eliminate existing regulations includes many that cause cancer and birth defects.

NSR. The Clean Air Act's New Source Review (NSR) and Prevention of Significant Deterioration (PSD) programs currently requires existing industrial facilities to install modern pollution controls when they make a physical or operational change that causes their actual annual emissions to increase significantly.[15] Under Clear Skies, however, industrial facilities that take advantage of the bill's opt in provision are exempt from NSR and PSD until 2025, as long as they limit their emissions of particulate matter.[16] In effect, these facilities are given a 20-year grace period during which they can make any number of changes that cause significant amounts of new pollution, all without having to update their pollution control systems.

VISIBILITY IMPROVEMENT. Additionally, the Clean Air Act requires a broad range of industrial facilities to install the "best available retrofit technology" (BART) if such a facility emits pollution "which may reasonably be anticipated to cause or contribute to any impairment of visibility" in national parks and other specially protected Class I areas.[17] That requirement would no longer apply to the vast majority of industrial facilities opting into Clear Skies. Instead, these facilities will be exempt from the Clean Air Act's BART requirement until 2025, provided they limit their particulate matter emissions.[18] The only visibility improvement provision that would apply to industrial facilities that opt into Clear Skies is a requirement that new or modified facilities comply with PSD if they are located within 50km of a Class I area.

Question 3. Aren't there available technologies that can reduce mercury from coal-fired power plants to a far greater degree than required by S. 1844?

Response. Yes. There are several approaches[19] available to reduce mercury emissions to a greater degree that the 70 percent national reduction required by S. 1844, including:

- Coal cleaning as a pre-combustion alternative,
- Installing conventional controls,
- Optimizing the mercury capture of existing control devices,
- Adding mercury-specific controls, and
- Multipollutant approaches (e.g., strategies to simultaneously reduce mercury, NOx, SOx and particulate matter (PM)).

Coal cleaning removes about 23 percent of the mercury in the coal and is currently used for about 77 percent of eastern coals.[20] Coal cleaning can thus offer additional mercury reduction for units not already burning cleaned coal and a new precombustion cleaning technology is now available for subbituminous coals that remocs on average 70 percent of the mercury.[21]

Conventional NOx and SO_2 controls on existing boilers already capture on average about 36 percent of the mercury—with some configurations capturing well in excess of this amount. In addition, we have seen from EPA's own analysis that adding conventional controls to existing boilers will capture an additional 29 percent of the mercury.[22] For boilers that already have controls, optimizing the performance of these devices for mercury removal (e.g., adding a bag to an existing fabric filter) has the potential would increase mercury capture by these controls at least 10 percent.

Technologies designed to specifically capture mercury, or that offer Multipollutant benefits are in various stages of development ranging from commercially available

[15] CAA §§111(a)(4), 165(a), 173(a).
[16] S. 131 §407(k)(1).
[17] CAA §169A.
[18] S. 131 §407(k)(1).
[19] U.S. EPA, 2002. Control of mercury emissions from coal-fired electric utility boilers: Interim report including errata dated 3–21–02. Office of Research and Development. EPA–600/R–01–109. April.
[20] U.S. EPA, 2002. Control of mercury emissions from coal-fired electric utility boilers: Interim report including errata dated 3–21–02. Office of Research and Development. EPA–600/R–01–109. April
[21] See *http://www.kfx.com*.
[22] U.S. EPA, 2003. Performance and cost of mercury and multipollutant emission control technology applications on electric utility boilers. Prepared for Office of Research and Development. EPA–600/R–03–110. October.

to bench-scale testing. The mercury capture efficiency of several of these technologies is summarized in Table 1.

Table 1.—Mercury-Specific or Multipollutant Control Technologies [23, 24, 25, 26]

Mercury Control Approach	Percent Mercury Capture	Comments
Conventional coal cleaning	23%	Average removal for eastern bituminous coals.
Optimization of existing controls	Variable	Incremental increase in performance.
Installation of conventional controls	29%	National reduction achievable through implementation of proposed CAIR rules.
Activated carbon injection with ESP for PM control.	60%	Addition of a small fabric filter would increase the capture efficiency to 90%. Saving in sorbent costs would payback the cost of the fabric filter in 3 to 4 years.
Halogenated activated carbon injection with ESP for PM control.	90+%	Month-long test achieved average 94% control efficiency.
Activated carbon injection with existing fabric filter for PM control.	90%	For subbituminous and lignite coals, an activated carbon that is treated with iodide, sulfur or bromine would probably be needed to achieve this high level of reduction.
COHPAC–TOXECON	90+%	This configuration is a small fabric filter in combination with activated carbon injection. High capture efficiency for all coal types.
Enhanced wet scrubbing	50–80%	Control efficiencies vary with scrubber chemistry. Avoids excess carbon in the fly ash.
K-Fuel®	70%	Advanced coal cleaning techniques for subbituminous coals.
Powerspan—ECO®	80–90%	Multipollutant control. Also removes 98% of SO_2, 90% of NOx, and 99.5% of $PM_{2.5}$.
Advanced Hybrid Filter™	>90%	Used in conjunction with activated carbon injection.
Airborne Process	Up to 75%	Multipollutant control. Also removes >95 percent of SO_2, 60 to 79% of NOx.
LoTox™ Process	>90%	Multipollutant control. Also removes >90% NOx.
MerCAP™	>80%.	

ESP = electrostatic precipitator, PM = particulate matter

To address the question of control technology availability, in 2003 Senator Jeffords requested information concerning the availability and performance of mercury control technologies.[27] In response, five pollution control equipment vendors reported the following regarding commercial availability of mercury controls:

- Two companies were confident their technologies can reduce mercury emissions from power plants by at least 80–90 percent from all types of coal combustion.
- One of these two technologies can achieve even greater than 90 percent capture of mercury from the harder-to-control western subbituminous and lignite coals.
- Three out of the five companies responding indicated that their technologies are currently available commercially.
- The remaining two planned to enter the market in 2004 and 2005.

In addition, options for optimizing criteria pollutant controls for mercury capture are immediately available, as is the option for adding additional conventional controls (e.g., NOx and SO_2 controls) to existing units. Table 2 summarizes the current state of development of some mercury controls. There are numerous other variations

[23] NESCAUM, 2003. Mercury emissions from coal-fired power plants: the case for regulatory action.

[24] U.S. EPA, 2003. Performance and cost of mercury and multipollutant emission control technology applications on electric utility boilers. Prepared for Office of Research and Development. EPA–600/R–03–110. October.

[25] Environmental Energy Insights. M.J. Bradley and Associates. Volume VII, Issue 1, January/February 2004.

[26] ADA–ES, Inc. Presented at PowerGen, December 2004.

[27] The Real Status of Mercury Control Technology—December 3, 2003. Statement of James M. Jeffords, Ranking Member, Senate Environment and Public Works Committee Pending EPA Proposal to Deregulate Mercury. December 3, 2003.

of these technologies under development (e.g., different activated carbon-based sorbents) that are too numerous to list here.

Table 2.—State of Development of Mercury Controls [28, 29, 30]

Mercury Control Approach	Commercial Status	Projected Availability Date	Comments
Conventional coal cleaning.	Available	Currently available	An option for 23 percent of eastern coals. See K-Fuel® for western coals.
Optimization of existing controls.	Available	Currently available	Additional 10% control achievable on existing units.
Installation of conventional controls.	Available	Currently available	30% reduction projected to meet other emission limits for $PM_{2.5}$.
Activated carbon injection	Available	Currently available	Systems for power plants now being offered by ADA–ES [a] and Sorbent Technologies.
COHPAC–TOXECON	Available	Currently available	Both components now commercially available. Full-scale tests complete on integrated system. 5-year full-scale test will finish in 2007.
Enhanced wet scrubbing	Near commercial	2005.	
K-Fuel®	Near commercial	Early 2005.	
Powerspan—ECO®	Near commercial	3rd qtr 2004.	
Advanced Hybrid Filter™	Emerging		Pilot-scale tests.
Airborne Process	Emerging		Pilot-scale tests.
LoTox™ Process	Under Development		Bench-scale tests.
MerCAP™	Under Development		Bench-scale tests.
MB Felt Filter	Under Development		Bench-scale tests.

[a] See http://www.adaes.com

More recently, on January 31, 2005, the Institute of Clean Air Companies (ICAC) presented a briefing to Senate staffers entitled "Advances in Mercury Control Technology to Meet Future Needs." In this briefing, ICAC states that primary mercury capture technologies are available. These include activated carbon injection (with several different types of sorbent), flue gas desulfurization, advanced precombustion coal cleaning, particulate matter collection devices and multipollutant controls. In addition, continuous mercury monitors are now on the market from at least 6 suppliers. There is currently sufficient supply of activated carbon to supply the needs of States with new mercury rules with additional needed to meet the needs of a Federal standard.

In response to EPA's Notice of Data Availability, Sorbent Technologies Corporation states that activated carbon injection (ACI) systems are simple and easily commercially available. Full-scale ACI systems have already been installed on at least 20 U.S. coal-fired boilers in temporary ACI trials and about another 20 systems will be installed over the next 2 years in additional full-scale ACI demonstrations. According to Sorbent Technologies, little distinguishes these temporary full-scale installations from permanent ACI systems except, perhaps, permanent piping rather than flexible hoses, more permanent foundations, or larger activated carbon storage silos. Sorbent Technologies Corporation's first B–PACT™ mercury-sorbent manufacturing plant became available for continuous power plant use in September of 2004. Sorbent Technologies states:

> Consequently, all EPA utility mercury policymaking deliberations, including modeling analyses, should consider brominated ACI technology available for full-scale retrofit implementation with every coal type, on every coal-fired utility boiler, in 2005.[31]

[28] NESCAUM, 2003. Mercury emissions from coal-fired power plants: the case for regulatory action.

[29] U.S. EPA, 2003. Performance and cost of mercury and multipollutant emission control technology applications on electric utility boilers. Prepared for Office of Research and Development. EPA–600/R–03–110. October.

[30] Environmental Energy Insights. M.J. Bradley and Associates. Volume VII, Issue 1, January/February 2004.

[31] Sid Nelson, Jr., President, Sorbent Technologies Corporation to William Maxwell, U.S. EPA. Part I of comments filed by Sorbent Technologies in response to the Notice of Data Availability. December 30, 2004.

Despite statements by the manufacturers of pollution control equipment that mercury control technology is available and there is sufficient labor to install it, industry has and will argue that the availability of control technology means more than simply having the equipment on hand. In industry's view, there must be adequate testing and long-term demonstrations before a technology is really "available" to reliably meet emission controls requirements. Taking that view, can we really say that mercury control technology is currently available? We believe the answer is yes. ADA–ES, Inc. has explored the issue of new technology acceptance in the electric power sector and their analysis lends valuable insight into where mercury control technology is today in terms of commercialization and adoption.[32] Basically, the development and acceptance of new technology has followed 6 steps. They are:

1. Laboratory testing,
2. Pilot-scale testing,
3. Full-scale field tests,
4. Full-scale tests at multiple sites,
5. Long-term demonstration at several sites, and
6. Widespread implementation.

Regarding the first 2 steps, laboratory and pilot-scale testing of mercury control technologies took place in the early to mid-90s. Full-scale field tests, including full-scale tests at multiple sites were completed during 2001–2003 as Table 3 illustrates. In Table 3, the facilities are listed by coal type and within each coal type by roughly a chronological order. Thus, it is apparent that during the later tests, as the technology has rapidly advanced, the mercury capture efficiency has increased to the 90 percent range across all coal types. In addition, it can be seen that the earlier tests required considerably more carbon to achieve the same results as the later tests with halogenated sorbents. The need for less carbon will considerably reduce control costs.

Step 5 entails long-term demonstrations at multiple sites. A year-long test has already been completed at the Gaston plant (average reduction 86 percent with an average-performing sorbent) and 3 other month-long tests have also been completed with success.[33] [34] As shown in Table 4, numerous other full-scale tests at a variety of plants are either ongoing or scheduled in the 2004–2005 timeframe.

We also note that state mercury rules will be going into effect by 2008, which will provide additional long-term commercial experience with mercury controls. Compliance with some of the state rules begins in 2008; consequently these facilities will have installed, tested and operated ACI systems long before the compliance date. By 2008, 15 boilers in Massachusetts, Connecticut and New Jersey will be controlling mercury by more than 90 percent. These bituminous-fired boilers have control configurations that are similar to 60 percent of the fleet and will provide the early proving ground that industry maintains is needed prior to widespread implementation of this technology.

Given this systematic evolution of the adaptation of activated carbon technology to the power sector, we are confident that this technology will be available prior to 2010. We also note once again for the record that not all plants will need to use ACI to achieve a stringent standard. Conventional controls will achieve a stringent emissions level for many plants and precombustion controls and other technologies (e.g., oxidizing catalysts and multipollutant controls) will also be options.

Table 1.—Full-Scale Tests of Sorbent Injection Completed: 2001–2003

Site	Coal	Existing Control Equipment	Injection Rate (lbs/mmacf)	Percent Mercury Capture
Brayton Point	Low Sulfur Bituminous	ESP (2)	10	94.5%
PGE	Low Sulfur Bituminous	ESP	10	90%
Cliffside	Low Sulfur Bituminous	HS–ESP	6.4	>80%
Gaston	Low Sulfur Bituminous	HS–ESP/COHPAC	0.55	86%
Lausche	High Sulfur Bituminous	ESP	4	70%
St. Clair	Bit./Sub. Blend	ESP	3	90%

[32] Bustard, J. and Durham, M., 2004. Air Pollution Control Equipment New Technology Acceptance Process. Presented at: AWMA 97Th Annual Conference and Exhibition, Indianapolis, IN. June 22–25, 2004.

[33] ADA–ES, Inc. Presented at PowerGen, December 2004.

[34] Sid Nelson, Jr., President, Sorbent Technologies Corporation to William Maxwell, U.S. EPA. Part I of comments filed by Sorbent Technologies in response to the Notice of Data Availability. December 30, 2004.

Table 1.—Full-Scale Tests of Sorbent Injection Completed: 2001–2003—Continued

Site	Coal	Existing Control Equipment	Injection Rate (lbs/mmacf)	Percent Mercury Capture
Pleasant Prairie	Subbituminous	ESP	11.3	66%
St. Clair	Subbituminous	ESP	3	94+%
Holcomb	Subbituminous	SDA/FF	1.2	93%
Meramac	Subbituminous	ESP	3	90%
Stanton 10	Lignite	SDA/FF	1.5	95%
Stanton 10	Lignite	SDA/FF	1.5	90%

ESP(c) = cold-side electrostatic precipitator, HS-ESP = hot-side electrostatic precipitator, FF = fabric filter, SDA = spray dryer adsorber
Source. ADA–ES, Inc. Presented at PowerGen, December 2004.

Table 2.—Full-Scale Tests of Sorbent Injection Ongoing and Scheduled: 2004–2005

Site	Coal Type	Existing Control Equipment	Testing Company
Gaston	Low Sulfur Bituminous	FF	ADA–ES
Holcomb	Powder River Basin	SDA/FF	ADA–ES
Arapahoe	Powder River Basin	FF	ADA Tech
Stanton 10	ND Lignite	SDA/FF	Apogee
Yates 1	Low Sulfur Bituminous	ESP/FGD	URS
Yates 2	Low Sulfur Bituminous	ESP	URS
Leland Olds	ND Lignite	C–ESP	EERC
Meramec	Powder River Basin	C–ESP	ADA–ES
Buck	Low Sulfur Bituminous	H–ESP, C–ESP	Sorbent Tech
St. Clair	PRB/Bituminous	C–ESP	Sorbent Tech
Miami Fort	High Sulfur Bituminous	C–ESP	ADA Tech
Conesville	High Sulfur Bituminous	ESP/FGD	ADA–ES
Nanticoke	PRB/Bituminous	ESP	ADA–ES
Arapahoe	Powder River Basin	FF	ADA Tech
Antelope Valley	ND Lignite	SDA/FF	EERC
Stanton 1	ND Lignite	C–ESP	Apogee
M.R. Young	ND Lignite	FGD	EERC
Monticello	TX Lignite	FGD	EERC

C–ESP = cold-side electrostatic precipitator, HS–ESP = hot-side electrostatic precipitator, FF = fabric filter, SDA = spray dryer adsorber
Source. ADA–ES, Inc. Presented at PowerGen, December 2004

Question 4. The U.S. PIRG report, "Pollution on the Rise" found that more than half of the nation's dirtiest power plants increased their SO_2 emissions in spite of existing air pollution control regulations. Could this continue to happen under S. 1844?

Response. Yes. Because the Clear Skies Act allows for the trading of emission allowances between power plant operators (subject only to a very broad Eastern U.S. versus Western U.S. limitation on trading), there is nothing in the Act that will prevent any power plant from increasing its emissions. That determination will involve each plant operator comparing the cost of reducing his own emissions to the cost of buying emission allowances from another plant operator.

In general, the more a plant emits, the less it costs (per ton) to reduce emissions, so it is likely that the highest polluters will reduce their emissions rather than buy large amounts of emission allowances. This cannot, however, be assured. Many large polluters chose to meet the requirements of the Acid Rain law by buying allowances rather than cleaning up emissions. The same thing could happen under Clear Skies.

STATEMENT OF FRED PARADY, MANAGER, ENVIRONMENTAL SERVICES, OCI WYOMING, L.P., ON BEHALF OF THE NATIONAL ASSOCIATION OF MANUFACTURERS

Good morning, Mr. Chairman and members of the committee. I am Fred Parady, Manager of Environmental Services for OCI Wyoming, L.P. Since 1962, we have operated a 400-employee, 4-million-ton-per-year underground trona mine and 2.3-million-ton-per-year soda ash refinery located near Green River, Wyo. Today, I am pleased to testify on behalf of the National Association of Manufacturers (NAM) in support of the Clear Skies Act of 2005, which you, Mr. Chairman, and full committee Chairman Jim Inhofe have just introduced.

As you undoubtedly are aware, the NAM is the nation's largest industrial trade association representing small and large manufacturers in every industrial sector and in all 50 states. The NAM's mission is to enhance the competitiveness of manufacturers and improve American living standards by shaping a legislative and regulatory environment conducive to U.S. economic growth. In light of our dedication to that mission, the NAM commends the subcommittee chairman and Chairman Inhofe for preparing legislation intended to provide increased emissions reductions in a way that will also provide greater regulatory certainty and flexibility.

A number of the NAM's members are electric generators and coal producers, and they would be directly affected by this legislation. Other NAM members have large industrial boilers and would be eligible for the "opt in" provisions in your legislation. However, virtually all the members of NAM members use electricity as a major source of energy, and for the vast majority of them electricity is the largest energy cost. In fact, the manufacturing sector (excluding electric generation) uses about one-quarter of the nation's energy, including almost one-third of its natural gas and 30 percent of its electricity. According to a recent NAM study, external overhead costs, including regulation and rising energy prices, add approximately 22 percent to U.S. manufacturers' unit labor costs (nearly $5.00 per hour worked) relative to their major foreign competitors. More specifically, as a percentage of output, American manufacturers spend considerably more on pollution abatement than do their competitors in Germany, Japan, France, the United Kingdom, Canada, Mexico, China, South Korea and Taiwan. Therefore, NAM member companies' ability to compete in the highly competitive international marketplace is directly affected by any legislation that would have a major impact on such a broadly used and a significant input cost as electricity.

I would like to briefly address specifics germane to the soda ash industry in southwest Wyoming. For more than 50 years, Sweetwater County has been home to the domestic soda ash industry. The industry is predicated on three fundamentals: affordable energy, the availability of trona ore and water supply. The world's largest natural deposits of trona ore are found in our county, with an estimated 600 years of reserves at current economics and consumption rates. Soda ash is the fifth largest bulk commodity chemical in the world, used in all types of glass manufacturing (container, consumer, etc.) pollution controls, and as a chemical feedstock. Mr. Chairman, soda ash is the most costly raw material for glass plants operating in your home state of Ohio, such as Libby Glass in Columbus and Thompson Electric, a television manufacturer near Columbus.

Four operations currently mine approximately 16 million tons of trona ore and refine it into more than 10 million tons of soda ash, employing more than 2,300 people in the process with solid jobs that build retirements, support kids in college and pay the bills. The industry is Wyoming's leading international export, accounting for 85 percent of Wyoming's export trade. Soda ash is shipped from Sweetwater County to more than 30 countries, contributing more than $500 million as a surplus to the overall U.S. balance of trade. The domestic market for soda ash, however, has been stagnant for nearly 20 years (increased use in some markets has been offset by the increased use of plastic bottles and other factors). The prospects for growth in our industry hinge on growing our markets offshore, and therefore, hinge on stable energy prices at home.

To put things in perspective, in the 15 years between 1982 and 1997, this industry enjoyed a steady and significant growth in exports. Just in the five years from 1992 to 1997, export growth volume grew 100 percent. Since then, export growth has been marginal, with exports in 2003 only 4 percent above their 1997 levels. The natural soda ash industry is the cleanest in the world, yet faces intense competition from China. Chinese soda ash operations do not meet our environmental or labor standards, yet compete voraciously on the world market for our customers. As recently as 1989, China imported more than 1 million tons per year of soda ash. Next year, we expect them to be a 1.5-million-ton exporter. I should note that the Chinese produce soda ash synthetically, using salt, coal and limestone, which are readily available but also produce substantial environmental problems in their system.

The year 2003 marked a milestone for our industry, as China overtook the United States for world leadership in soda ash production for the first time in history. China has quadrupled their soda ash capacity in the last decade, from less than 3 million tons per year to more than 11 million tons. China's undervalued currency, unregulated environment and unfair labor practices are undermining this core Wyoming—and U.S.—industry.

Finally, I would like to briefly address energy costs directly for our industry. Energy price volatility, for both electricity and natural gas, are causing the soda ash industry to lose its ability to reinvest in the industry. Natural gas price volatility and annual rate increases from our electrical utility are forcing our site to consider

retrofitting our calciners to coal. The Clear Skies initiative would strengthen our ability to pursue this project, thus assuring both investment and long-term energy price stability.

Returning to the general energy picture in the United States, should the maze of current clean air requirements and the litigation that inevitably adds uncertainty and delay have the effect of forcing electric utilities to switch from coal to natural gas, the consequences to industry—and to the general public—could be devastating, and already has had a significant impact. Already, the 66 percent increase in natural gas used to generate electricity since 1990 has contributed to the high cost of natural gas, which has had an adverse impact on the manufacturing sector since mid-2000.

The chemical industry alone estimates that 100,000 jobs were lost since 2000 as a direct result of the high natural gas prices due to the gas supply and demand imbalance. More than half of the fertilizer capacity in the United States is shut in or closed permanently. The chemical industry has gone from the lead net export industry in the United States to a net importer of chemicals. Other industries, including plastics, aluminum, steel, metal heat treating, glass and paper are struggling to stay afloat in the current natural gas cost environment. Unless there is a rational investment future for coal-burning electricity generation, prudent electricity providers will be continuing to build units using natural gas or restart the many natural gas electricity units that are currently not operating because of the high costs of natural gas. Clearly, more generation of electricity with natural gas will create even more upward pressure on natural gas prices and electricity prices, which would impede the manufacturing recovery now fully underway after a loss of almost three million manufacturing jobs between 2000 and early 2004. The NAM certainly supports nuclear power as another form of electricity generation to meet our future energy needs, but the long lead times and required changes in the public attitude make it difficult to significantly expand nuclear power for the next decade or so.

The National Association of Manufacturers supports the concept of multi-emissions legislation, and supports the changes that you, Mr. Chairman and Chairman Inhofe, have made to the Administration's original legislative proposal. The goal of effective multi-emissions legislation must be to reduce pollution while replacing conflicting and problematic regulations for the electric utility industry with one clear set of rules that will improve upon the gauntlet of current requirements and litigation. The U.S. economy must have adequate, reliable and affordable supplies of electricity. Clear Skies legislation would provide electricity generators with the regulatory certainty and flexibility that is essential for rational investment decisions needed to meet both objectives of cleaner air and affordable power from coal.

Your legislation, the Clear Skies Act of 2005, represents the most rational and realistic multi-emissions proposal introduced in more than a decade. Other bills that were proposed in the last Congress, such as S. 366, The Clean Power Act, and S. 843, The Clean Air Planning Act, represent unacceptable approaches. They included carbon dioxide (CO_2) mandates and set unreasonable emissions targets and timetables superimposed on top of existing Clean Air Act regulations, which would result in the loss of more valuable U.S. manufacturing jobs. Such oppressive versions of multi-emissions legislation would unnecessarily raise energy costs while providing no compelling benefits to human health, the environment or national security beyond the benefits that the Clear Skies Act would provide. Unreasonably stringent emission-reduction targets would waste capital dollars that otherwise can be dedicated to increasing productivity, energy efficiency and employment and raise energy costs for all consumers. In addition, mandatory CO_2 cuts would limit the use of fossil fuels—particularly the use of abundant and affordable domestic coal, which has severely damaged our economy while yielding infinitesimal, if any, benefits to the global climate system.

"Business-as-usual" under the current archeological pile of Clean Air Act provisions and regulations, some almost 35 years old, is also an unacceptable alternative. The overlapping, conflicting, burdensome, single-emission provisions of the existing Clean Air Act will continue to result in significant uncertainty, delays for legal challenges, short planning and construction time periods and, ultimately, higher electricity costs and unstable natural gas markets. In general, the Clear Skies Act balances the various needs we have detailed above in a more effective manner than other multi-emissions proposals or current law.

Importantly, the chairman's legislation would enact reforms that expressly replace many of the current Clean Air Act requirements for electric generators. The current regulatory structure of the Clean Air Act encourages litigation, discourages innovation and reduces utilities' flexibility to effectively plan to reduce air emissions in the most cost-effective manner. In addition, numerous ongoing and anticipated future rulemakings further jeopardize the viability of coal by injecting uncertainty in the

future use of coal for electricity generation. As it phases in increasingly strict emissions requirements, the Clear Skies Act must replace—not just be added onto—current Clean Air Act regulation. Simply imposing additional reduction requirements as overlays to the current regulatory structure will further complicate the regulatory maze now governing power plants. Specifically, the Clear Skies Act supports the use of cap and trade for mercury controls, rather than a unit-by-unit "maximum achievable control technology" (MACT) requirement; coordinates the Section 126 petition process with the reductions and schedule in the bill; reforms new source review (NSR) for new and existing electric generators; and also addresses the redundant control requirements established under the "best available retrofit technology" (BART) and the regional haze program.

The NAM believes that a Clear Skies Act that is consistent with the following principles provides the best opportunity to make further progress on emission reductions in an economically and environmentally sound manner.

The Clear Skies Act must remain a three-emission bill—sulfur dioxide (SO_2), nitrogen oxides (NOx) and mercury. The NAM does not believe it is appropriate to include carbon dioxide (CO_2) provisions in this legislation, since CO_2 is not a pollutant and is not regulated, nor required to be regulated, under the Clean Air Act. More importantly, the NAM strongly opposes any legislative proposal that would establish CO_2 mandates. Creating any new regulatory scheme for CO_2 emissions would severely depress the U.S. economy. Instead, the NAM believes that the best way to develop and implement the goals of climate change policy is through a strong economy with incentives coupled with removal of disincentives for energy efficiency and environmental improvements. For the record, the NAM notes that the majorities in the Congress and this Administration are on record as opposing regulation of carbon emissions. We urge the committee to avoid encumbering this vitally important legislation with such controversial provisions.

The Clear Skies Act should not extend its mandates to either current or future industrial boilers or non-utility combined-heat-and-power systems (CHP), but should provide such industrial units with the opportunity to voluntarily opt in to the benefits and obligations of the cap-and-trade program. In virtually all cases, CHP units are a source of highly efficient power with correspondingly low emissions. Hundreds of industrial facilities depend on the economic efficiencies of CHP. In fact, the President's National Energy Policy recommends the increased use of CHP systems to improve energy efficiency and decrease air emissions. Also, the President's global climate change initiative relies on more energy-efficient technologies, like CHP, to achieve its goals. The ability of CHP units to receive an allocation incentive and opt in to meet the rigors of multi-emissions limitations without infringing on the otherwise available pool of emissions credits would not only encourage additional investments in CHP emission controls, but also meet the energy security goals of the United States.

The Clear Skies Act must support the continued and increased use of coal for electric power generation. The NAM in the strongest terms urges the Congress to ensure that any emissions caps and timetables mandated in final Clear Skies legislation avoid causing investors in electricity generation to choose scarce natural gas over abundant and more affordable coal for the preferred energy source to power America's ever-growing energy needs.

In this context, Mr. Chairman, the NAM is particularly concerned about the mercury emission levels that would be part of final Clear Skies legislation. Significant reductions of mercury will occur under the current bill's Phase I caps for SO_2 and NOx. Going beyond this level of control too soon could force the premature closing of many existing coal-fired power plants in favor of new natural gas facilities, further straining already limited natural gas supplies. In addition to control technology concerns, emerging scientific research suggests that reducing mercury emissions from the U.S. power generating sector does little to reduce the amount of mercury deposition in the United States and has even less effect on the levels of methylmercury in fish that is consumed by Americans. For these reasons, we support the Phase I mercury reduction objective in the Clear Skies Act that is set at the level achieved as a cobenefit from sulfur dioxide and nitrogen oxides controls, without establishing a "hard-cap" reduction requirement. Phase II mercury reductions should be based on the progress in developing affordable mercury emission control technology and on a public, peer-reviewed investigation and determination into whether additional mercury regulation will produce net public health benefits. Further, the Clear Skies act must recognize that the various grades of coal (lignite, subbituminous and bituminous coals) contain different levels and species of mercury. The legislation currently recognizes these differences and any efforts to eliminate the mercury allocation adjustment factors must be resisted. My company operates in the Western United States, an area that contains these various grades of

coal. We want to ensure that we have the ability to select an appropriate coal and have certainty that we can meet the emission limits.

Being from the West, we are also aware of the Western Regional Air Partnership (WRAP) SO_2 reduction plan that is included in the proposed legislation. Unfortunately, several additional states have been added to the WRAP plan in the proposed legislation, without a corresponding adjustment in the SO_2 reduction milestones. This problem needs to be corrected.

For the Record, Mr. Chairman, the NAM is greatly concerned about the barrage of misinformation being put forth regarding the contribution of U.S. coal-burning power plants to the levels of methylmercury in fish, as well as the misinformation regarding the net benefits to the American public of eating fish. The NAM urges the committee to ensure that any final Clear Skies legislation direct the HHS, in coordination with the EPA and other health organizations, to review in an open and peer-reviewed process the most recent scientific evidence regarding the sources of methylmercury in fish—including natural sources, foreign sources and U.S. electricity generation sources—to evaluate the net beneficial health benefits of eating fish for Americans, including pregnant women. The NAM is on record with the EPA to urge that the agency reanalyze its increasingly suspect conclusions regarding an appropriate methylmercury reference dose, which is many times lower than the reference dose determined to be appropriate by the FDA and at least four other national and international health organizations. Most importantly, the critical question that must be asked is whether reducing elemental mercury emissions from U.S. power plants will have any measurable impact on the methylmercury levels in fish broadly consumed by the American public.

The business community has been a good steward of our environment, investing hundreds of billions of dollars over the past three decades to help our nation achieve its unprecedented and unparalleled clean air progress. As a trip through Ohio would document, however, some manufacturers have closed or moved elsewhere because the high costs of environmental progress cannot always be absorbed in this era of intense international competition. The NAM strongly supports the Clear Skies Act as a way to avoid excessive energy costs while mandating dramatic future reductions in SO_2, NOx and mercury. We believe the Clear Skies Act successfully employs market forces to achieve these reductions; ensures the expanded use of coal, which provides reliable and affordable energy to the nation; provides certainty for ratepayers and business and utility planners; and, redirects precious resources from fighting the regulatory and legal battles of the current confused and duplicative system to investments that ensure real air pollution reductions.

Mr. Chairman, the NAM and the workers and the prosperity that we represent, urge your attention to these concerns. Thank you, I would appreciate an opportunity to respond to any questions that the committee may have.

RESPONSES BY FRED PARADY TO FOLLOW-UP QUESTIONS FROM SENATOR JEFFORDS

Question 1. You suggested that "the maze of current clean air requirements and the litigation that inevitably results add uncertainty and delay." How many legal actions has the National Association of Manufacturers initiated or joined with respect to Clean Air Act standards, regulations or guidance, issued by the U.S. Environmental Protection Agency or by a state using delegated authority, since 1991? Please describe the basic thrust of each action, including the subject standard or regulation, and the date of filing.

Response. Since 1991, the NAM has been involved in the following legal actions pursuant to the Clean Air Act:

Engine Mfrs. Assn. v. *South Coast Air Quality Mgt. Dist. (S. Ct., No. 02–1343)*—Whether the Clean Air Act pre-empts state motor vehicle emission requirements restricting new fleet vehicles to natural gas engines only. We urged the Supreme Court to rule that local fleet regulations are pre-empted. We argued that the fleet rules were not submitted to or approved by EPA as required by law, and they conflict with the technology and fuel-neutral emissions regulation developed by the EPA under the Clean Air Act. The Supreme Court ruled that the fleet rules were pre-empted. Joint brief with Alliance of American Auto. Mfrs., American Petroleum Inst., Assn. of Internat'l Auto. Mfrs., Calif. Motor Car Dealers Assn., Nat'l Auto. Dealers Assn., Nat'l Petrochemical and Refiners Assn. and Truck Mfrs. Assn. filed 8/29/03; vacated and remanded 4/28/04.

U.S. v. *Hoechst Celanese Corp. (Nos. 96–2003, 96–2051, 4th Cir.)*—This case involves an enforcement action against Hoechst Celanese for alleged violations of the federal regulations pertaining to equipment in facilities that produce or use benzene. The NAM filed a brief supporting arguments concerning the government's re-

fusal to comply with Admin. Procedure Act and Clean Air Act provisions mandating that prior notice be given of agency regulatory requirements, thus, attempting to make a significant change in the meaning of a rule without first going through notice and comment. Joint brief filed 11/4/96 with Chem. Mfrs. Ass'n, Corp. Environmental Enforcement Council and Pharmaceutical Research and Mfrs. of America. Affirmed 10/27/97.

Clean Air Implementation Project v. *EPA (Docket No. 97–1117, DC Cir.)*—The NAM petitioned the district court to review the EPA's 2/24/97 promulgation of credible evidence rule. Rule allows use of non-reference test to prove or disprove Clean Air Act (CAA) violations. It permits use of any valid evidence in CAA enforcement actions. The NAM contends EPA does not have authority to issue the rule under the CAA, nor can the EPA legally implement it via state implementation plans. The EPA also failed to follow proper administrative procedures in issuing the rule. Petition for review filed 4/18/97. Dismissed as unripe 8/14/98.

Arizona Public Serv. Co. v. *EPA (No. 98–1196 (DC Cir.)*—Challenging the EPA rule granting Indian tribes Clean Air Act authority. Affects permitting for any industrial source located or seeking to locate within tribal territories or trust lands. Could also affect discharges from upstream sources. Tribal decisions are not subject to judicial review. Industry is prohibited from commenting or objecting to tribal applications for permitting authority. Filed 4/10/98 with AFPA, Mich. Chem. Council, Timber Producers Assn. of Mich. & Wisc., Rhinelander Area Chamber of Commerce. Court upheld the EPA rule granting Indian tribes Clean Air Act authority. Brief filed 7/6/99; decided 5/5/00.

American Trucking Assns. v. *EPA (Nos. 97–1440, 1441 and 1556 (D.C. Cir.) (consolidated with API, NAM v. EPA, Nos. 1502 and 1555)*—Reviewing the final EPA rules on new air quality standards for ozone, particulate matter, and Federal Reference Method for NAAQS. All companies that emit ozone or that must comply with EPA's air quality regulations; case sets first precedent for challenging federal regulations under SBREFA. Twenty-six suits challenge the ozone and other standards, thirty-three challenge the PM standard, six involve the federal reference method. Petitioners include mining, autos, power companies, chemicals, paint, equipment manufacturers, oil, steel and trucking. The Court rejected the rules implemented by the EPA concerning ozone pollution. The ruling has stripped the EPA from assuming arbitrary authority and requires the EPA to say why the ozone pollution levels it has set are reasonable in terms of health effects. Filed 8/14/97, 9/12/97; cases consolidated 10/1/97; main briefs on ozone and SBREFA claim filed 3/98. Reversed and remanded 5/14/99.

Subsequently, the Supreme Court heard the appeal under the caption *Whitman* v. *American Trucking Assns., Inc*. The Court upheld the EPA's authority under the Clean Air Act. The EPA may not use cost factors when issuing air regulations, and the CAA does not violate non-delegation doctrine. Cross-petition and reply brief filed 2/28/00; cert. granted 5/22/00; decided 2/27/01. Reply brief by the NAM and others filed 10/26/01. The D.C. Cir. upheld the rules on 3/26/02.

New York v. *EPA (Equipment Replacement Project) (D.C. Cir.)*—Supporting the EPA's final rule on replacement of pollution control equipment under the Clean Air Act. The rule, issued 10/27/03, is being challenged by numerous state attorneys general and several environmental organizations. Joint motion to intervene filed 11/7/03 by Equipment Replacement Rule Coalition, which includes the NAM; joint briefing schedule proposed 11/24/03; opposition to motion for stay filed 12/5/03.

Massachusetts v. *EPA (D.C. Cir.)*—Supporting the EPA's decision not to regulate greenhouse gases (CO_2, methane, nitrous oxide and hydro-fluorocarbons). Various states and organizations have sued to force the EPA to regulate GHGs as a pollutant. Joint motion to intervene filed 11/24/03 by the CO_2 Litigation Group, which includes the NAM.

United States v. *Duke Energy Corp. (4th Cir.)*—The NAM and other business organizations filed a brief asking the U.S. Court of Appeals for the Fourth Circuit to affirm a district court's ruling that routine maintenance, repair and replacement, without change in emissions, do not trigger the EPA's New Source Review (NSR) permit requirements. The NAM argues that NSR is only statutorily triggered, according to the Clean Air Act, when facilities are physically changed or modified to create an increase in emissions over the level approved in the original permit process. However, the EPA wants a broader reading of the act that would require manufacturers to obtain permits prior to any physical modifications, including any necessary repairs. Congressional intent, plain meaning of the statutory definition of "modification" and common sense all support the NAM's position that repairs do not constitute changes triggering a need for an NSR permit. This case is of high importance to all manufacturers as American industry would grind to a halt if it were required to scrutinize for potential NSR applicability for thousands of activities each

year. For instance, if the activity is a necessary repair or replacement project, the result could be an extended shutdown of the facility until it could be undertaken. Reversing the district court's ruling would cause a fundamental, drastic change in how industry operates. Joint amicus brief filed 10/15/04.

American Lung Assn. v. *EPA (D.C. Cir.) (consolidated with South Coast Air Quality Mgt. Dist. v. EPA)*—The NAM on 7/29/04 joined with the American Chemistry Council, the American Forest & Paper Association and the American Petroleum Institute to try to intervene in this case to support the EPA's final rule to implement the 8-Hour Ozone Phase I Implementation Rule. The Phase I rule addresses classification of areas that are in nonattainment, attainment and emission-reduction states, transition from the 1-hour to the 8-hour ozone standard, and the date on which the 1-hour standard will be revoked. Motion to intervene granted 8/19/04.

In Re Final Rule To Implement the 8-Hour Ozone National Ambient Air Quality Standard—Phase 1 (EPA)—The National Petrochemical & Refiners Association (NPRA) and the NAM submitted to the EPA 6/29/04 a Petition for Reconsideration of the final rule to implement the 8-hour ozone national ambient air quality standard (NAAQS) and the designations and classifications for the ozone standard. Industry is concerned that the timetable for certain facilities in nonattainment areas to come into compliance is too short. At least 15 regions of the country will need more time to come into compliance than is provided by the EPA.

New York v. *EPA (D.C. Cir.) (Equipment Replacement Rule case)*—The NAM is a member of the Equipment Replacement Rule Coalition, which filed a motion 11/12/03 to intervene in a suit brought by the State of New York against the EPA over the agency's 10/27/03 final rule titled "Prevention of Significant Deterioration (PSD) and Non-Attainment New Source Review (NSR): Equipment Replacement Provision of the Routine Maintenance, Repair and Replacement Exclusion." This rule governs the factors that determine whether companies must obtain EPA permits before replacing broken or deteriorating equipment at their industrial facilities. New York is challenging the rule as too lenient. The Equipment Replacement Rule Coalition, comprising various trade associations, manufacturers and utilities, generally support the EPA's new rule.

New York v. *EPA (D.C. Cir.) (New Source Review regulations)*—The NAM is one member of a coalition of associations known as the NSR Manufacturers Roundtable, which filed a motion 1/15/03 to intervene in a suit brought by NY, CT, ME, MD, MA, NH, NJ, RI and VT against the EPA's final regulation governing the procedures for companies to install stringent emission controls at their facilities under the Prevention of Significant Deterioration (PSD) and nonattainment New Source Review (NSR) provisions of the Clean Air Act. These states have challenged the legality of EPA's rule, and the NSR Manufacturers Roundtable intervened to insure that the court considers the views of manufacturers and the effects of the rule on industry. On 4/7/03, we filed a statement of issues, including (1) whether the EPA's preamble statements regarding an "actual-to-potential" methodology to determine whether a change at an existing emissions unit results in an "increase in actual emissions" conflict with the language of the regulations, other interpretations and case law, (2) whether similar preamble statements constitute an unlawful attempt to revise the regulations without notice and comment, (3) whether EPA's failure to provide that the first step in assessing if the rule applies is a determination of whether there is an increase in the maximum emissions rate of the unit involved is contrary to the Clean Air Act, and (4) whether the final rule is unlawful in that it provides that emission reductions achieved by a source that relies on the pollution control project exclusion cannot be used as netting credits or offsets.

On 7/25/03, the EPA agreed to reconsider its rule with respect to six issues raised by parties seeking reconsideration. On 9/30/03, the D.C. Circuit ordered that the court appeal be held in abeyance pending completion of EPA's reconsideration process.

The NSR Manufacturers Roundtable filed a joint opening brief with the Clean Air Implementation Project, the American Chemistry Council, the Utility Air Regulatory Group, Alabama Power Co., and the National Environmental Development Association's Clean Air Regulatory Project, on 5/11/04. The EPA's 2002 rule changes the definition of plant modifications to include virtually all changes as covered by the Clean Air Act. The first brief of the NAM and other industry petitioners challenges only this EPA action. We argue that the statutory language itself, as well as the history of its enforcement, make clear that the first step of the analysis of whether there is a change to an existing emissions unit at a stationary source is the requirement that the emitting capacity of the existing unit must be increased (i.e., that "new pollution" be created) by the change.

Question 2. You referenced a recent NAM study on "external overhead costs including regulation . . ." What is NAM's estimate of the cost of environmental-only regulations as it relates to manufacturers' labor costs?

Response. In December 2003, the NAM released a study entitled "How Structural Costs Imposed on U.S. Manufacturers Harm Workers and Threaten Competitiveness." Although the study does not specifically assign a dollar amount to labor costs as they relate to pollution abatement rules, it does cite statistics generated by the Organization for Economic Cooperation and Development (OECD) that show that the U.S. spent 1.6 percent of its GDP on pollution reduction compliance schemes, surpassed only by South Korea, at 1.7 percent of GDP, among the nine other major U.S. trading partners listed on the table. Other countries cited in the study include Japan (1.4 percent), Germany (1.5 percent), Great Britain (1 percent), Canada (1.1 percent), Mexico (0.8 percent), and France (1.4 percent).

The study further states that environmental compliance is the only regulatory area for which reliable comparative data from other countries is available. According to NAM economists, the compliance costs of environmental regulations, or pollution abatement rules, "reduces U.S. cost competitiveness by at least 3.5 percent points." A cursory geographical analysis demonstrates the relative ease with which manufacturers may be lured to nearby countries where pollution abatement is significantly less costly than in the U.S.: Canada (1.1 percent); and Mexico (0.8 percent).

Question 3. You indicated that in a highly competitive international marketplace any legislation that would have a major impact on electricity costs could disadvantage NAM member companies. On average, or by major sector, what portion of NAM member companies' annual operating costs is electricity and how does that compare with the electricity costs in the countries of NAM competitors?

Response. The NAM does not keep energy data on its membership, but instead we rely on data published by the Energy Information Administration. The EIA data indicate that electricity is the manufacturing sector's largest energy input and that industry (a category that also includes construction and agriculture) uses about 30 percent of the nation's electricity. In 2003, industry spent almost $52 billion on retail electricity, and it looks like 2004 will be almost the same. Some manufacturing sectors use electricity only for lighting and electric motors, while other sectors use electricity for process energy. The largest electricity users would be the aluminum sector, which has lost more than 30 percent of their primary aluminum production capacity since 2000 due primarily to high electricity costs and tight supplies of electricity in the Northwest. The U.S. manufacturers' historic advantage in low electricity costs compared to the EU has already almost disappeared—with these reforms to current law, electricity could be added to natural gas as structural energy cost disadvantages for manufacturing in the United States. EIA's most recent international electricity cost data is for 2001, or in a few cases 2002, before the high natural gas prices and revitalized economy began influencing domestic electricity rates.

Question 4. Should we amend the Clean Air Act to delay the existing attainment deadlines therein? If so, why?

Response. Congress should amend the Clean Air Act to establish uniformity and certainty to a piece of legislation that has deteriorated to a morass of contradictory and overlapping regulatory requirements. Since Congress adopted the CAA in 1970, and amended the law in 1990, the EPA has issued numerous regulations which different parties have litigated in the federal court system on different grounds. The Agency has reacted to this litigation onslaught, over the course of three different Administrations, by interpreting and drafting rules to comply with the numerous court decisions being handed down by federal judges from across the country. Passage of the Clear Skies Act of 2005 will pre-empt ambiguous and contradictory regulatory standards, and reduce the number of lawsuits filed pursuant to the CAA.

Question 5. Would you support a binding global treaty that required all nations to reduce their mercury use and emissions?

Response. The NAM does not support ratification of any global treaty that would bind the U.S. to reduce mercury emissions. The most recent debate surrounding international emissions abatement targets has centered on the Kyoto Protocol, which the U.S. Senate overwhelmingly rejected by a vote of 95 to zero in July 1997. International environmental treaties that specifically target air emissions often do not require participation by underdeveloped countries, which does nothing to reduce the global inventory of a given, targeted pollutant. Also, the soundness of the science on which policy decisions are made must be clearly established before national governments, and international non-governmental organizations (NGOs), impose regulatory mandates that may ultimately stifle job creation and technological advancement without accomplishing clear environmental objectives. The NAM has

formally requested the EPA to participate in an interagency panel to thoroughly review the most recent science regarding elemental mercury, methylmercury and the net health benefits of eating fish. (See NAM comments to the mercury NODA filed with the EPA on January 3, 2005).

Question 6. Mr. Parady, your company's parent company Oriental Chemical Industries of the Republic of Korea operates in a country that is a party to the Kyoto Protocol. Though they are not an Annex One company with specific reduction requirements, Korea is actively participating in a binding global process to reduce greenhouse gas emissions. Do you think the United States should be part of such a global process?

Response. The NAM is strongly opposed to multilateral mandatory carbon quotas such as the Kyoto Protocol or unilateral carbon quotas such as the Climate Stewardship Act being pursued by Senators McCain and Lieberman. I understand that the United States is already heavily involved in bilateral discussions with a number of nations to increase the quality of the climate data and the efficiency of fossil fuel combustion. I am not aware that Korea has agreed to any binding reductions of its own greenhouse gas emissions.

Question 7. How many NAM member companies would or could opt-in to the relief of current hazardous air pollutant requirements provided by S. 131?

Response. The NAM membership includes a number of electric generators (utilities) as well as many companies that operate large combined heat and power units. The EIA data indicate that in 2004, industrial combined heat and power units produced a total of 128 billion kilowatts out of the U.S. net electricity generation total of 3,314 billion kilowatts. I do not know how much of this CHP produced electricity is from power plants large enough to meet the threshold in the bill, or how many facilities would be able to make the investments to meet the pollution reduction thresholds provided in the bill.

STATEMENT OF THE AMERICAN FARM BUREAU FEDERATION

On behalf of hundreds of thousands of farming and ranching members, the American Farm Bureau Federation respectfully submits this testimony to the Subcommittee as it considers Clear Skies legislation.

The American Farm Bureau Federation supports the Clear Skies initiative as a viable, proactive plan for much-needed reform of the Clean Air Act. Most significantly, our support for Clear Skies is based on farmers' and ranchers' growing concerns about the increasing demands on natural gas, as well as our opposition to any attempt to regulate carbon as a pollutant.

Natural gas is considered by many to be the most important energy source for production agriculture and for the manufacturers who supply us with products and inputs that keep our farms and ranches running. It is relied on to produce inputs including nitrogen fertilizers, farm chemicals and, in many areas, electricity for lighting, heating, irrigation, and grain drying. Based on USDA statistics, Farm Bureau estimates that increased energy costs reflected in the price of inputs during the 2003 and 2004 growing seasons added over $6 billion to the cost of production for food and fiber in the United States. Plainly put, the increasing price of natural gas is the single most significant factor adding to energy costs for American farmers and ranchers.

Over the last three years, the United States has experienced prolonged natural gas price volatility which has led to a significant overall price increase. The current natural gas situation is a product of under-supply and over-demand. Existing burdensome, out-of-date air quality regulations exert constant pressure on natural gas supplies by artificially driving up demand and encouraging "fuel switching" from other energy sources by manufacturers and power suppliers.

The challenges facing the fertilizer industry perfectly demonstrate how critical a stable, affordable natural gas supply is to domestic food and fiber production. Natural gas is the primary feedstock used to produce virtually all commercial nitrogen fertilizers in the United States. For example, the price of natural gas accounts for 90 percent of a farmer's total cost of anhydrous ammonia fertilizer. According to The Fertilizer Institute, this nitrogen-based fertilizer cost producers about $100 per ton during the 2000 planting season. By the 2003 and 2004 growing seasons, however, farmers faced anhydrous ammonia prices of $350 or more per ton—over a three-fold increase.

Equally alarming is the fact that over the last four years the United States has permanently lost at least 25 percent of our domestic production capacity of fertilizers. An additional 20 percent of production is temporarily shut down due to high

natural gas prices. Currently, U.S. sources are domestically supplying just over half of the fertilizer once produced for American agriculture.

The unavoidable fact facing U.S. farmers and ranchers is that price volatility of natural gas threatens the very existence of what remains of our domestic fertilizer industry. Loosing that domestic production would cause America to be dependant yet again on foreign sources for a vital economic need—in this case, fertilizers.

Additionally, Farm Bureau supports Clear Skies as much for what it does not do as for what it does do. In contrast to other reform proposals, the Clean Air Act initiatives will drastically improve air quality without the need to federally regulate carbon as a pollutant.

According to EPA estimates, Clear Skies will help reduce air pollution faster, cheaper and sooner than the current regulatory structure. Clear Skies will reduce emissions of sulfur dioxide, nitrogen oxides and mercury by as much as 70 percent without choking our economy with another layer of regulation for carbon, or exacerbating the demand on natural gas.

In conclusion, we believe that the Clear Skies initiative complements our support for a comprehensive energy policy and will help achieve the objectives of our grassroots members. American Farm Bureau clearly supports updating and reforming current federal air quality laws to allow for the following:

- Use of new, cleaner energy production technologies;
- Stabilizing the demand for natural gas;
- Reducing dependence on foreign energy sources;
- And, improving air quality without sacrificing economic productivity.

American Farm Bureau Federation appreciates the opportunity to provide the Subcommittee with input and for your consideration of our position.

STATEMENT OF THE AMERICAN PUBLIC POWER ASSOCIATION

We appreciate the opportunity to submit this statement for the record related to the Committee's hearing on the Clear Skies Act, S. 131. The American Public Power Association (APPA)[1] supports sensible multi-emission control legislation, as represented by the Clear Skies Act, S. 131. The passage of S. 131 will achieve a 70 percent reduction in three power plant emissions, improve air quality more quickly than current law, and provide regulatory and environmental certainty while promoting the use of more cost-effective, pollution control strategies.

The emissions reductions proposed in S. 131 are significant and will come with a cost to electric utility generators and the consumers they serve. However, APPA recognizes the importance of protecting and improving air quality and believes that the Clear Skies Act provides a reasonable means to achieving this important goal.

While the Clean Air Act has resulted in notable improvements in air quality, additional improvements are needed to achieve further air quality objectives in a more timely and cost-effective manner. There is widespread agreement that the existing Act is complex, duplicative and uncertain—in particular as it relates to controlling emissions from the electric utility sector. For that reason APPA supports an integrated multi-pollutant approach that employs market-based trading mechanisms to achieve reductions of nitrogen oxides (NOx), sulfur dioxide (SO_2) and mercury (Hg). Such an approach is embodied in S. 131.

S. 131 would build upon the successful aspects of the current acid rain program, and in doing so, would result in the reduction of SO_2 emissions by 73 percent (from 11.2 to 3 million tons), NOx emissions by 67 percent (from 5.1 to 1.7 million tons) and mercury emissions by 69 percent (from 48 to 15 tons) from 2000 levels. If designed and implemented correctly, the regulatory certainty, utility flexibility, and appropriate reforms afforded by such an approach will yield equal or superior environmental protection in a cost-effective manner.

When the Clear Skies Initiative and subsequently proposed Clear Skies Act (H.R. 5266 and S. 2815) were introduced in 2002, APPA presented a package of technical comments and recommendations to congressional and Administration staff. Our recommendations included three "core" issues: (1) the level of the phase I mercury cap; (2) the phased-in auction; and (3) the allowances penalty that would be imposed in

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[1] APPA is the national service organization representing the interests of the more than 2,000 state, municipal and other local government-owned electric utilities in the United States. Publicly owned electric utilities are among the most diverse of the three electric utility sectors, representing utilities in small, medium and large communities in 49 states, all but Hawaii. Seventy-five percent of public power utilities are located in cities with populations of 10,000 or less. Overall, public power utilities provide approximately 16.6 percent of all kilowatt-hour sales to ultimate consumers in the United States.

the event that the U.S. Environmental Protection Agency (EPA) failed to implement the program. Many of our comments and recommendations were accepted and incorporated in the subsequent version introduced in early 2003 (S. 485 and H.R. 999). We appreciate that those issues that were first addressed to our satisfaction in 2003 and were maintained in the current version, S. 131.

The proposed Clear Skies Act also comes at a time that will benefit states and localities facing CAA criteria pollutant attainment problems. Affected communities and states have been looking for effective ways to achieve emissions reductions to meet the newest and more stringent CAA ambient air quality standards for ground level ozone and for fine particles. Currently, more than 300 counties fail to meet one or more of these ambient standards. Clear Skies also addresses declining visibility and regional haze improvement in many of our nation's national parks and wilderness areas. Clear Skies, through a combination of certainty and flexibility, will help enable these affected communities, states, and regions achieve significant improvements in air quality and meet national air quality goals. In contrast, the current CAA regime of complex and overlapping regulations, which often is characterized by conflict, litigation, and delay, will not provide the level of reductions necessary to reduce emissions in affected regions, nor the certainty that is needed. Regulatory certainty is needed in our sector in order to continue to provide the low-cost electricity that has underpinned our nation's economic development and allowed us to address crucial environmental issues.

An area of growing concern for the electricity sector in general and the public power community specifically, is how Clear Skies may impact the planning and construction of new electricity generating facilities, including new coal-fired power plants to meet increasing energy demands. An important feature of S. 131 is its requirement to set permanent caps on emissions from the power generation sector. The cap and trade system will give power suppliers a defined regulatory platform upon which to make critical decisions including: siting, fuel choice, and generation technology decisions. S. 131 will help power suppliers site and construct new generation in locations where they can deliver the best value to local consumers while protecting and improving air quality.

The bill's benefits to the environment are very significant and enduring. S. 131 provides absolute environmental certainty because once enacted into law, the emissions reductions are statutorily mandated. Emissions caps guaranteeing that power plants will not exceed the total allotted levels for each air pollutant will be solidified in law. These caps and compliance deadlines, also described in statute, cannot be disputed or legally challenged in court as they are under the current maze of regulations.

As S. 131 proceeds through committee mark-up, floor consideration and final conference review, it is important that other considerations be recognized and addressed. We would greatly appreciate Members' attention to the following issues:

PLANNING FOR NEW ELECTRICITY GENERATING UNITS, INCLUDING COAL-FIRED UNITS

As previously stated, there are many public power systems serving towns and cities with growing populations and local economies, and as a result, increasing energy demands. These utilities and communities will need to plan and build new energy resources, including the construction of new coal-fired units, to meet this growing demand. These new coal units will be cleaner and more efficient than older units. It is imperative that the allocation methodologies that determine and allot allowances for existing and new units be done on a fair basis. We will be reviewing the new source set-aside sections to determine if the approach is done on a basis that is fair and not detrimental to our members planning new, clean units. We also believe that the expected improvement in visibility impacts in Class I areas due to the significant reductions in SO_2 and NOx with S. 131 should be reflected in siting requirements for new clean coal units.

SMALL UNIT CONSIDERATIONS

In developing Clean Air Act reform legislation, it is important that Congress continue to recognize the role played by small (25MW or less) generating units in public power communities. Because they are usually located inside the utility's distribution service territory, these small units often provide relief from transmission congestion and increase local system reliability. Appropriately, multi-pollutant control legislation should continue to exempt such small units from most of the Clear Skies emission reduction programs.

With respect to controlling mercury, we ask that Congress take into consideration that many units operated by municipally owned electric utilities are small, including many that are no larger than 50MW. There are many municipal utilities where

there is only one boiler of 50MW size at the utility with no ability to "bubble" as larger facilities with multiple units do in order to reduce regulatory costs. This is unique to public power. The capital costs associated with installation of controls on these smaller units are disproportionately high. Often, mercury removal efficiencies are unrelated to plant size. Smaller emitting plants will remove far fewer pounds of mercury through the use of control technology from larger plants. APPA wrote extensive comments regarding these concerns in response to EPA's Proposed National Emission Standards for Hazardous Air Pollutants. In these comments we described the unique difficulties municipal utilities with small generating units face with respect to control technology retrofits. Among these issues, we described how many municipally-owned generation facilities are located in the heart of small towns. These plants often have substantial space constraints that inhibit significant new construction projects and may make new control technology installations infeasible. We also stated that for such small units, the technology to control mercury is not currently available. In fact, it is very unclear at this point when control technologies will ever be developed that will enable small units (<100MW) to make appropriate mercury emission reductions. We encourage your consideration of possible alternative compliance options for small (100MW or less) units. (Comments are found on APPA's website:
http://appanet.org/pressroom/
index.cfm?ItemNumber=10561&sn.ItemNumber=12041#QL3)

MERCURY MONITORING

While S. 131 has improved in the area of mercury monitoring, we urge the Committee to acknowledge that smaller emitters need to have other options other than Continuous Emissions Monitoring (CEMS) for monitoring mercury. Our experience shows that CEMS work sensibly for SO_2 and NOx, but not yet for mercury. Our concern is primarily focused on the lack of availability for CEMS systems and the cost (capitol expenditures and annual operating expenses) of such systems. Installing a CEMS system on a 25–100MW unit would cost approximately the same as on a 500–1000MW unit. For some municipal utilities, the cost of monitoring mercury might exceed the cost of controlling it. The initial installation costs, along with the extensive operating and maintenance expenses, become an overwhelming and impossible burden on the 25–100MW facilities. We urge Members to clarify that smaller units (25–100MW) should be allowed by the EPA in rulemaking to take advantage of alternative monitoring options to determine mercury emission.

Related to this small unit/system concern is a provision in the bill that would exclude a category of coal-fired units from S. 131's mercury cap-and-trade program because of financial burdens overwhelming a unit's ability to participate. APPA supports a de minimis exclusion because, as we discussed above, most of these very low emitting units are too small to allow economical retrofitting of more emissions controls. Often these utilities physically do not have the space at the utility for a second coal pile or to accommodate retrofitting. At the very least, we urge the Committee to consider the option of using creative alternative mercury reduction strategies for this unique category of low emitting facilities

CONCLUSION

APPA supports the Clear Skies proposal largely because it provides regulatory certainty, flexibility and reforms while ensuring improvements in air quality through statutorily dictated emissions limits. We also strongly believe that the Clear Skies Act, without the auction provision and with some additional consideration of the mercury Phase I cap, will achieve significant emission reductions in a cost-effective manner, while assuring that the nation's electricity supply is reliable, secure, well balanced and reasonably priced. For these reasons, APPA supports passage of multi-pollutant control legislation based on the Clear Skies Act framework and we urge Congress to make passage of the bill a high priority.

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