

# Darkening Skies

**Trends**

**Toward**

**Increasing**

**Power Plant**

**Emissions**



## **The State PIRGs**

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# Executive Summary

**S**mog and soot in our air, acid rain destroying our lakes and forests, mercury contamination in our fish and global warming threatening our future – all of these are among the serious public health and environmental problems caused by pollution from the electric power sector. Due to its over-reliance on an aging fleet of uncontrolled coal-burning power plants, the U.S. electric power industry emits billions of tons of pollution each year, much of which could be eliminated through increased use of modern pollution control technologies, a shift to cleaner burning fuels, or increased investment in renewable energy sources and energy efficiency.

Nearly one month ago on February 14, 2002, the Administration unveiled its long-awaited principles for reducing pollution from the electricity sector. This proposal was met by cheers from industry lobbyists and by universal dismay on the part of clean air advocates.<sup>1</sup> While President Bush dubbed his plan the “Clear Skies Initiative,” if passed into law this proposal would increase the amount of smog, soot, carbon dioxide and toxic mercury pollution that could be emitted by power plant smokestacks relative to the pollution reductions that could be achieved under the current Clean Air Act.

The thrust of the Bush plan is to replace current Clean Air Act programs with national caps on electric sector emissions of nitrogen oxides (NOx), sulfur dioxide (SO<sub>2</sub>) and mercury, allowing sources to meet these obligations either by reducing emissions or by purchasing “credits” from other sources that reduce emissions more deeply than required. The President’s plan contains no mandate to reduce emissions of carbon dioxide (CO<sub>2</sub>), the leading cause of global warming, instead relying solely on voluntary action by the polluters.

The findings in this report illustrate some of the major shortcomings of the President’s “Clear Skies Initiative.” In particular, power plant pollution data trends show that mandatory emission limits on CO<sub>2</sub> are essential to any effort to address global warming. Moreover, the data illustrates that for sulfur and nitrogen pollution, which disproportionately impacts the health of people living near the plants, pollution caps alone will not protect the majority of communities from increasing power plant emissions. Rather, caps must work hand-in-hand with existing and new measures to ensure that every plant is meeting modern emission standards.

This report analyzes six years of emissions data (1995-2000) for NO<sub>x</sub>, SO<sub>2</sub> and CO<sub>2</sub> from the 500 most polluting power plants in the nation, which is available from the EPA Acid Rain Database. Such data for mercury emissions does not exist. Specifically, we found that:

- In the absence of mandatory CO<sub>2</sub> emission limits, CO<sub>2</sub> emissions are rapidly rising.
- From 1995 to 2000, power plant CO<sub>2</sub> emissions from the 500 most polluting power plants in the nation increased by 13.5 percent, a total increase in annual emissions of 277 million tons.
- Texas saw a net CO<sub>2</sub> increase from its dirty power plants of 37 million tons per year, a far bigger increase than any other state in the nation.
- Twelve states, “the dirty dozen,” actually had a net CO<sub>2</sub> emissions increase of 10 million tons per year or more between 1995 and 2000. These states are, in order of largest to smallest CO<sub>2</sub> increases: Texas, Minnesota, Indiana, Alabama, Arizona, South Carolina, North Carolina, Illinois, Virginia, California, West Virginia and Georgia.
- One power plant alone, the Sherburne County plant in Minnesota, increased its output of CO<sub>2</sub> by a whopping 10 million tons per year, by far the biggest jump of any single plant in the nation.

## **LESSON** A mandatory limit on carbon emissions is necessary if we are to make real progress toward stabilizing the climate. We cannot continue to rely on voluntary measures.

Although the 1990 Clean Air Act amendments placed a national cap on SO<sub>2</sub> from power plants, most plants’ emissions of sulfur dioxide continued to rise, exposing nearby communities to more fine particle “soot.”

- From 1995 to 2000, over which time the national SO<sub>2</sub> cap took effect, 300 of the dirtiest 500 power plants increased their SO<sub>2</sub> emissions, even while the cap resulted in an overall decrease of about 5 percent. This means that residents of 300

local communities are being exposed to higher levels of soot from nearby facilities.

- There were seven states that had a net SO<sub>2</sub> increase of 20,000 tons or more over this six-year period. These “sooty seven” states are, from largest to smallest emission increases: North Carolina, New York, Mississippi, Georgia, Washington, South Carolina and Maryland.
- One plant, the EC Gaston plant in Alabama, increased its SO<sub>2</sub> emissions by 62,000 tons per year, a bigger jump than any other plant in the nation. This plant is just a few miles from Birmingham, Alabama, which is likely to be designated a non-attainment area for fine particle soot under the 1997 federal health standard based on data from monitoring in 1999 and 2000.
- The Clean Air Act’s New Source Review (NSR) program, when enforced, provides an important tool for ensuring that communities near these plants are protected. Of the 50 plants with highest SO<sub>2</sub> increases during this timeframe, fourteen were the subject of the U.S. EPA’s NSR enforcement initiative, including the Gaston plant described above.

**LESSON** **Pollution caps are not designed to address localized pollution problems and therefore must work hand-in-hand with other emission control programs, such as New Source Review, which ensure that older plants eventually meet modern emission standards. Moreover, the U.S. EPA must tighten enforcement of these emission control programs.**

Despite national and regional NO<sub>x</sub> reduction initiatives implemented during the 1990s, more power plants increased their NO<sub>x</sub> pollution between 1995 and 2000 than decreased their pollution. This means that many communities near power plants are being exposed to higher levels of the soot and smog formed from rising NO<sub>x</sub> emissions at local plants.

- 263 of the dirtiest 500 power plants increased their NO<sub>x</sub> emissions, even while collectively these 500 plants decreased their total NO<sub>x</sub> emissions by 877,000 tons per year.
- There were four states that each had a net NO<sub>x</sub> emission increase of 10,000 tons per year or more. These “filthy four” states are, in order of largest to smallest net increase in NO<sub>x</sub> emissions: Arizona, Mississippi, Louisiana, and Georgia.
- Three power plants increased their annual NO<sub>x</sub> emissions by more than 10,000 tons per year. These plants are the Jack Watson plant in Mississippi, the EC Gaston plant in Alabama and the Intermountain plant in Utah. Two of these plants, Jack Watson and EC Gaston, are in or adjacent to areas expected to be in non-attainment with the federal 8-hour health standard for ground-level ozone or “smog” based on monitoring data from 1998-2000.
- The Clean Air Act’s New Source Review (NSR) program, when enforced, provides an important tool for ensuring that communities near these plants are protected. Of the 50 plants with the highest NO<sub>x</sub> increases between 1995 and 2000, eight were the subject of the U.S. EPA’s NSR enforcement initiative, including the Jack Watson and EC Gaston plants.

**LESSON** **Without better enforcement of the Clean Air Act’s existing programs, the status quo will allow NO<sub>x</sub> emissions to increase, exposing more communities located near power plants to smog and soot. A national NO<sub>x</sub> cap alone will not protect the health of these communities. Rather, a national NO<sub>x</sub> cap should be accompanied by policies to ensure that every plant installs modern pollution control equipment.**

The President’s proposal stands in sharp contrast to the leading Congressional proposals to address power plant pollution. Key differences between the Congressional approaches and the Administration’s proposal include:

- The Clean Power Act (S. 556) and the Clean Smokestacks Act (H.R. 1256) would establish caps for NO<sub>x</sub> and SO<sub>2</sub> that work with important existing clean air programs rather than eliminating Clean Air Act programs, including New Source Review, as proposed by the Bush administration.
- S. 556 and H.R. 1256 call for plant-specific controls for NO<sub>x</sub>, SO<sub>2</sub> and mercury to ensure that nearby plants do not threaten human health and to prevent toxic “hotspots” from developing.
- The caps and plant-specific controls under S. 556 and H.R. 1256 are far more stringent and would take effect more than a decade earlier than would the pollution reductions envisioned in the Bush plan.
- S. 556 and H.R. 1256 establish a mandatory cap for carbon dioxide at 1990 emission levels.

This report’s findings, as detailed above, illustrate the importance of maintaining these aspects of both bills.

### A. Fine Particle Soot Causes Heart Attacks, Asthma Attacks, Premature Death

Power plants emit sulfur dioxide (SO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>), which are converted in the atmosphere into fine particle aerosols. When inhaled, these aerosols are extremely hazardous to our health. In the last decade, mountains of research have linked these particles to dozens of health problems, including asthma attacks, heart attacks, hospitalization for respiratory and cardiovascular disease, chronic bronchitis, and premature mortality.

These fine particle pollutants are especially harmful to children, the elderly, and people with preexisting lung or heart problems:

- One study found that babies in cities with high levels of particulate pollution had a 26 percent increased risk for Sudden Infant Death Syndrome (SIDS.)<sup>ii</sup>
- Particles can trigger heart attacks in people with heart disease by causing changes in heart rhythms.<sup>iii</sup>
- Studies by the Harvard School of Public Health, the Health Effects Institute and others have confirmed that tens of thousands of people each year die prematurely due to fine particle pollution.<sup>iv</sup>
- A 2000 study estimated that 30,000 people die prematurely each year due to particles from power plants. Of these deaths, an estimated 18,000 could be prevented if power plants were required to install modern pollution controls.<sup>v</sup>

### B. Ozone Smog

More than 141 million Americans live in areas where ground-level ozone or “smog” levels are high enough to cause serious health damage.<sup>vi</sup> Like fine-particle soot, smog damages our respiratory systems and can trigger asthma attacks, sending hundreds of thousands of people to the emergency room each year.

Smog is formed when nitrogen oxides (NO<sub>x</sub>) from power plants and cars mix with other chemicals in the air in the presence of sunlight. Power plants are the largest industrial source of NO<sub>x</sub> in the nation.

Ozone reduces lung function for anyone chronically exposed, including healthy adults who exercise outdoors in the summertime. For vulnerable populations, including children, the elderly, and people with asthma or other respiratory disease, high smog days often means staying

indoors, missing work, or missing school, and in the worst cases, hospitalization. Smog triggers an estimated 6 million asthma attacks per year and sends 150,000 Americans to hospital emergency rooms just in the Eastern half of the nation.<sup>vii</sup>

### C. Mercury Poisoning

Mercury is a toxic heavy metal, which, when ingested, can cause serious neurological damage, particularly to fetuses, infants, and children. People are exposed to mercury when they eat fish that have been contaminated by methylmercury, the organic and most dangerous form of mercury. The neurotoxic effects of low-level mercury exposure are similar to the effects of lead toxicity in children and include delayed development and cognitive deficits, language difficulties, and problems with motor function, attention and memory.

Most at risk are developing fetuses exposed to mercury in the womb as well as children and infants whose nervous systems are still developing. The National Academy of Sciences issued an alarming report in July of 2000, concluding that more than 60,000 U.S. children are born each year with a risk of nervous system damage from mercury exposure in the womb.<sup>viii</sup>

Health agencies in 41 states have issued fish consumption advisories for at least one species of fish because of mercury pollution in local waterways. Because mercury is bioaccumulative, moving up the food chain as fish are consumed, large predator fish such as largemouth bass, walleye, shark, tuna and swordfish have higher levels of mercury than species lower in the food chain.<sup>ix</sup>

National estimates for 1994-95 concluded that coal and oil burning power plants were the largest stationary sources of mercury, responsible for 32.8 percent of total mercury emissions.<sup>x</sup> EPA has yet to set any standards for mercury emissions, so power plant operators can emit mercury without limits, unlike every other source of mercury in the U.S.

#### **D. Global Warming:**

Perhaps the most serious environmental challenge we face in the coming decade and century is global warming. The world's most respected climate scientists have concluded that our planet is warming as a result of manmade pollution. They also conclude that unless we act quickly to reverse this trend, we will face catastrophic changes in weather systems and our climate across the globe.

The most authoritative source of scientific information has been the United Nation's International Panel on Climate Change (IPCC), which came out with a three-part series of reports last year concluding that:<sup>xi</sup>

- The Earth warmed more in the 20th century than in any century in the past 1000 years;
- The Earth could warm by another 2.5-10.4 degrees Fahrenheit over the course of this century, a warming rate not seen in the last 10,000 years;
- The most likely cause of the warming is the emission of greenhouse gases from the burning of fossil fuels.

The consequences of global warming would include:

- Sea level rise of up to three feet by 2100;
- Unprecedented heat waves;
- Drought;
- Increasingly intense tropical storms;
- Floods;
- Soil erosion;
- Decreased crop yields;
- Decreased water availability;
- Spread of infectious diseases;
- Loss of coastline.

Power plants in the U.S. are responsible for 40 percent of all emissions of carbon dioxide (CO<sub>2</sub>), the leading cause of global warming. Burning coal results in more CO<sub>2</sub> emissions than any other method of generating electricity, yet we continue to rely on coal for more than half of our electricity generation.

#### **E. Acid Rain**

The same sulfur and nitrogen emissions that cause soot and smog formation also cause acid rain. These pollutants combine with water to form acids called sulfates and nitrates. These acids fall to earth in rain, snow and fog, destroying sensitive ecosystems. In many eastern states, the rain is often as acidic as orange juice.<sup>xii</sup>

Aquatic life is extremely vulnerable to the effects of acid rain. Twenty-five percent of lakes in the Adirondack region of New York cannot support any fish at all due to acidity.<sup>xiii</sup> Similarly, 30 percent of trout streams in Virginia are either marginal or unsuitable for brook trout.<sup>xiv</sup> Water bodies as far south as Georgia and as far west as Indiana are impacted by acid rain.

Forests also are severely affected by acid deposition. In the Adirondacks, more than half of the red spruce trees have died since the 1960s, and the red spruce in the Southern Appalachians are showing signs of damage as well.<sup>xv</sup> New England's famous sugar maples are in decline due to the loss of nutrients in the soil caused by acid rain.

The 1990 Acid Rain program of the Clean Air Act was designed to protect lakes and forests from the impacts of acid rain. Unfortunately, recent studies show that power plants will need to reduce their emissions of sulfur and nitrogen by as much as 80 percent to allow these lakes and forests to recover.<sup>xvi</sup>

## Carbon Dioxide Emissions on the Rise

In order to curb global warming, we must stabilize concentrations of greenhouse gases, such as carbon dioxide (CO<sub>2</sub>), in our atmosphere, and we must begin immediately. Scientists have warned that, even in order to stabilize CO<sub>2</sub> concentrations at a level twice as high as pre-industrial levels, global emissions must reverse course by 2013, only 11 years from today.<sup>xvii</sup>

Yet, U.S. CO<sub>2</sub> emissions continue to rise at an alarming rate. The Energy Information Administration reported in November 2001 that U.S. CO<sub>2</sub> emissions in 2000 were 17 percent higher in 2000 than in 1990.<sup>xviii</sup> Electric utility emissions grew at an even higher rate, jumping 26.5 percent from 1990 to 2000.<sup>xix</sup>

Unfortunately, the Administration has responded to this urgent need with more delay. The President's February 14, 2002 climate change plan announced a set of voluntary goals that would simply reduce the rate at which our CO<sub>2</sub> emissions increase, and at roughly the same slowing of emissions growth that took place over the last two decades. The response from the *New York Times* was typical of the response from opinion leaders across the nation:

**The obvious conclusion to be drawn from President Bush's latest global warming strategy, unveiled this week, is that he does not regard warming as a problem. There seems no other way to interpret a policy that would actually increase the gases responsible for heating the earth's atmosphere... The White House described Mr. Bush's strategy as aggressive and bold. The only thing bold about it are accounting tactics worthy of Enron that are designed to make an increase in emissions look like a decrease.** <sup>xx</sup>

Each power plant that must report emissions to the national acid rain database must report its CO<sub>2</sub> emissions. Therefore, the EPA Acid Rain database includes CO<sub>2</sub> emissions for each power plant from 1995 to 2000.<sup>xxi</sup> Overall, this set of power plants increased emissions by 200 million tons (9 percent) in just six years. For the 500 most polluting facilities, CO<sub>2</sub> emissions grew from 2.05 billion tons in 1995 to 2.36 billion tons in 2000 (13.5%).

In some states, the trends are even worse. Texas increased its CO<sub>2</sub> emissions by 37 million tons per year, while another 11 states each increased their CO<sub>2</sub> emissions by more than 10 million tons per year. See *Table 1 below*.

The single plant with the greatest increase in CO<sub>2</sub> emissions between 1995 and 2000 was the Sherburne County plant in Minnesota, which alone increased its CO<sub>2</sub> emissions by 10 million tons. *Table 2 (opposite)* lists the 50 plants with the largest increases in emissions between 1995 and 2000.

Analyses show that we can reverse this trend toward ever-higher CO<sub>2</sub> emissions while also lowering energy costs for consumers. For example, the Department of Energy's Interlaboratory Working Group on Energy-Efficient and Clean Energy Technologies released a report (the "5-Lab Study") concluding that we can achieve a 47 percent reduction in CO<sub>2</sub> emissions from power plants by the year 2020, while lowering the nation's energy bill by \$124 billion per year, compared to the costs of energy in 2020 if we do nothing.<sup>xxii</sup> The Energy Information Administration's "Analysis of Strategies for Reducing Multiple Emissions from Electric Power Plants with Advanced Technology Scenarios," released

**Table 1: Dirty Dozen States With Highest Net CO<sub>2</sub> Increases, 1995-2000 (tons)**

State	1995 CO <sub>2</sub>	1996 CO <sub>2</sub>	1997 CO <sub>2</sub>	1998 CO <sub>2</sub>	1999 CO <sub>2</sub>	2000 CO <sub>2</sub>	Total Increase
TX	170,080,256	193,413,618	198,487,614	207,675,147	212,344,231	211,999,456	37,251,444*
MN	17,008,404	33,830,167	35,403,263	35,853,952	34,343,448	37,664,513	20,656,109
IN	123,103,519	128,993,343	136,134,165	136,939,068	138,132,861	138,763,321	15,659,802
AL	75,079,806	79,063,524	79,063,521	80,114,782	83,137,401	87,604,462	12,524,656
AZ	36,334,807	35,688,112	39,524,262	43,043,183	44,917,115	48,049,782	11,714,975
SC	27,486,242	31,811,591	33,269,909	35,543,030	37,999,860	40,711,160	11,527,906*
NC	61,818,596	70,601,189	75,424,960	73,018,913	72,500,794	73,292,479	11,473,883
IL	82,410,953	84,777,456	91,974,775	92,076,299	89,209,272	93,810,991	11,319,749*
VA	28,781,346	32,389,245	34,742,375	37,781,788	38,225,645	39,471,631	10,690,285
CA	14,110,119	11,388,694	12,422,288	12,886,851	15,728,415	24,740,676	10,556,415*
WV	80,950,713	85,159,095	91,092,513	92,620,057	93,737,299	91,372,550	10,421,837
GA	72,541,533	70,653,268	75,379,251	76,121,675	77,935,560	82,566,859	10,025,326

\* For TX, SC, IL and CA, the total state increase noted in the right hand column is lower than the difference between the 1995 and 2000 columns because several plants did not have CO<sub>2</sub> data for the year 1995. For those plants, we compared the 2000 emissions to the 1996 or 1997 emissions, and the total increase column is a subtotal of the plant increases for each state.

in October 2001, found that a mandatory CO<sub>2</sub> emission cap on the electric sector requiring a return to 1990 emission levels by 2007, coupled with the policies analyzed in the 5-Lab Study, would cut Americans' electricity bills by \$36 billion annually starting in 2020.

The Clean Power Act and the Clean Smokestacks Act would each set a mandatory cap on power plant CO<sub>2</sub> at 1990 levels, or roughly 1.914 million tons of CO<sub>2</sub>. This policy is warranted given the large increases we have seen over the last decade while relying on voluntary industry actions.

**Table 2: 50 Power Plants with Largest Increases in CO<sub>2</sub> Emissions, 1995-2000 (tons)**

State	Plant Name	1995 CO <sub>2</sub>	1996 CO <sub>2</sub>	1997 CO <sub>2</sub>	1998 CO <sub>2</sub>	1999 CO <sub>2</sub>	2000 CO <sub>2</sub>	Total Increase
1. Minnesota	Sherburne County	7,494,525	16,363,805	16,837,989	16,564,341	15,864,260	17,679,632	10,185,107
2 Virginia	Clover	1,669,691	5,046,733	5,501,619	6,894,488	7,188,660	7,615,277	5,945,586
3 Alabama	E C Gaston	9,285,950	11,413,392	11,413,392	12,609,741	13,010,925	13,811,099	4,525,149
4 Alabama	James H Miller Jr	18,073,241	21,214,722	21,214,721	20,953,699	21,365,768	22,337,061	4,263,820
5 Pennsylvania	Bruce Mansfield	11,818,383	3,313,022	14,311,790	14,960,050	13,576,930	16,047,349	4,228,966
6 Arizona	Navajo	15,964,166	14,341,710	17,156,377	19,800,996	19,499,180	20,137,722	4,173,556
7 Florida	Stanton Energy	2,645,121	4,461,627	6,420,602	5,928,290	6,083,921	6,718,589	4,073,468
8 Texas	Monticello	10,916,304	15,108,938	16,340,889	15,672,988	16,184,141	14,960,318	4,044,014
9 West Virginia	John E Amos	11,256,524	15,653,553	16,272,570	15,849,703	18,017,179	15,289,449	4,032,925
10 Texas	Big Brown	6,820,531	7,783,463	7,827,732	7,635,131	7,850,243	10,834,508	4,013,977
11 Texas	Cedar Bayou	892,334	4,021,269	4,334,699	4,218,978	4,282,200	4,836,827	3,944,493
12 S.Carolina	Winyah	4,609,621	5,873,908	6,856,728	7,147,039	8,389,202	8,447,635	3,838,014
13 Louisiana	Big Cajun	10,339,156	11,607,737	12,327,289	12,693,110	13,183,144	14,124,989	3,785,833
14 Texas	Welsh	9,412,130	11,365,865	12,285,844	12,371,975	12,695,086	13,121,748	3,709,618
15 Texas	Coleto Creek	1,108,403	4,973,419	3,828,119	4,491,076	4,720,563	4,791,472	3,683,069
16 Indiana	Warrick	2,584,160	4,429,072	6,031,805	5,657,846	6,181,321	6,154,590	3,570,430
17 Georgia	Yates	3,214,223	3,911,146	4,659,475	5,344,568	5,896,638	6,736,643	3,522,420
18 Illinois	Kincaid	2,918,670	4,290,447	4,162,423	5,058,023	5,665,024	6,437,581	3,518,911
19 Minnesota	Allen S King	337,290	3,626,468	3,822,028	2,783,991	3,465,485	3,800,539	3,463,249
20 Washington	Centralia	6,946,854	9,960,211	8,846,268	11,402,964	10,645,221	10,345,031	3,398,177
21 Indiana	Wabash River	2,352,261	9,143,036	6,889,443	5,699,948	4,911,992	5,531,139	3,178,878
22 Kentucky	Mill Creek	8,100,965	9,541,622	9,078,841	9,232,003	9,904,727	11,068,921	2,967,956
23 Indiana	Merom	5,903,197	8,120,859	8,188,881	8,393,394	8,474,637	8,615,208	2,712,011
24 Minnesota	Riverside	224,480	2,372,023	2,591,266	3,104,748	2,744,689	2,874,901	2,650,421
25 S. Carolina	Cross	6,121,414	7,373,774	6,992,030	7,647,547	7,405,600	8,756,646	2,635,232
26 California	Pittsburg	1,758,578	1,723,476	2,383,037	3,008,883	2,261,328	4,288,462	2,529,884
27 New York	Northport	3,946,552	3,908,333	3,995,685	4,535,011	7,322,022	6,468,963	2,522,411
28 Georgia	Hammond	2,934,826	2,978,460	3,675,158	3,303,202	4,378,698	5,456,480	2,521,654
29 Arizona	Coronado	4,664,519	4,691,427	4,788,183	5,391,429	6,096,634	7,113,186	2,448,667
30 Ohio	Muskingum River	5,818,753	8,298,811	8,442,669	7,207,813	5,907,439	8,261,015	2,442,262
31 New Mexico	San Juan	12,074,907	13,956,090	14,509,543	14,284,771	13,748,364	14,512,417	2,437,510
32 Ohio	Walter C Beckjord	5,718,967	6,784,736	7,252,347	8,406,213	8,663,538	8,079,087	2,360,120
33 New Jersey	Hudson	1,592,571	2,222,225	3,142,642	1,954,968	3,140,979	3,855,072	2,262,501
34 N. Carolina	GG Allen	3,661,778	5,545,956	6,627,324	4,508,312	5,619,742	5,914,264	2,252,486
35 Missouri	Meramec	1,728,293	1,973,359	2,580,016	2,886,756	3,846,320	3,957,804	2,229,511
36 Arkansas	Independence	10,084,094	12,832,863	11,117,813	11,720,401	13,282,750	12,310,474	2,226,380
37 Wyoming	Laramie River	12,228,380	13,528,172	12,406,750	14,741,078	14,267,970	14,442,863	2,214,483
38 Kentucky	EW Brown	2,933,021	4,230,780	3,750,188	4,167,850	4,287,034	5,099,558	2,166,537
39 Oregon	Boardman	1,861,637	2,049,975	1,836,655	3,968,873	4,329,202	3,998,677	2,137,040
40 Indiana	R M Schahfer	9,160,428	9,644,056	10,495,513	11,506,357	11,909,084	11,265,361	2,104,933
41 Texas	P H Robinson	0	3,358,009	3,334,940	4,520,013	5,177,627	5,441,940	2,083,931
42 Arizona	Cholla	6,361,723	5,941,289	7,799,519	7,666,799	8,017,733	8,441,970	2,080,247
43 Ohio	Miami Fort	7,236,870	8,526,433	8,304,793	8,283,229	9,755,553	9,308,268	2,071,398
44 New York	Ravenswood	3,089,414	2,866,784	3,382,204	3,052,408	3,383,600	5,132,053	2,042,639
45 Texas	Sam Seymour	10,540,286	11,125,152	11,033,481	10,233,106	12,723,703	12,514,444	1,974,158
46 Louisiana	Rodemacher	2,882,671	4,438,165	4,428,841	4,747,034	4,923,508	4,843,732	1,961,061
47 Texas	Sweeny Cogeneration	n/a	n/a	58,216	2,039,493	1,830,090	2,004,701	1,946,485
48 Alabama	Barry	10,496,463	12,259,660	12,259,660	11,084,687	11,980,916	12,435,918	1,939,455
49 Illinois	Waukegan	3,219,770	3,425,604	5,269,305	4,976,266	4,189,626	5,157,540	1,937,770
50 Nevada	North Valmy	2,075,920	2,761,013	3,086,418	3,808,791	3,730,046	3,998,874	1,922,954

## Sulfur Dioxide Emissions on the Rise at Most Power Plants

In 1990, Congress adopted Title IV of the Clean Air Act to address the acid rain in the Eastern U.S. by reducing power plant emissions of sulfur and nitrogen. One goal of the program was to reduce sulfur emissions to 10 million tons below 1980 levels, or roughly 8 million tons per year.<sup>xxiii</sup> This program was the first to set a national pollution cap and allow power plants to meet their obligation by either reducing their emissions or purchasing emission “allowances” from other sources that reduce emissions beyond their obligation. This type of emission program is known as “cap and trade.”

In some respects, the program has been a success. SO<sub>2</sub> emissions from the sources subject to the cap in 2000 were 11.2 million tons, 4.5 million tons lower than when the program was adopted, but still 3.5 million tons above the goal of 8.9 million tons of sulfur per year due to the ability of sources to bank credits.<sup>xxiv</sup> The reductions were 75 percent less expensive than projected in 1990.<sup>xxv</sup> However, it has become evident that much deeper reductions will be necessary to allow lakes and forests to recover from the impacts of acid rain.<sup>xxvi</sup>

Moreover, an analysis of the implementation of the acid rain program strongly suggests that such cap and trade policies alone are not appropriate if the goal is to protect public health. This is primarily because a national cap cannot assure that reductions will occur where they are most needed, in places with degraded air quality. Furthermore, caps allow emissions to remain at high levels or even increase in some communities, placing the people who live in those communities at greater risk for pollution-related health problems.

**Particulate Matter Disproportionately Impacts Health of People Near the Plants:** It is becoming increasingly well documented that fine particulate matter resulting from power plant sulfur dioxide emissions contributes to severe health impacts, including premature death.<sup>xxvii</sup> Researchers from the Harvard School of Public Health have documented in two important studies that sulfur dioxide and other emissions from power plants have their most severe impact on the cardiovascular and respiratory health of people who live near the plants. The Harvard researchers found that nine plants in northern Illinois increased particulate matter concentrations in the vicinity enough to cause an additional 320 premature deaths per year. Another study found that over 70 lives could be saved simply by requiring two Massachusetts power plants to meet modern pollution standards.<sup>xxviii</sup>

**Under the 1990 Sulfur Cap, Most Plants Got Dirtier:** Under a cap and trade regime, some plants may decrease pollution, but others will actually increase pollution levels, further jeopardizing the health of neighboring communities. Since the sulfur cap adopted in the 1990 Acid Rain Program took effect, this is exactly what has occurred. While the dirtiest 500 plants have made a modest reduction in their collective SO<sub>2</sub> emissions because of the sulfur cap, 300 plants actually have increased their emissions since 1995. Many of these pollution increases will make it even more difficult for communities to meet federal health standards for particulate matter.

**The Industry Campaign to Eliminate Plant Specific Control Programs:** Unfortunately, industry advocates, including Enron and Southern Company, are fiercely advocating the elimination of key Clean Air Act programs that require plant-specific pollution reductions in favor of replacing these programs with national pollution caps. One of the most important programs they want to eliminate is the New Source Review (NSR) program. Under the Clean Air Act, new power plants and other industries are required to meet tough emission limits, but older sources are exempt. However, the NSR program imposes modern emission standards on older plants whenever these plants make major, pollution-increasing modifications. The purpose of NSR is to ensure that eventually all facilities meet modern emission standards or are replaced by new, clean facilities.

In 1999, EPA concluded an investigation of the NSR program finding widespread violations in the electric and oil refining industry, and launched an enforcement initiative. Dozens of lawsuits filed by the Department of Justice on behalf of EPA as part of this initiative are still pending.

Unfortunately, due to intense industry pressure, the Bush Administration is preparing regulatory changes that would

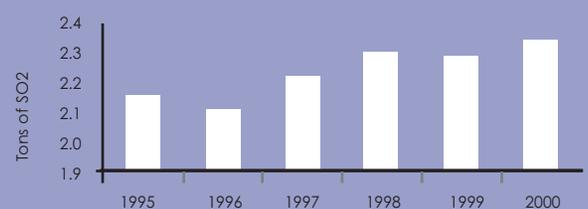
gut the NSR program, placing both the enforcement actions and the future of the program in jeopardy. Regulatory changes to the NSR program could result in emission increases at more than 17,000 facilities, including power plants, refineries, chemical plants and other industry. Moreover, in its February 14, 2002 announcement of its “Clear Skies” program, the Administration made it clear that its intent was to support legislation replacing current programs with new national caps. EPA Administrator Christine Todd Whitman previewed this announcement in her testimony before the Senate Environment and Public Works Committee on July 26, 2001, listing NSR along with five other important programs she would replace with pollution caps.<sup>xxix</sup>

**Smog and Soot Non-Attainment Areas:** Reliance solely on pollution caps can result in power plant emission increases in areas that most need pollution reductions – places that fail to meet the federal health standards for soot and smog. Under the Clean Air Act, the EPA sets ambient air quality standards based on what is necessary to protect public health. These ambient air quality standards were updated in 1997, and new standards for fine particles (PM 2.5) and ground level ozone “smog” were adopted. Now EPA is in the process of collecting air quality data from monitors across the nation and designating which areas are in compliance or “attainment” and which areas are too polluted (non-attainment). Once the areas are designated, states must reduce pollution and bring the areas into attainment over a specific period of time. Ozone monitoring data from 1998-2000 indicates which counties should be designated non-attainment for smog.<sup>xxx</sup> In addition, we have two years of data for fine particles (PM 2.5) on the basis of which we can make educated assumptions regarding likely non-attainment areas.<sup>xxxi</sup>

We cannot rely on pollution caps to reduce emissions in or near non-attainment areas. In fact, many of the power plants with the largest increases in NO<sub>x</sub> and SO<sub>2</sub> are in or near likely non-attainment areas for particulate matter. The EC Gaston plant in Alabama provides a valuable case study showing why pollution caps alone cannot ensure protection of public health. Birmingham in Jefferson County, Alabama, likely will not meet the federal health standard for fine particle pollution when designations are made (*see Appendix 5*). A few miles away, the Gaston Plant, a large, 1960s-era coal burning plant, has increased its SO<sub>2</sub> emissions (the leading precursor of fine particulate matter) by 62,000 tons per year since 1995, more than any other plant in the nation. The national sulfur emission cap, which is indifferent to the local air quality needs of cities like Birmingham, has allowed SO<sub>2</sub> emissions at EC Gaston to skyrocket.

In contrast, the NSR program provides the necessary tools to address the sulfur emissions at Gaston; in fact, this plant is one of the 51 targeted by EPA’s NSR enforcement actions in 1999. If that suit is successful, EC Gaston would dramatically reduce its sulfur emissions, allowing Birmingham to meet the particulate standards and prevent pollution-induced illness and mortality in the area.

Figure 1: Skyrocketing SO<sub>2</sub> Emissions at Alabama Power’s Gaston Plant



**Table 3: Sooty Seven States with Highest Increases in SO2 Emissions between 1995 and 2000**

State	1995 SO2	2000 SO2	Total Increase 1995-2000
North Carolina	392,200	453,391	61,191
New York	192,803	244,431	51,628
Mississippi	83,703	129,892	46,189
Georgia	472,779	508,336	35,557
Washington	52,941	83,604	30,663
South Carolina	177,854	200,252	22,398
Maryland	226,971	248,799	21,828

**The Sooty Seven States:** Seven states had a net increase of 20,000 tons of SO2 or more between 1995 and 2000 (See Table 3 left). It is worth noting that North Carolina, with an astounding 62,000 ton-per-year increase since 1995, has 17 counties that are projected to be in non-attainment with the PM 2.5 health standard when designations are made, meaning that fine particle pollution in

**Table 4: 50 Power Plants with Highest SO2 Emission Increases, 1995-2000**

State	Plant Name	County	Projected PM 2.5 nonattainment?	NSR Enforcement Target?	1995 CO2 (tons)	2000 CO2 (tons)	Total Change in SO2
1 Alabama	E C Gaston	Shelby		Yes	55,738	117,856	62,118
2 Indiana	Warrick	Warrick			37,682	91,387	53,705
3 Ohio	Muskingum River	Morgan		Yes	117,556	156,037	38,481
4 Ohio	Miami Fort	Hamilton	Yes		44,476	81,513	37,037
5 Ohio	Kyger Creek	Gallia			92,806	126,191	33,385
6 Washington	Centralia	Lewis			52,941	83,600	30,659
7 Mississippi	Gerald Andrus	Washington			1,960	31,740	29,780
8 Ohio	Walter C Beckjord	Clermont		Yes	42,141	71,434	29,293
9 Indiana	Tanners Creek	Dearborn		Yes	39,589	67,447	27,858
10 Georgia	Yates	Coweta			20,269	45,104	24,835
11 Indiana	Wabash River	Vigo	Yes	Yes	34,087	58,472	24,385
12 Ohio	W H Sammis	Jefferson		Yes	97,519	120,619	23,100
13 Kentucky	EW Brown	Mercer			27,794	50,380	22,586
14 Ohio	Conesville	Coshocton		Yes	116,770	137,941	21,171
15 W. Virginia	Fort Martin	Monongalia		Yes	69,974	90,055	20,081
16 S. Carolina	Winyah	Georgetown			18,401	37,542	19,141
17 W. Virginia	John E Amos	Putnam		Yes	72,121	91,106	18,985
18 Maryland	C P Crane	Baltimore City	Yes		12,162	30,677	18,515
19 Florida	Crist	Escambia		Yes	34,951	53,082	18,131
20 New Jersey	Hudson	Hudson	Yes		6,529	23,234	16,705
21 Georgia	Wansley	Heard			53,801	69,218	15,417
22 W. Virginia	Mt Storm	Grant		Yes	97,793	113,072	15,279
23 New York	Northport	Suffolk			10,927	25,649	14,722
24 N. Dakota	Leland Olds	n/a			30,805	45,451	14,646
25 N. Carolina	Roxboro	Person			82,454	96,913	14,459
26 Texas	Monticello	Titus			74,434	88,345	13,911
27 Texas	Big Brown	Freestone			72,166	85,991	13,825
28 Illinois	E D Edwards	Peoria	Yes		43,046	56,809	13,763
29 Illinois	Marion	Williamson			189	13,632	13,443
30 Kansas	Jeffrey Energy	Pottawatomie			45,600	58,495	12,895
31 N. Carolina	GG Allen	Gaston	Yes	Yes	21,274	34,059	12,785
32 New York	Roseton	Orange			3,988	16,664	12,676
33 Pennsylvania	Armstrong	Armstrong			21,907	34,387	12,480
34 Michigan	St Clair	St Clair			38,250	50,327	12,077
35 Alabama	Greene County	Greene		Yes	36,975	47,891	10,916
36 Maryland	Herbert A Wagner	Anne Arundel	Yes		13,219	23,602	10,383
37 Illinois	Vermilion	Vermillion			2,623	13,001	10,378
38 N. Carolina	Lee	Wayne	Yes		6,654	16,853	10,199
39 Wisconsin	Nelson Dewey	Grant			4,127	14,271	10,144
40 Indiana	H T Pritchard	Morgan			7,866	17,663	9,797
41 Mass.	Canal	n/a			14,067	23,848	9,781
42 Florida	Port Everglades	n/a			11,290	20,947	9,657
43 W. Virginia	Mountaineer (1301)	Mason			28,719	38,350	9,631
44 Mississippi	Baxter Wilson	Warren			444	10,004	9,560
45 Pennsylvania	Bruce Mansfield	Beaver			19,549	29,062	9,513
46 Texas	Welsh	Titus			30,043	39,466	9,423
47 N. Carolina	Riverbend	Gaston	Yes	Yes	8,166	17,462	9,296
48 New York	Greenidge	Yates			10,665	19,893	9,228
49 Michigan	Trenton Channel	Wayne	Yes		18,608	27,758	9,150
50 Oregon	Boardman	Morrow			5,279	14,374	9,095

these counties is at levels capable of damaging human health and causing premature death. These 17 counties have a population of 3.7 million, including 46,000 children with asthma.

Table 4 (*opposite*) lists the fifty plants with the highest increases in sulfur dioxide emissions from 1995-2000. Of these fifty plants, ten are in projected PM 2.5 non-attainment areas. This illustrates clearly that we cannot rely upon pollution caps to reduce pollution where it is most needed, in places where air quality is most degraded. Moreover, fourteen of these fifty plants are the subject of NSR enforcement actions, showing that NSR is a critical tool for achieving local air quality goals.

Pollution caps can play an important role in reducing regional and national air pollution problems, such as acid rain. However, in order to ensure that every community is protected against fine particulate matter resulting from power plant emissions of sulfur dioxide, policies must require each plant to meet modern emission standards. The Clean Power Act (S. 556) under consideration by the U.S. Senate accomplishes this goal in two ways: (1) It maintains current Clean Air Act programs, including NSR, and (2) It requires every plant to meet modern air quality standards by the later of the plant's 30th year of operation or five years after adoption of the Clean Power Act. By contrast, the President's plan envisions a future in which we rely solely on pollution caps. Adding insult to injury, the President's plan sets the caps at levels that will fail to accomplish the pollution reductions achievable under the current Clean Air Act.

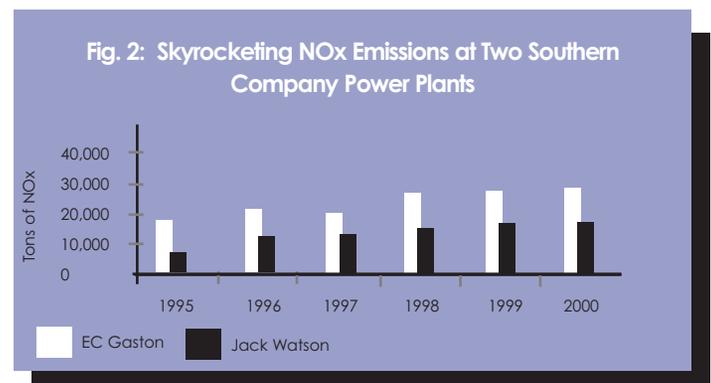


## NOx Emissions Increasing at a Majority of Power Plants

As described earlier, nitrogen oxides (NOx) contribute to the formation of both fine-particle “soot” and ground-level ozone or “smog.” Both smog and soot attack our respiratory systems. Smog triggers an estimated six million asthma attacks per year in the Eastern U.S. alone and sends 150,000 Americans to hospital emergency rooms each year.<sup>xxxii</sup> Because smog and soot have both regional and local impacts, it is important to design policies that not only reduce NOx at the national level but also in communities surrounding power plants.

The policies at work from 1995 to 2000 did not adequately achieve this objective. Over the six years from 1995 through 2000, NOx emissions from the 500 dirtiest power plants fell from about 6 million tons per year to about 5 million tons per year. However, once again, more than half (263 plants or 53%) of the plants increased their output of NOx during this period.

Two Southern Company power plants illustrate why policymakers should enact stronger measures to guarantee power plant emission reductions. The Jack Watson plant in Harrison County, Mississippi, and the EC Gaston plant in Shelby County, Alabama



emitted 11,900 and 11,100 tons more NOx in 2000 than in 1995, respectively (See Figure 2 previous page). These were the highest increases of NOx in the nation. However, the neighboring communities of these plants can ill-afford more power plant pollution:

- As noted above, the Gaston plant is just miles from Birmingham, Alabama, where particulate levels are exceeding national health standards. Moreover, Shelby County, Alabama, where the Gaston plant is located, will likely fail to meet the new health standard for ozone adopted in 1997 when the attainment designations are made (see Appendix 6). Shelby County is home to 143,000 people, including 2,000 children with asthma.
- The Jack Watson plant in Harrison County, Mississippi is surrounded on both sides by Hancock and Jackson Counties,

State	Plant Name	County	Projected 8-hour ozone nonattainment?	NSR Enforcement Target?	1995 NOx (tons)	2000 NOx (tons)	Total Change in NOx
1 Mississippi	Jack Watson	Harrison		Yes	6,504	18,418	11,914
2 Alabama	E C Gaston	Shelby	Yes	Yes	18,635	29,751	11,116
3 Utah	Intermountain	Millard			20,575	30,919	10,344
4 Texas	P H Robinson	Galveston	Yes		0	9,051	9,051
5 Georgia	Hammond	Floyd			8,099	16,867	8,768
6 Louisiana	Big Cajun Point	Coupee			12,863	21,486	8,623
7 S.Carolina	Winyah	Georgetown			13,478	21,896	8,418
8 Arizona	Navajo	Coconino			29,521	37,267	7,746
9 Illinois	Marion	Williamson			271	7,543	7,272
10 Texas	Welsh	Titus			13,761	20,963	7,202
11 Indiana	Warrick	Warrick	Yes		10,992	18,151	7,159
12 Illinois	Kincaid	n/a			16,989	23,796	6,807
13 Texas	Big Brown	Freestone			12,607	19,171	6,564
14 W.Virginia	John E Amos	Putnam		Yes	37,592	43,970	6,378
15 N. Mexico	San Juan	San Juan			25,005	31,376	6,371
16 Virginia	Clover	Halifax			4,742	10,917	6,175
17 Missouri	Sioux	St. Charles	Yes		19,365	25,266	5,901
18 Montana	Colstrip	Rosebud			26,453	32,301	5,848
19 Washington	Centralia	Lewis			14,618	20,115	5,497
20 Indiana	Wabash River	Vigo		Yes	5,959	11,414	5,455
21 Florida	Fort Myers	Lee			5,162	10,614	5,452
22 Iowa	Council Bluffs	Pottawattamie			8,287	13,715	5,428
23 Missouri	Thomas Hill	Randolph			21,384	26,774	5,390
24 Florida	Sanford	Volusia			8,977	14,335	5,358
25 Ohio	Walter C Beckjord	Clermont	Yes	Yes	16,122	21,410	5,288
26 Ohio	Muskingum River	Morgan		Yes	23,294	28,417	5,123
27 Kansas	La Cygne	Linn			29,069	34,136	5,067
28 Pennsylvania	Bruce Mansfield	Beaver	Yes		23,941	28,949	5,008
29 Colorado	Craig	Moffat			14,573	19,565	4,992
30 Ohio	Conesville	Coshocton		Yes	24,064	28,892	4,828
31 Louisiana	Rodemacher	Rapides			5,297	10,097	4,800
32 Arizona	Agua Fria	Maricopa	Yes		636	5,414	4,778
33 Georgia	Yates	Coweta			5,893	10,640	4,747
34 Texas	Monticello	Titus			15,636	20,325	4,689
35 W.Virginia	Willow Island	Pleasants			4,821	9,409	4,588
36 Nevada	North Valmy	Humbolt			2,782	7,189	4,407
37 Oregon	Boardman	Morrow			3,841	8,202	4,361
38 Oklahoma	Seminole	Seminole			0	4,323	4,323
39 Texas	Sam Seymour	n/a			15,686	19,836	4,150
40 Florida	Stanton Energy	Orange			5,189	9,263	4,074
41 Kentucky	EW Brown	Mercer			5,896	9,850	3,954
42 S.Carolina	Cope	Orangeburg			0	3,887	3,887
43 Oklahoma	Muskogee	Muskogee			17,986	21,825	3,839
44 Texas	Permian Basin	Ward			8,842	12,585	3,743
45 W.Virginia	Mitchell	Marshall		Yes	21,018	24,735	3,717
46 New York	Northport	Suffolk	Yes		3,706	7,191	3,485
47 S.Carolina	Cross	Berkeley			11,777	15,216	3,439
48 Texas	Morgan Creek	Mitchell			6,628	9,981	3,353
49 Wisconsin	Pulliam	Brown			4,661	7,984	3,323
50 Indiana	Merom	Sullivan			12,882	16,192	3,310

both of which will fail to meet the new ozone standard when designations are made, based on 1998-2000 data. These counties are home to 174,000 people including 2500 children with asthma.

Table 5 (*below*) lists the “filthy four” states with the highest increases in NO<sub>x</sub> emissions between 1995 and 2000. In these four states, more than 111,000 children with asthma live in counties that are projected to fail federal health standards for ozone when EPA makes those designations.

State	1995 NO <sub>x</sub>	2000 NO <sub>x</sub>	Total Increase In NO <sub>x</sub>	Counties That Exceed Ozone Health Standard	Estimated Number of Children with Asthma in Non-attainment Counties
Arizona	72,336	93,033	20,697	1	40,534
Mississippi	43,032	58,572	15,540	4	4,384
Louisiana	81,001	94,554	13,553	15	28,900
Georgia	169,032	181,431	12,399	12	37,635

Table 6 (*opposite*) lists the fifty plants with the highest increases in power plant NO<sub>x</sub> emissions. Of these fifty plants, eight are in projected ozone non-attainment areas. Moreover, eight of these fifty plants would be cleaned up under the current enforcement actions filed by the U.S. EPA under the New Source Review (NSR) program in 1999.

## Conclusion

Pollution from the electric industry has an enormous impact on our health and environment. It is long past time for policymakers to adopt an aggressive new program to comprehensively address the pollution from this sector.

Failure to set mandatory reduction targets for power plant CO<sub>2</sub> emissions irresponsibly diminishes our ability to stabilize greenhouse gas concentrations in the atmosphere. This report shows that we cannot depend upon voluntary industry actions to reverse the upward trend in power plant CO<sub>2</sub> emissions.

Finally, any new power plant pollution policy should recognize and build upon the successes of the existing Clean Air Act. The Bush Administration’s plan to eliminate plant-specific control programs and rely solely on pollution caps would ignore the experience of the last decade, as illustrated by the findings of this report. In order to ensure clean air progress at the national, regional and local levels, any new policy must maintain current plant-specific control programs in addition to setting aggressive national pollution reduction caps.



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## Notes and Appendices

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- xxvi Driscoll et.al., *Acid rain revisited: Advances in scientific understanding since the passage of the 1970 and 1990 Clean Air Act Amendments*. Hubbard Brook Research Foundation. Science Links Publication 1(1).
- xxvii See summary of studies, Wilson and Spengler, *Particles in Our Air: Concentrations and Health Effects* (1999), at 212. Abt Associates, *The Particulate-Related Health Benefits of Reducing Power Plant Emissions*, (October 2000).
- xxviii Levy, JI, Spengler, JD, et al., *Using CALPUFF to evaluate the impacts of power plant emissions in Illinois: model sensitivity and implications*, 36 *Atmospheric Environ.* 1063-1075 (2002); Levy JI and Spengler, JD, *Modeling the Benefits of Power Plant Emission Controls in Massachusetts*, 52 *J. Air & Waste Manage. Assoc.* 5-18 (2002);..
- xxix "Environmental Effects of Electric Power Plant Emissions," Thursday, July 26, 2001, U.S. Senate Committee on Environment and Public Works. At page 48 of the transcript, in response to a question from Senator Voinovich, Administrator Whitman stated: "Well, it is our feeling that right now that depending on where you set the targets, the New Source Review is certainly one of those regulatory aspects that would no longer be necessary – the regional haze, the BART, as I mentioned before, the MACT standards, the NOx SIP Call, the 126 Rule, acid rain – all of those could be eliminated and combined into one regulatory process under a new piece of legislation that would be vastly simplified."
- xxx See Appendix 6. Lung disease data comes from the American Lung Association, "The Estimated Prevalence and Incidence of Lung Disease by Lung Association Territory," April 2001. Population data comes from the U.S. 2000 Census. PM Ozone Monitoring Results from U.S. EPA (<http://www.epa.gov/airprog/moar/aqtrnd00/carboz00.html>).
- xxxi See Appendix 5. Lung disease data comes from the American Lung Association, "The Estimated Prevalence and Incidence of Lung Disease by Lung Association Territory," April 2001. Population data comes from the U.S. 2000 Census. PM 2.5 Monitoring Results from U.S. EPA.
- xxxii *Out of Breath, Health Effects from Ozone in the Eastern United States*, Prepared by Abt Associates for Clear the Air, October 1999.

### Appendix 1: Reactions to President Bush's Clear Skies and Greenhouse Gas Initiatives

Senator James Jeffords (I-VT), Chairman of the Senate Environment and Public Works Committee, February 14, 2002: "A year ago, the President sent several Senators a unilateral Dear John letter rejecting carbon dioxide reductions at power plants and formally rejecting the Kyoto Protocol. Today's new climate policy is like delivering the final divorce papers to the public and the world. And it is divorced from the reality of global warming. Maybe you could call it a love letter to the status quo and the polluting past."

Connecticut Attorney General Richard Blumenthal in the Hartford Courant on February 15, 2002: "It's a very dangerous camouflage for a retreat on clean air..."

The Newark Star-Ledger, February 18, 2002: "Bush's plan would allow 36 percent to 100 percent more pollutants than does existing law. That's not progress."

The Los Angeles Times, February 15, 2002: "Bush's Clean Skies standards wouldn't even start phasing in until 2008, and in the meantime his plan would weaken the Clean Air Act to allow massive new increases in air pollution—a 36% increase in smog-producing pollutants, a 50% increase in the pollution that causes acid rain and a 73% increase in toxic mercury emissions."

The Detroit Free Press editorial, February 18, 2002: "Bush totally ignores the costs of air pollution to everyone but the companies that produce it. He calls [his plan] the Clear Sky plan – but it won't let you breathe easier."

The Natural Resources Defense Council, February 14, 2002: "The president announced new targets for three pollutants from U.S. power plants that would delay by up to 10 years life-saving emission cuts now required under the Clean Air Act."

Frank O'Donnell, Clean Air Trust, February 15, 2002: "In effect, this has become a polluter protection plan. It's a Valentine's Day Massacre of the Clean Air Act."

The Atlanta Journal-Constitution editorial, February 19, 2002: "It's unfortunate that Bush has chosen to reward his old buddies in the business when he could have called for stricter enforcement of the Clean Air Act, advocated for higher fuel efficiency standards for passenger vehicles and boldly led the nation toward cleaner, more sustainable sources of energy."

The Washington Post editorial, Sunday, February 17, 2002: "There was more air than substance in the global warming policy President Bush outlined last week, a disappointing program that aims too low, asks too little and waits too long to assess the need for tougher action." — Washington Post, Sunday, February 17, 2002