

**BEFORE THE SUBCOMMITTEE ON CLEAN AIR,
CLIMATE CHANGE, AND NUCLEAR SAFETY**

**ENVIRONMENT AND PUBLIC WORKS COMMITTEE,
UNITED STATES SENATE**

HEARINGS ON THE NEED FOR MULTI-POLLUTANT LEGISLATION

**TESTIMONY OF
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ON BEHALF OF

**CLEAN AIR TASK FORCE
CLEAR THE AIR
NATIONAL ENVIRONMENTAL TRUST
UNITED STATES PUBLIC INTEREST RESEARCH GROUP**

JANUARY 26, 2005

Mr. Chairman and distinguished members of the Subcommittee,

Introduction

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 in 27 counties in Georgia, Ohio and Illinois and other states breathing air that flunks those standards at the attainment date of 2010.

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).

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% 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.

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.

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.

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.

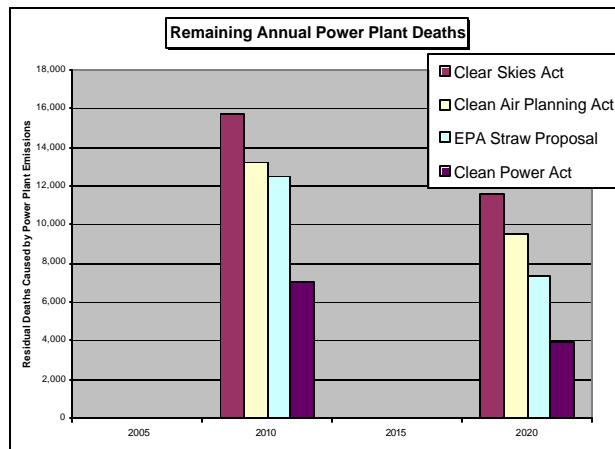
(Let me note at the outset that I do not intend to get into a discussion of whether certain presentations of EPA's position in the past represented the agency's view of current regulatory requirements under the Clean Air Act or, as some EPA staff now claim, were instead simply a tactic to "scare" industry 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

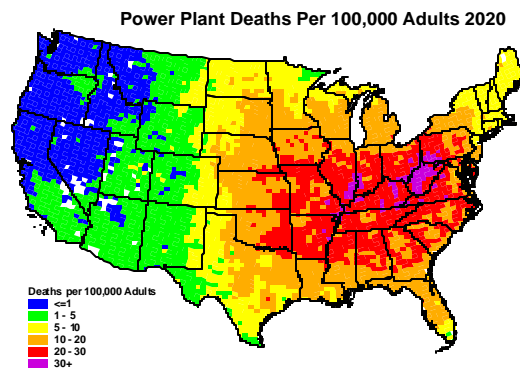
	Nitrogen Oxides (NOx)	Sulfur Dioxide (SO₂)	Mercury (HG)	Carbon Dioxide (CO₂)	New Source Review	Effect on other CAA Programs
Jeffords/Lieberman/Collins Clean Power Act S. 366	1.51 million ton cap by 2009	2.255 million ton cap by 2009	5 ton cap by 2009 Each plant limited to 2.48 grams of mercury per 1000 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 CO ₂ 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 SO ₂ and 2.5 lbs/MWh NO _x	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 CO ₂ 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 CO ₂ 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.

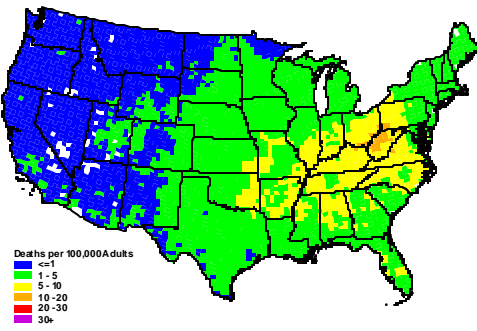
The results are instructive: *Each one of the competing proposals provides significantly greater health benefits than CSA and those additional benefits far outweigh the additional costs.* This analysis is very conservative because it completely ignores the added environmental benefits from the added 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:



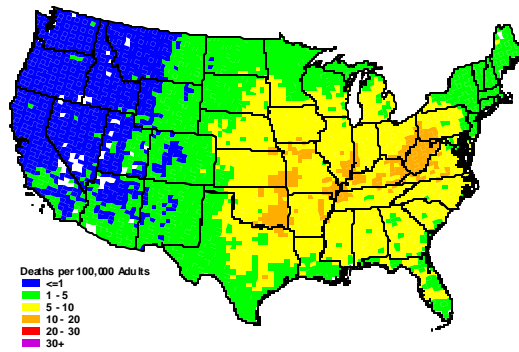
These data can be seen geographically in the following maps illustrating mortality shrinking in the central US with each more stringent proposal:



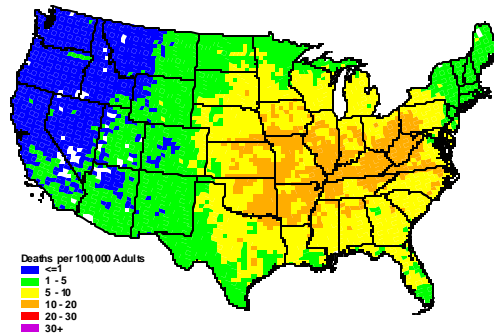
Clean Power Act 2020



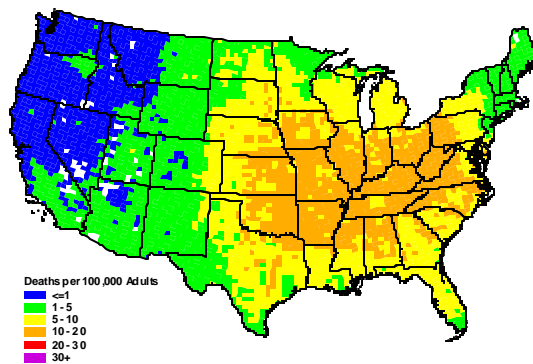
EPA "Straw" Proposal 2020



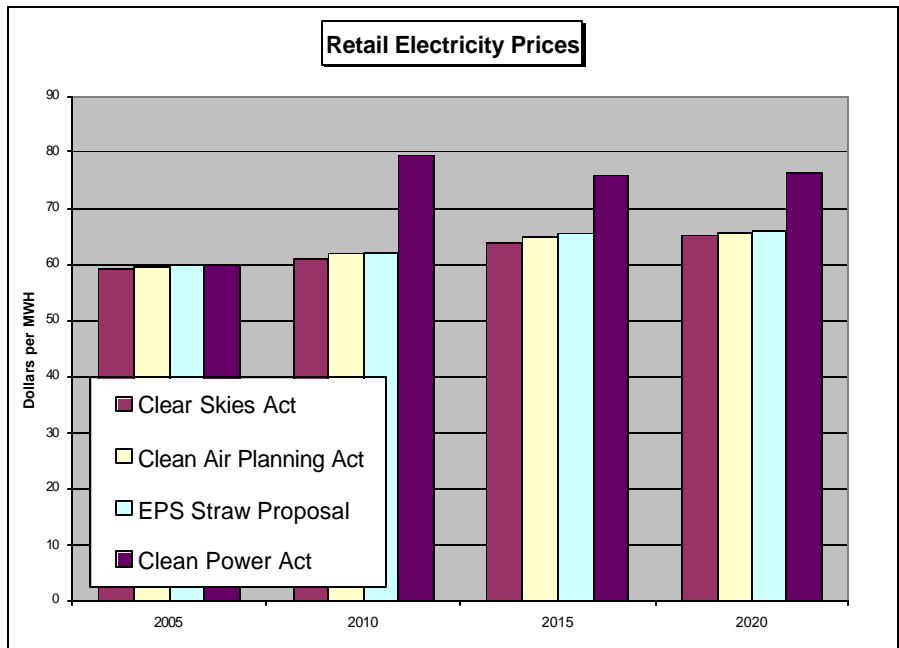
Clean Air Planning Act 2020



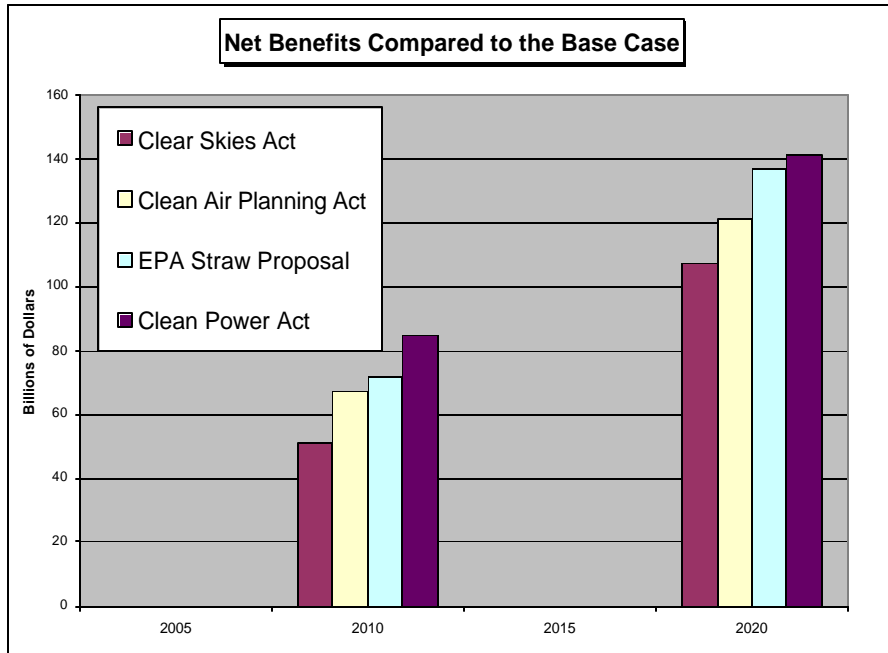
Clear Skies 2020



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:

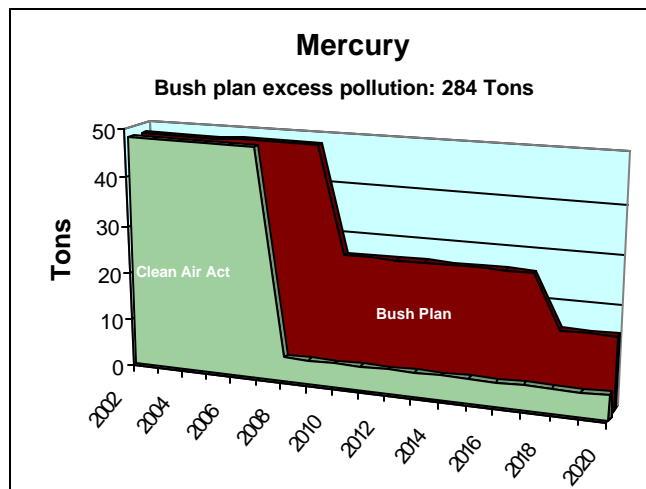


These results are quite consistent with EPA’s own analysis comparing CSA to the Clean Air Planning Act, which found roughly \$50 billion in additional annual health benefits in 2020 from the latter as compared with CSA, with a little bit over \$2 billion in added annual costs:

	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

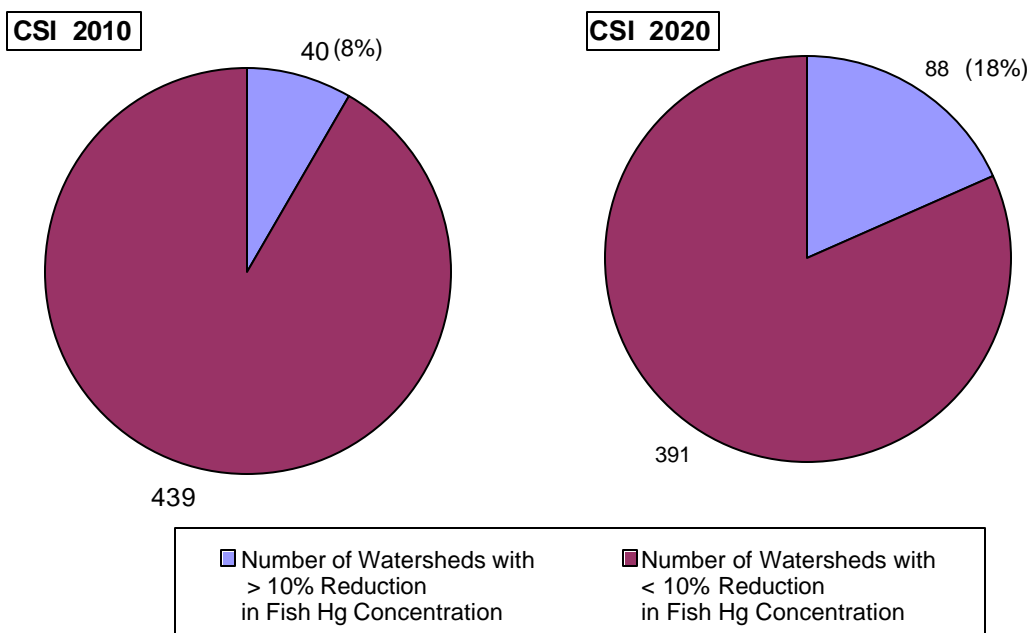
Chart and data from EPA Powerpoint Presentation, “S. 3135, The Clean Air Planning Act of 2002 Presentation for Jeff Holmstead,” November 2002.

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):

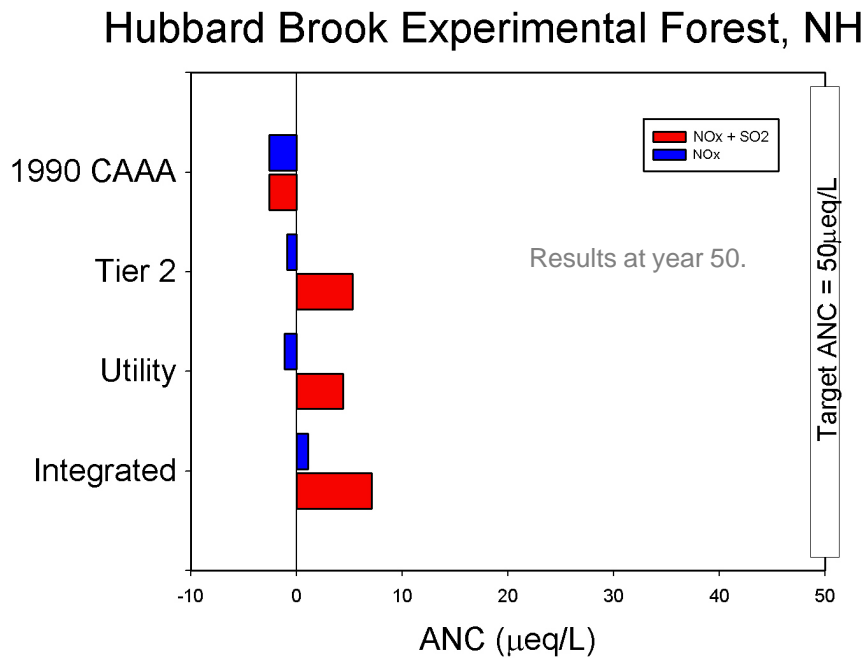


According to EPA’s Mercury MAPS tool which predicts how watersheds will respond to changes in mercury deposition, CSA by 2020 would result in measurable improvement in only 18 percent of modeled watersheds.

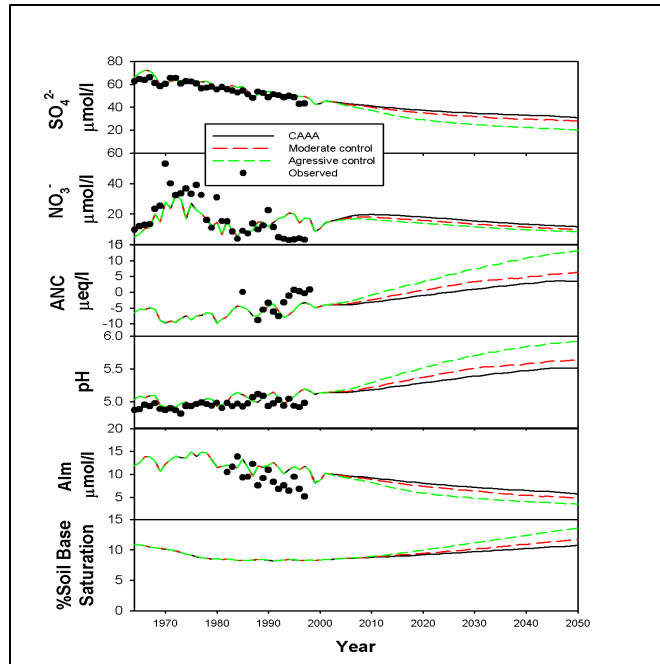
Effect of CSA on Mercury Concentration in Fish in 2010 and 2020



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

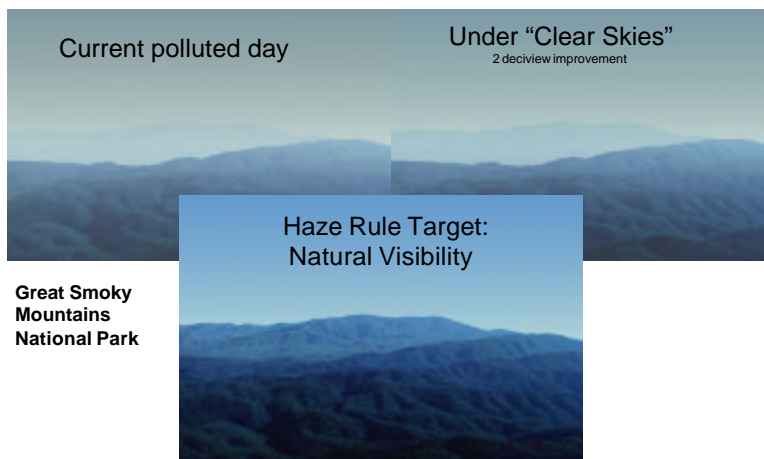


Likewise, the CSA caps are too lax to yield any noticeable improvement in visibility in our nation's national parks. The images below demonstrate the lack of improvement in polluted vistas at two of our most visited parks: Acadia National Park in Maine and Great Smoky Mountains National Park between North Carolina and Tennessee.

Acadia National Park



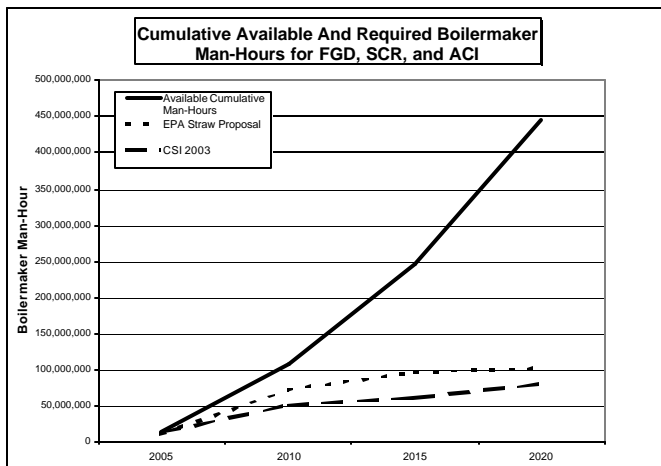
Great Smoky Mountains National Park



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

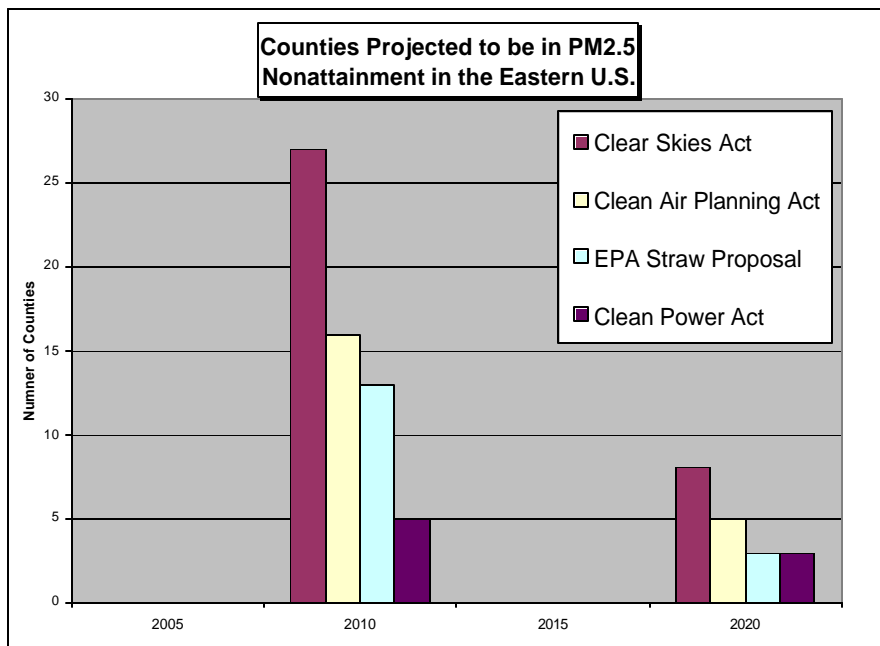
In sum, CSA offers far *too little, too late* by way of human health and environmental protections, while much better alternatives are available and cost effective. On this ground alone, the subcommittee should reject CSA.

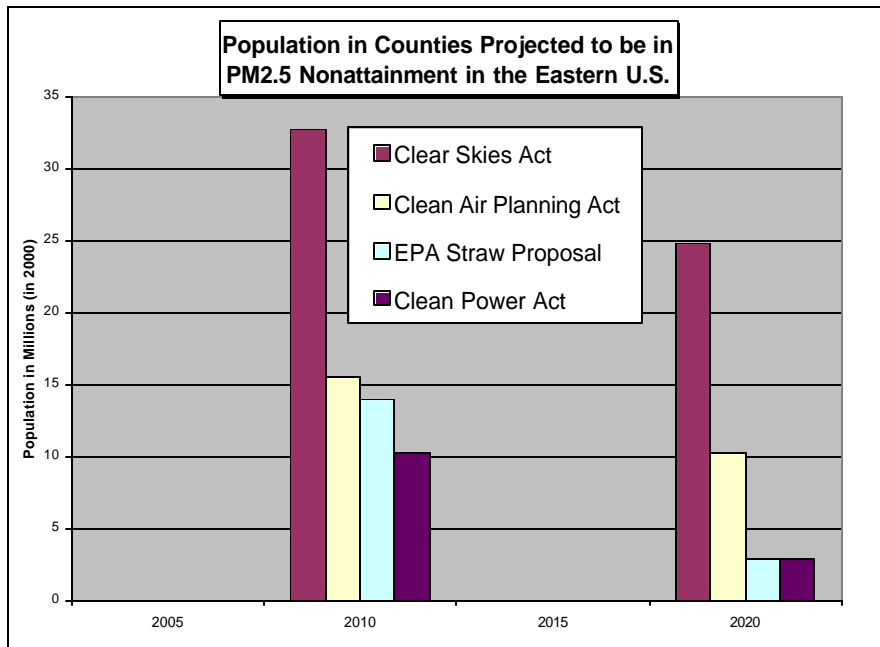
2. CSA Provides Too Little, Too Late to States Seeking Attainment of National Soot and Smog Standards

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 shoulder additional clean-up burdens on new and existing industrial facilities and can be denied federal highway funds. At a minimum, non-attainment 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 commissioned 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% 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% of the nation's anthropogenic CO₂ emissions, and 10% of the world's total anthropogenic CO₂ 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 CO₂ from US 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 CO₂ 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 CO₂ policies which do *not* lead to a "dramatic shift" from coal to natural gas, or "significantly higher electricity prices."

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 Hegel.

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 CO₂ 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 CO₂, would be a mere 6% increase in the country’s natural gas-fired generation by 2020 with coal retaining a 45% market share.⁷
- The McCain-Lieberman bill and other CO₂ 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 U.S. or among most industrialized countries.”⁸ And AEP concluded from a similar review that CO₂ 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 CO₂ 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% of power sector revenues in that year.¹¹

⁷ As EPA stated, “Offline analysis showed that the costs of compliance for the CO₂ constraint would be low due to the wide availability of inexpensive GHG offsets. The net cost of the CO₂ 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.

- 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 CO₂ 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 CO₂ 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 CO₂ 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:

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.

- ✓ Changing the definition of the term “modification” to mean a change that “increases hourly emissions at the unit’s maximum capacity.” (§483(d)(3)) 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 nonattainment 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 (nonattainment 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))

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

- 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

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%;
 - (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.

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.

- 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 SO₂ and NO_x 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

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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 SO₂ scrubber requires approximately 304 boilermaker man-hours per MW¹⁶, building an SCR for NO_x removal requires approximately 350 boilermaker man-hours per MW¹⁷, and building an ACI for mercury control requires about 5 boilermaker man-hours per MW¹⁸. Thus, a total of 664 boilermaker man-hours per MW will provide SO₂, NO_x, 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% are available for utility projects. This number is projected to grow at 5.3% 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

¹⁶ A total of 760 man-hours per MW are required, of which 40% are boilermakers (page 41 of EPA-600/R-02/073).

¹⁷ A total of 700 man-hours per MW are required, of which 50% are boilermakers (page 41 of the EPA report).

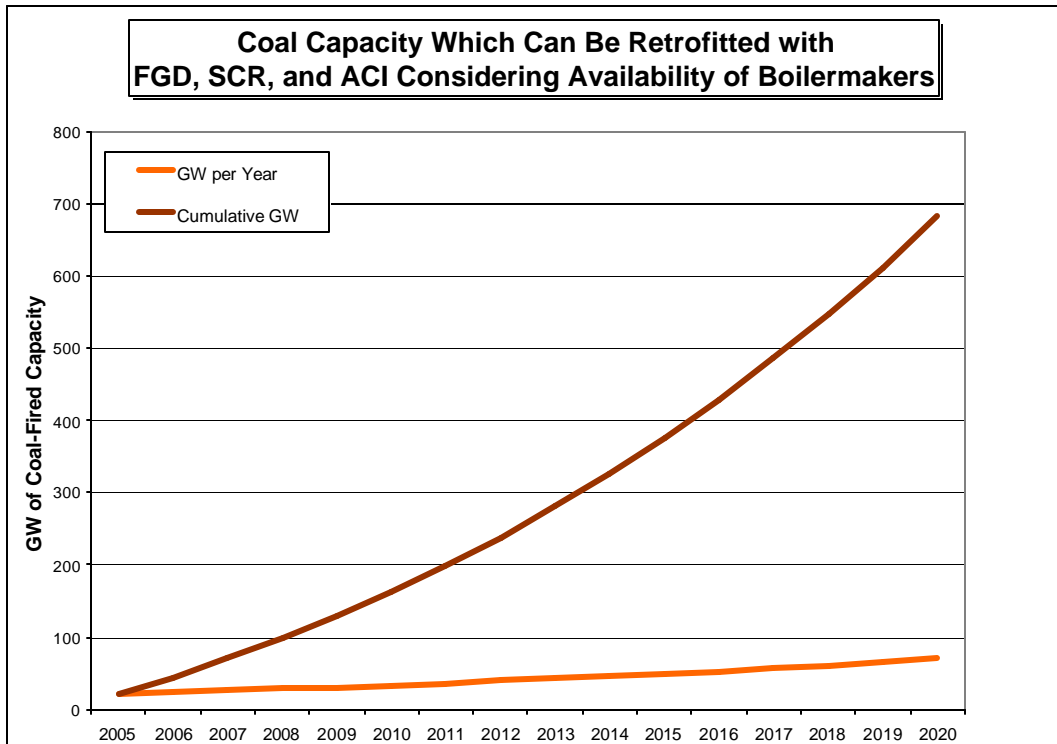
¹⁸ A total of 10 man-hours per MW are required, of which 50% are boilermakers (page 41 of the EPA report).

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 U.S. 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.

Figure 1. Capability to Add Control Equipment



¹⁹ EPA Report at page 45.

²⁰ EPA Report at page 44-45.

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 boiler maker labor for adding emission control equipment with the need for this equipment under both the Straw Proposal and Clear Skies.

Figure 2. Requirements for Emission Control Equipment

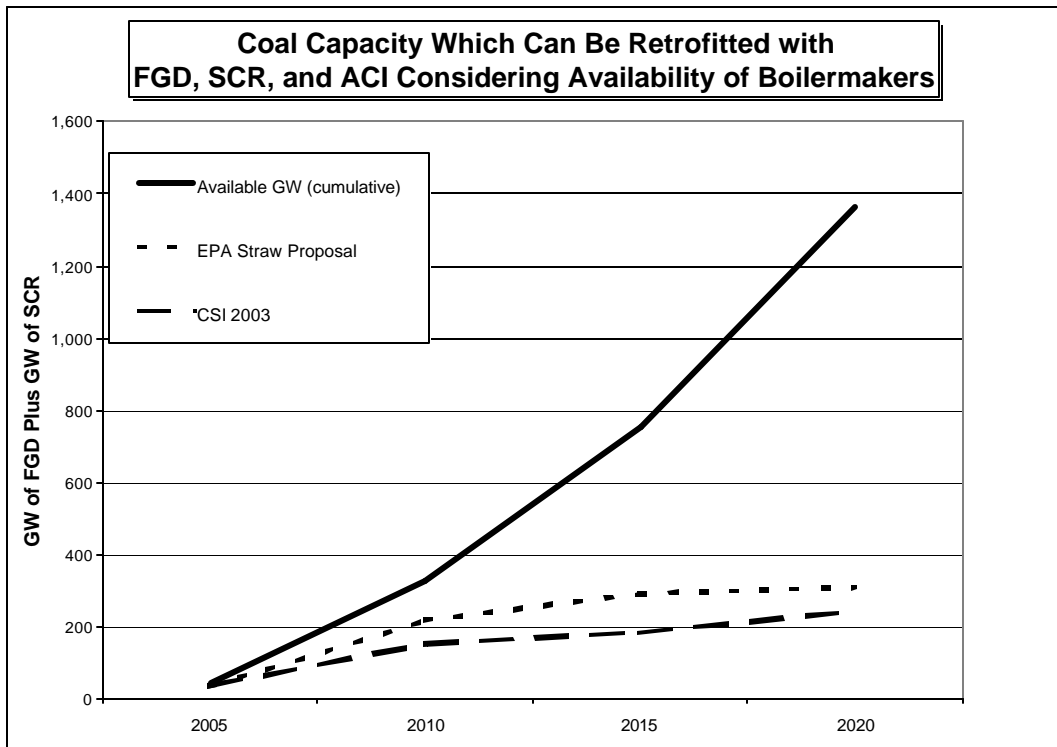
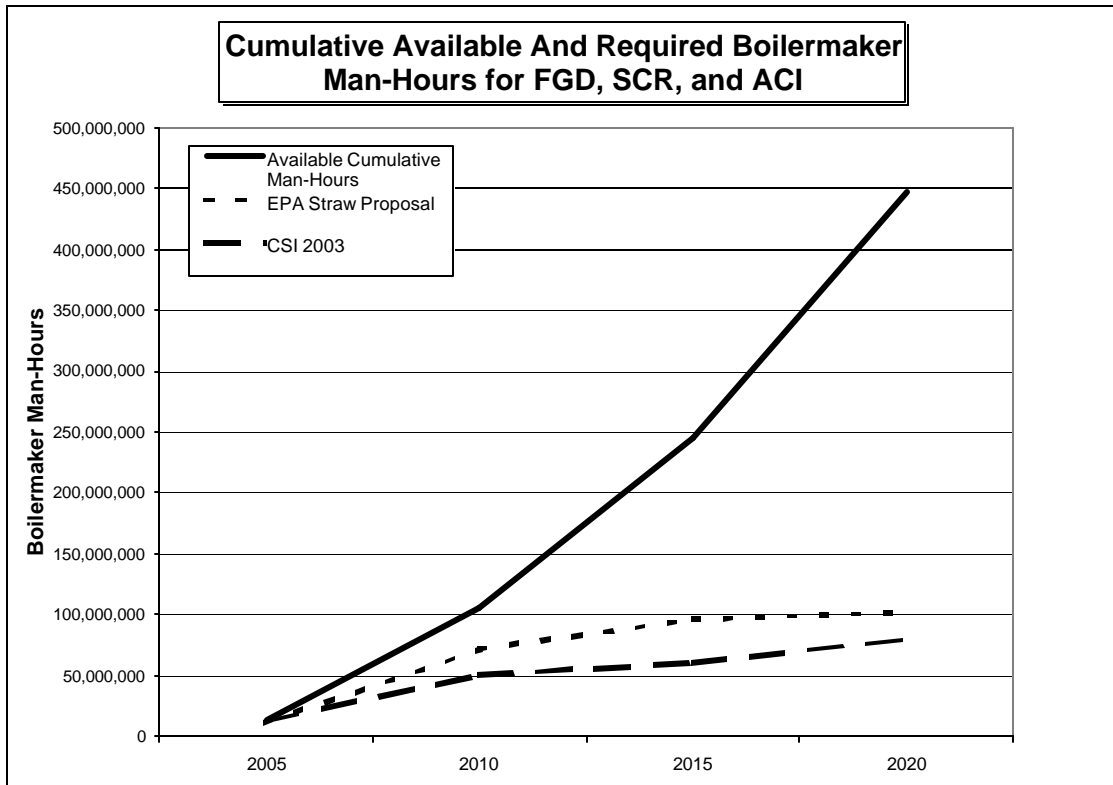


Figure 3 below shows the equivalent data expressed in boilermaker man-hours.

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 3. Required and Available Boilermaker Labor



In conclusion, Figures 2 and 3 show clearly that there is expected to be sufficient boiler maker labor available to meet the requirements of either the Clear Skies Initiative or the Straw Proposal.