

**In 1970, Congress enacted the Clean Air Act (CAA), which aimed to protect public health by reducing air pollution. However, industry lobbying led to what many consider to be the Original Sin of environmental protection- the Grandfather Clause. The Grandfather Clause assured that the ancient, creaking coal-fired power plants of the 40's, 50's and 60's would escape pollution standards. The congressional mandate in 1970 was very clear: "protect and enhance the quality of the Nation's air resources so as to promote the public health." With thirty years of hindsight, however, Congress's message has been obscured greatly by corporate and political interests. The American public has been the victim of an elaborate smoke-and-mirrors scheme where public health appears to be the goal, but electric utilities are emitting more than their share of dirty smoke while the government provides mirrors to deflect the truth: the grandfather clause is destroying the lives of Americans. Ladies and gentlemen, we've been had. It is because of this that we are **RESOLVED: That the United States Federal Government should significantly reform its environmental policy.****

**To provide clarity for this round, let's start with the following DEFINITIONS.**

- 1.) **Environmental policy-** "The term "environmental policy" includes all government measures aimed at: 1) assessing the state of environmental pollution; 2) evaluating this pollution in relation to the threat it poses to either human welfare (anthropocentric) or ecosystems (ecocentric); and 3) controlling polluting activities by means of regulations, economic incentives and for training, moral persuasion, information campaigns and collaborative contractual arrangements with selected target groups. These measures are shaped by a set of policy goals that are more or less quantifiable, depending on the existence of precise emission standards or environmental quality standards ("immission" standards). Environmental policy goals can involve the reduction of emissions or local immissions, the freezing of current emission or immission levels or the deceleration of predicted growth rates. In principle, pollution control can be practised either by means of basic preventive measures (changes in the emission source structure) or by limiting certain activities that give rise to emissions (control of immission levels). The latter strategy currently prevails in most industrialized countries."
 

*Professor Peter Knoepfel [Political Science], "Environmental Policy Analyses: Learning from the Past for the Future - 25 Years of Research," [Barnes & Noble: This book, written by a practice-oriented political scientist, together with the teachers and researchers from various universities in Europe and the rest of the world is a testimony to both policy and the evolution of policy analyses over the last 25 years.], 2007, Springer pp. 9"*
- 2.) **Grandfather clause-** "A grandfather clause is an exception that allows an old rule to continue to apply to some existing situations, when a new rule will apply to all future situations. It is often used as a verb: to grandfather means to grant such an exemption. Frequently, the exemption is limited; it may extend for a set period of time, or it may be lost once a change is made. For example, a "grandfathered power plant" might be exempt from new, more restrictive pollution laws, which would be applied if the plant were expanded. "

**Judge, just as a note- we're going to be referring a lot to "ending grandfathering" and "enforcing a program called New Source Review, or NSR." NSR is basically a program that ends grandfathering for given plants, but it's been failing, so you might hear the term "enforcing NSR". When you do, just remember- for most practical applications, that means the same thing as "ending grandfathering."**

**With those definitions established, let's examine the state of the current system as pertains to grandfathering in the BACKGROUND.**

- 1.) Vampire coal plants. Grandfathered coal plants are old coal-fired power plants that have used legal maneuvering to avoid pollution standards, causing massive pollution with no end in sight. This is according to Carl Pope, executive chairman of the Sierra Club, in September 2009.**

*Carl Pope [Executive chairman of the Sierra Club, formerly executive director. Pope has worked with the Sierra Club for more than 30 years, and has served as a board member for other organizations, including the National Clean Air Coalition, California Common Cause, and Public Interest Economics Inc. He was a Peace Corps volunteer in India in the 1960's.], "ORIGINAL SIN-The Clean Air Act Story: back to the beginning", published by Grist Magazine, 9 August 2009 <http://www.grist.org/article/2009-08-10-the-clean-air-act-story-back-to-the-beginning>*

When I first lobbied on clean air in 1970, there was a crucial but often forgotten fork in the road. Environmentalists urged Senator Edmund Muskie, who was leading the charge, to require that all polluting facilities, new and old, be modernized and cleaned up. When the business community pushed back and told Muskie that old power plants, refineries and factories were not worth cleaning up because they would shortly be retired, Muskie compromised. Muskie believed that his compromise didn't matter, because the plants over time would be phased out, and because he had a back-up mechanism—every airshed was nominally required to meet health-based air quality standards. Cleaning up existing plants was anticipated to result from this state-based process. Unfortunately, Muskie misjudged. Companies found ingenious ways to continually upgrade and modernize facilities, turning them into virtual vampires: polluters that cannot be killed. As I write, there are 145 operating coal-fired power plants built before 1950; two-thirds of the coal fleet was constructed before Muskie passed the Clean Air Act. The state-based process for meeting air quality standards also floundered. When states refused to clean up existing polluters and couldn't meet the standards, Congress just gave them more time to do the job. Today, 40 years later, the nation faces an enormous air pollution problem, almost all of which results from emissions from these "grandfathered" vampire power plants. All of this wasn't a case of the law failing because its initial standards were too weak—it was a case of a basic design flaw which made it almost impossible to ever recover.

**So judge, here's the situation: Coal companies have avoided pollution requirements and subverted the intent of the law. These coal plants were supposed to be retired decades ago, and now our coal fleet is made up of old plants with little pollution control. This creates the following HARMS.**

**1.) Coal kills. The grandfathered electric plants create deadly pollution that kills 24,000 people each year. According to William S. Eubanks in the Journal of Land, Resources and Environmental Law in 2009, quote,**

*William S. Eubanks II [Associate Attorney at Meyer Glitzenstein & Crystal, a Washington, D.C. public interest environmental law firm. LL.M [Master of Law]. in Environmental Law, summa cum laude, from Vermont Law School, 2008; J.D., magna cum laude, from North Carolina Central University School of Law, 2007; B.A. from the University of North Carolina at Chapel Hill, 2004. He specializes in complex environmental litigation under the National Environmental Policy Act, the Endangered Species Act, the Clean Water Act, the Clean Air Act, and other environmental statutes in federal trial and appellate courts. He also specializes in environmental legal theory related to sustainable agriculture, climate change, air and water pollution, public lands protection, wildlife conservation, and environmental justice.], "Article: The Clean Air Act's New Source Review Program: Beneficial to Public Health or Merely a Smoke-and-Mirrors Scheme?", published in the Journal of Land, Resources & Environmental Law, 2009 [29 J. Land Resources & Env'tl. L. 361] [LexisNexis]*

The current EPA cites "significant improvements since 1970" due to the Clean Air Act such as: the six most common air pollutants have decreased by more than 50%, air toxics from large industrial sources have been reduced by nearly 70%, and new cars are more than 90% cleaner.<sup>n29</sup> Despite these gains, our nation has not realized the full benefits anticipated by Congress in 1977 when it created the NSR program. For example, the EPA's principle consultant group on air quality claims that fine particulate pollution from electric utilities in the United States kills more than 24,000 people annually and causes asthma attacks, cardiac problems, and respiratory complications for many individuals. Sulfates, the main component of fine particulate matter, derive predominantly from coal-fired power plants.<sup>n31</sup> Nearly 90% of all deaths from particulate matter, or 22,000 of the 24,000 annual deaths, could be avoided if sulfur dioxide and nitrogen dioxide were reduced to 75% below 1997 emissions levels,<sup>n32</sup> which is well within the bounds of the reductions that would be realized by implementing the best available pollution-control technology under New Source Review if EPA properly enforced the NSR program.

**2.) Coal costs. The National Academy of Sciences found in 2009 that the total annual damages from coal pollution due to health expenses cost the American economy 62 billion dollars annually. This is according to the National Academy of Sciences in 2009.**

*National Academy of Sciences, "REPORT EXAMINES HIDDEN HEALTH AND ENVIRONMENTAL COSTS OF ENERGY PRODUCTION AND CONSUMPTION IN U.S." October 19 2009 <http://www8.nationalacademies.org/onpinews/newsitem.aspx?RecordID=12794>*

A new report from the National Research Council examines and, when possible, estimates "hidden" costs of energy production and use -- such as the damage air pollution imposes on human health -- that are not reflected in market prices of coal, oil, other energy sources, or the electricity and gasoline produced from them. The report estimates dollar values for several major components of these costs. The damages the committee was able to quantify were an estimated \$120 billion in the U.S. in 2005, a number that reflects primarily health damages from air pollution associated with electricity generation and motor vehicle transportation. The figure does not include damages from climate change, harm to ecosystems, effects of some air pollutants such as mercury, and risks to national security, which the report examines but does not monetize. Requested by Congress, the report assesses what economists call external effects caused by various energy sources over their entire life cycle -- for example, not only the pollution generated when gasoline is used to run a car but also the pollution created by extracting and refining oil and transporting fuel to gas stations. Because these effects are not reflected in energy prices, government, businesses and consumers may not realize the full impact of their choices. When such market failures occur, a case can be made for government interventions -- such as regulations, taxes or tradable permits -- to address these external costs, the report says. The committee that wrote the report focused on monetizing the damage of major air pollutants -- sulfur dioxide, nitrogen oxides, ozone, and particulate matter -- on human health, grain crops and timber yields, buildings, and recreation. When possible, it estimated both what the damages were in 2005 (the latest year for which data were available) and what they are likely to be in 2030, assuming current policies continue and new policies already slated for implementation are put in place. The committee also separately derived a range of values for damages from climate change; the wide range of possibilities for these damages made it impossible to develop precise estimates of cost. However, all model results available to the committee indicate that climate-related damages caused by each ton of CO2 emissions will be far worse in 2030 than now; even if the total amount of annual emissions remains steady, the damages caused by each ton would increase 50 percent to 80 percent. Coal accounts for about half the electricity produced in the U.S. In 2005 the total annual external damages from sulfur dioxide, nitrogen oxides, and particulate matter created by burning coal at 406 coal-fired power plants, which produce 95 percent of the nation's coal-generated electricity, were about \$62 billion; these nonclimate damages average about 3.2 cents for every kilowatt-hour (kwh) of energy produced. A relatively small number of plants -- 10 percent of the total number -- accounted for 43 percent of the damages.

**This brings us to the PLAN: End the grandfathering provision.**

**Mandates:**

- 1.) End the grandfathering provision. The Clean Air Act shall be amended to remove the grandfathering provision and require all existing coal-fired power plants to comply with the permitting process laid out in the CAA Amendments of 1977 and install the Best Available Control Technology.**

**Agency: Congress and the President**

**Enforcement shall be through the Environmental Protection Agency, the Department of Justice, and all other necessary federal agencies.**

**Timeline: The plants shall have a five-year deadline to complete the upgrades.**

**Now let's look at how the plan will solve for the harms in the SOLVENCY.**

**First, let's ask the question, "will the problem be solved?" The answer is yes, as we see under Solvency 1, "Loophole closed, problems solved."**

**1.) Loophole closed, problems solved- the problem won't be solved until the 30-year loophole is finally closed. This is according to ABT Associates in a study for the Harvard School of Public Health in June 2004.**

*Abt Associates (A private research and technical consultant firm specializing in health, economics, and technology) "Power Plant Emissions: Particulate Matter-Related Health Damages and the Benefits of Alternative Emission Reduction Scenarios" Study commissions, reviewed, and approved by the EPA. The study was peer reviewed, approved, and cited by the Harvard School of Public Health. June 2004 [http://www.catf.us/publications/reports/Dirty\\_Air\\_Dirty\\_Power.pdf](http://www.catf.us/publications/reports/Dirty_Air_Dirty_Power.pdf)*

The deaths, hospitalizations, and lost work time caused by fine particles from power plants can be reduced comprehensively only when the Clean Air Act's 30-year loophole for old, dirty power plants is finally closed. Requirements such as these can ensure that U.S. energy policy better accounts for the public health and environmental costs associated with electricity production and will propel us toward a more sustainable energy future.

**Now, let's answer the question, "is it technically feasible?" The answer is "yes", as we see in the example of a retrofitted power plant in Greenidge, New York.**

**2.) Empirical success- DOE retrofits drastically reduce pollution. This is according to the National Energy Technology Laboratory in December 2008.**

*The National Energy Technology Laboratory [The DOE's national laboratory system], "Multi-Pollutant Control System for Small Coal-Based Power Plants Meets, Exceeds Goals", published December 2008  
[http://www.netl.doe.gov/publications/press/2008/08062-Greenidge\\_Meets\\_Goals.html](http://www.netl.doe.gov/publications/press/2008/08062-Greenidge_Meets_Goals.html)*

A U.S. Department of Energy project has successfully demonstrated the cost-effective removal of multiple pollutants from the emissions of an older 100-megawatt coal-fired power plant at AES Greenidge's facilities in Dresden, New York. The successful retrofit means the unit can meet increasingly stringent emissions regulations while continuing operations another 20–30 years.

In addition, wide commercial acceptance of the new system could contribute to significant reductions in national emissions and help extend the life of more than 400 power plants with capacities of 50–300 megawatts, enabling them to continue to produce reliable electricity. These smaller existing units are a valuable part of the Nation's energy infrastructure, constituting almost 60 gigawatts, which is roughly 20 percent of the country's coal-based capacity. Continued operation of such plants would enable utilities and ratepayers to avoid the higher costs of building new plants to replace them.

The goal of the Greenidge Multi-Pollutant Control Project was to show that the multi-pollutant control system could substantially reduce emissions of nitrogen oxides, sulfur dioxide, sulfur trioxide, hydrochloric acid, and mercury, while affording lower capital and maintenance costs and smaller space requirements than leading conventional technologies. The project succeeded in all respects. It began startup and testing in early 2007 and concluded in October of this year.

Many smaller coal-fired units such as AES Greenidge Unit 4 do not have sufficient land area to install conventional pollution control equipment. These units are also penalized by economies of scale, making it difficult to justify the large capital investment required to retrofit them with technologies such as selective catalytic reduction (SCR) and wet flue gas desulfurization (FGD). The new system required only 0.4 acres of land, significantly less than would have been required for these conventional systems. Moreover, it had a total plant cost roughly 40 percent less than the estimated cost to retrofit the same unit with conventional SCR and wet FGD.

Greenidge's 107-megawatt, 1953-vintage Unit 4 is a tangentially-fired boiler that primarily burns eastern bituminous coal. The unit's new multi-pollutant control equipment includes: (1) a hybrid SCNR/SCR (selective noncatalytic reduction/selective catalytic reduction) system for nitrogen oxide control; and, (2) a circulating fluidized bed dry-scrubbing system for control of sulfur dioxide, mercury, acid gas, and particulate matter. An activated carbon injection system was also installed, but it proved unnecessary to meet the project's mercury removal goal.

Operating data collected through June 2008 revealed average pollutant reductions of 96 percent for sulfur dioxide, 95 percent for sulfur trioxide, 97 percent for hydrochloric acid, and 98 percent for mercury—all of which meet or exceed target values. In addition, the nitrogen oxides emission rate goal of less than or equal to 0.1 pounds per million British thermal units was demonstrated during short-term testing. Although not an original project goal, the system reduced emissions of particulate matter by more than 98 percent relative to the emission rate achieved by the unit's particulate control equipment prior to the project.

**So what we see is that with a simple legal change, we can close the loophole, enforce the law, and save 62 billion dollars and 22,000 lives each and every year.**

**I leave you with a thought from Jacqueline Close Moore.**

**“We were given a pristine earth with all upon it and in it that we require to sustain ourselves. What we do with that gift is either a symbol of our thanks to the Creator, or what our children will be left to answer for. How short the memory of mankind?”**

**Thank you.**