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## THE CLEAN AIR ACT

### INTRODUCTION

Americans want clean air. There can be no doubt about that. Coupled with this goal is a realization that there are tradeoffs in attaining ever cleaner air. Some of the tradeoffs are very costly--with cleaner air or cleanest air being bought at the increasingly high economic price of eliminating jobs, slowing economic growth, and retarding industrial expansion and foreign trade. The Business Roundtable, in a late 1980 report on the "Cost-Effectiveness and Cost-Benefit Analysis of Air Quality Regulation," states that the direct cost of Clean Air Act compliance from 1970-1987 will be over \$400 billion at current price levels. Regulatory reform in the mobile source pollution program alone could save between \$5.4 and \$15.2 billion in 1983 and reemploy close to 152,000 workers in the automobile and related industries. The push for the cleanest air possible is part of the more general campaign for mega-regulation that imposes a multi-billion dollar annual burden on the economy. Has regulation gone too far? Is the search for the cleanest air, rather than clean air, something that the United States can afford?

These are the issues at the heart of the current battle over reauthorization of the Clean Air Act, which expires on December 31, 1982. On one side are the career environmentalists saying that any fine tuning of the Act would be tantamount to its revocation. On the other side are responsible voices in both the public and private sector who do not want the Act revoked but want to make it more economically realistic and administratively streamlined.

The various questions raised in the clean air debates are full of scientific and technical complexities. The average citizen must sort through NAAQS (National Ambient Air Quality Standards); PSD (Prevention of Significant Deterioration); LAER

*Note: Nothing written here is to be construed as necessarily reflecting the views of The Heritage Foundation or as an attempt to aid or hinder the passage of any bill before Congress.*

(Lowest Achievable Emission Rate); and other bureaucratic acronyms. Thanks to this "alphabet soup," clean air goals simple in concept have become buried in a complex, bureaucratic language difficult for both scientists and the public to understand.

It is difficult with such a complicated topic to phrase objective questions for public opinion analyses. As a result, two polling organizations, Louis Harris Inc. and Opinion Research Corporation (ORC), came up with widely divergent results when querying Americans on the need to reform the Clean Air Act. According to Harris's September 1981 poll, even conservatives or others who voted for Ronald Reagan in 1980 oppose relaxation of the clean air legislation by a margin of 3 to 1. Yet according to ORC's November 1981 poll, 78 percent of those classifying themselves as active participants in the environmental movement agreed that "changes in the Act can probably be made so that air quality will be protected at a lower cost than now." What Americans are saying is that they want to retain the goals of the Clean Air Act, while cutting back on excessive regulatory compliance costs.

The thrust of the Act, as enforced by the Environmental Protection Agency, reflects the original Nixon Administration goal of maintaining

conditions under which man and nature can exist in productive harmony, and fulfill the social, economic and other requirements of present and future generations.<sup>1</sup>

In 1969, then Governor Ronald Reagan, in addressing the Governor's Conference on California's Changing Environment, stated:

We cause smog, pollute the water and change the environment as we require more living space, more power and more production to meet our legitimate needs...we cannot afford those who say growth and progress justifies all of this, but likewise we cannot abide by the thinking of those who would stop the world to maintain the ecological status quo...the answer lies somewhere in between....

As President, Reagan apparently realizes that the Act's reauthorization process offers an opportunity not only to simplify the law's complexities, but, in the spirit of the New Federalism, to return many of the Act's oversight functions to the states. As a basis for developing legislation to improve the Act, in August 1981, President Reagan endorsed a set of eleven guiding principles. They reflect the notion that the nation must continue its steady progress toward cleaner air and that statutes and

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<sup>1</sup> 42 U.S.C. 4321, National Environmental Policy Act.

regulations should be reasonable and related to the economic and physical realities of the particular areas involved.

What can be simplified, for example, are some of the rules and regulations dealing with the Clean Air Act Nonattainment and Prevention of Significant Deterioration programs. What can be turned over to the states are the setting of secondary air quality standards and certain administrative oversight responsibilities. It should be noted that some states are hesitant in assuming responsibility for their own environmental regulations and might tacitly resist such a transfer of power.

Many of the Clean Air Act's myriad of regulations continue to have effects much more detrimental than beneficial. They have introduced confusion and uncertainty into the economic planning process while frequently producing little or no improvement in air quality. It is this counterproductive result that must now be corrected. Senator Gary Hart (D-CO), a leading advocate of cautious reform, notes that the current debate marks the "first real attempt to reconcile the values of the sixties and the seventies with the economic realities of the eighties."

Reauthorization of the Clean Air Act is slowly moving through both houses of Congress. Action is not expected in either house before late summer. Americans do not need excessive rhetoric about the obvious need for clean air. This precept is accepted by environmentalists, industry, and the public at large. What is sorely needed is clean air legislation that supports innovative and cost-effective pollution control measures, reflects the economic realities of the 1980s and beyond, and--most important of all--maintains the goals of the current Clean Air Act.

#### THE CLEAN AIR ACT

In 1963, Congress adopted a then toothless consensus vehicle called the Clean Air Act. It authorized the Secretary of Health, Education and Welfare (now the Department of Health and Human Services) to conduct inter- and intrastate air pollution abatement conferences and to undertake research on certain specific problems. Within two years, Congress amended the original act by requiring the establishment of nationwide emission standards for motor vehicle engines. In 1966, funds were authorized to support state and local air pollution control programs. As Congress became aware that air pollution had developed into a widespread concern, it required HEW in 1967 to designate air quality control regions based on federally developed criteria.

Responding to the growing environmental movement, Congress amended the 1963 and 1967 acts in 1970 and laid the foundation for the current Clean Air Act. Among its provisions, this landmark legislation required the development of state implementation plans (SIPs), which were then subject to federal approval. Most state-set air quality standards were superseded, though uniform



emission standards for existing factories and other existing stationary sources were left to each state's discretion.

In 1974, the oil embargo prompted enactment of the Energy Supply and Environmental Coordination Act which, among other conservationist measures, restricted the burning of petroleum or related by-products and required that certain plants convert from oil to coal. This required temporary suspension or postponement of some portions of the Clean Air Act.

The 1977 Amendments to the Clean Air Act contained many of the items currently under review by Congress. Among them were certain questionable restrictions pertaining to construction activities in areas that were not in compliance with the national clean air standards.

In 1981, the Steel Industry Compliance Extension Act was enacted. This allows a case-by-case extension of the Act's compliance deadline to afford steel companies the opportunity to devote more of their capital to modernization projects rather than costly compliance with the ever increasing and questionable pollution control requirements mandated by the Clean Air Act.

The thrust of the air pollution portion of the Clean Air Act is found in Title I, Part A, section 101(a), which reflects the authority by which EPA sets "primary" air quality standards for protection against pollution levels that endanger public health, allowing an adequate margin of safety. EPA also is given the authority to set "secondary" standards to protect the public welfare--soil, vegetation, crops, visibility, personal comfort, and the like. The regulations implementing the Act established three two-level standards (primary and secondary) for seven criteria pollutants--sulfur dioxide ( $\text{SO}_2$ ), nitrogen oxides ( $\text{NO}_2$ ), carbon monoxide ( $\text{CO}$ ), ozone ( $\text{O}_3$ ), total suspended particulate (TSP) matter (i.e., smoke, ash, and soot), hydrocarbons (HC) and lead (Pb).

These individual pollutant standards are then applied to the air quality control regions nationwide through the use of elaborate testing procedures. An area (usually a region or a portion of a region) is either deemed within the standard for a given pollutant and declared an "attainment area" or, if its air quality exceeds the standard, a "nonattainment area." These areas can be as small as several city blocks or as large as a state. To bring nonattainment areas into compliance with standards by the December 31, 1982, deadline, individual states are required to submit state implementation plans to EPA for review and approval.

Inherent in the approval process lie several different permit programs. Naturally, areas that are in nonattainment for several different pollutants will come under the most stringent restrictions allowable. These restrictions vary--though they generally apply more to new than to existing facilities. In order to build a new facility in a pollutant-specific nonattain-

ment area, the state must prove that the new emissions will be more than offset by decreased emissions from existing sources. In order to force industry to meet this "net" figure, each new facility must install pollution control equipment which meets the lowest achievable emission rate (LAER) attained or required anywhere. This gives EPA an extremely powerful weapon. If a state's implementation plan, as amended, reflects that a projected new facility will not comply with the national ambient air quality standards (NAAQS), then EPA can ban all new construction in the area. In addition, a firm with more than one facility statewide that constructs a new facility in the state must certify that all of its existing intrastate facilities are in compliance; otherwise the new facility cannot be built. These restrictions apply to nonattainment areas only.

In attainment areas, where pollution is in check, the Act calls for the states to at least not exceed the current low level of pollution. This is mandated in the Prevention of Significant Deterioration program. There are three classes in these attainment areas: I, II, and III.

It is conceivable that a company with five intrastate plants could be in a situation where all its plants were in violation of one or more of the standards--even though, in the aggregate, they might be in compliance.

Accompanying the statutory framework is a complex set of general, procedural, and interpretive agency regulations. Recent proposals for the Clean Air Act address over eighty major substantive and procedural changes.

The consensus that existed in 1979 still exists with regard to breathable air, but there is a new and growing recognition that there are tradeoffs in attaining ever cleaner air. Some of the tradeoffs are costly, with ever cleaner air being bought at the price of sorely needed industrial expansion. Is this increasing burden something the U.S. can afford or should Congress step back and examine the tradeoffs involved?

#### NATIONAL AMBIENT AIR QUALITY STANDARDS

Herein is the guts of the Clean Air Act. The seven "criteria" pollutants for which primary and secondary standards have been set are sulfur dioxide, nitrogen oxides, carbon monoxide, particulate matter, hydrocarbons, ozone, and lead.

All areas of the United States must attain primary (health-related) standards by December 31, 1982, though extensions to 1987 are possible for carbon monoxide and ozone.<sup>2</sup> The primary

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<sup>2</sup> 42 U.S.C. 7410.

NAAQS must also include "an adequate margin of safety" to protect the public health. The "public" specifically is defined to include young children, asthmatics, and other "at risk" groups.

Secondary standards are intended to protect against known and anticipated effects of pollutants on "soils, water, crops, vegetation, manmade materials, animals, wildlife, weather, visibility and climate, damage to and deterioration of property, hazards to transportation, effects on economic values and on personal comfort and well being."<sup>3</sup> These standards must be attained within a reasonable time, and states may not apply any emittant standard that is less stringent than the federal standard.

Among the fundamental criticisms of the primary and secondary National Ambient Air Quality Standards are: they are executed without comparative cost-benefit analysis; the scientific rationale is nebulous; they do not reflect realistic state-set secondary standards. A number of conflicting issues are involved.

**\*\*\*Issue:** The current statutory provisions governing the setting of ambient air quality standards do not provide for weighing the costs of compliance against the health and welfare benefits expected from varying levels of standards.

**Suggested Solution:** EPA and the states should begin phasing in a limited cost-benefit analysis approach to the regulatory structure of the Clean Air Act. This would be in line with Executive Order 12291 of 1981, which calls for across-the-board, cost-benefit analysis in general government regulations.

Groups, such as the National Coal Association, recommend that levels of air quality standards be set on the basis of a health benefits analysis reflected in dollars spent. Defenders of the current statutory provisions, including professional environmentalists, are adamant that cost considerations should not be used in making value judgments which, in their opinion, could affect seriously the health of Americans. This issue has obvious political consequences, which also must be weighed in establishing important public policy. Yet a line must be drawn somewhere; a tradeoff is unavoidable. On its face, including cost-benefit analyses in the setting of air quality standards may seem extremely insensitive and callous. In reality, the use of such analyses would permit the establishment of standards more in line with overall consumer expectations of corporate protection. If the public wants the most protection possible, it must be made clear that such protection will exact a very high price, which the public must pay. It almost becomes a matter of consumer sovereignty in which exercise of the power of purchase takes precedence. The program by which states are permitted to pass more stringent standards than those in the federal Act should be retained.

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<sup>3</sup> 42 U.S.C. 7602(h).



**\*\*\*Issue:** The standards lack scientific credibility.

**Suggested Solution:** The EPA Administrator should retain an independent advisory group drawn from the National Academy of Science or the Office of Technology Assessment to conduct an evaluation of all scientific data relative to each existing and proposed new criteria pollutant. Most of the published studies to date have analyzed proposed changes in the air quality program and not the underlying validity of the standards themselves.

The Administrator of EPA is charged with setting a pollutant level to protect the public health and then determining an adequate margin of safety. The 1977 Amendments to the Clean Air Act require that the EPA Administrator appoint an independent scientific advisory committee (The Clean Air Scientific Advisory Committee) of seven members, including at least one member of the National Academy of Sciences, one physician, and one state pollution control administrator to review previously issued criteria and pollutant standards. While this continuing review may be full and comprehensive, the Committee's opinions are not binding and lack the inherent authority of structural independence.

In contrast, an independent board, as suggested above, could provide unbiased scientific data. The EPA Administrator could then accept or reject standards on a more credible basis.

**\*\*\*Issue:** States with different economic, environmental, and energy needs are required to abide by the same set of national secondary standards.

**Suggested Solution:** Each state should be permitted to tailor its secondary standards to its unique conditions and problems and its own economic, environmental, and energy goals.

Enforcement in Maine or Montana of a national standard set to protect such diverse crops as cotton, peanuts, or oranges is unrealistic. If citizens of a given state want looser or stricter regulations, they should be encouraged to use the political and administrative processes through which their voices or votes can be heard.

## NONATTAINMENT AREAS

A nonattainment area is a region, which, for any air pollutant, is shown by monitored data or is calculated by air quality modeling to exceed any national ambient air quality standard for such pollutant. Only Hawaii and North Dakota are practically attainment pure. Classification as a nonattainment area can impose significant economic burdens if the air quality standards are to be attained.

There have been many problems with the nonattainment program. Among them are the existence of stringent mandatory deadlines for

meeting the national standards and the concomitant threat of economic sanctions, the implementation of unduly strict emission offset regulations, and the utilization of unrealistic technology control requirements.

**\*\*\*Issue:** The current deadlines by which states are expected to achieve the National Ambient Air Quality Standards are unrealistic.

**Suggested Solution:** The EPA Administrator should be authorized to grant variances or reasonable attainment date extensions to states which have exhibited a good faith effort at reaching the standards and have prepared a well-defined plan for near-term attainment. These variance extensions would be reflected in revised state implementation plans.

**\*\*\*Issue:** The automatic sanctions for failure to meet the national ambient air quality standards attainment deadline and other requirements impose a penalty disproportionate to the alleged wrong.

**Suggested Solution:** Congress should amend the current law to make the EPA Administrator's authority discretionary rather than mandatory in the matter of such sanctions.

If an area cannot meet these standards within the statutorily established time frame, emitting sources, unless excepted, become subject to heavy sanctions. These costly and disruptive sanctions include the loss of federal monies for sewage treatment plants and highways located in nonattainment areas where previously amended state plans have not been approved, the withholding of funds for air quality control programs, and an automatic ban on modernizing existing facilities or creating new ones. This happened in Van Nuys, California, where a General Motors auto plant being retooled from large to small car production has been stalled for over a year because it is claimed that it will create a "new source" of pollution.

At the end of 1980, the Carter Administration cut off a total of \$850 million in federal funds for six metropolitan areas in California and imposed sanctions against two Kentucky counties in the Cincinnati metropolitan area for failing to have mandatory automobile inspection programs for pollution control equipment. Such action may also soon affect Pittsburgh, St. Louis, Detroit, Chicago, Cleveland, Houston, and as many as five other big metropolitan areas. This could be counterproductive if it prohibits the introduction of new facilities that produce less pollution than the old sources. The ominous and uncertain situation created by the threat of sanction disrupts normal business planning and prevents or postpones economic development and job growth.<sup>4</sup>

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<sup>4</sup> "Clean Air Act and Industrial Growth -- An Issues Workbook for the 9th Congress," National Environmental Development Association, January 1982, p. 6.



**\*\*\*Issue:** New sources and modifications to existing sources located in nonattainment areas are required to obtain pollution control "offsets" before being allowed to begin construction.

**Suggested Solution:** Individual states should require that a new source in a nonattainment area pay a fee to the state or local entity--based upon EPA estimates of control cost for each pollutant--to meet the lowest achievable emission rate provided that the state or local entity uses such fees to reduce other emissions of the pollutant.

An industry seeking to locate in a nonattainment areas currently must show that the increase in pollution caused by its operation will be offset at least by reductions in pollution elsewhere in the nonattainment area.<sup>5</sup> These offsets are basically emission reductions from sources already operating in the region. The purpose of the program is to compensate for the amount of new emissions expected from the new source. The problem is that this requirement retards needed industrial expansion without giving an alternative to a firm which, through no fault of its own, must bear the sometimes difficult burden of "finding" its own offsets.

**\*\*\*Issue:** The multiplicity of control technology requirements is confusing, ineffective, and costly.

**Suggested Solution:** Both nonattainment and prevention of significant deterioration areas should be subject to the "best available control technology."

The present law applies one type of control technology for nonattainment areas and another type for attainment areas. The nonattainment control requirements ignore state-to-state and region-to-region differences in pollution control strategy.<sup>6</sup> What may be perfect for Michigan may be totally inappropriate in Colorado or Mississippi.

The level of technology in attainment areas where the prevention of significant deterioration program is the main focal point, is termed the "best available control technology" or BACT. Implementation of BACT-level technology may take into account economic, environmental, and energy costs and other factors though it still must control at least as much pollution as the new source performance standards (NSPS), which apply to various but specific categories of new sources--no matter where they are located.

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<sup>5</sup> Mark Dungan, Senior Research Analyst, "The Clean Air Debate," House Republican Research Committee, March 1982, p. 3.

<sup>6</sup> American Enterprise Institute Report on "The Clean Air Act -- Proposals for Revisions," November 1981, p. 64.

In order to decrease confusion and avoid semantic charades between the lowest achievable emission rate (LAER) and the best available control technology (BACT), one level of tough control technology should be required and that should be the best available control technology, which should be equated with the New Source Performance Standards where they exist. This change would allow for the construction of well-controlled "clean" facilities in nonattainment areas and lead to earlier retirement of older facilities--thus enhancing the prospects of achieving the national ambient air quality standards while also promoting energy conservation and economic growth.<sup>7</sup> Also, a firm constructing new facilities in a nonattainment area is currently being required to certify that all of its existing facilities in the entire state comply with the clean air law or are on a reasonable schedule for compliance.

It would seem that government would want to permit industry to accelerate the development and installation of acceptable pollution control equipment. Such is not the case. What incentive does a firm have for developing better pollution control equipment when each improvement immediately becomes applicable industry-wide because of the enforcement of the lowest achievable emission rate in nonattainment areas? A recent report by the Washington University Center for the Study of American Business in St. Louis stated that "both new and existing sources should be given a grace period after installation of air pollution control equipment during which modifications for controlling the same pollutant will not be required."<sup>8</sup>

#### PREVENTION OF SIGNIFICANT DETERIORATION

The prevention of significant deterioration program is a judicially inspired statutory answer to a controversial 1974 Supreme Court decision--Sierra Club v. Ruckelshaus.<sup>9</sup> The Court found that the Clean Air Act requires not only an air quality program aimed at places where the national standards are exceeded but also a program designed to prevent the significant degradation of air quality where the air is relatively clean. In direct response to this suit, EPA issued regulations on December 1, 1974, requiring each state to adopt a program to prevent the significant deterioration of air quality. Congress affirmed this concept in the 1977 Amendments to the Clean Air Act.<sup>10</sup> Less than two years later, in response to another suit, EPA again revised its Prevention of Significant Deterioration (PSD) regulations.

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<sup>7</sup> Kenneth W. Chilton and Ronald J. Penoyer, "Making the Clean Air Act More Effective," Center for the Study of American Business, Washington University, St. Louis, Missouri, September 1981, p. 24.

<sup>8</sup> Ibid., p. 27.

<sup>9</sup> 412 U.S. 541 (1973).

<sup>10</sup> 42 U.S.C. 7470 (Part C -- Title I of PL 95-95).

New sources seeking to locate in areas that meet national standards for some pollutants but not others are forced to comply with two sets of regulations--those applying to attainment areas known as "PSD regulations" and those applying to nonattainment areas. Needless to say, this is very confusing and the increased regulatory costs tend to discourage economic expansion.

The thrust of the PSD program requires that before new plants or modifications to existing plants with significant emissions are built, EPA approval must be secured--if the project is within an area where the air has already been deemed clean.

These PSD regions are then subdivided into three descriptive classes. Class I areas are those where the retention of exceptionally good air quality is most valued and include certain national parks and international territories, national wilderness areas, and memorial parks. There are 158 mandatory Class I areas, of which 83 percent are in the mid- and far West. Class II areas are all other attainment areas in each state to which PSD provisions apply. There are 260 mandatory PSD Class II areas with 78 percent in the mid- and far West. There are currently no Class III areas. Different degrees of air quality deterioration are deemed acceptable in all three classes with the least deterioration permitted in mandatory Class I areas and the most in Class III areas.

Criticism of the PSD program has been widespread. The Chairman of President Reagan's Council on Environmental Quality, A. Alan Hill, stated that in general the program had gone too far and should be statutorily returned to "its objective of providing a special measure of federal protection to areas of critical environmental concern like the national parks and not border-to-border in every area where standards for any pollutant have been met."<sup>11</sup> H. Landis Gabel, a University of Virginia Professor of Business Economics, feels that "under current regulations...PSD... air quality in these areas is kept superior to the national standards under an awesomely complex system of permitted increments to existing emissions."<sup>12</sup>

Since PSD regions already comply with the national ambient air quality standards, little is to be gained by piling more regulatory requirements on industry within these areas. Congress should concentrate the country's pollution control resources on nonattainment areas where the pollutant levels are above the national standards. It makes more environmental sense to use certain economic incentives within nonattainment regions to spur industry to be cleaner than it does to pursue ever cleaner air in PSD areas.

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<sup>11</sup> A. Alan Hill, Speech before the Vermont State Chamber of Commerce, Burlington, Vermont, February 24, 1982.

<sup>12</sup> H. Landis Gabel, "SMR Forum: Reform of the Clean Air Act -- Another Decade of Waste?," Sloan Management Review, Fall 1981, p. 71.



Certain changes in the PSD program could simplify implementation and possibly reduce the related excessive regulatory cost--invariably passed on to consumers. Such changes would: 1) eliminate short-term increments; 2) repeal the statutory requirement that a PSD program be established for Set II pollutants; and 3) strengthen the requirement that all new sources are required to incorporate the best available control technology (not more stringent than existent new source performance standards). These changes would decrease the current long lead time for permit approval, not materially affect the air quality in areas which are already below the national standards, decrease excess regulatory costs, and trim the federal and state environmental oversight bureaucracy.

**\*\*\*Issue:** The technical determination of short-term increments is too complicated in practice and ambivalent in effect.

**Suggested Solution:** The short-term (non-annual averaging) increments should be eliminated.

Currently, PSD provisions apply only to the presence of suspended particulates and sulfur dioxide or, as they are called, Set I pollutants. Safety levels for these two pollutants are established. In order to stay within the boundaries of the Act, only certain carefully estimated (through modeling) incremental increases over baseline PSD standards are allowed. The estimation process is very complicated for the allowable increments. The technical determination of these increments has become one of the major points of controversy in enforcing the Clean Air Act.

The elimination of short-term increments would not materially affect air quality in an attainment area--provided that the annual average increments for both sulfur dioxide and total suspended particulates were retained. Why should areas that already have attained relatively clean air be concerned with short-term increments?

Retention of the sulfur dioxide and total suspended particulates permit process, using the annual average increment measure is more than sufficient. After all, the purpose of the primary national ambient air quality standards is to protect the public health. If a region meets these pollutant specific standards, why burden it with a complex, little understood PSD short-term measurement program?

**\*\*\*Issue:** The current Clean Air Act mandates that another PSD increment program be set up for the remaining national ambient air quality standards.

**Suggested Solution:** The statutory requirement for a "Set II" PSD program should be repealed.

In addition to the existing statutory regulations, EPA is required by law to prepare a similar PSD increment program for

the remaining five national ambient air quality standards--carbon monoxide, nitrogen oxides, hydrocarbons, ozone, and lead. This requirement would produce yet another layer of environmental regulation.

It is conceivable that a region could be, per the national standards, relatively clean in certain pollutants and therefore come under the tightly controlled PSD programs and at the same time be relatively dirty with regard to the other pollutants and be subject to nonattainment sanctions. A new source locating in such a mixed area, for example, a power plant, would be faced with multiple statutory control technology requirements. The added burden to industry of excessive and unreasonable air quality requirements--as reflected in permit applications--is paid for by business, not government. This cost is reflected in a higher indirect overhead cost that the American consumer sees directly as an increased unit retail price.

**\*\*\*Issue:** The construction permit application process is plagued by an unpredictable and often long lead time which is economically and environmentally inefficient.

**Suggested Solution:** Removal of most of the aforementioned PSD increment measurement regulations will cut down on the permit approval period. Delays of two or sometimes three years--even for that matter two or three months--in obtaining building permits greatly increase construction and labor costs. Such delays wreak havoc on a firm's budgeting process and internal financial plans. Another effect of a long lead time is on the opportunity cost factor. The longer it takes a factory to replace an obsolete, less efficient, more pollution prone plant with a more productive and less polluting plant, the greater the degree of environmental damage. At the same time, the consumer fails to benefit from the lower cost production of the new plant. Elimination of many needless requirements would shorten the permit approval lead time with tremendous economic gains and little, if any, environmental loss.

#### FEDERAL MOBILE SOURCE CONTROLS

Federal mobile source controls are used to regulate emissions from automobiles, trucks, and other mobile sources of pollution. Yet for the most part, except for being a heavy contributor to acid deposition, the role of the automobile is practically insignificant as a contributor to the total ambient pollution. The mobile source standards promulgated in 1970 and 1975, moreover, were generally not based on hard scientific data but on a need to "do something quick" without regard to cost or energy waste. These controls remain in effect and, by conservative estimate, for automobiles alone, will cost the American consumer at least \$5.4 billion in 1983. The "no-lead in gas" regulation imposes an additional cost of \$9.8 billion. Eliminating many of these regulations could reinstate close to 152,000 workers in the automobile and related industries.

The current mobile source provisions have effects far beyond the American automobile market. For example, the supplies of rhodium, palladium, and platinum--the three rare strategic metals used in the construction of the catalytic converter--are located in Russia and South Africa and subject therefore to the vagaries of those countries' politics.

Advocates of the current mobile source standards maintain that the various required pollution control devices are absolutely necessary and should not be weakened at all. On the other hand, critics support regulatory reform aimed at preserving the current mobile source pollution control system while restructuring the various emission standards in light of environmental and economic reality.

The current mobile source program is ineffective because the standards used are based on skimpy scientific data, a questionable federal automobile emission testing procedure, an ill-conceived and wasteful state-administered inspection and maintenance system, and the improper retention of most pollution control devices that work only on paper or in an artificial laboratory environment.

A congressional investigation into the effectiveness of the entire mobile source program is sorely needed. The Heritage Foundation will be publishing soon a Background on the "mobile source" portion of the Clean Air Act.

#### ACID DEPOSITION

The acid deposition issue not only sharply divides American scientists and policymakers but is the cause of a tremendous amount of diplomatic tension between the United States and Canada. The National Research Council, an arm of the National Academy of Sciences, directly addressed the highly technical problem in its 1981 "Atmosphere-Biosphere Report." It suggests that there is overwhelming circumstantial evidence supporting claims that power plant emissions are a major factor in forming acid deposition (also known as acid rain or precipitation). The report adds, "there is little probability that some factor other than emissions of sulfur and nitrogen oxides is responsible for acid rain." Former U.S. EPA Administrator Douglas Costle said:

We know it is killing fish and other water life. We know soils are being damaged. We suspect that forests and crops are being reduced. We are faced with a genuine and serious problem.<sup>13</sup>

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<sup>13</sup> Robert Collins, "Acid Raid: Scourge from the Skies," Reader's Digest January 1981, p. 112.



These allegations are not supported by the current EPA, which believes that the scientific data base from which to draft acid rain legislation is insufficient and rests more on isolated occurrences than on solid scientific evidence. EPA Assistant Administrator for Air, Noise and Regulation, Kathleen Bennet, repeatedly has stated that "uncertainties about the formation of acid rain and the feasibility of potential controls must be resolved before regulatory action is taken. The American people have the right to expect that their government will not impose additional multi-billion dollar programs without first determining with some assurance that the intended environmental benefit will be achieved."

Less than two years ago, Congress passed the Acid Precipitation Act of 1980 which created the Interagency Task Force on Acid Precipitation. This year the task force released its national research plan to determine the causes of acid deposition and to recommend actions to lessen or prevent its deleterious effects. Despite this planned research program, bills have been introduced in Congress which would force midwestern and southern states to spend billions of dollars on acid deposition control and make it easier for one state to sue another state from which it alleges that acidic emissions originate. Inherent in these bills is the assumption, unsubstantiated by extensive scientific evidence, that acid deposition is caused only by distant stationary sources.

Environmentalists claim that by decreasing sulfur dioxide emissions from industrial plants, acid deposition in Canada and the northeastern United States would be alleviated. It is, of course, possible that acid deposition is caused by industrial plant emissions. But it is also possible that other factors cause acid rain. At a time when the U.S. needs its capital base for new productive plants, it is unwise to mandate billions in outlays for unproved control methods, which may prove to be ineffective in correcting the identified problem. Indeed, it is a known fact that some of this acid deposition is caused by natural and nonstationary source factors such as local automobile emissions.

PEDCO Environmental Inc. of Cincinnati, a midwestern firm which recently completed a study for the Department of Energy, suggests that acid precipitation may be predominantly a local problem with home oil burning and local automotive sources contributing more to acid rain than pollutants carried from distant power plants.<sup>14</sup> The energy crisis had caused many Americans to decrease dependence on fossil fuels by burning increasingly large amounts of wood--not only for warmth but for cooking and sometimes for business as well. As reported in the April 1982 edition of Reason magazine:

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<sup>14</sup> Don L. Gibbons, Sciqwest, January 1982, p. 12.

An October, 1981, study by the American Council on Science and Health (ACSH) reports that, in addition to producing such noxious substances as carbon monoxide, polycyclic hydrocarbons, hydrochloric acid and large amounts of particulate matter, some of the pollutants released from burning wood are potential carcinogens such as benzo(a)pyrene, a substance also found in cigarette smoke.

The American Council on Science and Health study also reported that in an area of Portland, Oregon, half of the respirable particulates in the air on one day in January 1978 came from residential wood burning. In another study by Brookhaven National Laboratory scientist, Frederick Lipfert, data indicate that in some northern cities residential wood burning is a major source of carcinogenic particulate matter. This particulate matter also falls as acid deposition. Therefore, much more information is needed on cause and effect before remedial action is mandated regarding acid deposition.

The best course of government action is to accelerate federal research on the program and produce a definitive study of the acid deposition problem by the end of FY 1983. Federally funded acid deposition research in the EPA budget has increased 70 percent from \$11 million in FY 1980 to \$18.2 million in FY 1982. The FY 1983 EPA acid rain budget request is \$23 million. These funds will be used for planning and implementing the federal government's comprehensive research program on the causes and effects of acid deposition! In addition to EPA, other agencies could participate in interagency research efforts. The government should be given the opportunity to get all of the facts on the table before a remedial regulatory decision is made.

#### FREE MARKET APPROACH TO THE CLEAN AIR ACT

As a valid alternative to government regulation, various innovative free market approaches to air pollution control should be investigated.

Government involvement in attaining clean air is not wrong. There are evident needs to set certain tough cross-boundary standards--so long as they are realistic. There are other areas where regulatory reform is sorely needed. According to Paul R. Portnoy, a scientist writing in the March 1982 Journal of the Federation of American Scientists, "These instances arise mainly where existing regulation takes the form of uniform controls on offending activities which are insensitive to special circumstances, or where regulations specify not only what is to be accomplished, but also, how it should be done. In the latter cases, relatively inexpensive means of accomplishing the same ends are often precluded."<sup>15</sup>

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<sup>15</sup> Washington Post, April 3, 1982, p. A9.



Milton Friedman, in Free to Choose: A Personal Statement, writes that "most public discussion of the environmental issue is frequently characterized more by emotion than by reason. Much of it proceeds as if the issue is pollution versus no pollution... that is clearly nonsense...no one who contemplates the problem seriously will regard zero pollution as either a desirable or a possible state of affairs....One source of atmospheric pollution is the carbon monoxide that we all exhale. We could stop that very simply--but the cost would clearly exceed the gain!"

There are several innovative methods by which "clean air" can become a marketable commodity and the American atmosphere can be cleaned. Using the current tough federal and state air pollution standards, with minor adjustments, the cost of cleaning the air can be determined on an open "emission rights" market rather than by a strict regulatory scheme with its thousands of symbiotic scientific and environmental bureaucrats. Among these market approaches are the bubble concept, netting out, intra-nonattainment area financial equalizing payments, offsets, banking, marketable rights, and the use of emission reduction credits. The General Accounting Office, on March 23, 1982, released a report entitled "A Market Approach to Air Pollution Control Could Reduce Compliance Costs Without Jeopardizing Clean Air Goals." This thorough report reviewed the most prevalent "economic entitlement" suggestions leading toward easier implementation of the Clean Air Act.

Programs such as the bubble policy, offset policy, and emission reduction banking come under the relatively recent EPA-sponsored regulatory relief rubric of "controlled trading." This economic incentive approach retains the same air quality standards as the Clean Air Act but considers the potential cost savings in a firm's pollution control program.

The three-year-old bubble policy places an imaginary "bubble-like" enclosure over an industrial plant or complex. Within this "bubble," a maximum allowable nonspecific pollutant level of measurable emissions is permitted. On April 2, 1982, EPA Administrator Anne Gorsuch expanded the bubble policy to stretch across whole cities or even portions of states. This is a tradeoff policy which deals with situations in which one plant smokestack may be extremely efficient while another may be extremely inefficient; as long as they balance each other so that aggregate emissions are below the allowable standard, the inefficient plant would be allowed to continue operating.

There are also cases where one firm in an area can more than adequately control its pollution at lower cost efficiency than another. Utilization of a multi-plant bubble might provide an economic incentive for the high cost firm to finance additional pollution controls by the low cost firm. These might be called intra-nonattainment area financial equalizing payments.

The offset policy permits new firms in nonattainment areas to offset their expected emissions with proved emission reductions



from current existing sources. This "emission reduction banking," according to EPA officials, could lead to the "large-scale trading, banking, and brokering of a new currency called ERCs (emission reduction credits)." For example, a firm, anticipating future growth or expansion in its area, might, under the emission reduction banking program, find it financially prudent to limit its pollution to a level substantially below the statutory standard. The difference between the standard and the actual measurements would then become a "bankable credit" which could be used by the firm in the future as a pollution offset or traded on an open "pollution rights" market.

Another concept recently discussed by EPA is "netting out." This policy would allow plants to expand or modernize without waiting for a year-long review if they could demonstrate that they could achieve a net reduction in emissions by reducing pollution from old sources. This concept is an expanded version of the offset policy.

Taxing pollutants also offers a free market means of cleaning the air. Yet there are enormous enforcement problems with either a punitive pollution tax or a pollution reduction tax credit.

The pollution tax would be levied by EPA or state agencies on each unit of specific excess pollutant emitted into the atmosphere. The unit tax would be designed to make it profitable for polluters to clean up their pollution until they reached a point where the pollution tax and the cleanup costs were approximately equal. There are several problems with this plan. First, the Internal Revenue Service would have a difficult time analyzing eligible noncompliance measurements, much less determining what excess pollutant emittant occurred in a firm's given fiscal year. Second, according to William Tucker in his May 1981 Harpers article on "Marketing Pollution," in order to set the tax at a certain "trigger" level "would probably involve just as much exhaustive analysis and pre-planning by government agencies as does the present system. If the tax were set too high, the clean up would proceed beyond what was practical or economical [and it would again be picked apart in litigation]. If it were too low industries wouldn't clean up enough."

A pollution tax credit would cause just as many problems. If a firm could receive a credit for emitting less pollutant specific emissions than the standard by enhancing its pollution control program, then once the relative value of the credit reached the approximate cost of the improvements, the market would reach a parity point. As with a pollution tax, this pollution tax credit would be almost impossible to determine by source in a timely fashion set to coincide with the close of a firm's tax year. Both the tax and the credit program would be an administrative oversight nightmare guaranteed to spawn a new bureaucracy.

The use of an innovative "marketable rights" approach to emission reduction, while commendable, also has several potential

problems. There would be a potential uncertainty in the availability of air pollution entitlements due to their newness and questionable future supply. One concern is that some firms, rather than offering their rights for sale on an open market, might hold on to them for fear that future controls might be tightened or their fuel supply might be changed (for example, being required to change from oil to coal). When this need for incremental leeway develops, there might not be any such credits on the open market.

On balance, however, a cautiously introduced "market approach" program would not only decrease much of the existent regulatory overhead but should help control pollution costs as well while meeting the goals of the Clean Air Act.

## CONCLUSION

Since enactment of the amended 1970 Clean Air Act, the United States has made significant progress toward attaining clean air. If Congress permits remedial and realistic changes in the clean air law, the U.S. will continue to enjoy clean air but at a much lower cost to consumers.

National Ambient Air Quality Standards (NAAQS) are the heart of the Clean Air Act. The effectiveness of these standards can be improved with a number of changes. Among them: 1) to weigh properly the cost of compliance against the health and welfare benefits expected from varying levels of standards, EPA should begin phasing in a limited cost-benefit analysis approach; 2) a totally independent advisory group drawn from the National Academy of Science or the Office of Technology Assessment should conduct an evaluation of all scientific data relative to each existing and proposed criteria pollutant to allow for the promulgation of standards based on credible data; 3) pursuant to the Reagan Administration's "New Federalism" initiative, each state should be permitted to tailor its secondary standards to its unique conditions and problems--reflective of its economic, environmental, and energy goals--to allow for regional disparities in climate, agriculture, and the state's economic plan.

The unrealistic nonattainment area regulatory scheme coupled with an overly punitive sanction program creates an unreasonable economic burden for industry and, inevitably, the consumer. This problem can be ameliorated by making discretionary some of the EPA Administrator's mandatory oversight responsibilities. First, the Administrator should have the authority to make reasonable attainment date extensions to states that have exhibited a prior good faith effort at reaching the standards and have prepared a well-defined plan for near-term attainment. Second, the imposition of monetary and other such sanctions should be discretionary and not mandatory. In addition, both nonattainment and Prevention of Significant Deterioration areas should be subject to the same control technology--the best available control technology (which

should be deemed equivalent to New Source Performance Standards where they exist for a category of pollutants).

Attainment areas (those subject to the Prevention of Significant Deterioration program) are also subject to a complicated set of regulations. Among several recommended changes are the elimination of short-term increments, the repeal of the statutory requirement that similar programs be established for Set II pollutants, and the requirement that all new sources incorporate the best available control technology. These changes would decrease the long lead time for permit approval, decrease regulatory costs, and not affect air quality in areas already below the national standards.

Continuation of most federal mobile source controls, as they are currently mandated, represents a costly disservice to the American consumer and the American automobile industry. A congressional investigation must review, among other issues, the scientific validity of 1) the mobile source standards, 2) the federal automobile emission testing procedure, 3) the state-monitored inspection and maintenance system and 4) the relevance of most pollution control devices. Low impact regulatory reform could save at least \$5.4 billion and reemploy 152,000 workers in the automobile industry and related industries.

The acid deposition issue has national as well as international ramifications. The United States should rapidly accelerate federal and other research on the issue to produce a definitive study of the problem by the end of FY 1983.

A "free enterprise" market approach to pollution control in contrast to a government regulated oversight program is long overdue. Among the concepts which can be readily applied are the bubble concept, netting out, intra-nonattainment area financial equalizing payments, offsets, banking, marketable rights, and the use of emission reduction credits.

Americans need clean air legislation which supports innovative and cost-effective pollution control measures, based on quality guidelines. Such measures will derive from good economic and common sense--not ineffectual strivings toward an impossible dream.

Paul T. Langerman  
Policy Analyst