1990

Cooperative Failure: An Analysis of Intergovernmental Relationships and the Problem of Air Quality Non-Attainment

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COOPERATIVE FAILURE: AN ANALYSIS OF INTERGOVERNMENTAL RELATIONSHIPS AND THE PROBLEM OF AIR QUALITY NON-ATTAINMENT

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INTRODUCTION

An increasing awareness and concern for matters of environmental quality has led to greater social pressure for environmental protection. Although many pressing public issues compete for our collective attention, the subject of air pollution and its control appears near the top of the list. Despite this high level of public interest and support, air pollution remains a serious social problem which affects millions of Americans.

Over the last twenty years, Congress has established air pollution abatement as a national priority. To achieve this objective, the Clean Air Act sets forth the national ambient air quality standards ("NAAQS") to protect public health and welfare.[1] In order to accomplish this public health purpose, Congress created a system of air quality regulation that allocates discrete planning, regulatory and enforcement functions to both federal and state levels of government. Moreover, this functional distribution has been made for political as well as practical reasons. What is most significant is that the Clean Air Act has set forth a complex environmental policy goal to be achieved through a planning and regulatory system relying upon intergovernmental cooperation.

Although the attainment of health-protecting air quality standards might be congressionally supported as a national goal, its actual achievement often has been perceived as imposing serious burdens upon local industries and interfering with the transportation choices of individuals and state and local governments.[2] As such, the Clean Air Act's air quality attainment goals could con-

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1. See Clean Air Act § 109, 42 U.S.C. § 7409 (1988).

2. See, e.g., Crow & Williams, U.S. Refiners Facing Squeeze Under New Federal, State Air Quality Rules, Oil & Gas J., Jan. 23, 1989 at 281 (lead industry would be harmed by air quality regulations).

flict with other significant values held by state and local government and by individual citizens. The divergence in interests between levels of government might affect the nature of state and local government participation in the federal scheme of air quality control. This Article focuses on the design of an intergovernmental planning and regulatory system in which the participants do not, or may not, share the same desire to achieve the national environmental objectives.

For over thirty years, Congress has identified air quality as a legitimate federal concern. The body of law that has arisen represents a complex area of governmental regulation involving all three branches of government. In 1990, after thirteen years, Congress finally amended the Clean Air Act, the nation's primary air pollution law.[3] This complex set of amendments represents the most recent legislative expression of national air pollution policy. In adopting this new law, Congress has adopted provisions which will alter the path of environmental policy development in a myriad of significant ways. More importantly, this statute sets the course for the 1990s and will likely be the federal air pollution law of the next century.

This Article addresses several fundamental and related questions: what has been the intergovernmental structure of the system of air pollution control established under federal law? How have the relationships between federal and non-federal levels of government changed during the twenty-year development of the Clean Air Act? To what extent is the continuing problem of NAAQS non-attainment affected by the structure of air quality planning, regulation, and enforcement established under the Clean Air Act? Has the adoption of the 1990 Clean Air Act amendments ("1990 Act") resulted in the improvement of intergovernmental relationships, making NAAQS attainment and maintenance more likely in the future?

This Article concludes that universal NAAQS attainment remains a fundamental yet elusive public policy objective. Moreover, it argues that intergovernmental relationships defined by the Act have evolved under the changing framework of federal air pollution law. While retaining the basic structure of intergovernmental relationships, the 1990 Act has established a highly-defined air quality planning and regulatory program with clearer operational provisions. In the end the success or failure of the

3. Clean Air Act Amendments of 1990, Pub. L. No. 101-549, 104 Stat. 2399 (1990) [hereinafter 1990 Act].

Act in reaching attainment depends substantially upon the continued commitment of state and local government and a high degree of popular support. The future role of the Environmental Protection Agency ("EPA") in this cooperative enterprise will be to motivate and encourage state participation in a congressionally specified system of air pollution control.

I
THE EVOLUTION OF FEDERAL AIR POLLUTION LAW AND POLICY: 1955 TO 1970

Emerging Federal Interest.—After World War II, state government took the lead in developing legal responses to the emerging problem of air pollution.[4] However, limitations inherent in the size and reach of individual state governments restricted the potential for developing an effective system of state-centered air pollution control.[5] Restricted geographical jurisdiction, inadequate resources and expertise, and conflicting state regulatory interests limited the potential effectiveness of the state approach to air pollution control.[6] Although air pollution was widely considered a public health and aesthetic menace, no unified or national concept of unacceptable pollution yet existed.[7] Consequently, the non-attainment issue had not yet arisen. During the 1950s and 1960s, congressional action began to define a federal interest in air pollution control. This emerging federal interest and resultant body of law predominated after 1970, when federal law developed the idea of a national air quality standard.

The 1955 Act.—Over a thirty-five year history, federal air pollution law has grown immensely in its scope and complexity. This statutory evolution has been accompanied by a series of changes in the relationship between federal and state governments in the area of air pollution control. This section describes the development of federal air pollution legislation from 1955 through 1970, giving special attention to matters of intergovernmental relationships.

As the states' interest in air pollution grew during the 1950s, Congress moved slowly to enact legislation in the field. In 1955, Congress passed a statute authorizing the Surgeon General to

4. See, e.g., Cowan, Air Pollution Control in New Jersey, 9 Rutgers L. Rev. 609, 631 (1954).

5. See Note, State Common Law Actions and Federal Pollution Control Statutes: Can They Work Together?, 1986 U. Ill. L. Rev. 609, 620.

6. See id.

7. See Cowan, supra note 4, at 631-32.

fund or to undertake research into air pollution abatement and to disseminate such results to state and local air pollution control agencies.[8] Furthermore, in an effort to carry out the mandate, this two page statute authorized an appropriation of up to five million dollars per year for five years to fund research, training, and demonstration projects.[9] With this modest start, the federal government entered the field of air pollution, viewing it as a suitable subject of study for public health purposes.[10]

In this early statute, Congress emphasized the secondary and supportive role that the federal government was to play with the states in the battle against air pollution. The preamble of the 1955 Act stated that the main congressional policy was "to preserve and protect the primary responsibilities and rights of the States and local governments in controlling air pollution. . . ."[11]

Following the pattern of the prior seventy-five years, and despite its provision for financial and technical assistance, Congress took great pains to acknowledge the primacy of state and local governments and the limited aspirations of the federal government. Specifically, it continued to consider air pollution as a public health matter principally of local concern and one for which no national policy was necessary. The idea of federal intervention through the actions of a regulatory agency was not yet an alternative to local control.[12] The 1955 Act represented a modest, non-regulatory effort to involve the federal health agency in the study of the air pollution problem. The law would begin to change in the 1960s.

The Clean Air Act of 1963.—In 1963, Congress returned to the subject of air pollution control when it enacted the first statute entitled the "Clean Air Act."[13] The 1963 law added to the pre-existing components of the 1955 Act, but it also began to develop a distinctly federal character to the emerging program. While providing funding at a level nearly six times that of the prior Act's

8. See Act of July 14, 1955, Pub. L. No. 84-159, 69 Stat. 322 (1955).

9. Id. § 5(a), 69 Stat. at 322-23.

10. Id., 69 Stat. at 322.

11. Id., 69 Stat. at 322.

12. The Senate Report on what eventually became the 1955 Act stated flatly: "[t]he committee recognizes that it is the primary responsibility of State and local governments to prevent air pollution. The bill does not propose any exercise of police power by the Federal Government and no provision in it invades the sovereignty of States, counties, or cities. There is no attempt to impose standards of purity." S. Rep. No 389, 84th Cong., 1st Sess. at 351 (1955), reprinted in 1955 U.S. Code Cong. & Admin. News, 2457, 2459.

13. Pub. L. No. 88-206, 77 Stat. 392 (1963).

authorization, the 1963 Clean Air Act also emphasized the creation of a national air pollution research and development program that did not merely respond to local requests for information. Rather, as part of this federal research function, the statute specifically charged the United States Department of Health, Education and Welfare ("HEW") with the responsibility for compiling and publishing documents known as air pollution criteria.[14] These criteria were intended to reflect the latest scientific knowledge useful in indicating the kind and extent of health and welfare effects resulting from the exposure to air pollutants.[15] With the development of these air pollution criteria documents, the nature of the federal role in air pollution control began to change. Instead of providing research support, the federal government became responsible for administrative standard-setting. The air quality criteria would later become the basis for setting the NAAQS under the 1970 Clean Air Act.[16]

The 1963 Act also was significant for its establishment of the federal policy of providing direct funding for state and local air pollution control agencies.[17] While this financial support aided the creation of sub-federal anti-pollution agencies, it also initiated a pattern of state dependence on programmatic funding. This form of federal funding continues today. With the expansion of the federal role in sponsoring air pollution control agencies, Congress moved the federal government into a position of challenging the previously state- and local-dominated system of pollution abatement.

Although reluctant in 1955 to intrude into the states' sovereignty over pollution control, Congress found it possible in 1963 to create a procedure for federal abatement of interstate air pollution. The idea that the federal government could abate interstate public nuisances was not new,[18] but the 1963 statute established the federal government as the more important actor in the process of pollution control. While this abatement procedure proved largely unworkable in practice,[19] it did represent a novel view that

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14. Id. at § 3(c)(2), 77 Stat. at 395.

15. Id.

16. See supra note 1 and accompanying text.

17. Pub. L. No. 88-206, § 3(b)(3), 77 Stat. 392, 394 (1963).

18. See Georgia v. Tennessee Copper Co., 206 U.S. 230 (1907).

19. See D. Currie, Air Pollution-Federal Law and Analysis 1-12 to 1-14 (1981); see, e.g., United States v. Bishop Processing Co., 287 F. Supp. 624 (D. Md. 1968), aff'd, 423 F.2d 469 (4th Cir.), cert. denied, 398 U.S. 904 (1970); Edelman, Federal Air and Water Pollution Control: The Application of the

air pollution problems had a greater than local significance and that the federal government had a legitimate role in resolving interstate air pollution disputes. Finally, although the 1963 Act granted no direct federal regulatory authority, it did extend federal administrative activity in the field, and it also established a more aggressive function for HEW in enforcing the emerging environmental law.[20] The recognition of state interests in the control of air pollution would not be directly addressed until 1970.

The Air Quality Act of 1967.—The next step in the development of federal air pollution control legislation was the passage of the 1967 Air Quality Act.[21] This statute introduced a number of fundamental organizational concepts which would remain with the federal air pollution control program well beyond 1967.

First, the Act required HEW to establish "atmospheric areas" that shared a common climate, topography, and meteorology.[22] Within these areas, HEW was directed to define "air quality control regions" ("AQCR") which would be used for imposing air quality standards.[23] Second, the federal agency was then to issue "criteria of air quality" and reports on "pollution control techniques" setting forth the most current information on those topics.[24] Third, each state was mandated to designate ambient air quality standards consistent with the criteria and control techniques for each AQCR within its borders.[25] Finally, the 1967 Act obligated each state to prepare an implementation plan to set emission standards and compliance schedules for specific sources within its borders.[26]

In sum, the 1967 scheme of air quality planning and regulation vested considerable authority in each state with loose federal supervision and little direct control. Although the 1967 Act provided a number of organizing principles that would be carried over into subsequent federal legislation, it represented the last vestige of state autonomy in the control of air pollution. And even though the Act soon would be superseded by the compre-

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Commerce Power to Abate Interstate and Intrastate Pollution, 33 Geo. Wash. L. Rev. 1067 (1965).

20. Pub. L. No. 88-206, § 8, 77 Stat. at 400.

21. Air Quality Act, Pub. L. No. 90-148, 81 Stat. 485 (1967).

22. Id. § 107(a)(1), 81 Stat. at 490.

23. Id. § 107(a)(2), 81 Stat. at 490-91.

24. Id. §§ 107(b), (c), 81 Stat. at 491.

25. Id. § 108(c)(1), 81 Stat. at 492.

26. Id. § 108(c)(2), 81 Stat. at 492.

hensive 1970 statute, it provided the foundation for the future federal-state relationship in air quality planning and enforcement.

III
THE CLEAN AIR ACT AMENDMENTS OF 1970

A. Foundation of Change The Clean Air Amendments of 1970[27] ("1970 Act") was the first comprehensive federal regulatory statute concerned with environmental quality to be enacted. Its passage came at a time of great social concern about environmental matters.[28] For example, it followed Earth Day, an event that focused the nation's attention on matters of environmental quality,[29] by approximately six months. The general societal interest in environmental issues manifested itself in a political way at the national level. Within a period of two years, Congress actively considered and enacted a number of sweeping environmental bills, including the National Environmental Policy Act of 1969 ("NEPA"),[30] the 1970 Act[31] and the Federal Water Pollution Control Act.[32] Why was this federal legislative and administrative effort necessary? Within the field of air pollution control, congressional leaders thought the 1967 Air Quality Act inadequate to the task and its own prior implementation "regrettably slow."[33] In addition, the 1970 Act reflected a fundamental change in the federal view of the states' capacity to cure air pollution on an individual basis. Heavy reliance upon the efforts of state and local governments seemed misplaced because these entities often

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27. Pub. L. No. 91-604, 84 Stat. 1676 (1970).

28. The political rhetoric of the time described the nation as facing a serious air pollution crisis imposing costs of as much as 38 billion dollars per year in environmentally induced diseases. A recurring opinion expressed during the development of the 1970 Act was that population growth, industrial production, and rising affluence had a substantial affect on the intolerable air quality conditions of many urban areas. Thus, Senator Edmund Muskie, the Senate sponsor of the bill, noted in the conference report:

> [W]e learned that air pollution is more severe, more pervasive and growing faster than we had thought. Unless we recognized the crisis and generated a sense of urgency, national lead times to find and apply control measures could melt away without any chance for a rational solution to the air pollution problem.

116 Cong. Rec. 42,382 (1970).

29. See Lewis, The Spirit of the First Earth Day, 16 EPA Journal 8 (Jan./Feb. 1990).

30. Pub. L. No. 91-190, 83 Stat. 852 (1970).

31. Pub. L. No. 91-604, 84 Stat. 1676 (1970).

32. Pub. L. No. 91-224, 84 Stat. 91 (1970).

33. H.R. Rep. No. 1146, 91st Cong., 2d Sess. 5356, 5360 (1970).

lacked the expertise, resources, and desire to regulate air polluting sources stringently.

Furthermore, the enactment of the main federal anti-pollution laws indicated an understanding that air and water pollution problems should be approached in a uniform and scientifically based fashion that was not limited by the artificial boundaries of states. Air was perceived as a natural resource which moved according to natural forces and respected no political boundaries. These environmental problems were transformed into national dilemmas requiring national solutions. The Clean Air Act not only reflected the national interest in the subject of air pollution, but also it allocated extensive regulatory powers to the newly constituted EPA. Environmental improvement was now to be the province of an expert federal agency. As such, the 1970 Act represented a quantum leap in federal responsibility for cleaning up the air.

B. Steps Leading to Attainment.—The drafters of the 1970 Act designed a system of air pollution control that was comprehensive in scope and optimistic in objective. As its central purpose, the Act established the national policy goal of uniform air quality high enough to protect all citizens against adverse pollution-created health effects.[34] To achieve this result, the 1970 Act set forth a three-part strategy containing the following components: (1) environmental quality objectives; (2) national performance standards; and (3) planning and enforcement mechanisms.[35] These three features comprised the major elements of a rational planning model for reaching the Act's air quality goals. A common factor affecting each of these items was that the air quality objectives had to be achieved within a congressionally mandated time.[36] The addition of a temporal dimension to the Clean Air Act's structure was undoubtedly intended to provide a discipline to the regulatory process. However, it also gave rise to the possibility of regulatory failure in achieving the Act's goals. This is the problem of non-attainment.

Environmental Quality Objectives—The National Ambient Air Quality Standards.—The 1970 Act established the concept of the NAAQS as the Act's main organizing principle and regulatory ob-

34. Pub. L. No. 91-604, § 4(a), 84 Stat. at 1679-80 (amending Clean Air Act § 109, 42 U.S.C. § 7409 (1988)).

35. See id., 84 Stat. at 1678-84 (amending Clean Air Act §§ 108-111, 42 U.S.C. §§ 7408-7411 (1988)).

36. Id., 84 Stat. at 1679 (amending Clean Air Act § 109(a)(1), 42 U.S.C. § 7409(a)(1) (1988)).

jective.[37] Importantly, the statute made the function of NAAQS determination an exclusively federal responsibility.[38] This was a major departure from the 1967 scheme of allowing the states to set and enforce their own ambient air quality standards.[39]

Under the terms of sections 108 and 109 of the 1970 amendments,[40] the EPA was to develop the NAAQS at two increasingly stringent levels: primary standards to protect human health and secondary ones which would preserve the public welfare. The statute then laid out a multi-step NAAQS standard-setting procedure to be exercised by the EPA in its role as a health effects and technology assessment expert.[41] Within this context the EPA set standards for six pollutants and thereby defined the meaning of "healthy air" for the nation. Although there has been some adjustment of the standards over the twenty year period, the NAAQS have remained relatively stable in number and definition. Recently, however, there have been demands to tighten the air quality standards further to protect public health.[42]

National Performance Standards.—A second significant component of the 1970 Act's structure was the allocation to the EPA of the responsibility for setting performance standards for new motor vehicles, new polluting facilities, and sources of hazardous air emissions.[43] Believing that each of these sources presented a serious threat to air quality, Congress granted the EPA the authority to mandate emission performance standards in the form of technological solutions to reduce air emissions. Exhaust pollution from new motor vehicles was required to be reduced by at least ninety percent in no more than six years.[44] Once again Congress selected a policy which emphasized the centralized EPA's development of state-of-the-art technical rules for significant air pollution sources. This technologically optimistic policy assumed the EPA to be sufficiently competent to make these complex engi-

37. Id., 84 Stat. at 1678-79 (amending Clean Air Act §§ 108-109, 42 U.S.C. §§ 7408-7409 (1988)).

38. Id.

39. See supra note 25 and accompanying text.

40. Pub. L. No. 91-604, § 4(a), 84 Stat. at 1678-79 (amending Clean Air Act §§ 108-109, 42 U.S.C. §§ 7408-7409 (1988)).

41. Id., 84 Stat. at 1679-80 (amending Clean Air Act § 109, 42 U.S.C. § 7409 (1988)).

42. 19 Env't Rep. (BNA) 222 (June 17, 1988) (criticism of ambient SO_2 standards); see also 18 Env't Rep. (BNA) 2525 (Apr. 22, 1988).

43. See Clean Air Act subchapter II, §§ 111, 112, 42 U.S.C. §§ 7521-7554, 7411, 7412 (1988).

44. See id. § 202(b)(1), 42 U.S.C. § 7421(b)(1) (1988).

neering judgments and to be free from any anti-regulatory attitude that a state might foster in its desire to encourage local industry.

Planning and Enforcement Mechanisms.—The final major component in the 1970 Clean Air Act scheme of air quality management was the development of the State Implementation Plan ("SIP").[45] The drafters of the Act viewed the SIP as the principal mechanism for state involvement in the newly federalized system of air pollution control.[46] Each state was required to devise a plan containing certain statutorily enumerated provisions that would attain the primary NAAQS "as expeditiously as practicable but . . . in no case later than three years from the date of [plan approval]. . . ."[47] Read literally, this would have meant that SIPs would have had to project attainment of the primary NAAQS by 1975, or 1977 at the latest, if certain extensions were granted. Maintenance of the primary NAAQS would thereafter have been required, and the secondary NAAQS would have had to have been achieved within a "reasonable time."[48]

The controlling idea in section 110 was that states, rather than the EPA, would be free to design a SIP tailored to their individual pollution control preferences.[49] This local option system permitted the states to make the most direct public policy choices about which categories of sources would reduce their emission and to what degree.[50] The language of the 1970 Act in general

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45. Pub. L. No. 91-604, § 4(a), 84 Stat. 1680-83 (amending Clean Air Act § 110, 42 U.S.C. § 7410 (1988)).

46. The conference report accompanying the 1970 Clean Air Act contained the following language:

> The conference substitute makes it the primary responsibility of each State to assure air quality within the entire geographic area comprising such State by submitting an implementation plan for such State for achieving air quality standards. All interstate and intrastate regions designated prior to enactment of this legislation would remain in effect. The Administrator retains authority to designate interstate and intrastate regions and is authorized to approve the establishment by the State of intrastate regions.

H.R. Rep. No. 1783, 91st Cong., 2d Sess., reprinted in 1970 U.S. Code Cong. & Admin. News 5376.

47. Clean Air Act § 110(a)(2)(A)(i), 42 U.S.C. § 7410(a)(2)(A)(i) (1988) (amended 1990).

48. Id. § 110(a)(2)(A)(ii), 42 U.S.C. § 7410(a)(2)(A)(ii).

49. However, the statute's anti-preemptive policy contained in section 116 was limited. States could not vary the automobile standards, except for California, nor could they change the new sources performance standards set under Clean Air Act § 111, 42 U.S.C. § 7411 (1988) (amended 1990).

50. See 116 Cong. Rec. 42,382 (1970) (statement of Sen. Muskie) ("The Senate remains convinced that most effective enforcement of standards would

continued to speak in terms of local or state autonomy. Thus, one of the Act's initial findings was that "the prevention and control of air pollution is the primary responsibility of states and local government."[51]

The EPA principally had an evaluative function in this state-managed plan formulation process; it ascertained whether the SIP air pollution control provisions projected attainment of the NAAQS by the date specified in the Act. Other functions allotted to the EPA in the 1970 Act include approving SIP revisions, extending compliance or attainment dates, and producing its own SIP in case of state default.[52] The 1970 Act also accorded the EPA significant enforcement powers both to order source compliance with SIP requirements and to seek judicial enforcement in federal court.[53] For example, under the Act, EPA approval of a state's SIP rendered it federally enforceable and alterable only with the EPA's consent.[54] Furthermore, a special provision existed to permit the EPA to assume SIP state enforcement responsibilities when there was widespread SIP violation and a failure of state enforcement.[55] While the rhetoric surrounding the enactment of the 1970 statute employed the language of shared power, the federal actors appeared to have the upper hand. Congress set the framework for air quality planning and installed the EPA as the supervisor of the state's conduct, possessing significant powers of preemption should the state fail to enforce its SIP.[56] To assist the states, the 1970 Act authorized federal funding to help support state air pollution programs.[57] With the adoption of section 110, the structure of intergovernmental relationships afforded the federal government at least nominal superiority over the states in the design and implementation of the SIPs. So long as the EPA-approved SIPs actually provided for timely attainment of the NAAQS, the odds of intergovernmental conflict remained low. Nevertheless, the 1970 Act created the potential for an ad-

take place on the State and local levels. It was here that the public could participate most actively and bring the most effective pressure to bear for clean air.").

51. Clean Air Act § 101(a)(3), 42 U.S.C. § 7401(a)(3) (1988) (amended 1990).

52. See id. §§ 110(a)(3), 110(e)-(f), 110(c), 42 U.S.C. §§ 7410(a)(3), 7410(e)-(f), 7410(c).

53. See id. § 113, 42 U.S.C. § 7413.

54. Id. §§ 110(a)(3), 113, 42 U.S.C. §§ 7410(a)(3), 7413.

55. Id. § 113(a)(2), 42 U.S.C. § 7413(a)(2).

56. Id. § 110(c)(1), 42 U.S.C. § 7410(c)(1).

57. The 1970 Act provided authorization for one billion dollars in state program funding over the period 1971-73. See 116 Cong. Rec. 42,386 (1970).

versarial relationship between the federal and state governments if air quality goals were not reached.

As the mid-1970s' attainment dates approached, it became rapidly apparent that in many areas the NAAQS would not be achieved on time.[58] The Clean Air Act's SIP strategy—unrealistic in temporal terms—had failed to produce timely attainment. This failure presented the EPA with a daunting responsibility: the design of a post-attainment date policy without express congressional direction. Many questions remained to be answered: would all states with non-attainment areas be required to submit plan revisions indicating attainment? What would the new attainment date be? The implications of non-attainment were thought to be bleak.[59]

The non-attainment issue also crystallized the conflict between the federal goals of clean air and local economic and social interests in economic health. Recognition of this conflict highlighted the direct link between federal air pollution policy and local land use and economic development.

Yet there remained the question of whether the pursuit of nationwide attainment would be justified and supported when the true dimensions of the aggregated associated economic cost to local interests were known. The EPA was unwilling to administer a devastating blow of federally mandated factory shutdowns to the American economy as a consequence of non-attainment. In 1976, it fashioned an interim policy to preserve its general air quality goals without unduly stifling economic growth. And, to accommodate both the federal and the local interests, it also developed an "offset" or "trade-off" policy that would permit limited new source growth in non-attainment areas.[60] The centerpiece of this policy used new source construction to spur the cleanup or shutdown of heavily-polluting existing facilities.[61] New facilities would be allowed to locate in such areas if their emissions would be offset by a reduction in existing source emissions resulting in a "positive net air quality benefit."[62]

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58. See 1 W. Rodgers, Environmental Law—Air and Water 273 (1986).

59. Id. ("[T]he predicted consequence of non-attainment under the 1970 amendments was a flat ban on new sources for the obvious reason, to put it starkly, that if prevailing air quality brought death and destruction, there was little to commend a move that would aggravate conditions already quite bad enough. The very real prospect, then, was a shutdown of industrial growth in many parts of the nation.").

60. 41 Fed. Reg. 55,524, 55,528 (1976).

61. Id. at 55,528.

62. See id. at 55,528-29 (1976).

But this new EPA trade-off policy alone would not bring non-attainment areas into compliance with the NAAQS. In 1977, Congress was forced to deal with this complex issue by adopting the first legislative component designed expressly to deal with the problem of non-attainment.[63] In a number of significant ways, this new component shifted the relationship between state and federal government in favor of stricter federal direction.

IV
THE 1977 CLEAN AIR ACT AMENDMENTS

The 1977 Clean Air Act Amendments ("1977 Act") responded to the problem of non-attainment by adding a new Subpart D ("Part D") to the Act[64] and by relying in part upon the fundamental planning and enforcement structure of the 1970 Act[65] as well as the EPA's trade-off policy.[66] Specifically, the 1977 amendments retained the pre-existing policy of nationally uniform attainment dates for all NAAQS pollutants.[67] No consideration was given to the idea of regionally variable attainment dates because the new law embraced a policy of complete regional and temporal uniformity in all matters pertaining to attainment.

In the area of non-attainment, some innovations were incorporated into the 1977 law that limited state options for dealing with non-attainment conditions.[68] The 1977 Act thus began to erode the traditional federal-state relationship. Nevertheless, while the EPA's powers were enhanced and more limitations on state discretion were imposed by the 1977 Act, the general pattern of state planning and federal supervision continued.

Designation of Non-Attainment Areas.—Following the 1977 Act, the attainment status of a geographical area had significant implications for the potential economic growth of a region. The

63. Clean Air Act §§ 171-178, 42 U.S.C. §§ 7501-7508 (1988). See Connecticut Fund for the Env't, Inc. v. EPA, 672 F.2d 998, 1001 (2d Cir.), cert. denied sub nom. Manchester Envtl. Coalition v. EPA, 450 U.S. 1035 (1982) ("When it became apparent that many states would fail to meet the NAAQSs by even mid-1977 because of inadequate state regulation and industry violations, Congress rescued these states from a possible shutdown of existing sources of pollution and a ban on new sources in excessively polluted areas by amending the Act.").

64. Pub. L. No. 95-95, 91 Stat. 685, 746-51 (1977); see infra notes 78-80 and accompanying text.

65. See supra notes 45-57 and accompanying text.

66. See supra notes 50-62 and accompanying text.

67. Clean Air Act § 172(a), 42 U.S.C. § 7502(a) (1988) (amended 1990).

68. Id. § 172(b), 42 U.S.C. § 7502(b) (amended 1990).

amendments established a procedure for classifying all lands for purposes of the Act. First, it required that the states submit lists of data by early 1978 identifying the attainment status of all Air Quality Control Regions ("AQCRs") within their borders.[69] Areas were to be classified as one of the following: attainment, non-attainment, or unclassifiable.[70] Next, Congress directed the EPA to promulgate this list either intact or as modified by the EPA.[71] This step was to be accomplished within sixty days of the state's submittal of its list. The information upon which the attainment status designations were based was either direct monitoring data or diffusion computer model projections.[72] Finally, non-attainment status could change over time, requiring redesignation from one category to another. Redesignation requests generally come from the states; indeed, at least one federal court of appeals concluded that the EPA could not modify existing designations unless a state had previously asked for the change.[73]

Extension of Attainment Deadlines and Non-Attainment Area SIPs.— One way to avoid the problem of non-attainment was to redefine the concept of attainment by postponing the date by which the NAAQS had to be achieved. In 1977, Congress revised the attainment principle when it adopted a two-tiered system of attainment date extensions at five and ten year intervals.[74] The first deadline was applicable to all NAAQS pollutants, while the second was available for those areas experiencing severe pollution created by automobiles. In selecting these deadlines, congressional drafters optimistically believed that the times specified were reasonable and attainable throughout the nation. Moreover, the drafters failed to make any provision for states or regions to obtain attainment date extensions beyond those set out in the 1977 Act.[75]

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69. See id. § 107(d)(1), 42 U.S.C. § 7407(d)(1)(amended 1990).

70. See id.

71. Id. § 107(d)(2), 42 U.S.C. § 7407(d)(2) (amended 1990).

72. Id. § 171(2), 42 U.S.C. § 7501(2) (1988). The statute clearly anticipated this information and courts were extremely willing to accept it. See Republic Steel Corp. v. Costle, 621 F.2d 797 (6th Cir. 1980); Cincinnati Gas & Elec. Co. v. Costle, 632 F.2d 14 (6th Cir. 1980); PPG Indus. Inc. v. Costle, 630 F.2d 462 (6th Cir. 1980); and Columbus & Southern Ohio Elec. Co. v. Costle, 638 F.2d 910 (6th Cir. 1980).

73. See Bethlehem Steel Corp. v. EPA, 723 F.2d 1303 (7th Cir. 1983); see also 53 Fed. Reg. 29,724 (1988) (EPA's acquiescence to court ruling).

74. See Clean Air Act § 172(a), 42 U.S.C. § 7502(a) (1988).

75. Id. Much of the structure of Part D originated in the Senate's version of the bill. See 123 Cong. Rec. 27070 (1977), reprinted in 1977 U.S. Code Cong. & Admin. News 1570, 1573.

Nevertheless, the confident statements of the sponsors of the 1970 Act about meeting the NAAQS in a timely fashion gave way to serious talk about the difficulty of reaching attainment status and the need for a carefully designed and well-implemented system of regulation.[76] As a matter of policy, these time extensions were not automatically effective; rather, they were conditioned upon the states undertaking and the EPA approving a number of SIP revisions to ensure that attainment would be reached by the dates set in the Act. These SIP revisions were mandatory obligations and necessary to avoid statutory sanctions.[77]

Of greatest importance to this scheme was the requirement in section 172 that the states revise their SIPs to provide for attainment "as expeditiously as practicable. . . [but] not later than December 31, 1982."[78] Enhanced SIP commitments were necessary for further delay of the attainment date for carbon monoxide and hydrocarbons until 1987. Congress continued to rely upon the regulatory structure of air quality plans with concrete performance objectives to be achieved by fixed future dates.

Congress also set forth eleven explicit programmatic characteristics for these revised SIPs.[79] The program elements of an acceptable SIP did not require the gradual adjustment of the pre-existing SIPs but rather mandated the adoption of significant new provisions to control state discretion in regulating air pollution sources in non-attainment areas. For instance, existing air pollution sources were forced to assist the attainment effort by complying with a new technology requirement termed "reasonably available control technology."[80] Moreover, new sources were obligated to undergo a permitting process that included pre-construction review and meeting a stringent series of approval conditions.[81]

As might be expected, even greater program demands were imposed for those states which requested the second stage exten-

76. 123 Cong. Rec. 27070 (1977), reprinted in 1977 U.S. Code Cong. & Admin. News 1570, 1573.

77. See Clean Air Act § 172(b), 42 U.S.C. § 7502(b) (1988) (amended 1990).

78. Id. § 172(a)(1), 42 U.S.C. § 7502(a)(1) (amended 1990).

79. See id. § 172(b), 42 U.S.C. § 7502(b) (1988). This section contained a broad scope of the factors to be considered and emphasized existing source control, emission inventory data, new source permitting procedures, and organization principles.

80. Id. See also 40 C.F.R. § 51.1(o) (1990) (regulatory definition of RACT).

81. See Clean Air Act § 173(1)-(4), 42 U.S.C. § 7503(1)-(4) (1988) (amended 1990).

sion to 1987. In its specificity of SIP requirements, the 1977 Act at least began the process of federal control of state planning activity in non-attainment areas and curbed state discretion in designing a customized non-attainment plan.

Upgraded Sanctions for SIP Failure.—Section 172 continued the previous practice of congressional specification of state air pollution program features followed by a process of EPA approval or disapproval within statutory deadlines. In this case, the states were required to have their revised SIPs approved by the EPA in less than two years from enactment of the 1977 amendments.[82] In addition, the 1977 Act maintained the EPA's existing power to prepare a SIP for any state failing to submit one deemed to be adequate.[83]

If this were the extent of the authority allotted the EPA to carry out the planning requirements of the non-attainment program, the 1977 Act would not constitute a major departure from the 1970 Act. However, the drafters of the 1977 Act believed that the EPA needed greater leverage to ensure that states developed and implemented SIPs adequate to reach attainment status by 1987. The potential impact of these new sanctions apparently was deemed sufficient to bring reluctant states into line. In reality, however, the sanctions changed the EPA's relationship with the states, at least symbolically, to one in which the EPA was transformed into the superior force endowed with punitive powers.

The 1977 amendments provided the EPA with a number of new enforcement mechanisms to assist it in obtaining state cooperation in the non-attainment program. The most prominent of these devices was the EPA's new authority, under section 110(a)(2)(I), to prohibit construction or modification of major stationary sources in any non-attainment area that was not under a legitimate SIP.[84] This new section indicated Congress' view that the EPA's pre-existing power to promulgate directly an SIP for a recalcitrant state was inadequate.[85] Undoubtedly, the predominant policy imperative in the new section was the need to compel satisfactory state participation in the SIP development and implementation process. This construction ban authority appeared to give the EPA tremendous leverage over uncooperative states by threatening the ability of such states to locate major in-

82. See id. § 172, 42 U.S.C. § 7502 (1988).
83. Id. § 110(c)(1), 42 U.S.C. § 7410(c)(1) (amended 1990).
84. Id. § 110(a)(2)(I), 42 U.S.C. § 7410(a)(2)(I) (amended 1990).
85. Id. § 110(c), 42 U.S.C. § 7410(c) (amended 1990).

dustrial facilities in non-attainment areas.[86] Congress apparently believed that, with regard to non-attainment, such an intrusion into local matters of land use and economic development was warranted.

The Clean Air Act amendments also provided for three other sanctions which, if used, would deny federal funding for a variety of state and local government activities.[87] Thus, for the first time, Congress attempted to employ financial leverage in its air pollution law to obtain the cooperation, not of the regulated emission sources, but of the state governments themselves. The theory behind these provisions was that fiscal pressure might accomplish what the construction ban and the threat of direct EPA SIP promulgation could not.

Section 176 mandated that neither the EPA nor the Department of Transportation would grant federal funds to states for use in a non-attainment area where transportation controls were needed to achieve attainment and the state had failed to submit a plan considering such controls.[88] More generally, the Act also stated that no Clean Air Act grants would be made when an approved SIP was not being implemented.[89] Finally, the EPA was accorded discretionary authority to limit funds for the construction of sewage treatment works in any area where a state failed to effectuate a plan to control emissions associated with the sewage treatment facility.[90] This third sanction gave the EPA potentially substantial power over local land development.

Conclusions Regarding the 1977 Amendments and the Evolution of Non-Attainment Policy.—The 1977 Clean Air Act amendments represent the first direct legislative recognition of the non-attainment problem. The subpart D program reflected the recognition that the 1970 system of SIP development, approval, and enforcement had failed to reach its primary objective: the NAAQS remained important yet unrealized public health goals even after seven years. The national goal of achieving uniformly healthy air had proved to be more elusive than the drafters of the 1970 Act

86. The General Accounting Office ("GAO") analyzed the impact of the construction ban and indicated that it was largely ineffective as of 1985. See GAO, EPA's Sanctions Policy Is Not Consistent with the Clean Air Act, GAO/RCED-85-121 (1985) [hereinafter GAO Report].

87. See Clean Air Act § 176(a), 42 U.S.C. § 7506(a) (1988); id. § 176(b), 42 U.S.C. § 7506(b); id. § 316(b), 42 U.S.C. § 7616(b).

88. Id. § 176(a), 42 U.S.C. § 7506(a).

89. Id. § 176(b), 42 U.S.C. § 7506(b).

90. Id. § 316(b), 42 U.S.C. § 7616(b).

imagined. Reaching that goal would require time, programmatic sophistication, and a willingness to sacrifice short-term economic interests for long term health benefits.

It was apparent that the true price for the uniform attainment of the NAAQS under the 1977 legislation would have to be paid at the state and local level. By focusing on stationary source and transportation control measures and setting forth enhanced planning and permitting regulatory requirements applicable only to sources in non-attainment areas, the Act established an undesirable classification surely unwanted by state and local governments.[91] For classification of part of a state's territory as non-attainment would limit its industrial growth and demand greater air quality planning effort.

While operating within the general structure of the 1970 air quality planning program, the 1977 Clean Air Act amendments altered the principles of cooperative federalism stated by the prior Act: any idea that the air pollution law would harness the collaborative energies of equals was surely abandoned. The elements set out in subpart D specified state participation in terms of precise programmatic and permitting requirements. State government was to be viewed not as an equal partner in the pollution control effort but rather as an unwilling instrument of the federal air pollution policy.

Within this revised statutory scheme, Congress gave little thought to the continuing relationship of the EPA and the states. While the ultimate objective of reaching attainment was clearly set out,[92] little statutory attention was given to the direction of the EPA in its management of the subpart D program. The absence of guidance to the Agency combined with the lack of truly effective state inducements and sanctions created the potential for a program which would fail to achieve its purpose. Like its predecessor,[93] the 1977 Act also failed to consider the possibility that attainment would not be achieved by the extended attainment dates. Possibly, this failure reflected its confidence in the new regulatory program and optimism about the program's eventual

91. The most direct reflection of this was the high number of cases filed to challenge the non-attainment designation process. See, e.g., Western Oil & Gas Ass'n v. EPA, 767 F.2d 603 (9th Cir. 1985); Dressman v. Costle, 759 F.2d 548 (6th Cir. 1985); U.S. Steel Corp. v. EPA, 605 F.2d 283 (7th Cir. 1979).

92. See Clean Air Act § 172(a)(1), 42 U.S.C. 7502(a)(1) (1988) (amended 1990).

93. See supra notes 58-59 and accompanying text.

success. The experience since 1977 shows that this confidence was misplaced.

V
POST-1977 EXPERIENCE OF THE NON-ATTAINMENT PROGRAM

Enactment of the 1977 Clean Air Act Amendment's non-attainment provisions did not result in the achievement of the NAAQS.[94] More than thirteen years after the passage of that legislation, the attainment goal remains elusive. The post-1977 experience with the non-attainment program reveals a pattern of delayed and reluctant cooperation between the EPA and the states in the preparation of the revised SIPs and the implementation of control measures intended to lead the nation towards the objective of clean air. This time period also has witnessed a change in the EPA's role: instead of encouraging and certifying the state preparation of adequate SIPs, it now disapproves of state SIP development and threatens substantial sanctions on uncooperative states. The EPA's policy in this area could also be inconsistent, and one that labors against the pressure of unachievable, uniform statutory deadlines. Beyond this, the EPA spent most of the 1980s attempting to design a post-attainment date non-attainment policy in the absence of direct congressional guidance.

Attempts to Follow the Act.—In formulating the 1977 amendments, Congress sought to ensure achievement of the new NAAQS attainment dates by imposing a precise schedule for air quality planning and implementation.[95] A range of sanctions also were made available to bolster the EPA's authority to obtain necessary SIP revisions and the adoption of control measures.[96] First, the non-attainment areas were to be identified and formally listed by early 1978.[97] The EPA met this requirement by promul-

94. See Grider, Interstate Air Pollution: Over a Decade of Ineffective Regulation, 64 Chi.-Kent L. Rev. 619 (1988) ("Unfortunately, [the 1977 amendments to the Clean Air Act] have not proven effective. Case law and statutory analysis demonstrate that there are no current regulations . . . at the federal or state level which provide an adequate remedy for states plagued by interstate air pollution.").

95. See Clean Air Act Amendments of 1977, Pub. L. No. 95-95, 91 Stat. 685 (1977).

96. See id., 91 Stat. at 704; supra notes 45-63 and accompanying text.

97. See id. § 103, 91 Stat. at 687-88 (adding Clean Air Act § 107(d)(1), 42 U.S.C. § 7407(d)(1) (1988)).

gating attainment status designations under section 107(d).[98] In March 1978, the EPA designated over four hundred areas as non-attainment for one or more primary or secondary NAAQS.[99]

Once the geographical extent of non-attainment status was known, the second step of the program required the state submission of SIP revisions for non-attainment areas no later than January 1, 1979.[100] These revisions were intended to contain reasonably available control measures ("RACM") and were expected to demonstrate annual incremental progress towards the December 31, 1982 attainment date.[101] An examination of the statutory design reveals an SIP revision process and implementation of control strategies which were to occur within a compressed period of time. This temporal element, along with the fundamental difficulty of the task, would cause the EPA to reformulate its approach numerous times without substantial success.

The EPA initially took a forceful position with regard to the demands of Part D. In July 1979, it issued a rule stating that the construction ban authorized by section 110(a)(2)(I) would apply immediately to any designated non-attainment area that did not have an approved SIP.[102] Because the EPA had not approved any Part D SIPs for carbon monoxide and ozone at the time, the ban became effective in every non-attainment area. This sanction would be removed gradually over the next three years, however, as most states submitted their SIPs (originally required in January 1979) and the EPA approved or "conditionally" approved them.[103] By the end of 1982, therefore, most ozone and carbon monoxide non-attainment areas were not under the construction ban for failing to have an approved SIP.[104]

By its terms, the 1977 Act required not only approved and timely air quality planning, but also actual attainment of the NAAQS by December 31, 1982.[105] As 1982 drew to a close, the

98. See id., 48 Fed. Reg. 4,972 (1982).

99. See 43 Fed. Reg. 8,962 (1978). The EPA adjusted many of these designations in the fall of 1978. See id. at 40,502.

100. Clean Air Act § 172(a)(1), 42 U.S.C. 7502(a)(1) (1988).

101. Id.

102. 44 Fed. Reg. 38,471 (1979).

103. See 48 Fed. Reg. 5,022 (1983). For a specific example of conditional approval of SIPs, see id. at 5,282 (conditional approval of Indiana SIP); see also 1990 Act, supra note 3, § 101, 104 Stat. at 2407 (providing for conditional approval of SIP revisions).

104. See 48 Fed. Reg. at 5,025-29.

105. Clean Air Act § 172(a)(1), 42 U.S.C. 7502(a)(1) (1988).

EPA embarked upon a strategy of employing existing air quality data to list the 474 non-attainment counties as either a Tier I or a Tier II county.[106] Tier I consisted of approximately 330 counties that had their SIP revisions fully approved, would likely meet all attainment deadlines, and could have their area redesignated as attainment during 1983.[107] Tier I would not be subject to future sanctions. Tier II was comprised of 111 counties that would not likely meet their deadline for one or more pollutants and thirty-three other counties that still had not met all of their 1979 SIP revision requirements.[108]

Adapting the Part D Program to the Reality of Continuing Non-Attainment.—The EPA targeted the Tier II group for the sanctions provided by the Act. After the passage of the 1982 attainment date, it took an aggressive position regarding both the non-attainment deadlines and the use of available sanctions as leverage against the states. Specifically, the EPA proposed to disapprove the SIPs of Tier II areas and impose the Act's construction ban.[109] This position was decisive and best effectuated the literal meaning of the Clean Air Act. It rightly accorded little room for avoiding the statutory commands of the 1977 Act. The position also reflected a belief that the construction ban was an influential and potentially motivating force which would prompt the states to reach attainment.[110] By taking this punitive approach, moreover, the EPA's role became decidedly more adversarial toward the states. Ultimately, this position became impossible to sustain.

The EPA's policy of strict enforcement brought on a firestorm of criticism from Congress, the states, and the public in general.[111] Much of the criticism emphasized that the widespread imposition of the construction ban would penalize those states which had made good faith efforts to control emissions but failed.[112] More importantly, it was feared that widespread use of the construction ban would cause serious harm to local economies.[113] Congress was sufficiently attuned to this opposition to the EPA's interpretation of its statutory mandate. It enacted leg-

106. See 48 Fed. Reg. 4,972-73 (1983).

107. See id. at 4,975 and Appendix C.

108. See id. at 4,973 and Appendix D.

109. Id. at 4,972.

110. The 1985 GAO report cast doubt both on the legality of the EPA's post-1982 policy and the efficacy of the construction ban as a motivator. See GAO Report, supra note 86, at 15-16.

111. See id. at 3.

112. See id. at 6.

113. See id.

islation barring the Agency from using any appropriated funds during the 1984 fiscal year to impose the construction ban in non-attainment areas with previously approved SIPs.[114]

In response to both the funding law and the vocal opposition, the EPA reversed its construction ban policy and allowed non-attainment states one more year to revise their SIPs in order to provide for attainment "as expeditiously as practicable."[115] Furthermore, this revised policy emphasized a new spirit of cooperative planning rather than the imposition of sanctions.[116] Nevertheless, as a check against recalcitrance, the new EPA policy mandated that the construction ban and the funding sanctions could be imposed in the event that a state failed to respond to this SIP call in an adequate fashion.[117]

As the 1980s progressed, it became increasingly apparent that NAAQS violations for ozone and carbon monoxide would continue well beyond the Clean Air Act's ultimate 1987 deadline. Laboring under a statute which accorded it very little flexibility, the EPA realized that attainment could be reached in the short term—the early 1990's—only through the use of "draconian" measures that would be "severely disruptive."[118] Using administrative ingenuity, the Agency developed two proposals in 1986 to "reasonably" tighten state SIPs through greater EPA involvement so that attainment would be reached at some indeterminate future point.[119] By mid-1987, however, the EPA concluded that it

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114. See Department of Housing and Urban Development-Independent Agencies Appropriation Act, 1984, Pub. L. No. 98-45, 97 Stat. 219, 226 (1983).

115. States also would have an opportunity to cure other deficiencies in the SIPs. See 48 Fed. Reg. 50,686 (1983). The EPA employed contorted reasoning to reach the conclusion that Part D did *not* require the SIPs to provide for actual attainment. See id. at 50,690-91.

116. In February, 1984, the EPA made calls for 27 SIP revisions in 15 states: 18 revisions for ozone, 6 for carbon monoxide, 2 for sulfur dioxide, and 1 for nitrogen dioxide. Of these 27 revisions, 21 were for areas with approved SIPs which had failed attainment by 1982 and 6 were for areas which had not even submitted an SIP. Later, in December 1984, the EPA made 10 more calls for SIP revisions in 9 more states. See GAO Report, supra note 86, at 15.

117. 48 Fed. Reg. 50,693 (1983). During mid-1982, the EPA began receiving supplemental SIP revisions for 1987 extension areas. The EPA acknowledged that the SIPs for some large urban areas would not be able to demonstrate attainment by 1987 under any configuration. Id. However, the EPA stated that it would consider approving such an SIP if the state showed that it would produce attainment shortly thereafter. See 46 Fed. Reg. 7,182 (1981).

118. 52 Fed. Reg. 26,404 (1987).

119. See id. (discussing "Sustained Progress Program" and the "Reasonable Extra Efforts Program").

did not have sufficient authority to embark on such a course without a clearly stated statutory mandate.[120]

During the next two years, the EPA developed its present non-attainment policy, which resulted in the disapproval of the pending SIPs and in the issuance of new calls for SIP revisions. By November, 1989, the EPA issued SIP calls for ozone revisions in 184 counties containing over 135 million people, and carbon monoxide revisions in 121 counties with nearly ninety million people.[121]

The Agency's approach in the late 1980s was influenced by the extended process of statutory amendment that had been underway for most of the decade.[122] The uncertainty caused by the continuing possibility of a comprehensive legislative alteration to the non-attainment provisions certainly affected the way in which both the states and the EPA viewed their respective tasks. States had little incentive to embark upon major new air quality planning initiatives when the statutory demands were sure to change.

Congressional delay in amending the Clear Air Act contributed both to this problem and to the current problem of nationwide non-attainment by denying the EPA necessary policy guidance and clear authority to act. To avoid this type of administrative uncertainty and to ensure that the EPA can deal effectively with the states, Congress must concentrate on making the Act's non-attainment provisions not only effective as a matter of environmental objective, but also more durable and adaptable over time. The post-1977 experience has made the optimism expressed by the drafters of the Clean Air Act of 1970 at least premature. The enormous resources expended by government and industry to comply with the mandates of the Act failed to achieve the Act's fundamental attainment goal: uniformly healthy air throughout the nation. At present, over 150 million Americans live in areas with air that violates the federal primary air quality

120. See id. (1987 public notice stating that the EPA should not "make choices between health and economic values that are essentially legislative in character and magnitude. It is not properly the EPA's role as an administrative agency to take on the task of making such choices without a considerably stronger indication of Congressional delegation than now exists.").

121. See EPA, Status in 1988 & 1989 Calls for State Implementation Plan Revisions—Ozone and Carbon Monoxide (1989).

122. The Senate Report on S. 1630—the precursor to the 1990 Clean Air Act amendments—described the extended, unsuccessful attempts to enact comprehensive clean air legislation in 1982, 1984, and 1987. See S. Rep. No. 228, 101st Cong., 1st Sess. 4 (1989).

standards for health.[123]

Thus, after twenty years, the main objectives of the Clean Air Act have not yet been realized. In the 1990s, attainment of the health-related air quality standards remains an elusive yet socially desirable goal. But the development of the policy to achieve this goal must occur over time, for environmental policy in the United States is not static; its progression is influenced by numerous forces, both within and outside government. As in other environmental areas, the dominant pattern of federal air pollution law is the incremental development of legislative policy as objectives change and experience is acquired. With the 1990 amendments, Congress has greatly refined non-attainment policy and given serious attention to federal-state relations.

VI
THE FUTURE DIRECTION OF THE NON-ATTAINMENT PRINCIPLE: THE 1990 CLEAN AIR ACT AMENDMENTS

Clean Air Act Development.—The third major revision of federal air pollution policy after the 1970 and 1977 Acts occurred in November 1990 and likely will set the direction of air pollution public policy for the next decade. The 1990 amendments to the Clean Air Act ("1990 Act")[124] are truly comprehensive modifications to air pollution control law in this nation. A document formidable in length and complexity, the legislation addresses entire new areas of concern such as air toxics,[125] acid deposition control,[126] and stratospheric ozone[127] and global climate protection.[128] The amendments also have affected subjects already treated by pre-existing law by adding considerably to the detail and specificity of the statutory language.[129] The non-attainment issue is one of these topics.[130] In supplementing the coverage of the Part D provisions of the 1977 Act, Congress has substantially

123. See id. at 11.

124. 1990 Act, supra note 3.

125. See, e.g., id. §§ 301-306, 104 Stat. at 2531-84 (mobile source-related air toxics).

126. See id. §§ 401-413, 104 Stat. at 2584-634.

127. See id. §§ 601-603, 104 Stat. at 2648-72.

128. See, e.g., id. § 821, 104 Stat. at 2699.

129. See, e.g., id. § 102, 104 Stat. at 2399-471 (provisions for attainment and maintenance of NAAQS).

130. Id. §§ 101, 171-172, 104 Stat. at 2399, 2412-15.

redefined its non-attainment policy and attempted to cure defects identified during the last thirteen years.

Retention of the Attainment Objective with Variable Achievement Deadlines.—Although numerous changes have been made to the format and coverage of the non-attainment provisions, the basic structure of the pre-existing policy of both the 1970 Act and 1977 Act is left intact. Thus, the new law retains the essential organizing concept of attainment of the NAAQS as a nationally uniform definition of clean air.[131]

However, this legislation has made even familiar concepts considerably more complex. For instance, in contrast to the 1977 law, under which every state was required to have air quality conforming to the requirements of the NAAQS by a single, fixed deadline, the 1990 Act states that the uniform air pollution standard need not be achieved at the same time in all parts of the nation.[132] Attainment dates vary in two ways. First, different lengths of time to reach attainment are provided for different NAAQS pollutants. Second, different lengths of time are allocated to reach attainment for each pollutant depending upon the severity of the pollution in each non-attainment area.[133] This variation in attainment dates reflects a congressional recognition that the time allowed for air pollution cleanup should be tailored to the pollutant and to the severity of the pollution. Consequently, attainment dates for the same pollutant would vary in length according to the level of NAAQS violation. Therefore, it would be possible for a state to have up to five different attainment dates for ozone in different parts of its territory.

Congress also decided to exercise greater control over both the general process of establishing non-attainment status and the specific identification of the degrees of non-attainment. Unlike the 1977 Act, the new statute defines certain areas as non-attainment as a matter of law, thereby restricting the ability of both the EPA and the states to influence such important regulatory definitions.[134] Furthermore, the EPA's authority to redesignate an area from non-attainment to attainment is circumscribed by a specific six-part test intended to reflect the Agency's determination of

131. Id. § 181(a)(1), 104 Stat. at 2423.

132. See id.

133. The 1990 Act establishes five categories of ozone non-attainment—marginal, moderate, serious, severe, and extreme—and defines them in technical terms. See id.

134. See id. § 101(a), 104 Stat. at 2399 (amending Clean Air Act § 107(d), 42 U.S.C. § 7407(d) (1988)).

complete compliance with the Act.[135] This pattern of highly detailed congressional directive is repeated throughout the 1990 Act, and it substantially limits the discretion of both the EPA and the states.[136]

Federal Financial Support of State Air Pollution Control Programs.— One consistent feature of federal air pollution law has been the recognition of the federal government's role in providing funding for state air pollution programs. The new statute extends this practice by authorizing general funding for state programs and specific funding for non-attainment programming.[137]

In addition to the extension of this traditional form of intergovernmental program support, the Act also requires that states tap new revenue sources to support their air quality programs. It directs states to charge pollution sources permit fees in an amount sufficient to cover the reasonable costs of developing and administering the Clean Air Act permit system.[138] These fees, a mandatory component of each state's SIP, are correlated to the amount of source emissions to encourage reduction of such emis-

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135. Clean Air Act §§ 107(d)(3)(A)-(F), 42 U.S.C. §§ 7407(d)(3)(A)-(F) (as amended by 1990 Act, Pub. L. No. 101-549, § 101(a), 104 Stat. 2399, 2401-02 (1990)).

136. See supra notes 56-57, 87-90 and accompanying text.

137. See 1990 Act, supra note 3, § 822, 104 Stat. at 2699 (amending Clean Air Act. § 327, 42 U.S.C. § 7626 (1988)). With the expansion of planning and regulatory responsibilities under the 1990 amendments, the availability of increased governmental financial resources became a significant issue, especially in light of what had occurred in the 1980s. While air program demands grew, the funding available fell in nominal and real terms. This drop was considered one of the primary reasons for the failure of the non-attainment program to reach its goals during the 1980s. See S. Rep. No. 228, 101st Cong., 1st Sess. (1989). The Senate committee report addressed this issue of inadequate government funding and concluded that:

> Lack of resources at the Federal, State and local level has severely hampered implementation of the Act's requirements. During the decade of the 1980's, while the demands on EPA grew, appropriated funds for the air pollution program, as for other EPA programs, decreased both in nominal and real terms. States, which are required by the Act to impose permit fees to cover the costs of administering and enforcing permit programs, in many instances have not complied. Lack of resources led to preparation of inadequate and incomplete inventories, use of less costly—and less accurate—models, less frequent review and updating of inventories and other data on which control strategies are based, inadequate enforcement programs, and, at the Federal level, woefully inadequate oversight of, and technical assistance to, the States.

S. Rep. No. 228, 101st Cong., 1st Sess. 12 (1989).

138. See 1990 Act, supra note 3, § 101, 104 Stat. at 2405 (amending Clean Air Act § 110(a)(2)(L), 42 U.S.C. § 7410(a)(2)(L) (1988)).

sions. Thus, as emission reductions occur, the fees decline. In general, the fees are intended to provide states with funds with which to operate their air pollution programs.[139] The new financing method shifts the cost of such programs from the state to the polluters themselves and also makes state agencies somewhat less dependent upon state appropriation and federal program support. Potentially, these funds could help the states undertake their non-attainment planning and enforcement actions in a more professional and scientifically defensible way.

Federal Technical Assistance.—As the primary federal environmental agency, the EPA has the responsibility and specialized competence for the production of technical information that would be useful to the states in their air quality planning and regulation. This function of expert consultant to the states is extremely important because it can increase the technical sophistication and effectiveness of SIPs. The 1990 amendments charge the EPA with the duty of preparing a number of significant guidance documents. There are at least three examples of this requirement.

First, within six months of enactment of the amendments, the EPA must issue two sets of guidelines for effective SIP development and evaluation. The first set of guidelines is for enhanced air quality monitoring techniques, and the second, for improved air emission source inventories.[140] General adoption of the techniques listed in these documents could improve the accuracy of SIPs and create a greater uniformity of air quality regulatory practices from state to state.

Second, within one year of enactment, the EPA must publish information regarding the formulation and emission-reduction potential of at least sixteen transportation control measures.[141] Such information could assist a state in designing a series of control measures to combat automobile-created air pollution. Moreover, the information is not merely advisory, for it must be used in ozone non-attainment areas to offset growth in vehicle miles traveled.

Third, the EPA is required to produce new control technique guidelines ("CTGs") for eleven categories of ozone stationary

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139. Id. Many states have not complied with the requirement that they charge fees. See S. Rep. No. 228, 101st Cong., 1st Sess. 12 (1989).

140. Clean Air Act § 108(g) (as amended).

141. 1990 Act, supra note 3, § 108(b), 104 Stat. at 2465-66 (amending Clean Air Act § 108(f)(1), 42 U.S.C. 7408(f)(1) (1988)).

sources by 1993 and review periodically all existing CTGs.[142] The identification of available control technology is a function well-suited to the EPA. Furthermore, these centrally issued and nationally uniform CTGs can assist states in developing specific emission limitations for many previously undercontrolled or uncontrolled sources.

Under the Act, the EPA also must issue CTGs or regulations for certain specialized industrial sites and functions, including the loading and unloading of petroleum carrying vessels, aerospace coating and solvent applications, consumer and commercial products, and hazardous waste facilities.[143] With the increased need for obtaining additional units of emission reductions, these special provisions will take on added significance. For, while they grant states technical information, the provisions also deprive states of the ability to control these source categories in a less stringent manner.

Emphasis on State Implementation Plans.—Another major element of the pre-existing Clean Air Act strategy retained by the 1990 amendments is use of the SIP as the central air quality planning and regulatory device to achieve NAAQS attainment objectives. In their revised 1990 form, SIPs continue to serve as the focus of the Clean Air Act program. The 1990 Act also maintains primary state responsibility for the development and implementation of these plans. Furthermore, the EPA retains its role of evaluator and plan designer in case of state failure.[144]

The 1990 Act soon departs from these general similarities to prior practice. The Act attempts to address a number of serious deficiencies that Congress believes contributed to the current widespread state of non-attainment.

SIP Development Rules.—The new statute sets forth several general changes intended to improve the SIP development and evaluation process. First, the Agency's power to partially approve or disapprove a SIP submission has been confirmed.[145] Second, the Act establishes new timetables and procedures for the evalua-

142. Id. § 103, 104 Stat. at 2443 (adding Clean Air Act § 183(a)-(b)).

143. Id., 104 Stat. at 2443-44 (adding Clean Air Act § 183(b)-(c)).

144. See Clean Air Act § 110(c)(1) (as amended) (concerning the preparation of a Federal Implementation Plan ("FIP")). However, the Senate Report on S. 1630 stated that the EPA intervention and takeover of the SIP would be considered a "last resort." See S. Rep. No. 228, 101st Cong., 1st Sess. 22 (1989).

145. 1990 Act, supra note 3, § 101(c), 104 Stat. at 2406-07 (adding Clean Air Act § 110(k)(3), (4), 42 U.S.C. § 7410(k)(3), (4)). This portion would overrule Abramowitz v. EPA, 832 F.2d 1071 (9th Cir. 1987).

tion of initial and revised SIPs, and directs the EPA to issue minimum criteria to apply when reviewing the newly-submitted SIPs.[146] Moreover, the EPA's time allotted for reviewing submitted plans was extended to twelve instead of four months, in order to allow the needed review and rulemaking proceeding.[147] The minimum completeness rules, coupled with the longer time allotted for closer scrutiny of SIPs should prove helpful to the states and should expedite the EPA's SIP review process by eliminating consideration of truly inadequate state plans.

Of major importance is the 1990 Act's enumeration of specific SIP development practices and control techniques required to combat each kind of NAAQS violation.[148] Since accurate emissions data is regarded as critical to the air quality regulatory process, the 1990 Act mandates that the states use EPA monitoring and inventory guidance to prepare revised emission inventories.[149]

Substantive Non-Attainment SIP Requirements.—The 1990 Act significantly modifies the previous non-attainment planning requirements by specifying program elements for each pollutant.[150] In addition, non-attainment areas for each pollutant are classified in terms of the severity of the NAAQS violation, and the new Act defines required programmatic components for each such classification. For example, SIPs in "moderate" carbon monoxide non-attainment areas need only have "enhanced" vehicle inspection and maintenance programs,[151] while SIPs for "serious" areas require listed transportation control measures, oxygenated fuels programs, and employer ridership programs.[152] Moreover, the statute sets out the mandatory steps to be taken to satisfy each component with such precision that there should be little uncertainty concerning statutory expectations.[153] Furthermore, because many of these specified SIP elements require control

146. 1990 Act, supra note 3, at § 101(c), 104 Stat. at 2406-07 (adding Clean Air Act § 110(k), 42 U.S.C. § 7410(k)).

147. Id. § 101(c), 104 Stat. at 2406 (adding Clean Air Act § 110(k)(2), 42 U.S.C. § 7410(k)(2)).

148. See id. §§ 103-106, 104 Stat. at 2423-64 (adding Clean Air Act §§ 181-190).

149. See id. § 103, 104 Stat. at 2430 (adding Clean Air Act § 182(c)(1), 42 U.S.C. § 7511a(c)(1)).

150. Id. §§ 103-106, 104 Stat. at 2423-64 (adding Clean Air Act §§ 181-190).

151. Id. § 104, 104 Stat. at 2455 (adding Clean Air Act § 187(a)(6)).

152. Id. § 104, 104 Stat. at 2456 (adding Clean Air Act § 187(b)(2)-(3)).

153. See, e.g., id. § 103, 104 Stat. at 2440-42 (adding Clean Air Act

measures that are potentially unpalatable to state or local governments, the fact that they are imposed by direct congressional mandate could relieve the EPA of the duty of justifying such an unattractive SIP choice.

The new law also creates detailed and objective SIP performance goals beyond the general admonition that they demonstrate attainment with the NAAQS by the relevant attainment date. For example, in ozone non-attainment areas classified as "serious," an approvable SIP must demonstrate "reasonable further progress," defined as an annual three percent reduction in the emission of volatile organic compounds ("VOC") over a specific three year period.[154] These goals do not specify the exact steps that a state must take; rather, they establish fixed, statutory standards against which the SIPs control techniques can be measured. In addition, the SIPs prepared for carbon monoxide and mandated that non-attainment areas contain quantitative "milestones," set at every three years, demonstrating "reasonable further progress" toward timely achievement of the NAAQS.[155] These milestones were intended to serve as concrete and objective measures of the state's progress in reaching attainment.[156] With such clear SIP performance standards, it would be difficult for either the EPA or the states to claim that "reasonable" progress towards attainment had been made when it had not.

Continuing EPA/State SIP Management.—In response to an important criticism of prior practice, the 1990 Act directs continuous state/federal program interaction throughout the life of the SIP.[157] Congress intended to compel EPA supervision over state SIP development and implementation on a continuing basis in order to determine, in a rapid fashion, whether the state was moving toward expeditious attainment. The milestones and other express performance standards serve as helpful indicators of state progress. However, Congress appears to have been wary of the passage of time in the administrative context; it thus forced the EPA to take a considerably more active role in the management of

§ 182(g)) (defining programmatic components in terms of specific performance criteria).

154. Id. § 103, 104 Stat. at 2432 (adding Clean Air Act § 182(c)(2)(B)).

155. Id. § 102(a)(2)(B), 104 Stat. at 2412 (amending Clean Air Act § 171(1), 42 U.S.C. § 7501(1) (1988)). "Reasonable further progress" is defined by the 1990 Act's language as "annual incremental reductions . . . as are required . . . for the purpose of ensuring" timely attainment. Id.

156. Id. § 104, 104 Stat. at 2457 (adding Clean Air Act § 187(d) (CO milestone)).

157. See id §§ 101, 102, 104 Stat. at 2399-423.

the Clean Air Act program. Consequently, several techniques were inserted in the Act to ensure closer EPA oversight of state conduct and air pollution control programs. In this way the 1990 Act provides specific management directives governing EPA-state relations.

As part of this strategy of increased federal oversight, the amendments impose regular reporting requirements on the states to submit data for the EPA's review. For example, SIPs for ozone areas must provide for annual reports discussing the air pollution control measures adopted or implemented during the year and an explanation of why the state failed to meet other SIP obligations.[158] Periodic state emission inventories are also mandatory.[159] Furthermore, at three year intervals, states must test the automotive travel assumptions upon which their SIPs are based and revise them if the earlier predictions underestimated actual car use in the area.[160] This step provides an important check on over-optimistic state assumptions in SIP drafting.

Default Provisions for Attainment Failure.—SIP failure to meet the NAAQS by the statutory deadline constituted one of the most serious deficiencies of the prior clean air laws.[161] The 1977 law provided for no default mechanism and it was not clear what would happen if attainment was not reached on time.[162] The 1990 Act responds to the deadline problem by establishing clear procedural and substantive obligations that would accrue in the event of SIP failure. These features seek to avoid the uncertainty and policy confusion which characterized the 1980s.[163]

First, the 1990 Act requires states to anticipate the possibility of failure in the development of its SIP. Thus, every SIP must contain non-attainment contingency measures which are automatically effective upon SIP failure and which reduce emissions by a statutorily prescribed amount.[164]

Second, the new legislation spells out the longer-term impli-

158. Id. § 102(d), 104 Stat. at 2417. (amending Clean Air Act § 174, 42 U.S.C. 7504 (1988)).

159. See id. § 103, 104 Stat. at 2426, 2427 (adding Clean Air Act §§ 182(a)(1), 182(a)(3)).

160. Id., 104 Stat. at 2434-35 (adding Clean Air Act § 182(c)(4)).

161. See supra notes 58-59, 115-19 and accompanying text.

162. See supra notes 115-19 and accompanying text.

163. See supra note 122 and accompanying text.

164. See 1990 Act, supra note 3, § 102, 104 Stat. at 2414-15 (amending Clean Air Act § 172(c), 42 U.S.C. § 7502(c) (1988) (nonattainment plan provisions in general)); id. § 104, 104 Stat. at 2454-55 (adding Clean Air Act § 187(a)(3) (for carbon monoxide)).

cations of the failure to attain the NAAQS. Once again, the law emphasizes automatic effect, leaving little room for negotiation and delay. Upon failure to reach attainment in a timely fashion, the area involved must be reclassified into the next most serious non-attainment category—for instance, from serious to severe for an ozone non-attainment area.[165] The effect of the reclassification would be to require within one year a SIP revision that imposes the attainment date and the enhanced control techniques applicable to the new classification.[166]

In addition to this general SIP tightening, the Act demands further annual, incremental emission reductions of five percent until attainment is reached.[167] The Act also imposes automatic penalties on individual polluters in the event attainment is not reached. For example, in heavily-polluted ozone non-attainment areas failing to attain, a financial penalty is placed upon VOC sources even if they are in compliance with their SIP emission limitations. Each major stationary source of VOC would be required to pay an annual emissions fee of $5,000 per ton for certain emissions.[168]

Overall, these provisions reinforce the SIP program with a self-correcting mechanism defined in explicit terms and kept within the control of the statute. The drafters of these elements attempted to maintain consistent pressure on the states to reduce air pollution and to reach the attainment goal. Consequently, a great deal of the EPA's discretion was sacrificed—the inevitable result of the failure of prior collaborative schemes.

Direct Federal Authority to Compel Attainment.—In order to reach attainment status by the statutory deadlines, the states and pollution sources must have the motivation to take the steps necessary to reach the Clean Air Act's goal of healthy air. One of the most significant problems in designing a national air pollution control strategy is determining a collaborative structure that will involve state and local governments in reaching federal objectives. The strategy of the 1990 Act is to focus on shared environmental values and joint effort. Moreover, the Act seeks to enforce coopera-

165. See id. § 103, 104 Stat. at 2424-25 (adding Clean Air Act § 181(b)(2)).

166. See, e.g., id. § 104, 104 Stat. at 2458 (adding Clean Air Act § 187(g) (failure of serious area to attain standard for carbon monoxide)); id. § 105, 104 Stat. at 2462 (adding Clean Air Act § 189(d) (failure to attain PM-10 standard)).

167. Id. § 105, 104 Stat. at 2462 (adding Clean Air Act § 189(d)).

168. Id. § 103, 104 Stat. at 2450-51 (adding Clean Air Act § 185(a)-(b)). The fee applies to all VOC emissions in excess of 80% of those allowed under the SIP. Id. (adding Clean Air Act § 185(b)(1)).

tion with the threat of federal regulatory takeover and the imposition of sanctions.

The original justification for devising such an integrated system of air pollution control was, in part, political and functional, for a completely federal system might not have been politically attractive to legislators who foresaw the likely effect the Clean Air Act would have on state regulation. Moreover, a joint federal/state scheme of SIP preparation and implementation would give the impression that state and local governments exert significant control over a process designed to meet federal objectives with limited federal bureaucratic intervention. Indeed, as a practical matter the scheme allows state air program officials to serve as proxies for the EPA and thereby expands its workforce.

To what extent may the EPA compel state and local government participation in the Clean Air Act program?[169] One answer is to empower the EPA to assume the state's programmatic responsibilities. Thus, the 1990 Act retained the 1970 Clean Air Act's provision for EPA intervention by allowing the EPA to develop a Federal Implementation Plan.[170] But because complete federal takeover of the air quality planning process constitutes an extreme form of state displacement in a supposedly cooperative system of regulation, some alternative, intermediate authority—short of total EPA domination—was needed to obtain the necessary state participation.

The 1990 Act's solution was to enforce its non-attainment program through a series of sanctions designed to punish recalcitrant states for their lack of cooperation or failure. Specifically, the new Act gives the EPA authority to impose a series of varied sanctions whenever a state fails to perform in one of three ways: (1) it fails to submit a SIP, or its submitted SIP fails to meet the EPA's minimum criteria; (2) the EPA disapproves the state's SIP submission in whole or in part or (3) the EPA "finds that any requirement of an approved SIP . . . is not being implemented."[171] These three grounds focus both on the initial state responsibility of submitting a complying SIP and the subsequent question of inadequate implementation. If the EPA believes that any one of these grounds exists and that the state is not making reasonable

169. The question assumes that satisfactory, voluntary cooperation from these governments is not forthcoming.

170. See 1990 Act, supra note 3, § 102, 104 Stat. at 2422-23 (amending Clean Air Act § 110(c)(1), 42 U.S.C. § 7410(c)(1) (1988)).

171. Id. § 102, 104 Stat. at 2420-21 (adding Clean Air Act § 179(a), 42 U.S.C. 7509(a)).

efforts to cure the failure, it is under a statutory duty to apply at least one sanction from a list of two provided by the Act: (1) a limitation of the use of federal highway funds to specified projects that will improve traffic safety or air quality; or (2) an expanded 2 to 1 emission offset requirement for new or modified sources wishing to locate in the non-attainment area.[172]

Each of these sanctions has a different potential impact. The limitation on Department of Transportation grants would redirect federal funding from projects that adversely affect air quality to those that reduce dependence upon automobile transportation and encourage highway safety.[173] The expanded offset requirement would make new and modified source location more difficult to accomplish. In short, both sanctions serve to impress the states with the significance of complying with the federal air quality control program. Moreover, having clearly enunciated and statutorily mandated sanctions lessens the EPA's discretion in their application. After all, Congress, not the EPA, imposes these collaborative obligations on the states.

CONCLUSION

The Clean Air Act is designed to achieve a number of important environmental objectives. One of the most significant goals is national attainment of clean and healthful air. By creating a pre-set deadline to meet this objective, the drafters of the Clean Air Act also have created a possibility of failure. Although Congress may select such a difficult social objective affecting so many interests, it cannot force the nation to reach it in a timely fashion by mere pronouncement. Rather, the public policy must be implemented through a complicated series of decisions and actions.

When Congress initially enacted the Clean Air Act in 1970, its intent was to achieve the NAAQS in a statutorily defined, expeditious manner. In retrospect, however, it appears that the attainment policy was adopted on the basis of faulty or at least overly-optimistic assumptions about the dimension of American air pollution, which have ultimately delayed attainment. However, these unrealistic assumptions concerning the nature of the nation's air

172. See id., 104 Stat. at 2421-22 (adding §§ 179(b)(1)-(2), 42 U.S.C. § 7509(b)(1)-(2)).

173. In discussing congressional intent behind the sanctions policy of the Senate bill S. 1630, the Senate Report only mentions the transportation grant sanction. Instead of emphasizing the loss of federal funding, it stresses the redirection of such funds to beneficial purposes. See S. Rep. No. 228, 101st Cong., 1st Sess. 26-28 (1989).

pollution problem have obscured a more serious legislative failure. While the 1970 Act created the main structural elements of the new federal air pollution control policy, it paid little attention to implementation theory, or addressed it with overly optimistic assumptions.

The drafters of the 1970 Act failed to understand and to confront adequately the conflict of interests between the federal and state governments. They wrongly assumed that both levels of government would share the same values and that effective cooperative action would be the norm. The EPA primarily was interested in air quality enhancement, and was charged with the major responsibility of achieving public health and safety objectives, while the states and localities were increasingly concerned with the impact of environmental controls on their economic development, living patterns, and personal mobility. The conflict of these potentially incompatible interests undercut the cooperative ideal and ultimately created the wrong incentives for the states. Indeed, the conflict may have tempted many states to underestimate the severity of their air quality problems and to overestimate the impact of their solutions.

With the passage of the 1977 amendments, federal air pollution law entered into a second phase in which Congress recognized the need for greater non-attainment policy guidance and enhanced the EPA's ability to ensure state compliance with the non-attainment program. At the same time, however, congressional involvement in designing the planning and enforcement aspects of the non-attainment program increased markedly. Congress replaced the original scheme of federal-state cooperation in air quality achievement with federal supervision of state programs reinforced with fiscal and development sanctions. It also used the EPA as its occasionally reluctant agent to coerce the states. Nevertheless, the 1977 Act failed seriously to consider the difficulty of designing a cooperative and effective system of air quality attainment.

The 1990 Clean Air Act amendments represent a third stage in intergovernmental relations. Congress retained the fundamental objective of NAAQS attainment and the basic strategy of relying upon SIPs, but introduced a model of congressional programmatic micro-management and an unprecedented increase in detail.[174] By enacting a pollution control statute with such specificity, and out of frustration with the nation's failure to

174. See supra notes 124-72 and accompanying text.

achieve the NAAQS in a timely fashion, Congress has significantly reduced the EPA's autonomy and state discretion. It avoided delegating authority to the EPA and instead established a largely self-executing system in which the solutions to air quality control problems are defined by Congress. In this way, the Clean Air Act has transformed the idea of delegating discretionary agency authority into a system in which the EPA acts as a true legislative "agent."

The final question to consider is whether the 1990 Clean Air Act amendments and the resulting modification in federal/state relationships are more likely to achieve air quality objectives than prior legislation. The ultimate answer is undoubtedly speculative and will depend upon a number of uncertain factors.

One factor involves whether the 1990 Act's implementation process increases the likelihood that states, industries, and the general public will take the necessary steps to reduce air emissions. For, despite the specificity and clarity of the implementation process and the possibility of EPA intervention, actual attainment of the NAAQS will ultimately depend upon such important factors as political will and popular support. Put bluntly: will the national environmental value of clean air be embraced by all affected parties? A second factor concerns the extent to which the state air pollution control agencies possess sufficient managerial and political skill—and commitment—to carry out the SIPs. This factor is especially significant because many SIP provisions have local impacts and may be initially unpopular. Consequently, obtaining the firm and unwavering commitment of state and local government to the Act's clean air goals will be indispensable. "Foot dragging" on the part of state agencies will undoubtedly convert any EPA cooperation into an adversarial position. State recalcitrance could also trigger citizen suits, with the result being judicial management of the attainment program. A third factor is the durability of state and industry support for the Clean Air Act's program during the implementation period. A corollary to this factor is the extent to which the courts should be neutral or supportive when aspects of the clean air program are challenged. A final consideration concerns the stability of the Clean Air Act's emphasis on uniform NAAQS attainment, and whether such a policy will be undermined in the future by competing public policies or changes in underlying economic or social conditions. The 1990 Act recognizes that achieving air quality goals will take many years and require stable popular and legislative support at both state and federal levels of government.

Time will tell whether the 1990 amendments to the Clean Air Act achieve the results Congress intended. While federal-state interaction has been retained, however, Congress modified the original idea of cooperative federalism with respect to air pollution control into a new cooperative federalism with precise rules. Possibly to design clear performance objectives, the new system has defined a process of non-attainment planning and enforcement containing sequential steps with pre-determined stages. While this process might be criticized for eliminating flexibility, it at least expressed clearer congressional expectations. In an ironic way, this should remove pressure from both the EPA and the states, for the locally unattractive performance goals have been set from above by Congress. Moreover, this programmatic development mandated by the Act may actually create more of a technical role for the EPA—one of evaluating compliance with statutorily created standards.

The history of the Clean Air Act reveals both the difficulty in reaching the Act's attainment goal and the delicacy of the federal-state relationship. Although the 1990 Clean Air Act amendments have given greater attention to implementation questions, we can hope that Congress has found the correct balance to ensure that air will be clean throughout the nation. If this elusive goal is achieved, we will have gained much in our ability to develop cooperative, intergovernmental systems to attain complex social objectives. In the end, this achievement may be as great as the environmental clean air goals themselves.