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ECONOMIC AND TECHNOLOGICAL FEASIBILITY UNDER THE CLEAN AIR ACT AMENDMENTS OF 1970

I. Introduction

In passing the Clean Air Act Amendments of 1970,¹ Congress instructed the Environmental Protection Agency (EPA) to set the desired level of air quality as high as necessary to protect the public health. In further imposing a three-year deadline for the attainment of this standard, this Act constituted the most stringent environmental legislation passed to that date.

Previous air pollution legislation had allowed the state administrator, in establishing air quality standards and developing plans for the attainment of these standards, to consider the economic and technological feasibility of alternative plans.² In addition to granting the EPA the authority to establish national air quality standards, Congress omitted any reference to economic and technological factors in § 110, which directs the states to develop implementation plans for the attainment of the air quality standards. This omission has caused confusion concerning the relevance of economic and technological feasibility factors to actions taken under § 110. Industry representatives have maintained that these factors must be given consideration in implementing pollution control standards, warning of severe economic disruption if they are not considered. Environmentalists counter by claiming that Congress was primarily concerned with the achievement of a healthful level of air quality and intended that economic factors not interfere with this objective. The EPA and several court decisions have taken a middle ground, asserting that Congress intended that the states be free to consider or ignore these factors as they wished, as long as the EPA-imposed air quality standards are attained. The soundness of these conflicting views will be examined against a background of the legislative history of the Clean Air Act Amendments of 1970, and subsequent federal regulations and court decisions.

II. Background: Previous Legislation and Statutory Framework of the 1970 Amendments

The Clean Air Act Amendments of 1970 marked a significant step in a national effort to control air pollution. Previous legislation had left the primary responsibility for establishing and enforcing air quality standards to the states, with the federal government assuming the limited role of assisting the states with research and technical guidance. Because of the economic and administrative burdens of the legislation, the states were unable to develop programs capable of enforcing strict air pollution standards.³ The Amendments of 1970 were designed

1 42 U.S.C. § 1857-1858(a) (1970).

2 Pub. L. No. 90-148, 81 Stat. 485, *as amended*, Clean Air Act, 42 U.S.C. § 1857-1858(a) (1970).

3 A discussion of the problems arising under the 1963 and 1967 Air Quality Acts may be found in Note, *Clean Air Act Amendments of 1970: A Congressional Cosmetic*, 61 GEORGETOWN L.J. 153, at 157 (1972) [hereinafter cited as *Congressional Cosmetic*].

to correct the "regrettably slow"⁴ progress made in controlling air pollution since the enactment of the 1967 Air Quality Act.⁵

The 1967 Act had authorized the states to develop their own air quality standards and emission limitations for achieving those standards. It directed the Secretary of Health, Education, and Welfare⁶ to issue information on recommended air pollution control techniques. These recommendations were required to include data "on the latest available technology and economic feasibility of alternative methods of prevention and control of air contamination including cost-effectiveness analyses."⁷ The approval of the Secretary of HEW was contingent on the standards being consistent with these recommended control criteria: if they were not consistent, the Secretary was authorized to issue standards consistent with the criteria.⁸ The legislation permitted numerous interruptions through hearings and notice time periods which severely limited the effectiveness of the states or the Secretary in establishing standards.⁹ More importantly, even when the standards were finally implemented, they reflected an emphasis on the economic and technological feasibility of achieving the standards.

Further indication of the reliance placed on these two factors in the 1967 Act is found in the enforcement section which directed the court to give "due consideration to the practicability and to the technological and economic feasibility of complying with such standards. . . ."¹⁰ These sections, providing for the establishment and enforcement of air quality standards, were extensively changed by the 1970 Amendments.

The 1970 Act enlarged the federal role in combatting air pollution by providing for EPA promulgation of air quality criteria¹¹ and national ambient air quality standards.¹² The EPA administrator was directed to promulgate primary and secondary ambient air quality standards for all air pollutants having an adverse effect on the public health or welfare. The primary air quality standards were to be based on criteria issued under § 108¹³ and, allowing "an adequate margin of safety," were to be "requisite to protect the public health."¹⁴ Secondary air quality standards, based also on § 108 criteria, were to be designed "to

4 H.R. REP. No. 91-1146, 91st Cong., 2d Sess. 6 (1970).

5 Pub. L. No. 90-148, 81 Stat. 485, *as amended*, Clean Air Act, 42 U.S.C. § 1857-1858(a) (1970).

6 Before 1970, national air pollution legislation was administered through the National Pollution Control Administration under the Secretary of Health, Education and Welfare. President Nixon's Reorganization Plan No. 3 of 1970 transferred these functions to the Environmental Protection Agency (EPA). Reorganization Plan No. 3 of 1970 § 2(a)(3), 3 C.F.R. 199-202 (1970).

7 Pub. L. No. 90-148, § 107(c), *as amended*, 42 U.S.C. § 1857-1858(a) (1970).

8 *Id.*

9 The lengthy procedures provided for in earlier air pollution legislation are discussed in *Congressional Cosmetic*, *supra* note 3, at 155-156, n. 15.

10 Pub. L. No. 90-148, § 108(c)(4), § 108(h), *as amended*, 42 U.S.C. § 1857-1858(a) (1970).

11 42 U.S.C. § 1857c-3 (1970).

12 42 U.S.C. § 1857c-4 (1970). "Ambient" air quality standards refers to the total amount of pollutants present in the atmosphere for any given area. Emission limitations, which the states are responsible for establishing under the 1970 Amendments, refers to the amount of pollutants discharged from any particular source.

13 42 U.S.C. § 1857c-3 (1970).

14 42 U.S.C. § 1857c-4(b)(1) (1970).

protect the public welfare from any known or anticipated adverse effects. . . ."¹⁵

In basing the primary standards on what is necessary to protect the public health, and placing strict time limits for attainment of this level of air quality, Congress arguably intended to place secondary emphasis on economic and technological feasibility in the establishment and implementation of air quality standards. This marked a shift from the 1967 Act, where as previously noted, economic and technological feasibility played a significant role.¹⁶

Controversy has arisen, therefore, under the 1970 Amendments regarding the relevance of economic and technological feasibility considerations in state implementation plans (hereinafter referred to as SIP's). Section 110¹⁷ instructs states to adopt, after public hearings, a plan providing for the attainment, maintenance, and enforcement of the national primary and secondary air quality standards. The administrator is required to approve or disapprove the plan within four months of its submission to the EPA. He must approve the plan if he determines that it was adopted after reasonable notice and public hearing and if it meets the requirements of subparagraphs A through H of § 110(a)(2).¹⁸ The most important of these § 110 factors requires that the plan provide for the attainment of the primary air quality standards "as expeditiously as practicable," but in no case later than three years from the date of approval of the plan, and the attainment of the secondary air quality standards within a

15 42 U.S.C. § 1857c-4(b)(2) (1970).

16 The factors of economic and technological feasibility were explicitly provided for in some sections of the Clean Air Act Amendments of 1970. Section 108 instructs the EPA to issue air quality criteria for the states and provide them with information on the available technology and costs of control. The difference, however, between this section and the related one in the 1967 Act is apparent from the purposes for which the information was to be used. In the 1967 Act, the control technology information was designed to aid the states in determining the ambient air quality standards they wished to establish, while in the 1970 Amendments, the information was simply to assist the states in determining sufficient emission limitations levels to meet the national air quality standards established by the EPA.

Section 111 (42 U.S.C. § 1857c-6 (1970)) permits the administrator to directly impose "standards of performance" on all new sources of emissions. In establishing the standards of performance, the administrator is to determine the standard reflecting "the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction) the Administrator determines has been adequately demonstrated."

Section 111 represents the single section in the 1970 Amendments which specifically incorporates considerations of economics and technology into the establishment of standards. This contrasts with the approach taken by the Federal Water Pollution Control Act Amendments of 1972 (33 U.S.C. §§ 1251 *et seq.* (Supp. II, 1972)) which incorporates these factors directly into the standards both existing and new point sources must meet. By 1977, FWPCA requires use of the "best practicable control technology currently available" (*Id.* at § 1311(b)(1) (A)), and by 1983, use of the "best available technology economically achievable" (*Id.* at § 1311(b)(2) (A)).

17 42 U.S.C. § 1857c-5 (1970).

18 42 U.S.C. § 1857c-5(a)(2) (1970). Section 110(a)(2) provides:

. . . The Administrator shall approve such plan, or any portion thereof, if he determines that it was adopted after reasonable notice and hearing and that—

(A) (i) in the case of a plan implementing a national primary ambient air quality standard, it provides for the attainment of such primary standard as expeditiously as practicable but (subject to subsection (e)) in no case later than three years from the date of approval of such plan (or any revision thereof to take account of a revised primary standard); and (ii) in the case of a plan implementing a national secondary ambient air quality standard, it specifies a reasonable time at which such secondary standard will be attained;

(B) it includes emission limitations, schedules, and timetables for compliance with such limitations, and such other measures as may be necessary to insure at-

"reasonable time."¹⁹ Significantly, there is no mention of economic or technological feasibility in subparagraphs A through H. This omission has contributed to the current confusion regarding the proper place of economic and technological feasibility factors in SIP's. Does the omission indicate that the factors are irrelevant under § 110? May a state include consideration of these factors in their implementation plan? Is the EPA required to consider these factors in approval or disapproval of an SIP? These questions warrant further examination in the following sections.

III. Economic and Technological Feasibility Within SIP's

A. Congressional Intent

The legislative history of the Clean Air Act Amendments of 1970 indicates considerable concern over the role of economic and technological feasibility factors in implementation of the air quality standards. The House version of the bill,²⁰ a less radical departure from previous legislation than the Senate bill,²¹ contained language permitting consideration of economic and technological feasibility in several places throughout the Act. The most significant of these was § 4(c)(4), where, in enforcement suits brought by the attorney general to secure compliance with the air quality standards, the district court was directed

tainment and maintenance of such primary or secondary standard, including, but not limited to land use and transportation controls;

(C) it includes provision for establishment and operation of appropriate devices, methods, systems, and procedures necessary to (i) monitor, compile, and analyze data on ambient air quality, and (ii) upon request, make such data available to the administrator;

(D) it includes a procedure, meeting the requirements of paragraph (4), for review (prior to construction or modification) of the location of new sources to which a standard of performance will apply;

(E) it contains adequate provisions for intergovernmental cooperation, including measures necessary to insure that emissions of air pollutants from sources located in any air quality control region will not interfere with the attainment or maintenance of such primary or secondary standard in any portion of such region outside of such state or in any other air quality control region;

(F) it provides (i) necessary assurances that the state will have adequate personnel, funding, and authority to carry out such implementation plan, (ii) requirements for installation of equipment by owners or operators of stationary sources to monitor emissions from such sources, (iii) for periodic reports on the nature and amounts of such emissions, (iv) that such reports shall be correlated by the state agency with any emission limitations or standards established pursuant to this chapter, which reports shall be available at reasonable times for public inspection; and (v) for authority comparable to that in section 1857h-1 of this title, and adequate contingency plans to implement such authority;

(G) it provides, to the extent necessary and practicable, for periodic inspection and testing of motor vehicles to enforce compliance with applicable emission standards; and

(H) it provides for revision, after public hearings, of such plan (i) from time to time as may be necessary to take account of revisions of such national primary or secondary ambient air quality standard or the availability of improved or more expeditious methods of achieving such primary or secondary standard; or (ii) whenever the administrator finds on the basis of information available to him that the plan is substantially inadequate to achieve the national ambient air quality primary or secondary standard which it implements.

19 42 U.S.C. § 1857c-5(a)(2)(A) (1970).

20 H.R. REP. NO. 91-1146, 91st Cong., 2d Sess. 25-55 (1970).

21 S. REP. NO. 1196, 91st Cong., 2d Sess. 68-129 (1970).

to give "due consideration to the practicability and to the technological and economic feasibility of complying with provisions of the plan. . . ."²² Clearly, this provision would have forced the states to consider these factors in their implementation plans. This provision, however, was never included in the Senate bill and is not present in the final bill.²³

Although ostensibly the House bill was adopted, a close reading of the final bill indicates that the stronger Senate measure was actually finally approved by Congress.²⁴ Throughout the Senate Report and debates are references to the relevance of economic and technological factors. The Senate Report states:

In the committee discussions, considerable concern was expressed regarding the use of technical feasibility as the basis of ambient air standards. The committee determined that 1) the health of people is more important than the question of whether the early achievement of ambient air quality standards is technically feasible; and 2) the growth of pollution load in many areas, even with the application of available technology, would still be deleterious to public health.²⁵

The dominant theme of the bill, as expressed in this passage and elsewhere,²⁶ was that the protection of the public health should serve as the primary basis for controls. The legislation directed the administrator to establish primary standards sufficiently strict to protect the public health,²⁷ and the states, as provided by § 110, were to develop plans to meet those standards. The Senate committee apparently recognized and approved of the potential harshness of this position, stating that "the committee determined that existing sources of pollution either should meet the standard of the law or be closed down. . . ."²⁸

22 H.R. REP. NO. 91-1146, 91st Cong., 2d Sess. 33 (1970).

23 During the 1972 hearings on implementation of the Clean Air Act Amendments, Senator Eagleton, one of the members of the conference committee, recalled,

On this matter of an economic factor, I am as positive as a mortal can be, that was specifically written out of the bill because many hours were spent in conference debating the economic feasibility factor and the House had such language in the bill as: "giving due consideration to economic and technological feasibility of compliance." That appeared in more than one place in the House bill and it was stricken from the bill in conference to go back to the Senate version which had no economic factor as far as protection of public health was concerned.

Hearings on Implementation of the Clean Air Act Amendments of 1970 Before the Senate Public Works Committee, 92d Cong., 2d Sess. 21 (1972).

24 See National Resources Defense Council (NRDC) v. EPA, 507 F.2d 905, 914, n. 14 (9th Cir. 1974). See also, H.R. REP. NO. 91-1783, 91st Cong., 2d Sess., pp. 44-45 (1970) (Conference Report); *Hearings on Implementation of the Clean Air Act Amendments of 1970*, 92d Cong., 2d Sess., part 1, at 19, 21, 24 (1972). *Contra*, *Buckeye Power, Inc. v. EPA*, 481 F.2d 162, 168-69 (6th Cir. 1973).

25 S. REP. NO. 1196, 91st Cong., 2d Sess. 2-3 (1970).

26 *Id.* at 238-39.

27 In basing the primary ambient air quality standards on that necessary to protect the public health, Congress recognized that this did not encompass the level of air quality necessary to protect the health of persons dependent on controlled environments, such as intensive care patients, or infants in nurseries. Evidencing the high level of air quality the Congress did anticipate meeting this standard would require, however, the Senate Report indicates that persons whose health was to be protected included ". . . citizens such as bronchial asthmatics and emphysematics who . . . are exposed to the environment." Thus in establishing the primary air quality standards, that level of air quality necessary to protect the health of "particularly sensitive" individuals must be referred to. S. REP. NO. 1196, 91st Cong., 2d Sess. 10 (1970).

28 S. REP. NO. 1196, 91st Cong., 2d Sess. 3 (1970).

Senator Muskie's explanation of the Act's objectives made in presenting the bill before the Senate further reveals the intention of Congress to attain the air quality standards regardless of the costs involved. Noting that the Senate Report on the 1967 Air Quality Act had warned against reliance on technological or economic feasibility arguments to the detriment of the public health, Senator Muskie stated that the Amendments of 1970 explicitly adopted this philosophy:

The first responsibility of Congress is not the making of technological or economic judgements—or even to be limited by what is or appears to be technologically or economically infeasible. Our responsibility is to establish what the public interest requires to protect the health of persons. This may mean that people and industries will be asked to do what seems to be impossible at the present time. But if health is to be protected, these challenges must be met.²⁹

Recognizing, however, that instances may arise where compliance with the primary air quality standards could not be met for economic or technological reasons beyond the control of the individual source, Congress included variance procedures in § 110. Both § 110(e)³⁰ and § 110(f)³¹ permit economic and technological considerations, under specified conditions, to be factors in extending the deadlines if the absence or unavailability of necessary technology will prevent attainment of the standards. While these provisions allow some flexibility, they further indicate the intent of Congress to limit the consideration of economic and technological factors to individual, case by case situations and not to the initial establishment of an SIP.

B. EPA Position

The EPA has wavered in its position regarding the extent to which economic and technological feasibility is to be considered under the 1970 Amendments. Shortly after enactment, the EPA distributed a paper to the states to assist them in preparing the SIP's.³² In these guidelines, the states were instructed not to include provisions for social and economic cost factors as relevant considerations of a state agency in implementing their program. The EPA at that time apparently felt that programs including such factors would direct the emphasis of the law away from considerations of public health.

In the later guidelines issued by the EPA which are currently in effect, a contrary position was taken. These guidelines provide that in the development of SIP's,

Nothing in this part shall be construed in any manner: . . .

(b) to encourage a state to adopt any pollution control strategy without taking into consideration the cost-effectiveness of such control strategy in

²⁹ 116 CONG. REC. 32901-32902 (1970) (remarks of Senator Muskie).

³⁰ 42 U.S.C. § 1857c-5(e) (1970).

³¹ 42 U.S.C. § 1857c-5(f) (1970).

³² ENVIRONMENTAL PROTECTION AGENCY, AIR POLLUTION CONTROL OFFICE, NECESSARY LEGISLATIVE CONSIDERATIONS FOR COORDINATED LOCAL, STATE, AND FEDERAL AIR POLLUTION CONTROL PROGRAMS (1971).

relation to that of alternative control strategies, . . .

(d) to encourage a state to prepare, adopt, or submit a plan without taking into consideration the social and economic impact of the control strategy set forth in such plan, but not limited to transportation and employment.³³

The present regulations thus permit the states to consider economic and technological feasibility in the development and operation of an SIP, while presumably retaining the position that the EPA cannot reject an SIP for inadequate consideration of economic and technological feasibility factors. This is substantially the same position the EPA has taken throughout the long series of court decisions involving the implementation of state plans.³⁴

An examination of the federal-state relationship created by the Act reveals the basis on which the EPA founded the interpretation reflected in the regulations. Contrasted with § 111³⁵ which permits the EPA to impose national emissions limitations on all new sources of pollution, the states were left free to develop their own emission limitations for all existing sources of pollution.³⁶ The limitations they establish must amount in the aggregate to no more than the level of ambient air quality as prescribed by the EPA. These emission limitations may be adopted on the basis of several models,³⁷ with considerable flexibility left to the states to choose among and modify the models. The EPA interpretation indicates this flexibility includes the right to use economic and technological feasibility factors to determine the most efficient manner for attaining the national air quality standards.³⁸ The arguable conflict of this view with the overall legislative history which seems to remove economic and technological factors from consider-

33 40 C.F.R. § 51.2 (1972). It has been suggested that the EPA's abrupt change in position was in response to political pressure applied by the Nixon Administration. See *Congressional Cosmetic*, *supra* note 3, at 172-76.

These regulations were subjected to harsh scrutiny during the 1972 Implementation Hearings, at one point prompting Senator Eagleton's comment, previously set out in note 23, *supra*. At a later point Eagleton appeared to be satisfied by an answer given by Administrator Ruckelshaus, to the effect that although economic and technological feasibility factors cannot be taken into consideration in setting the air quality standards, the states may be permitted to use cost factors in developing the most efficient programs to meet those standards. See note 38, *infra*.

34 See *Union Electric Co. v. EPA*, 515 F.2d 206 (8th Cir. 1975), *St. Joe Minerals v. EPA*, 508 F.2d 743 (3rd Cir. 1975), *NRDC v. EPA*, 507 F.2d 905 (9th Cir. 1974), *NRDC v. EPA*, 489 F.2d 390 (5th Cir. 1974), *NRDC v. EPA*, 478 F.2d 875 (1st Cir. 1973).

35 42 U.S.C. § 1857c-6 (1970).

36 In general, existing stationary sources of air pollution are so numerous and diverse that the problems they pose can most efficiently be attacked by state and local agencies. Even with air quality standards being set nationally, dealing with existing stationary sources would necessarily vary from one state to another and, within states, from one area to another.

2 A LEGISLATIVE HISTORY OF THE CLEAN AIR ACT AMENDMENTS OF 1970, at 984 (1974).

37 One way of establishing these emission limitations is by requiring industry to use the "best available technology" in controlling emissions. See generally, *Congressional Cosmetic*, *supra* note 3, at 163-64. It should be noted, however, that merely the application of best available technology is no guarantee of achieving the national ambient air quality standards. If, for example, the sources were very numerous in a particular area, even with application of the best technology, the amount of pollution in the air may still exceed the standards. See, *Hearings on Implementation of the Clean Air Act Amendments of 1970 Before the Senate Public Works Committee*, 92d Cong., 2d Sess., part 1, 276-77 (1972).

38 An explanation of the extent to which this interpretation would permit the states to consider economic and technological feasibility in development of their state plans was given by Administrator Ruckelshaus during the 1972 Implementation Hearings. Although these

ation is reconcilable. The Senate Report and the Senate debate concentrate on the irrelevance of economic and technological feasibility with respect to *establishment* of the national ambient air quality standards, which must be based on public health considerations, and not on the *manner* in which the states choose to attain these standards.

Reflecting the fact that the 1970 Amendments were subject to varying interpretations, many disputes arose during the administration of the Act. Environmental groups maintained that economic and technological feasibility factors were eliminated from consideration under the Act, while industry attempted to force the inclusion of these factors at various stages in the implementation process. The following section will examine the judicial approaches to these arguments.

IV. State and EPA Consideration of Economic and Technological Feasibility in State Implementation Plans

A. Industry Challenges to SIP's and Judicial Responses

1. Judicial Review of EPA Approval: § 307(b)(1)

Industry reaction to the Amendments of 1970 was predictable. Faced with significant increases in costs from attempts to meet emission limitations, industry spokesmen argued that these costs should be included as factors in decision-making under the Act.³⁹ Pursuant to the EPA regulations, some states were already allowing economic and technological feasibility considerations to be raised at state hearings conducted as a prerequisite to development of the implementation plan⁴⁰ and were incorporating these factors into the plan itself.⁴¹ However, industry found itself at the mercy of the states in this respect, and several states either did not include consideration of economic and technological factors in development of the plan, or failed, in industry's judgment, to apply these considerations appropriately. If state appeal procedures were unavailable to industry or an appeal was unlikely to succeed, then appeal to the EPA administrator was attempted. However, under EPA's construction of the Act, EPA hearings in addition to the state hearings were not required prior to the admin-

factors could not be considered in setting the standards, he said the states could consider them in determining the most efficient way to meet those standards. Thus instead of applying 85 percent reduction levels to three emitters and risk putting one out of business, the EPA regulations would permit placing levels of reduction of 90, 85, and 80 percent. This could still achieve the same ambient air quality and avoid forcing plants out of business.

39 See note 106 and accompanying text *supra*.

40 Section 110 requires that a state first hold a public hearing before adoption of an implementation plan or revision. If a state fails to hold such a hearing, the administrator of the EPA must do so. 42 U.S.C. § 1857c-5(a)(2), § 1857c-5(c) (1970).

41 Indeed, the Eighth Circuit interpreted the language found in the Senate Report—"These matters (technology and other considerations) would have been settled in the administrative procedures leading to an implementation plan or emission control provision"—to mean that technological feasibility considerations should be raised in the required state hearings prior to submission of an SIP. *Union Electric Co. v. EPA*, 515 F.2d 206, 216 (8th Cir. 1975).

istrator's action on the plan.⁴² Thus, in industry's view, SIP's were effected without giving appropriate consideration to factors of economic and technological feasibility.

These plans were subsequently attacked through § 307(b)(1)⁴³ which provides for judicial review of any administrator's action in approving an SIP. In determining the scope of review of the administrator's action, courts have generally looked to the Administrative Procedure Act⁴⁴ and the standard set forth in *Citizens to Preserve Overton Park v. Volpe*:⁴⁵

- 1) Whether the action was within the scope of the agency's authority;
- 2) Whether the agency conformed to procedural requirements; and 3)
- Whether the agency decision was arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.⁴⁶

The first two of these standards were never seriously disputed with respect to EPA approval of an SIP. Clearly, approval of an SIP was within the scope of the EPA's authority⁴⁷ and the procedure for such approval was fairly straightforward.⁴⁸ This left industry with the argument that the EPA's failure to consider economic and technological feasibility in approval of an SIP constituted an arbitrary or capricious act or an abuse of discretion.

Acceptance of this argument would be an effective rejection of the legislative history of the Act. If the congressional intent dictates that the EPA not consider these factors, it could hardly be an abuse of discretion to implement this intent. Even acknowledging this concern however, the *Overton Park* test still represented a fairly tough standard and industry met with little success.⁴⁹

2. Enforcement Actions

Arguments to allow industry to raise economic and technological factors as defenses in enforcement action under § 113 have been more successful.⁵⁰ This

42 Courts have generally agreed with this interpretation. "... If the state hearings were adequate [the administrator is] ... not required, prior to approving the state plans, to extend to the petitioners ... an opportunity to be heard." *Appalachian Power Co. v. EPA*, 477 F.2d 495, 502 (4th Cir. 1973). See also *Buckeye Power, Inc. v. EPA*, 481 F.2d 162, 172 (6th Cir. 1973).

43 42 U.S.C. § 1857h-5(b)(1) (1970).

44 5 U.S.C. §§ 550 et seq. (Supp. V, 1975).

45 401 U.S. 402 (1971).

46 *Id.* at 415-17. See also, *State of Texas v. EPA*, 499 F.2d 289, 296-97 (5th Cir. 1974).

47 See 42 U.S.C. § 1857c-5(a) (1970).

48 *Id.*

49 Although we do not read the Act as requiring the EPA to engage in exhaustive cost benefit studies or to initiate elaborate planning exercises, it could be arbitrary and capricious for the Agency to reject obviously less burdensome but equally effective controls in favor of more expensive or onerous ones. But we think a considerable part of the burden of suggesting attractive alternative strategies is upon those, like the petitioners, who dislike the present ones. The record discloses that the administrator has chosen rationally among the viable alternatives presented. We conclude that he did not abuse his discretion or go beyond his statutory authority with respect to the economic and social aspects of the plan.

South Terminal Corp. v. EPA, 504 F.2d 646, at 676 (1st Cir. 1974). See also *State of Texas v. EPA*, 499 F.2d 289 (5th Cir. 1974).

50 42 U.S.C. § 1857c-8 (1970).

section permits the EPA to issue abatement orders and to institute civil actions in instances where an individual source of air pollution is in violation of requirements under an SIP. Although the language directing courts to give "due consideration to the practicability and to the technological and economic feasibility of compliance"⁵¹ in enforcement actions was deleted from the final bill, many courts have accepted a fairly ingenious argument which permits industry to raise economic and technological feasibility factors as defenses in state and federal enforcement actions. Since § 307(b)(2)⁵² restricts judicial review in enforcement proceedings to those issues not reviewable at the time of approval under § 307(b)(1),⁵³ courts have determined that if the EPA was not permitted to consider economic or technological factors in approval or disapproval of an SIP, then these issues could be raised in an enforcement suit.⁵⁴ Notwithstanding the dubious validity of this interpretation of the Act, it has found judicial favor, allowing industry to raise these economic and technological objections in enforcement proceedings.

This view of the Act confuses the issues involved in the interpretation of § 110. If economic and technological feasibility factors may be raised as defenses in enforcement actions, this would force the states and EPA to consider these factors initially in the design and approval of an SIP. It would be pointless for the states and EPA to exclude economic and technological feasibility factors from the implementation process of the Act, if they were later forced to consider them in enforcement actions. Thus, a holding that these factors are appropriately raised in § 113 enforcement proceedings in effect dictates that economic and technological factors be considered in the implementation process under § 110 without ever specifically examining whether that was the intent of Congress.

3. Court-ordered Hearings

In some instances, seeking to force consideration of economic and technological feasibility factors, courts have created a new stage in the implementation process, and have ordered the EPA to hold hearings at which these factors could be raised by industry. These cases have arisen infrequently, and have resulted from the dual state-federal enforcement procedures provided for in the Act.⁵⁵ In *Getty Oil v. Ruckelshaus*,⁵⁶ the operators of an oil refinery failed to challenge the EPA's approval of the Pennsylvania SIP in a § 307(b)(1) proceeding and instead attempted to obtain a variance through state-created pro-

51 See notes 22-23 and accompanying text *supra*.

52 Section 307(b)(2) provides: "Action of the Administrator with respect to which review could have been obtained under paragraph (1) shall not be subject to judicial review in civil or criminal proceedings for enforcement." 42 U.S.C. § 1857h-5(b)(2) (1970).

53 Section 307(b)(1) provides for review in the United States Court of Appeals in the appropriate circuit of action taken by the administrator in approving an implementation plan under § 110. The petition for review must be filed within 30 days of approval. 42 U.S.C. § 1857h-5(b)(1) (1970).

54 *Indiana & Michigan Electric Co. v. EPA*, 509 F.2d 839, 845 (7th Cir. 1975). See also *Buckeye Power, Inc. v. EPA*, 481 F.2d 162, 173 (6th Cir. 1973).

55 42 U.S.C. § 1857c-8, § 1857d-1 (1970).

56 467 F.2d 349 (3rd Cir. 1972), *cert. denied*, 409 U.S. 1125 (1973).

cedures.⁵⁷ A state injunction was granted halting state enforcement of the plan while the variance procedure was pending, but since the EPA was not bound by the state injunction, it commenced federal enforcement proceedings against Getty. Getty was denied federal relief and was instructed that the only remedy for challenging an approved SIP was § 307. This placed Getty in the awkward position of defending in federal prosecution its failure to comply with requirements it was attempting to alter through state processes.

A remedy for the *Getty Oil* dilemma was provided by the Third Circuit in *Duquesne Light Co. v. EPA*.⁵⁸ Faced with a similar situation, the court termed the *Getty Oil* result "fundamentally unfair," and gave the EPA two choices. The EPA could either refrain from enforcement activities during the pendency of the state variance proceedings or, alternatively, hold a limited legislative hearing at which the industries would be permitted to file comments pertaining to the economic or technological feasibility of the SIP.⁵⁹ The Third Circuit, then, seemingly assumed that the companies were able to raise economic and technological feasibility factors at some stage in the implementation process, and, having lost the opportunity to do so in a § 307(b)(1) petition, these companies should be permitted to raise them in a hearing prior to enforcement.

4. Legislative Amendments

Although successful in forcing consideration of economic and technological feasibility factors in some instances under the Act, the discretionary manner in which these concerns may be included has led industry to seek an explicit statement of this obligation on the part of states and the EPA. In the 1975 implementation hearings,⁶⁰ industry representatives submitted several statements to Congress, expressing the need for an amendment to the Act instructing both states and the EPA to consider economic and technological feasibility in administration of the Act.⁶¹ These attempts have failed and the basic question regarding the relevance of economic and technological feasibility to EPA and state decision-making remains.⁶²

⁵⁷ See note 69 *infra*.

⁵⁸ 481 F.2d 1 (3rd Cir. 1973).

⁵⁹ *Id.* at 10. In a rather combative footnote, the Third Circuit noted that this was a fairly innovative remedy,

... We recognize that in this situation we are operating on the frontiers of legal thought, and any advance post that we take up is liable to the dangers of heavy ground assault. But it is only by such expeditions that knowledge of the terrain ahead may be gained.

Id. at 10, n. 49.

⁶⁰ *Hearings on Implementation of the Clean Air Act Amendments of 1970 Before the Senate Public Works Committee*, 94th Cong., 1st Sess. (1975).

⁶¹ *Id.* part 2 at 1311, 1313, 1348 (1975).

⁶² Attempts by industry to circumvent the difficulties encountered in the Clean Air Act by application of the National Environmental Policy Act (NEPA) (42 U.S.C. § 4321 (1970)) to the EPA have met with failure. NEPA requires all federal agencies to prepare an environmental impact statement when contemplating any major action (*Id.* at § 4332(2)(c)). The impact statement must include an assessment of the costs and benefits of the proposed action. Through 1974, courts had unanimously agreed that NEPA did not apply to the EPA. In that year the Energy Supply and Environmental Coordination Act of 1974 (Pub. L. No. 93-319, § 7(c)(1) (June 22, 1974)) became law; it specifically provides that no action taken under the Clean Air Act falls within NEPA. Thus another attempt by industry to include consideration of economic and technological feasibility factors under the Act failed.

B. State Consideration

Notwithstanding doubts voiced by members of Congress,⁶³ most courts have maintained that economic and technological feasibility considerations are relevant to designing state plans for the implementation of national air quality standards.⁶⁴ Certainly the states have been guided by the EPA regulations which specifically permit this inclusion.⁶⁵ Some courts, however, caught between the fairly clear legislative history of the Act, and the subsequent EPA regulations, have placed limits on the extent to which these factors are relevant to state action.

In *National Resources Defense Council v. EPA*,⁶⁶ an environmental group (NRDC) brought suit against the EPA for a review of decisions made by the administrator approving certain portions of the Rhode Island and Massachusetts air pollution implementation plans. These portions permitted the state air pollution control director to consider social and economic factors and the practicability of control technology in issuing abatement orders. The First Circuit in *NRDC* rejected the EPA's contention that these provisions were mere "surplusage" and a "nullity," and held that "to the extent . . . these provisions . . . are inconsistent with the federal act, they must be disapproved."⁶⁷ The court, however, applied the same rationale it had used concerning the question of state variance procedures,⁶⁸ and divided the problem into two time periods. They held that while in the period after attainment of the national air quality standards economic and technological considerations were certainly not to play a part in decision-making by the states, the greater need for flexibility during the preattainment period permitted the state to exercise "greater discretion" in the issuance of abatement orders.⁶⁹ Presumably, this meant that while the court considered economic and technological feasibility factors relevant to state action during this period, con-

63 See notes 27, 34 and accompanying text *supra*.

64 See *South Terminal Corp. v. EPA*, 504 F.2d 646 (1st Cir. 1974); *NRDC v. EPA*, 507 F.2d 905, 914 (9th Cir. 1974).

65 See note 41 and accompanying text *supra*.

66 478 F.2d 875 (1st Cir. 1973).

67 *Id.* at 889.

68 In administration of the 1970 amendments, a question arose as to the ability of the states to maintain a variance procedure independent of the federal act provisions of §§ 110(e) and 110(f). The EPA maintained that they were entitled to treat any state-granted variance as a "revision" under § 110(a)(3). The NRDC contended that any state-granted variance had to meet the strict substantive requirements of § 110(f) which provides the administrator must determine that,

(A) good faith efforts have been made to comply with such requirements before such date,

(B) such source (or class) is unable to comply with such requirement because the necessary technology or other alternative methods of control are not available or have not been available for a sufficient period of time,

(C) any available alternative operating procedures and interim control measures have reduced or will reduce the impact of such source on public health, and,

(D) the continued operation of such source is essential to national security or to the public health or welfare. . . .

42 U.S.C. § 1857-5(e) (f) (1970).

The First Circuit accepted neither view and instead adopted a view dividing the problem into two time periods. In the period after attainment of the primary air quality standards, the court held that § 110(f) was intended to be the sole procedure to gain an exemption. During the pre-attainment period, however, the greater flexibility needed by the states permitted them to exercise greater discretion in providing for "deferral mechanisms."

478 F.2d at 884-89.

69 *Id.* at 889.

sideration of these factors was not to interfere with the attainment of air quality standards.⁷⁰

This conclusion substantially adopts the position formulated by the EPA in the regulations previously discussed. The states are permitted to include economic and technological feasibility considerations in both the development and the operation of an SIP, but not in a manner that would interfere with attainment of the national air quality standards. Assuming the standards are established at a desirable level, there can be no real objection to this conclusion. If the air quality standards will be attained, certainly there can be no opposition to attaining them in a fashion which will result in the least disruption to industry.

A later case in the Fifth Circuit⁷¹ reached a conclusion similar to the one in the Rhode Island case, using a different method of analysis. In this suit the NRDC was also opposing the EPA's approval of a state implementation plan because the Georgia plan permitted state air pollution agencies to consider economic, social, and technological factors in exercising their responsibilities under the Act. The court held that inclusion of such provisions in the plan was violative of the Act insofar as they "were inconsistent with the congressional intent that considerations of economic cost or technological feasibility be always subordinate to considerations of public health."⁷² The Fifth Circuit continued, "Congress made it clear that cost and feasibility were not to be considered in meeting the three-year deadlines for attaining national primary standards. Those standards are set in terms of what is required for the protection of public health."⁷³ Basing its holding on the legislative history of the 1970 Amendments, the court concluded that the Georgia provisions were "overinclusive" in failing to distinguish between situations where cost and technological considerations are relevant and situations where they are not. While recognizing the strong intent of Congress to remove economic and technological factors from consideration, the Fifth Circuit followed previous decisions in permitting consideration of these factors in certain circumstances. "It is of course, appropriate for state air pollution control officials to take into account cost and feasibility factors in most circumstances; their doing so is proscribed only when those considerations are in conflict with considerations of public health."⁷⁴ These considerations presumably conflict with public health when they interfere with attainment of the national primary air quality standards. This holding, then, reaches the same result as the earlier First Circuit decision.

Train v. NRDC,⁷⁵ decided by the Supreme Court in April of 1975, presumably resolved any remaining doubts regarding the extent to which a state may include consideration of economic and technological feasibility factors in its SIP. While the Georgia case discussed above was appealed to the Supreme Court solely on the question of whether a state was permitted to operate independent variance procedures, it also provides insight to the economic and technological

70 See also *NRDC v. EPA*, 483 F.2d 690, 694 (8th Cir. 1973).

71 *NRDC v. EPA*, 489 F.2d 390 (5th Cir. 1974).

72 *Id.* at 411.

73 *Id.*

74 *Id.*

75 421 U.S. 60 (1975).

feasibility problem.

In *Train*, the Supreme Court accepted the EPA view of the issue; that § 110(a)(3),⁷⁶ the revision section, authorizes a state to grant variances which do not interfere with the attainment or maintenance of national ambient air quality standards. The revision section, according to the Court, authorizes action by the state as broad as that taken initially in development of the SIP. Further, EPA action in approving or disapproving a state revision is limited to an examination of whether the revision satisfies the requirements of § 110(a)(2), applicable to the original SIP. Thus, the Court found that the revision section permits a state to grant variances as long as the requirements of § 110(a)(2) are fulfilled.⁷⁷

Although whether a state may operate variance procedures independent of those provided for in § 110, and what they may consider in granting variances are different questions, the *Train* decision suggests that the state may consider economic and technological factors without facing EPA disapproval of the plan or revision if the attainment or maintenance of national air quality standards is not interfered with. To this extent it reaches the same conclusion as previous decisions. The decision, however, does not imply that the EPA can instruct a state to include such factors, nor disapprove the plan or revision if not present. These considerations remain irrelevant except so far as state consideration of these factors may interfere with the attainment or maintenance of national air quality standards.

C. EPA Consideration

1. Section 110.

The basic question involved in all the relevant decisions is the same; to what extent must the EPA consider economic and technological feasibility in approving or disapproving an SIP? As stated in the previous section,⁷⁸ the EPA apparently has the duty to disapprove any plan which permits a state to consider

⁷⁶ Section 110(a)(3) provides,

The Administrator shall approve any revision of an implementation plan applicable to an air quality control region if he determines that it meets the requirements of paragraph (2) and has been adopted by the state after reasonable notice and public hearing.

⁷⁷ 42 U.S.C. § 1857c-5(a)(3) (1970).

⁷⁸ 421 U.S. 60 (1975).

The *Train* decision may raise significant problems, notably one mentioned by the First Circuit in *NRDC v. EPA* (478 F.2d 875). The difficulties of proving that any particular variance granted to a source or class is going to prevent attainment of air quality standards are considerable. When hundreds or thousands of emissions are occurring in an air quality region, all contributing to the aggregate level of ambient air quality, the scientific evidence necessary to show that one source will prevent attainment of the standards is simply not obtainable. Yet the Supreme Court has apparently ordered the EPA to make these types of judgments in determining whether a revision by a state deserves EPA approval.

Permitting the state to consider economic and technological feasibility in plans or revisions under § 110 if the attainment of air quality standards is not interfered with, as the *Train* decision suggests they may do, raises similar problems for the EPA. They are again placed in a position of having to determine and prove that consideration of economic and technological feasibility factors in this particular instance interferes with attainment or maintenance of the national air quality standards.

⁷⁸ See notes 76-78 and accompanying text *supra*.

economic and technological factors, if the EPA determines such state consideration will interfere with attainment of the national air quality standards. The extent to which the EPA must consider these factors if a state inadequately considers or omits them in submission of an SIP will be examined in this section. The principal cases dealing with this question, *St. Joe Minerals v. EPA*,⁷⁹ and *Union Electric Co. v. EPA*,⁸⁰ have reached contrary conclusions.

a. *St. Joe Minerals v. EPA*

In *St. Joe Minerals v. EPA*, the Third Circuit was presented with a problem arising from its order in *Duquesne Light Co. v. EPA*.⁸¹ In *Duquesne*, the court had ordered the EPA to either refrain from enforcement proceedings during the time the parties, Duquesne Light Company and St. Joe Minerals, sought variances from the state, or grant the companies a limited hearing to present economic and technological feasibility objections. The EPA chose the latter option and concluded that a portion of the Pennsylvania implementation plan was indeed infeasible.⁸² The EPA had further concluded, however, that it did not possess the statutory authority to disapprove the plan on that basis. Instead it merely informed the state director of its finding, and requested a revision. Furthermore, the EPA offered to stay enforcement of the plan pending state administrative and judicial review of the plan. St. Joe, understandably perturbed by this result, sought review, alleging that the EPA's refusal to disapprove the plan was based on an erroneous construction of § 110. The EPA argued that if § 110(a)(2) is satisfied, then the mandatory language of that section and § 116⁸³ require it to approve an SIP even though it has found it to be technologically infeasible. The court relied upon its earlier decisions in *Duquesne*⁸⁴ and *Getty Oil*⁸⁵ in holding that the EPA can examine economic and technological feasibility in consideration of an SIP, and is empowered to disapprove a plan on that basis if the plan gives inadequate consideration to these factors. In *Getty Oil* the Third Circuit, while disallowing relief from federal enforcement proceedings, had assumed Getty could have raised economic and technological considerations in a § 307(b)(1) petition if it had brought the petition in a timely manner.⁸⁶ Similarly, the Third Circuit in *Duquesne*, without directly considering whether economic and technological feasibility factors were relevant to § 110 action, ordered the EPA to hold hearings at which the petitioners would be permitted to raise economic and technological feasibility objections to the SIP.⁸⁷ Employing circular reasoning, the Third Circuit in *St. Joe* cited these decisions and found that clearly the EPA was empowered to disapprove an SIP for inadequate con-

79 508 F.2d 743 (3rd Cir. 1975).

80 515 F.2d 206 (8th Cir. 1975), *cert. granted*, 96 S. Ct. 35 (1975).

81 481 F.2d 1 (3rd Cir. 1973).

82 508 F.2d at 745.

83 Section 116 provides that a state may adopt any air quality standard or emission limitation it wishes, as long as they are at least as strict as those required by the federal standards. 42 U.S.C. § 1857d-1 (1970).

84 481 F.2d 1 (3rd Cir. 1973).

85 467 F.2d 349 (3rd Cir. 1972), *cert. denied*, 409 U.S. 1125 (1973).

86 *Id.* at 359.

87 481 F.2d at 10.

sideration of economic and technological feasibility factors. Obviously, said the court, they would not have made those decisions if the EPA were not statutorily able to consider these factors.⁸⁸ This reasoning would be more convincing if the court in *Duquesne* had actually considered the question of economic and technological feasibility. However, they simply ordered the subject raised at hearings without determining whether the statute permitted such action.

The Third Circuit, in *St. Joe*, cited *Appalachian Power Co. v. EPA*⁸⁹ as an additional example of a court rejecting the EPA's claim that it was not entitled to consider economic or technological feasibility in approving or disapproving SIP's under § 110.⁹⁰ The court in *St. Joe* followed the Fourth Circuit's finding in *Appalachian Power Co.* and noted that during the four-month period the EPA has to review an SIP, the plan is reviewed by an interagency committee composed of representatives from the Federal Power Commission, Departments of Transportation, Labor, Commerce, Interior, and the Office of Management and the Budget. This committee is to review the "aggregate impact" of these SIP's and provide assistance "in determining the availability of fuels, transportation programs, and public and private sector investment."⁹¹ The Third Circuit in *St. Joe* agreed with the Fourth Circuit's contention that in fulfilling these duties, it is "inconceivable" that the committee does not "consider and evaluate the technological and economic aspects of the plans under review."⁹²

Although this is a reasonable presumption of what the committee might consider in examining an SIP, this conclusion sidesteps the substantive issue of whether the Act authorizes the EPA to disapprove an SIP on grounds of economic or technological infeasibility. Rather than examining the Act itself for an answer to this question, the Third Circuit chose to consider the procedure adopted by the EPA and base its decision on speculation.

b. *Union Electric Co. v. EPA*

While the Third Circuit in *St. Joe Minerals* ignored the legislative history in reaching its conclusion that the EPA can and must consider the economic and technological feasibility aspects of an SIP, the Eighth Circuit in *Union Electric Co. v. EPA*⁹³ relied heavily upon this history in concluding that Congress left consideration of these factors to the states, subject only to the requirement that the plan adopted would attain the national air quality standards.⁹⁴ The court held further that the decisions made by the states regarding economics and technology are not reviewable by the administrator, and thus not reviewable by a court in a § 307(b)(1) petition.⁹⁵ Although relying partially on remarks made by Senator Muskie in discussion of Title II of the 1970 Amendments

88 508 F.2d at 746-47.

89 477 F.2d 495 (4th Cir. 1973).

90 508 F.2d 747-48.

91 *Id.* at 749.

92 *Id.* See also *Appalachian Power Co. v. EPA*, 477 F.2d 495, 506 (4th Cir. 1973).

93 515 F.2d 206 (8th Cir. 1975).

94 *Id.* at 216.

95 *Id.* See notes 53-55 and accompanying text *supra*.

dealing with automotive emissions,⁹⁶ instead of § 110, the court nevertheless concluded that it was the intent of Congress to reduce economic and technological feasibility considerations from the EPA's actions under the Act.⁹⁷

2. Section 116

Section 116, which gives states the right to establish standards as strict as they wish as long as the national air quality standards are attained, illustrates the different rules the states and EPA play in the implementation and administrative process. In *Union Electric* the utility contended that because its compliance with emission limitations was not necessary to achieve the national primary air quality standards for the area concerned, the EPA had authority to disapprove that portion of the plan applying to the utility. This was simply an attempt to broaden earlier decisions authorizing a state to base determinations on economic and technological feasibility grounds as long as attainment of the national air quality standards was not interfered with. Without expressly adopting that view, the court rejected the proposal that the power to disapprove SIP's on economic or technological infeasibility grounds also be extended to the EPA in instances where attainment of the air quality standards would not be interfered with. In dismissing this contention, the Eighth Circuit noted that § 116 insures that "the states are free to adopt limitations even stricter than the federal and it cannot be contended that the states are limited in their implementation plans to doing no more than assuring that the national standards are to be met and maintained."⁹⁸

Section 116's allowance for stricter standards than imposed by federal requirements has played an interesting role in this issue of economic and technological feasibility. In several cases the EPA has argued that § 116 bars disapproval of an SIP on grounds of economic or technological infeasibility, maintaining that states may adopt as strict a program as they desire, regardless of economic or technological feasibility considerations. This argument, although rejected in *St. Joe Minerals*,⁹⁹ emphasizes the irrelevance of economic and technological factors under the Act. Air quality standards equal to (or even less strict) than the federally ordered standards may be economically or technologically impractical. However, Congress intended for them to be met, even at the cost of some shutdowns.¹⁰⁰ Likewise, the states are entitled to attain higher air quality

96 515 F.2d at 215, n. 29.

97 *Id.* at 215. This has been the conclusion reached by most courts who have considered the matter. See *NRDC v. EPA*, 507 F.2d 905, 914 (9th Cir. 1974); *NRDC v. EPA*, 489 F.2d 390, 412 (5th Cir. 1974); *NRDC v. EPA*, 478 F.2d 875, 889 (1st Cir. 1973). In only one instance was the opposite conclusion reached and this was based on a misreading of the action taken by the conference committee. *Buckeye Power, Inc. v. EPA*, 481 F.2d 162, 168 (6th Cir. 1973). The Sixth Circuit mistakenly concluded the House bill language had been approved and not the Senate language.

98 515 F.2d at 220.

99 508 F.2d 743, 748 (3rd Cir. 1975).

100 See text accompanying note 28 *supra*.

standards than federally required and these standards likewise cannot be disapproved for economic or technological reasons.¹⁰¹

V. Conclusion

In examining the vast legislative history, subsequent congressional hearings, and cases involving the issue of economic and technological feasibility in the Clean Air Act Amendments of 1970, several conclusions may be reached. Congress intended to minimize the impact economic and technological considerations could have on decision-making under the Act. In particular, the EPA was not to consider these factors in either establishing the air quality criteria or standards; nor were they to disapprove a plan for inadequate consideration of these factors by the states. To the extent that *St. Joe Minerals and Appalachian Power Co.* are inconsistent with this conclusion, they misinterpret § 110.

Arguably the states were left with the authority to consider these factors as long as the attainment of the national air quality standards was not hindered, which is an EPA determination. The states are, however, not required to consider economics and technology in developing an SIP and may impose as strict a set of standards as they wish. Finally, although inconsistent with the legislative history of the Act, economic and technological feasibility considerations probably may be raised as defenses in enforcement suits.¹⁰²

Serious questions remain, however, as to the practical role these factors should play in effectuating a national air pollution control policy. A policy placing little emphasis on economic and technological feasibility factors could have serious implications, including plant shutdowns with subsequent unemployment and economic disruption. These potential effects have indeed been recognized by several courts. In *Buckeye Power, Inc. v. EPA*,¹⁰³ the Sixth Circuit was unable to accept the view that Congress foresaw and approved of the possibility of electric utilities being forced to shut down because of an inability to meet the required emission standards. "If Congress intended such a far reaching result in the 1970 Amendments to the Act, it certainly would have mentioned such an intention in the body of Amendments."¹⁰⁴

Additionally, in *Union Electric*, the Eighth Circuit recognized the potential impact of its decision but concluded that the Act was clear in disallowing consideration of economic and technological factors.

101 Other decisions upholding the duty of the administrator to approve an SIP without considering the economic or technological feasibility of the plan have seized upon the mandatory language contained in section 110. In *Indiana & Michigan Electric Co. v. EPA*, 509 F.2d 839 (7th Cir. 1975), the Seventh Circuit stated that § 110 imposes a mandatory duty on the administrator to approve the plan if it was adopted by the state after reasonable notice and hearing, provides for the attainment of primary air quality standards "as expeditiously as practicable" but "in no case later than three years from the date of approval," provides for the implementation of secondary standards within a "reasonable time," and satisfies the requirements of sub-paragraphs A-H of § 110(a)(2). A-H does not include the factors of economic and technological feasibility, and it was this absence from otherwise detailed criteria that the court found "highly significant." *Id.* at 844.

102 See note 55 and accompanying text *supra*.

103 481 F.2d 162 (6th Cir. 1973).

104 *Id.* at 168.

Whether the public interest would be best served by closing plants or by allowing some variances from the national program for clean air we cannot say. . . . However it is not our role to sit as a super-legislature balancing the necessity of compliance with the clean air standards against competing economic and technological considerations.¹⁰⁵

These concerns surrounding the use of economic data were also expressed by industry representatives in seeking an amendment to the Clean Air Act during the 1975 Implementation Hearings.¹⁰⁶ These spokesmen felt that economics were among the most important considerations facing decision-makers designing or implementing air pollution control technology. To ignore the economic factor, urged the representatives, would be to risk severe consequences, including a large number of unemployed, loss of supplies of energy, and disruption of the national economy.

The importance of economic factors in industrial decision-making has generally been expressed in terms of a comparison of the costs and benefits of doing or not doing some act. If the benefits to be earned in expansion of an industry exceed the costs in doing so, the expansion should proceed. In the environmental protection area, however, this cost-benefit analysis approach produces questionable results. While the costs of implementing pollution control devices are fairly easy to calculate, ascertaining the benefits constitutes a much more difficult problem. Traditionally, the avoidance of deleterious effects on vegetation, crops, property, materials, and health has been interpreted as the benefits of pollution reduction.¹⁰⁷ Of these, health benefits and aesthetic values have been notoriously difficult to calculate.¹⁰⁸ As was indicated by spokesmen before the subcommittee conducting the 1975 hearings, the difficulty in computing these benefits lies in the translation of health effects and simple aesthetic values into "hard" economic benefits.¹⁰⁹ These problems led the National Academy of Sciences to conclude in a report prepared for the Senate Committee on Public Works that cost-benefit analysis, although useful as a tool providing helpful information, should not be used "as a technique for making policy determinations or for setting regulatory standards."¹¹⁰

105 515 F.2d at 219.

106 See notes 61-62 and accompanying text *supra*.

107 BARKLEY & SECKLER, ECONOMIC GROWTH AND ENVIRONMENTAL DECAY 84 (1972).

108 This has led, in some instances, to simply ignoring the nonquantifiable benefits of pollution reduction. Dr. John Knelson, Director of the Human Studies Laboratory of the EPA, noted in his testimony before the Senate during the 1975 Implementation Hearings that,

[T]here are two basically different ways of interpreting health effects data with respect to environmental control strategy. On the one hand, if data are inadequate and contradictory, one can argue that control is not necessary because adverse health effects have not been proven. If on the other hand, the data are inadequate and contradictory, I think one can equally conclude that prudence dictates an even greater margin of safety because precisely of the uncertain assessment of the potential adverse health effect.

Hearings on Implementation of the Clean Air Act Amendments of 1970 Before the Senate Public Works Committee, 94th Cong., 1st Sess., pt. 1, at 754 (1975).

109 *Id.* at 30.

110 THE SOCIAL AND ECONOMIC COSTS AND BENEFITS OF COMPLIANCE WITH THE AUTO EMISSION STANDARDS ESTABLISHED BY THE CLEAN AIR ACT AMENDMENTS OF 1970, S. DOC. NO. 93-16 93d Cong., 1st Sess. (1973).

Similarly, Dr. Knelson stated,

Finally, in an attempt to respond directly to your question, have we been able to

That economic and technological feasibility factors should be secondary considerations in environmental decision-making is essentially the view adopted by the Congress in passing the Clean Air Act Amendments of 1970. In basing the amendments on what is necessary to protect the public health, Congress realized that the Act might in some instances work harsh results, but felt such a measure was necessary to achieve a healthy level of air quality.

Jon R. Robinson

put a dollar value on public health, of course we can't. Nobody is able to accurately put a dollar value on human anguish and suffering and death and illness. There are attributes of life that are not quantifiable in dollar terms. These are societal decisions.

HEARINGS ON IMPLEMENTATION OF THE CLEAN AIR ACT AMENDMENTS OF 1970 BEFORE THE SENATE PUBLIC WORKS COMMITTEE, 94th Cong., 1st Sess., pt. 1, p. 32 (1975).

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