REPORT OF THE COMMITTEE ON THE ENVIRONMENT

I. INTRODUCTION

This report focuses on a variety of environmental matters of interest to energy practitioners. First, it notes various important regulatory and litigation activities concerning the Acid Rain Program under the Clean Air Act Amendments of 1990 (Act).[1] A discussion on pollution prevention and various industry and the EPA initiatives follows. Third is Global Climate Change, including a description of the Clinton Administration's Climate Change Action Plan. Finally, there is an update on environmental externalties and a report on the EPA's determination under RCRA concerning fossil fuel combustion wastes.

II. ACID RAIN IMPLEMENTATION

1993 was an important year for implementing the Acid Rain Program under title IV of the Clean Air Act, as amended by the Clean Air Act Amendments of 1990. The Environmental Protection Agency (EPA or Agency) published its final "core" acid rain rules on January 11, 1993,[2] received applications for Phase I permits and bonus extension allowances in February, published final rules governing Phase II allowance allocations in March,[3] issued draft and some final Phase I permits in the summer and fall,[4] proposed rules for opting-in to the Acid Rain Program in September,[5] and proposed a revision to the core rules on a number of permitting, monitoring, and allocation rule issues, including issues concerning substitution and reduced utilization plans in November.[6] The EPA also endeavored to develop the necessary computer software for recording allowances under the Allowance Tracking System (ATS) and for certifying compliance under the Continuous Emission Monitoring (CEM) Data Acquisition and Handling Systems (DAHS). Although the Agency encountered difficulties, as of the time of this report both of these systems were expected to be available by early 1994.

The past year also saw significant litigation challenging various aspects of the EPA's Acid Rain Program regulations. This litigation included challenges to the January 11, 1993, core rules on substitution and reduced utilization plans[7] and the March 23, 1993, Phase II allowance allocation rule.[8]

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1. 42 U.S.C. §§ 7401-7626 (Supp. II 1990).
2. 58 Fed. Reg. 3590 (1993).
3. *Id.* at 15,634 (1993).
4. *See, e.g.*, 58 Fed. Reg. 38,370 (1993) (notice of draft permits); 58 Fed. Reg. 46,968 (1993) (notice of final permits).
5. 58 Fed. Reg. 50,088 (1993).
6. *Id.* at 60,950 (1993).
7. Environmental Defense Fund v. EPA, No. 1203 (D.C. Cir. filed Mar. 12, 1993).

Petitions for review of the related Title V operating permit rule also were still pending at the time of this report.[9]

This report covers in detail a few of the more significant acid rain developments in 1993: (1) challenges to and the EPA's proposed revision of the rules governing substitution and reduced utilization plans; (2) rules and litigation concerning Phase II allowance allocations for Phase II utility units, cogenerators, and others; and (3) the proposed rules for opting-in to the acid rain program.

A. Substitution and Reduced Utilization Plans

1. Litigation Challenging The Core Rule

On March 12, 1993, the Environmental Defense Fund (EDF) filed suit in the United States Court of Appeals for the District of Columbia Circuit challenging the EPA's core acid rain rules.[10] Many other environmental and industry parties, including the Natural Resources Defense Council (NRDC) and the member utilities of the Utility Air Regulatory Group (UARG), intervened or filed petitions for review that have been consolidated with the EDF case. Although several issues have been raised in this litigation, environmental petitioners primarily object to the EPA's rules governing substitution and reduced utilization plans.[11]

2. EPA's Response: One-Year Permit Limit and Revised Rule

The EPA was concerned about allegations that the existing rule could jeopardize the Act's goal of reducing sulfur emissions. After re-examining its regulations, the EPA determined that:

> [t]he existing rules could be read to provide utilities with an open-ended ability to use substitution and reduced utilization plans to create a significant number of excess, new allowances in Phase I. . . . [This] would threaten achievement of the SO_2 emission reductions intended to be made under title IV . . . and thus would be contrary to the statutory purpose of section 404(b) and (c) and 408(c)(1)(B) of the Act which are aimed at facilitating and preserving the intended amount of reductions.[12]

The EPA therefore announced on July 16, 1993, that it would propose to approve only the 1995 portion of substitution and reduced utilization plans submitted prior to that date in the Phase I permit applications for 38 plants.[13] At the same time, the EPA announced that it would propose revisions to the core rules and that the remaining portion of the submitted

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8. 58 Fed. Reg. 15,634 (1993); Southern Illinois Power Coop. v. EPA, No. 93-1312 (D.C. Cir. filed May 14, 1993).

9. Clean Air Implementation Project v. EPA, No. 92-1303 (D.C. Cir. filed July 21, 1992).

10. *Supra*, note 7.

11. *See, e.g.*, EDF's Nonbinding Statement Of Issues To Be Raised, filed Apr. 15, 1993.

12. 58 Fed. Reg. 38,370-71 (1993). The EPA later estimated that roughly 200,000 new, excess allowances could be created per year under the existing rule, totaling one million new SO_2 tons over the five-year period of Phase I. Notice signed, 58 Fed. Reg. 60,950 (1993).

13. 58 Fed. Reg. 38,370-73 (1993).

substitution and reduced utilization plans would be approved to the extent they complied with the revised rules.

In November 1993, the EPA proposed the revised rule.[14] The EPA proposed first to modify the January 11, 1993, regulation for substitution plans by limiting the allowances allocated to each substitution unit (*i.e.*, the Phase II unit). The existing rule provided allowances equal to the baseline times the lesser of the 1985 actual or allowable emissions rate for the substitution unit. Under the proposed rule, the EPA would allocate allowances to each substitution unit equal to the baseline times the lesser of: (1) the 1985 actual emissions rate; (2) the 1985 allowable emissions rate; (3) the 1990 actual emissions rate; or (4) the most stringent federal or state allowable emissions rate applicable in 1995-1999 enacted or promulgated as of November 15, 1990.[15] The EPA recognized that only the first two emissions rates are expressly set forth in section 404(b)(2) of the Act. However, the EPA added the second two 1990 rates "in order to ensure, in accordance with section 404(b)(5), that a substitution plan will result in at least the same amount of reductions that would have occurred without the plan."[16]

In addition, the EPA proposed to require that a Phase I unit and its substitution unit must have a common owner or operator, as required by section 404(b) of the Act. The January 11, 1993, rule permitted utilities to meet this statutory requirement by having a common designated representative for Phase I units and substitution units that did not otherwise share a common owner or operator. On reflection, the EPA decided there was no reason to treat designated representatives any differently in the context of substitution plans than in other multi-unit compliance plans. The EPA noted that none of the permit applications submitted in February 1993 used a common representative to meet the common owner or operator requirement, and that as of November 1993, only one such plan had been submitted to the EPA.

The EPA also reconsidered whether to change the baseline used for calculating allowances for substitution units. Under the existing rule, the baseline reflects 1985-1987 utilization of the unit. Some comments on an earlier proposal had suggested that the baseline should reflect the current projected utilization. The EPA rejected this proposal on the grounds that it would be difficult to administer and could result in the creation of excess, new allowances.[17]

While the existing rules for substitution and reduced utilization presented similar problems, the Agency determined that it would have to employ a different solution for reduced utilization because of differences in the scope of its statutory authority. Sections 404(b) and (c) give the EPA

14. Notice of proposed revisions, 40 C.F.R. section 72.41 governing Phase I substitution plans, section 72.43 governing Phase I reduced utilization plans and section 72.91 governing Phase I unit adjusted utilization compliance certification.

15. 58 Fed. Reg. 60,950 (1993).

16. *Id.*

17. *Id.*

broad discretion to determine how many allowances to allocate to substitution units. In contrast, section 408(c)(1)(B) prescribes the formula the EPA must use to allocate allowances for compensating units. Thus, to limit the creation of new, excess emissions under reduced utilization plans, the EPA reasoned that it would have to limit the number of Phase II units allowed to qualify as compensating units.[18]

The EPA proposed two options for satisfying the statute. Under the first option, a unit would be allowed to become a compensating unit only if the applicant could demonstrate that the compensating unit was actually "needed" to account for reduced utilization at the Phase I unit. The EPA would grant upfront approvals of reduced utilization plans, contingent on an end-of-year determination that compensating units were actually "needed" for the year. If the EPA were to determine at the end of the year that the compensating unit was not "needed," the EPA would de-designate the unit and deduct the allocated allowances from the unit's account. A compensating unit would be prohibited from transferring allowances that it was allocated for each year in Phase I unless and until the end-of-year determination of need was made for that unit for that year. The EPA explained that this procedure would ensure that allowances were available for any end-of-year deduction and would prevent the use of what could be excess allowances by other units in the meantime.[19]

Under the second option, a Phase II unit would qualify as a compensating unit only if the Phase II unit's baseline times the lesser of its 1985 actual or allowable SO_2 emissions rate would not exceed the unit's baseline times the lesser of its 1990 actual SO_2 emissions rate or its most stringent federally enforceable or state enforceable emissions limitation for SO_2 for 1995-1999 as of November 15, 1990.[20] The EPA would conduct an upfront determination that would be conclusive; there would be no end-of-year review under the second option.[21]

B. Phase II Allocation Rule And Litigation

On March 23, 1993, the EPA published in the Federal Register the remaining rules necessary to implement Phase II of the Acid Rain Program for emissions of sulfur dioxide.[22] This final rule provides regulations governing allocations of early reduction credits for Phase I and II, all Phase II initial allowance allocations, Phase II reserves and set-asides, allocations for units repowered using clean coal technologies pursuant to section 409 of the Act, and rules for allocating allowances to eligible diesel refiners and for determining whether specific units qualify as exempt, cogeneration units, qualifying facilities (QF), independent power producers (IPP), and solid waste incinerators.

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18. *Id.*
19. *Id.* at 27.
20. *Id.* at 28.
21. *Id.* at 33.
22. 58 Fed. Reg. 15,643 (1993).

In the notice of proposed rulemaking published July 7, 1992, the EPA discussed whether a certification procedure would be helpful to determine whether projects would be affected units or non-utility units exempt under Title IV.[23] Industry comments emphasized the need to obtain such certification early in the process, preferably at the time of financing. The EPA accepted these comments. Under the final rule, project developers may petition the EPA for an early determination whether a proposed cogeneration, QF, IPP, or other project will be an affected "utility unit" or a non-utility unit exempt from Phase II requirements under Title IV. The EPA also committed to process such petitions "as rapidly as possible," but it declined to adopt a fixed deadline.[24]

The final Phase II rule also lists all affected utility units that will receive initial allocations in Phase II. Section 403(a)(1) of the Act imposes a cap on utility emissions in Phase II. That section prohibits the EPA from allocating basic SO_2 allowances under section 405, for years beginning after 1999, in an amount that would cause total annual emissions of SO_2 from utility units to exceed 8.9 million tons. If necessary to achieve this emissions cap, section 403 the Act directs the EPA to "reduce, pro rata, the basic Phase II allowance allocations for each unit." The EPA's pro rata allocation of Phase II allowances appears in tables two and three in 40 C.F.R. section 73.10 of the March 23, 1993, rule. As noted in the preamble, the EPA used the National Allowance Data Base (NADB) version 2.11 to determine the allowance allocations for each unit that the EPA believes will be an affected unit in Phase II. However, not all units that will be affected units in Phase II are listed. For example, units that will commence operation on or after January 1, 1996, are not listed. Also, any unit that meets the applicability requirements, that is not listed in tables two or three, must meet all applicable Phase II requirements without the benefit of an allowance allocation from the EPA.[25] In other words, such new facilities must purchase their allowances on the market.

In addition, the EPA published final allowance allocations for utility units listed in Table B in section 405(g)(2) of the Act. Section 405(g)(2) directed the EPA to allocate certain specified amounts of allowances to each listed unit. In the March 23, 1993, rule, the EPA also reduced these statutory allocations pro rata and deducted standard percentages for the auction and sales reserves. Affected utilities commented that Congress intended these units to be exempt from all reductions. The EPA rejected these comments, finding that the statute allowed the EPA to apply the same deductions to these units as to other Phase II units and that the legislative history was too vague to contradict the clear language of the statute.

Fourteen sets of petitions for review were filed in the United States District Court for the District of Columbia during May 1993 challenging the EPA's Phase II Allowance Allocation Rule. In related litigation, three utilities also filed actions in the United States Court of Appeals for the

23. 57 Fed. Reg. 30,034 (1992).
24. *See* 58 Fed. Reg. 15,634-36 (1993).
25. *Id.*

Seventh Circuit challenging the Allocation Rule as applied on a case-by-case basis to their facilities.[26] The EPA moved to dismiss all three cases for lack of jurisdiction. Finally, Southern Illinois also filed with the EPA's Environmental Appeals Board a petition for administrative review of the Phase II Allocation Rule.[27] The Board dismissed this appeal for lack of jurisdiction.

C. Proposed Opt-In Rule

The EPA proposed rules, on September 24, 1993, to implement the section 410 opt-in program for non-utility sources of SO_2.[28] Industrial and other non-utility units, such as exempt cogenerators, QFs, and IPPs, could volunteer to participate in the program. The EPA plans to implement the program separately for combustion sources and process sources.

First, the September 24, notice sets out the general requirements that will apply to all combustion and process sources and provides detailed requirements for allowance allocations, monitoring, and end-of-year compliance calculations for combustion sources. The EPA found that because of similarities between utility and non-utility combustion sources, the EPA was able to impose essentially the same detailed regulations already developed for utility units under the mandatory Acid Rain Program. However, because industrial process sources "vary considerably" from affected utility units, the EPA encountered technical difficulties in developing detailed regulations for such sources. The EPA therefore announced that it would study the technical issues further and propose detailed requirements for process sources "at a later date."[29]

Under section 410 of the Act, SO_2 emission sources that are not otherwise subject to the mandatory Acid Rain Program may volunteer to participate by "opting-in." An opt-in unit would receive allowances based on historical operations during the baseline period of 1985 to 1987 and historical and current emission rates. It would be required to hold allowances at least equal to its emissions. Because a source becomes subject to all applicable requirements of the Acid Rain Program by opting-in, presumably only those sources that can cost-effectively reduce emissions below the baseline and sell the resulting excess allowances at a profit will want to opt-in. The program's goal is to provide an economic incentive to industrial and other non-utility sources to help reduce the cost of compliance for utilities by generating and selling cheaper allowances.[30]

In the September 24, notice, the EPA proposed several provisions designed to ensure that the opt-in program would be "emissions neutral." The EPA reasoned that when Congress adopted the 8.9 million ton cap on

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26. Madison Gas v. EPA, No. 93-2131 (7th Cir. filed May 11, 1993); Southern Illinois Power v. EPA, No. 93-2263 (7th Cir. filed May 24, 1993); and City of Springfield Water Power & Light v. EPA, No. 93-2262 (7th Cir. filed May 24, 1993).

27. Southern Illinois Power, EPA Appeal CAA-93-1.

28. 58 Fed. Reg. 50,088 (1993).

29. *Id.* at 50,091.

30. *See Id.* at 50,089.

utility emissions and crafted the opt-in program, it had relied on emission projections showing that SO_2 emissions from non-utility sources would remain steady at about 5.6 million tons per year from 1985 into the future. The EPA therefore determined that to protect achievement of the Act's SO_2 reduction goal, the opt-in program should not be allowed to cause industrial emissions to increase above 5.6 million tons.[31] One way the EPA proposed to accomplish this goal was to ensure that voluntary opt-in sources must comply with the same stringent CEM requirements as apply to utility units in the mandatory program.

Another important provision in the proposed rule would prohibit opt-in sources from using reduced utilization or shutdowns to generate excess allowances for sale. Section 410(f) expressly prevents opt-in sources from transferring or banking allowances they produce through reduced utilization or shutdown, subject to a narrow exception for reduced utilization associated with replacing thermal energy from the opt-in unit with thermal energy produced by another unit subject to title IV. The proposed rule implements this provision by authorizing EPA to deduct allowances from the opt-in unit's account. EPA proposes to deduct allowances for reduced utilization equal to the amount of reduced utilization multiplied by the unit's historic emissions rate. Reduced utilization would equal the difference between the baseline and the opt-in unit's "average utilization" based on a 3-year average.[32]

Some industry representatives commented that the relatively stringent requirements proposed by the EPA could discourage participation in the opt-in program.[33] However, the Agency explained that it recognized that in developing the opt-in rule, it had to weigh several competing goals of the Act, such as reducing SO_2 emissions by 10 million tons, encouraging participation in the opt-in program, and promoting emissions trading. Faced with this choice, the EPA "favored proposing provisions that ensure that title IV achieves the emissions reductions required by Congress."[34]

D. NO_x Rule

On November 25, 1992, the EPA issued proposed regulations implementing section 407 of the Act and regulating nitrogen oxides (NO_x) emissions for coal-fired units under the Acid Rain Program.[35] The proposal establishes NO_x emission limitations, compliance options, and permitting procedures. The Agency committed to approving final NOx regulations by February 28, 1994.

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31. *Id.* at 50,090.

32. *Id.* at 50,099-100.

33. Inside EPA's Clean Air Report, at 19 (Sept. 23, 1993).

34. 58 Fed. Reg 50,090 (1993).

35. 57 Fed. Reg. 55,632-83 (1992).

III. POLLUTION PREVENTION

Following enactment of the Pollution Prevention Act of 1990,[36] which directed the EPA to develop and implement a strategy to promote pollution prevention, the EPA acted in a variety of settings to further pollution prevention as an alternative to traditional command and control regulation. The EPA defines "pollution prevention" as source reduction and other practices which reduce the amount of any hazardous substance, pollutant, or contaminant entering any waste stream or otherwise released into the environment prior to recycling, treatment or disposal.[37] In the energy sector, pollution prevention efforts are focused on reducing environmental damages from extraction, processing, transport, and combustion of fuels.[38] To this end, the EPA identified three pollution prevention approaches applicable to energy: (1) increasing efficiency in energy use; (2) substituting environmentally benign fuel sources; and (3) design changes that reduce the demand for energy.[39]

The EPA recently reaffirmed its commitment to pollution prevention as a mechanism for compliance with environmental regulation. In a policy statement issued June 15, 1993, Administrator Carol Browner explained that the Agency intends to design and implement regulations to provide incentives for source reduction and encourage the use of pollution prevention as a means of compliance with permitting, inspection, and enforcement programs.[40]

On August 3, 1993, President Clinton signed Executive Order 12,856 which commits the federal government to a cross-agency pollution prevention program as part of a comprehensive effort to bring Federal facilities within the scope of the Pollution Prevention Act and the Emergency Planning and Community Right-to-Know Act.[41] This executive order also directs each agency to establish a voluntary goal of reducing releases of certain pollutants by 50 percent, utilizing source reduction practices to the maximum extent practicable. Waste reduction goals were also a component of Executive Order 12,873, which imposed new requirements on federal agencies for the acquisition and use of environmentally preferred products and for waste reduction and recycling programs.[42]

Two recent developments have applied pollution prevention approaches in areas of particular interest to energy practitioners. First, the Edison Electric Institute (EEI) released a Statement of Policy favoring individual utilities' implementation of voluntary programs for pollution prevention. In addition, the EPA amended its policy concerning the mech-

36. 42 U.S.C. § 13,101 (1992).

37. *See* May 28, 1992, memorandum to EPA Personnel from Deputy Administrator F. Henry Habicht II. The EPA has recently reaffirmed this definition. EPA, POLLUTION PREVENTION POLICY STATEMENT, at 2 (1993).

38. *See id.* at 3-4.

39. *Id.*

40. EPA, POLLUTION PREVENTION POLICY STATEMENT (June 15, 1993).

41. 58 Fed. Reg. 41,981 (1993).

42. *Id.* at 54,911.

anisms available for electric utilities to achieve required reductions in NO_x emissions, allowing utilities to adopt seasonal fuel-switching programs as a means to meeting the governing National Ambient Air Quality Standards (NAAQS).

A. Edison Electric Institute Policy Position

At its Board of Director's meeting held in September 1993, EEI adopted a statement of policy in which it reaffirmed the electric utility industry's support for the development and implementation of voluntary pollution prevention programs by individual utilities.[43] EEI identified four methods of achieving pollution prevention goals:

> (1) Source reduction and product substitution as primary methods to eliminate or minimize the use of hazardous substances, pollutants, and contaminants;
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> (2) Recovery, recycling, byproduct use and/or reuse of materials that remain after efforts have been made to reduce them at the source;
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> (3) Environmentally sound treatment and/or disposal of any hazardous substances, pollutants, and contaminants that cannot be recovered, recycled, used, or reused; and
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> (4) Efficient generation and use of energy, including development of new technologies that result in environmentally beneficial impacts.

The EEI resolution marks an additional step toward the electric utility industry's use of pollution prevention initiatives as a means of implementing flexible and cost-effective approaches to environmental compliance.

B. Fuel-Switching as Means for Reductions in Utility NO_x

In July 1993, the EPA invoked a pollution prevention rationale when it revised its policy concerning the mechanisms available to electric utilities to control NO_x emissions. In a memorandum issued to the EPA's regional offices, the Agency announced that utilities that used coal or oil-fired generating plants would be permitted to switch to natural gas during the summer months to reduce NO_x emissions.[44] Prior EPA policy required that emission control methods be used continuously, rather than seasonally. Gas-fired boilers are subject to a separate standard and are not affected by the policy shift.

Title I of the Clean Air Act Amendments of 1990[45] requires areas that have not attained the NAAQS for NO_x to provide for the use of RACT controls on existing major stationary sources. Implementation of RACT has generally required utilities to install low NO_x burners or make other changes to combustion equipment. The new policy would enable states to authorize utilities to reduce NO_x emissions by switching to natural gas during the summer ozone season while continuing to use the facility's primary

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43. At this time, the EEI statement of policy does not appear in any publicly available source.

44. Memorandum to EPA regional air offices, Michael H. Shapiro, Acting Assistant Administrator, July 30, 1993.

45. 42 U.S.C. §§ 7410-7626 (Supp. II 1990).

fuel during the winter months. As noted in the EPA's memorandum, NO_x emissions during summer months combine with volatile organic compounds to produce ground level ozone. NO_x is also a contributor to acid rain. Allowing utilities to burn natural gas in the summer reduces NOx emissions at a time when such emissions are likely to have the greatest environmental impact.

The EPA's authorization of seasonal fuel-switching was intended to provide a more flexible and cost-effective way of controlling and reducing NO_x emissions. The memorandum referenced the Agency's Economic Incentive Programs (EIP), noting that "the EIP guidance is intended to stimulate the adoption of incentive-based, innovative programs that will assist states in meeting air quality goals through flexible approaches which allow for less costly control strategies and which provide stronger incentives for the development and implementation of innovative emissions reduction technology."[46] The EPA also noted that the policy offered substantial pollution prevention and global warming benefits.[47]

This new approach, however, does not reflect a change in the underlying emission reduction requirements. Affected sources are still required to achieve reductions equal to or greater than those that would have occurred in the absence of fuel-switching.[48] However, the Agency's more flexible approach should enable utilities to fashion more cost-effective and flexible methods for compliance that are best suited for individual emission sources.

IV. GLOBAL CLIMATE CHANGE

In October 1993, President Clinton and Vice President Gore announced their Climate Change Action Plan (Action Plan).[49] The Action Plan follows execution of the Framework Convention on Climate Change by 161 countries, including the United States, at the 1992 Earth Summit in Rio de Janeiro, Brazil. As of December 1993, more than 50 countries had actually ratified the Framework Convention, giving it the number needed to enter into force in March 1994.

The Framework Convention established the goal of reducing global emissions of greenhouse gases to 1990 levels by the year 2000. The Action Plan is designed to reduce United States emissions of greenhouse gases to 1990 levels by the year 2000.[50] Language in the Action Plan indicates that the Administration sees global climate change as an extremely serious,

46. EPA, POLLUTION PREVENTION POLICY STATEMENT, at 2 (1993).

47. *Id.* at 5-6.

48. *Id.* at 4.

49. The Climate Change Action Plan, President William J. Clinton and Vice President Albert J. Gore, October 1993.

50. The Framework Convention requires that each country develop a National Action Plan. The Administration's Climate Change Action Plan is not intended to be such a National Action Plan. Since the Framework Convention was not yet fully ratified at the time of the Administration's plan, no such National Action Plan was then required. The Administration's Climate Change Action Plan states that a task force will begin preliminary work on a National Action Plan. *See Id.* at 28.

long-term problem. For instance, the plan states that "the build-up of greenhouse gases threatens to change the global climate system, raise sea levels and inundate coastal areas, inflict irreversible damage to ecosystems, and destabilize agricultural production."[51] The Action Plan states that returning greenhouse gases to 1990 levels by the year 2000 is a "first step" and that "ultimately we will have to do more."[52]

Notwithstanding the seriousness with which the Administration views the global climate change problem, the most notable aspect of the Action Plan is that it rejects the two most direct ways of dealing with the problem: carbon taxes and emissions caps. The Administration's decision not to attempt to implement these methods stems in part from the recent defeat of the Btu tax in Congress. In part, also, the Administration seems to believe that the goal of reducing greenhouse gas emissions to 1990 levels by the year 2000 can be achieved without the use of coercive methods. The Action Plan states that it will be reviewed biannually.[53] Statements made by Administration representatives at the time of the release of the Action Plan indicate that the Administration may recommend more coercive methods if the Action Plan is not working.

The Action Plan consists of 44 separate actions organized into the following categories:

(1) Energy Demand Actions including commercial, residential, and industrial energy efficiency strategies;

(2) Transportation Actions including reform of the federal tax subsidy for employer-provided parking, a transportation system efficiency strategy, promoting greater use of telecommuting, and developing economy labels for tires;

(3) Energy Supply Actions including a natural gas strategy, a renewable energy strategy, an electric distribution efficiency strategy, and a utility industry strategy;

(4) Methane and Other Gases Actions including a methane recovery and reduction strategy and control strategies for HFCs, PFCs, and NO_x;

(5) Forestry Strategy; and

(6) Joint Implementation Strategy.[54]

The Action Plan relies on a series of "partnerships," which are intended to be cooperative approaches between government and the private sector to reduce emissions. For instance, in the electric utility industry, the Action Plan proposes a "Climate Challenge," a partnership between the Department of Energy (DOE) and a number of major electric utilities who have agreed to work with the Administration on the greenhouse emission issue. The Administration expects to work with the utilities to establish baseline 1990 emissions levels for those utilities and to enter into arrangements whereby the utilities agree, through strategies that the

51. *Id.* at i.
52. *Id.*
53. *Id.* at 28.
54. *Id.* at 10-26.

utilities choose, to return to that baseline by the year 2000.[55] There has already been some level of disagreement between the utilities and the DOE over just what the utilities have agreed to undertake through the Climate Challenge partnership.

Other partnerships include the DOE "Motor Challenge," in which the Administration expects to work with motor system manufacturers, industrial motor users, and utilities to establish a program to install the most energy efficient motor systems in industrial applications. The Motor Challenge is similar to the super efficient refrigerator program under which, beginning in 1990, a number of utilities sponsored research into CFC-free refrigerators.[56] The Administration also hopes to build on the EPA "Green Lights" program. That program will be expanded, and other similar programs such as "Energy Star Buildings," "Rebuild America," "Golden Carrots," and "Cool Communities," in which industry and government promote efficient energy use, will be implemented.[57]

One of the key areas of debate prior to release of the Action Plan was "joint implementation." Joint implementation refers to efforts undertaken cooperatively between countries or entities within them to reduce net greenhouse gas emissions. American industry generally favors joint implementation because it is felt that there are significant possibilities for reducing greenhouse gas emissions in Third World countries on a more cost effective basis than can be done in the United States. Certain groups are opposed to joint implementation because of concerns over whether the reductions that would be achieved through joint implementation would really be "new and additional" as compared with ongoing development assistance or private business transactions that would occur anyway.

The Action Plan establishes a pilot program to be headed by the Department of State, in consultation with other agencies, under which American firms will make investments overseas in greenhouse gas reductions. The impact of these investments on overall emissions levels will be carefully monitored. This joint implementation strategy will not be relied on for achieving the goals of the Action Plan; the Administration expects to reduce U.S. greenhouse gas emissions to 1990 levels by the year 2000 with domestic actions alone.[58] On December 17, 1993, the Department of State issued draft groundrules for U.S. Initiatives on Joint Implementation for comment.[59]

Under section 1605 of the Energy Policy Act of 1992,[60] the DOE has the responsibility to develop a national inventory of the aggregate emissions of each greenhouse gas (GHG) for a baseline period from 1987 to 1990. Section 1605(b)(1) requires that the Secretary of Energy issue, after opportunity for public comment, guidelines for the accurate voluntary col-

55. *Id.* at 2.
56. *Id.* at 15-16.
57. *Id.* at 12-17.
58. *Id.* at 26-27.
59. 58 Fed. Reg. 66,057 (1993).
60. 42 U.S.C. § 13,385 (1992).

lection and reporting of information on GHGs for a baseline period of 1987 to 1990 and subsequent years; annual GHG emissions reductions and carbon fixation; GHG emissions reductions specifically achieved as a result of voluntary reductions, plant or facility closings, and state or federal requirements; and an aggregate calculation of GHG emissions by each reporting entity. Subsections 1605(b)(2) and (4) further require that the EIA Administrator develop forms and a database for voluntary reporting under the guidelines.

On July 27, 1993, the DOE announced that it is developing guidelines under section 1605(b) of the Energy Policy Act for GHG emissions for the baseline period and subsequent calendar years, their reduction, and carbon fixation activities.[61] The DOE requested comments and information on the issues raised in the voluntary reporting program before it proposes the guidelines.

V. Environmental Externalities

Most states now require electric utilities to undertake some form of integrated resource planning or IRP. The purpose of IRP is to assure that utilities give supply and demand side resources equal treatment in the selection of the long-term least cost method for matching electric generation to demand.

Within the IRP and other utility resource acquisition processes, a number of state public utilities commissions have considered whether to require utilities to integrate environmental externalities concepts into their planning. Environmental externalities refer to environmental impacts resulting from utility resource actions that occur even after all environmental regulations are met. Under environmental externality theory, these impacts should be assigned a cost, and this cost should be included in the cost of electric generation in the resource selection process. The main difference between externality opponents and proponents seems to center whether environmental externality costs should be quantified or "monetized." Opponents of externality regulations oppose monetization and argue instead that externalities should not be regulated by utility commissions or, if they are, they should be considered in a qualitative fashion. Proponents of externalities regulations believe that externalities should be monetized, that is, a specific numerical cost figure should be assigned an environmental impact so that that cost figure can be added to the overall cost of the resource being considered.

The Committee on the Environment reported on pending matters in this area in its last report in the *Energy Law Journal*. As of this writing, six states have decided that externalities should be monetized in some fashion: New York, Nevada, California, Massachusetts, Oregon, and Wisconsin.[62] In addition, Minnesota is currently considering methods by which external-

61. 58 Fed. Reg. 40,116 (1993).

62. *See* National Association of Regulatory Utility Commissioners, Environmental Externalities and Electric Regulation, September 1993.

ities should be monetized.[63] Other states, including Virginia, Idaho, Utah, Colorado, Maine, South Carolina, Kentucky, and Michigan, have recently determined not to use quantified externalities in the resource selection process.[64] Other states, such as New Mexico, Arizona, Kansas, Vermont, and Illinois, currently have ongoing externality proceedings.[65]

Environmental externalities have also been addressed at the federal level. Section 111 of the Energy Policy Act of 1992 requires utilities to utilize integrated resource planning, defined as the planning and selection of new energy resources that "evaluates the full range of alternatives, including efficiency, renewables and conservation," so as to achieve the "lowest system cost."[66] However, section 111 does not require that utilities consider environmental externalities. Instead the section defines the term "lowest system cost" as including "quantifiable net costs" of, among other things, "environmental compliance."[67] Section 808 of the Clean Air Act Amendments required the Federal Energy Regulatory Commission (FERC) to produce a report regarding environmental externalities.[68] The FERC's report was published in December 1992.[69]

The DOE, in conjunction with the European Community, is working on a comprehensive analysis of environmental externalities inherent in eight fuel cycles. The purpose of the report is to demonstrate a methodology for assessing environmental, economic and other damages caused in the electric generation process. The report is expected to be available shortly.

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63. *See* In the Matter of the Quantification of Environmental Costs Pursuant to Laws of Minnesota 1993, Chapter 356, Section 3, Docket No. E-999/CI-93-583 (Minnesota Public Utilities Commission 1993).

64. *See* Virginia SCC Investigation of Conservation and Load Management Programs, Docket No. PUE900070 (Virginia State Corporation Commission 1992); Washington Water Power Company, 135 PUR 4th 382 (Idaho PUC 1992); Re Pacific Corp. 35 PUR 4th 396 (Utah PSC 1992); Re: Investigation into the Development of Rules Concerning Integrated Resource Planning, Docket No. 91R-642E (Colorado PUC 1992); Case No. U-8869-DE and Case No. U-9798 (Michigan PSC 1992); Maine Public Utilities Commission, Report to the 115th Maine Legislative Joint Standing Committee on Utilities Environmental and Economic Impacts: a Review and Analysis of its Role in Maine Energy Policy, May 1, 1991; National Coal Council, Special Report on Externalities, May 21, 1992, at 10.

65. *See* Docket No. 180,056-U (Kansas Corporation Commission); In the Matter of an Inquiry by the New Mexico Public Service Commission into Integrated Resource Planning, Including Transmission, for Electric Utilities, Case No. 2383 (New Mexico Public Service Commission); Docket No. 92-0274 (Illinois Commerce Commission), Board Investigation into the Unproved "External" Costs of Energy Services for Vermont Electric and Gas Utilities, Docket No. 5611 (Vermont Public Service Board); In the Matter of the Report of the Externalities Task Force, Docket No. U-0000-92-0035 (Arizona Corporation Commission).

66. 16 U.S.C. §§ 2602, 2621nt (1988).

67. *Id.*

68. 42 U.S.C. § 7171nt (1988).

69. Report on Section 808, Renewable Energy and Energy Conservation Incentives of the Clean Air Act Amendments of 1990, FERC, Dec. 1992.

VI. FOSSIL-FUEL COMBUSTION WASTES EPA FINAL DETERMINATION UNDER RCRA

The EPA announced in the August 9, 1993, Federal Register its determination that regulation under subtitle C of the Resource Conservation and Recovery Act (RCRA) is inappropriate for four large-volume fossil-fuel combustion waste streams which were studied in the Agency's 1988 *Report to Congress*.[70] In the Report, the Agency focused on wastes generated by coal-fired electric utilities and evaluated fossil-fuel combustion waste streams composed of flyash, bottom ash, boiler slag, and flue gas emission control waste.[71] The Agency determined that the four waste streams posed limited risks and State and Federal regulatory programs were generally adequate for appropriate control and management of these wastes. Therefore, the EPA concluded that the fossil-fuel combustion wastes should remain exempt from regulation as hazardous wastes under subtitle C of RCRA.[72]

The EPA first proposed to implement regulations for the management of fossil-fuel combustion wastes as hazardous wastes in December 1978.[73] Because of the uncertainties presented due to the insufficient amount of available data regarding the risks posed by such wastes and the costs and effectiveness of applicable management technologies, EPA initially proposed only a limited set of regulations for the management of these wastes.[74] With looming Congressional bills restricting the EPA's authority to regulate large-volume wastes under subtitle C, the EPA excluded fossil-fuel combustion wastes from the initial regulations implementing RCRA subtitle C.[75] However, under the mandates of RCRA Sections 8002(n)[76]

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70. *Report to Congress: Wastes from the Combustion of Coal by Electric Utility Power Plants*, Environmental Protection Agency (Feb. 1988).

71. The EPA's analysis in the *Report to Congress* addressed coal-fired combustion wastes generated by electric utilities in light of the eight study parameters required under section 8002(n) of RCRA:

(1) the source and volumes of such material generated per year;

(2) present disposal and utilization practices;

(3) potential danger, if any, to human health and the environment from the disposal and reuse of such materials;

(4) documented cases in which danger to human health or the environment from surface runoff or leachate has been proved;

(5) alternatives to current disposal methods;

(6) the cost of such alternatives;

(7) the impact of those alternatives on the use of coal and other natural resources; and

(8) the current and potential utilization of such materials.

72. 58 Fed. Reg. 42,466 (1993).

73. *Id.*

74. 43 Fed. Reg. 58,946, 59,015 (1978).

75. 45 Fed. Reg. 33,084, 33,089 (1980).

76. Under section 8002(n) of RCRA, Congress directed the EPA to conduct a "detailed and comprehensive study" based on an analysis of eight study factors and to submit a report to Congress "on the adverse effects on human health and the environment" of the disposal of fossil-fuel combustion wastes.

and 3001(b)(3)(C)[77] and the Hazardous and Solid Waste Amendments (HSWA),[78] the EPA conducted its study of the temporarily exempted wastes[79] and submitted its *Report to Congress* in February 1988.

Supported by its findings in the *Report to Congress* and comments received from interested parties, the EPA utilized a three-step methodology in making its regulatory determination.[80] The Agency found that such wastes had caused documented human health impacts or environmental damage, but that the wastes rarely exhibited the hazardous characteristics and posed very limited risk due to the small number of sites affected.[81] Although the EPA determined that groundwater contamination and surface water contamination could be possible under certain conditions, the potential for human exposure was limited because of the location of most coal combustion sites.[82] In addition, the Agency's data provided a clear indication that groundwater contamination appeared to be attributable to past management practices (unlined waste units).[83] Finding that current federal and state regulatory controls were generally adequate considering the industry's trend toward more protective waste management practices, the EPA concluded that regulation under subtitle C of RCRA would not be necessary or desirable for the management of the four large-volume fossil-fuel combustion wastes.[84] Although the Agency did not reach the economic consequences analysis of the process, it did note that preliminary studies indicated that the cost of disposal practices would become excessive if these wastes were regulated as hazardous wastes under subtitle C.[85]

The EPA's action in the August 9, 1993, Federal Register effected only the four large-volume wastes from coal-fired electric utilities referenced in RCRA section 3001(b)(3).[86] The study did not include large-volume

77. Congress directed that within six months after the study required by Section 8002(n) had been submitted, and after public hearing and opportunity to comment, the EPA must determine whether regulation of the management of fossil-fuel combustion wastes as hazardous wastes under Subtitle C would be warranted.

78. HSWA added Section 3004(x) to RCRA. This provision gave the EPA the authorization to modify requirements under subtitle C in order to consider the unique characteristics of some fossil-fuel combustion wastes.

79. *See* RCRA section 3001(b)(3)(A)(i).

80. 58 Fed. Reg. at 42,470-77. The three-step analysis involved answering a series of questions regarding the fossil-fuel combustion wastes. The decision process required the EPA to answer primary and secondary questions in each step to determine whether further analysis under succeeding steps would be required. Primary questions in each step consisted of:

(1) Does the management of this waste pose human health/environmental problems? Might current practices cause problems in the future?

(2) Is more stringent regulation necessary or desirable?

(3) What would be the operational and economic consequences of a decision to regulate a special waste under subtitle C?

81. *Id.* at 42,472-73 and 42,476.

82. *Id.* at 42,475. Available data suggested that contamination generally resulted from older units not typically located near populations and drinking water systems.

83. *Id.*

84. *Id.* at 42,476.

85. *Id.* at 42,468 and 42,477.

86. These are flyash, bottom ash, boiler slag, and flue gas emission control waste.

wastes which result from the practice of co-burning of materials and the remaining fossil-fuel combustion waste streams referenced in section 3001(b)(3) of RCRA, which require study according to section 8002(n).[87] Although the affected wastes will remain exempt from regulation as hazardous wastes under RCRA subtitle C pursuant to the final determination, the Agency still encourages industry and the States to review the appropriate management of these wastes.[88] In addition, the Agency has cautioned that it will continue to consider these wastes during its ongoing assessment of industrial non-hazardous wastes under RCRA subtitle D.[89]

87. 58 Fed. Reg. at 42,466 and 42,469.
88. *Id.* at 42,466.
89. *Id.*