

PREVENTION OF SIGNIFICANT DETERIORATION AND ITS ROUTINE MAINTENANCE EXCEPTION: THE DEFINITION OF ROUTINE, PAST, PRESENT, AND FUTURE

INTRODUCTION

Since the passage of the first remnants of the Clean Air Act's (CAA) New Source Review (NSR), it has been a source of frequent and contentious litigation.¹ This Note deals with only one of NSR's two constituent regulatory schemes, Prevention of Significant Deterioration (PSD), which applies in geographic regions with relatively clean air.² PSD allows older stationary sources that emit CAA-regulated pollutants to continue operating "as is."³ Under the CAA, a "stationary source" is "any building, structure, facility, or installation which emits or may emit a regulated . . . pollutant," and each source may include multiple emissions units.⁴ Any major new or modified sources, however, must install modern pollution control systems, based on the Best Available Control Technology (BACT).⁵ An existing source becomes subject to PSD when it undergoes a modification that results in an increase in pollution emissions.⁶ This grandfathering approach and the definition of "modification" on which it rests are at the core of NSR conflict.

The PSD regulations define a major modification as "any physical change in or change in the method of operation of a major stationary source that would result in: a significant emissions increase . . . of a regulated NSR pollutant."⁷ The regulations then define "a physical change or a change in the method of operation" in negative terms.⁸ One category of activity that does *not* constitute a modification for purposes of NSR is "[r]outine

1. *See, e.g.*, *Sierra Club v. Ruckelshaus*, 344 F. Supp. 253, 256 (D.D.C. 1972) (holding that CAA requires protection of air quality in areas with relatively clean air); *United States v. E. Ky. Power Coop., Inc.*, 498 F. Supp. 2d 976, 985–93 (E.D. Ky. 2007) (summarizing selected NSR cases).

2. PSD is codified in the Clean Air Act, 42 U.S.C. §§ 7470–7479 (2000). NSR's other constituent program is known as Nonattainment NSR, which applies in areas that do not meet National Ambient Air Quality Standards (NAAQS). DAVID R. WOOLEY & ELIZABETH M. MORSS, *CLEAN AIR ACT HANDBOOK: A PRACTICAL GUIDE TO COMPLIANCE*, at xxi–xxii n.2 (16th ed. 2006). All counties in Vermont are currently NAAQS attainment areas, and therefore any source of air pollution is potentially subject to PSD. Letter from James H. Douglas, Governor, State of Vermont, to Robert W. Varney, Regional Adm'r, Region I, U.S. Env'tl. Prot. Agency (May 7, 2003), <http://www.epa.gov/ozonedesignations/documents/03Recommendations/1/s/Vermont.pdf>.

3. *See* Prevention of Significant Deterioration of Air Quality, 40 C.F.R. § 52.21(a)(2)(i) (2008) (describing PSD applicability procedures).

4. *Id.* § 52.21(b)(5), (7).

5. *See id.* § 52.21(b)(12) (defining BACT).

6. *Id.*

7. *Id.* § 52.21(b)(2)(i).

8. *Id.* § 52.21(b)(2)(iii).

maintenance, repair, and replacement.”⁹ This Note will focus on one small, but important, issue within PSD: whether “routine” is defined on an industry-wide basis or in terms of each individual emissions unit.

This uncertainty frustrates the objectives of both the regulated entities and the enforcement agencies. In recent cases, the U.S. Environmental Protection Agency (EPA), state regulatory agencies, and citizen groups have argued for a narrow definition: any determination of what is routine should be made by analyzing activities only at a particular unit.¹⁰ Industry, however, has argued for a broader definition: any determination of what is routine should be made by analyzing activities throughout the industry.¹¹ EPA has identified several “industry groups,” of which the most prominent in the PSD debate is the electric-utility industry.¹²

Tension between how industry sees an aspect of PSD and how EPA interprets it is not unique to this particular issue. The Supreme Court settled a similar dispute in *Environmental Defense v. Duke Energy Corp.*¹³ There, EPA and industry had differing views on how to define an “emissions increase.”¹⁴ The definition of “routine” was an issue at the district-court level, but the Fourth Circuit did not address it and it never made it to the Supreme Court.¹⁵ The issue remains unresolved, and it is possible, if not likely, that it soon will come before the Court.

Any resolution of the issue will have far-reaching implications. Industry’s broad definition of routine would allow many pollution sources to continue to operate without pollution controls. EPA’s narrow definition would force more sources to install modern and efficient—but sometimes very expensive—pollution controls, resulting in higher operating costs for industry and increased prices for consumers. This tension must be resolved to ensure efficient PSD compliance and enforcement, and to achieve the environmental and economic objectives of the CAA. This Note suggests that a modest bright-line test is the best alternative to the current analytical framework.

9. *Id.* § 52.21(b)(2)(iii)(a).

10. *See* *United States v. E. Ky. Power Coop., Inc.*, 498 F. Supp. 2d 976, 981–85 (E.D. Ky. 2007) (outlining EPA’s arguments for a narrow interpretation).

11. *See id.* at 982–84 (outlining East Kentucky Power Cooperative’s arguments for a broad interpretation).

12. Prevention of Significant Deterioration (PSD) and Non-attainment New Source Review (NSR): Routine Maintenance, Repair and Replacement, 67 Fed. Reg. 80,290, 80,290 (proposed Dec. 31, 2002) (to be codified at 40 C.F.R. pts. 51 & 52).

13. *Env’tl. Def. v. Duke Energy Corp.*, 549 U.S. 561, 570 (2007).

14. *Id.* at 569–70.

15. *See* *United States v. Duke Energy Corp.*, 411 F.3d 539, 545 n.2 (4th Cir. 2005), *vacated*, 549 U.S. 561 (2007) (declining to address the issue of the definition of “routine”).

Part I traces the general legislative, executive, and judicial meanderings of PSD regulations and the routine maintenance exception through the last three decades and up to their current state. Part II presents the arguments on both sides of the “what is routine” issue and the outcome of recent litigation on that point. Part III examines the risks and benefits of those arguments and outcomes. After examining alternatives to the current routine maintenance exception, Part IV suggests a path forward.

I. WHERE DID PSD AND THE ROUTINE MAINTENANCE EXCEPTION COME FROM?

A. The History of PSD

Borne of a lawsuit, PSD was destined for frequent and contentious litigation from its inception. Congress enacted the CAA in 1970 amidst a powerful national environmental movement.¹⁶ The CAA represented Congress’s first effort at comprehensive environmental legislation, and it proved a model for subsequent environmental laws.¹⁷ The purpose of the CAA is “to protect and enhance the quality of the Nation’s air resources so as to promote the public health and welfare and the productive capacity of its population.”¹⁸

The 1970 CAA included the nonattainment NSR program, which is one of the statute’s mechanisms that regulates new and modified emissions sources in geographic regions that do not meet air quality standards set by EPA.¹⁹ These standards are known as National Ambient Air Quality Standards (NAAQS) and the geographic regions are known as NAAQS nonattainment areas.²⁰ The statute, however, paid little attention to emissions sources in areas with good air quality, known today as NAAQS attainment areas.²¹ In 1972, the Sierra Club sued EPA, arguing that the text and legislative history of the CAA required EPA to protect the air quality in attainment areas.²² The EPA Administrator argued the statute allowed “degradation of clean air areas,” and that the Agency had no authority under the CAA to prevent the degradation of air quality in attainment areas.²³ In a four-page decision, the United States District Court for the District of

16. WOOLEY & MORSS, *supra* note 2, at xxi.

17. *Id.*

18. Clean Air Act, 42 U.S.C. § 7401(b)(1) (2000).

19. WOOLEY & MORSS, *supra* note 2, at 114–15.

20. *Id.* at xxi.

21. ARNOLD W. REITZE JR., *STATIONARY SOURCE AIR POLLUTION LAW* 175 (2005).

22. *Sierra Club v. Ruckelshaus*, 344 F. Supp. 253, 254 (D.D.C. 1972).

23. *Id.* at 256.

Columbia sided with the Sierra Club.²⁴ The court relied heavily on the phrase “protect and enhance” from the CAA’s statement of purpose and Congress’s treatment of that phrase to conclude that EPA could and must prevent degradation of air quality in clean-air areas.²⁵

Shortly thereafter, EPA promulgated regulations to “prevent[] . . . significant deterioration” of air quality in any area, regardless of its current air quality.²⁶ Plaintiffs from all walks challenged the new regulations.²⁷ Environmental groups argued the new regulations did not go far enough, states argued the regulations infringed on their authority to regulate pollution, and public utilities argued the CAA did not authorize such a program.²⁸ The D.C. Circuit affirmed the regulations,²⁹ but before any appeal could reach the Supreme Court, Congress stepped in with the CAA Amendments of 1977.³⁰ The 1977 Amendments included statutory authority for the PSD program, and codified and expanded the existing PSD regulatory scheme.³¹ Congress most recently amended the CAA in 1990, building upon the 1977 Amendments as well as adding new programs.³² The 1990 Amendments, however, made few substantive changes to PSD.³³ EPA has promulgated many rules under the CAA statutory framework, some of which have made substantive changes to PSD.³⁴

B. The History of the Routine Maintenance Exception

The routine maintenance exception first appeared in New Source Performance Standards (NSPS), a CAA program different and separate from PSD.³⁵ NSPS apply to all new and modified sources regardless of the

24. *Id.*

25. *Id.* at 255–56.

26. Prevention of Significant Air Quality Deterioration, 39 Fed. Reg. 42,509, 42,510 (Dec. 5, 1974) (codified at 40 C.F.R. pt. 52).

27. *See* Sierra Club v. Env’tl. Prot. Agency, 540 F.2d 1114, 1120 (D.C. Cir. 1976) (adjudicating challenges from environmental groups, states, and industrial organizations).

28. *Id.*

29. *Id.* at 1140–41.

30. *See* Montana Power Co. v. EPA, 434 U.S. 809, 809 (1977) (remanding the case for further consideration in light of the CAA Amendments of 1977).

31. Clean Air Act Amendments of 1990, Pub. L. No. 101-549, 104 Stat. 2584 (codified at 42 U.S.C. §§ 7470–7491 (2006)); REITZE, *supra* note 21, at 175.

32. WOOLEY & MORSS, *supra* note 2, at xxi–xxii.

33. *See id.* (remarking that the 1977 Amendments were primarily responsible for implementing the PSD program).

34. *See, e.g.*, Requirements for Preparation, Adoption and Submittal of Implementation Plans; Approval and Promulgation of Implementation Plans; Standards of Performance for New Stationary Sources, 57 Fed. Reg. 32,314 (July 21, 1992) (codified at 40 C.F.R. pts. 51, 52, and 60) [hereinafter WEPCO Rule] (finalizing rules for measuring emissions increases at certain pollution sources).

35. United States v. Duke Energy Corp., 278 F. Supp. 2d 619, 631–32 (M.D.N.C. 2003).

relative air quality of a source's location.³⁶ The NSPS place a "technological floor" by setting minimum pollution control standards for new or modified pollution sources.³⁷ Under NSPS, routine maintenance, repair, and replacement was not considered a physical change.³⁸ In 1975, EPA stated that the NSPS routine maintenance exception "excluded from the definition of modification '[m]aintenance, repair, and replacement . . . routine for a source category'" (i.e., routine in an industry).³⁹ When Congress enacted the PSD program with the 1977 CAA Amendments, it "incorporate[d] the definition of 'modification' under NSPS,"—which included the routine maintenance exception—into the definition of modification under PSD.⁴⁰

The text of the PSD exception, which has remained essentially unchanged throughout its history, states: "Routine maintenance, repair, and replacement shall not be considered physical changes."⁴¹ The exception embodies EPA's recognition that some activities should not subject pollution sources to expensive emissions control requirements. EPA has used the example of an automobile to illustrate the routine maintenance exception.⁴² From a common-sense point of view, changing the oil or a broken headlamp would clearly be routine maintenance; rebuilding the engine or transmission would be nonroutine. It was not until the 1990 landmark Seventh Circuit case of *Wisconsin Electric Power Co. v. Reilly* (*WEPCO*) that a more structured analysis entered PSD routine maintenance determinations.⁴³

In *WEPCO*, the Wisconsin Electric Power Company (Wisconsin Electric), had proposed certain renovations to one of its coal-fired power plants.⁴⁴ EPA deemed the proposed projects nonroutine under PSD, and therefore subjected Wisconsin Electric to "the relevant strictures of the Clean Air Act [BACT]."⁴⁵ In reaching this determination, EPA relied on what is now known as the four-factor or *WEPCO* test, as articulated in a 1988 memorandum from Don Clay, EPA Acting Assistant Administrator

36. WOOLEY & MORSS, *supra* note 2, at 107.

37. *Id.* at 108.

38. *Duke Energy*, 278 F. Supp. 2d at 630–31.

39. *Id.* at 631 (quoting 40 C.F.R. § 60.14(e)(1) (1975)).

40. *Id.* (citing 42 U.S.C. § 7479(2)(C) (1995)).

41. *Id.* at 630 (citing 40 C.F.R. § 60.2(h)(1) (1971)).

42. Letter from Francis X. Lyons, Regional Administrator, U.S. Env'tl. Prot. Agency, to Henry Nickel, Counsel for the Detroit Edison Co., at 16 n.7 (May 23, 2000), <http://www.epa.gov/ttn/nsr/gen/letterf3.pdf> [hereinafter Lyons Letter].

43. *Wis. Elec. Power Co. v. Reilly*, 893 F.2d 901 (7th Cir. 1990).

44. *Id.* at 905–06.

45. *Id.* at 906.

for Air and Radiation.⁴⁶ According to the Clay memo, “EPA makes a case-by-case determination [of whether proposed work at a facility is routine] by weighing the [1] nature [and] extent, [2] purpose, [3] frequency, and [4] cost of the work, as well as other relevant factors, to arrive at a common-sense finding.”⁴⁷ The *WEPCO* court deferred to EPA’s interpretation of its own regulations and went on to apply the four-factor test to the projects at issue.⁴⁸

The routine maintenance issue stayed mostly dormant for several years until 1999. An internal EPA audit revealed a lack of PSD and other NSR permits issued, even though many of the nation’s power plants and industrial boilers were reaching the end of their projected lifespan, and despite evidence of large “life extension” construction projects at pollution sources.⁴⁹ In response, the U.S. Department of Justice issued enforcement actions against several large utility companies, alleging the utilities had performed major modifications without seeking NSR review.⁵⁰ Many of these utilities argued that the alleged modifications were routine maintenance and therefore the facilities were not subject to NSR requirements.⁵¹ Those cases that did not settle out of court were litigated at the federal-district-court level, but none reached the appellate courts on the routine maintenance issue.⁵² The courts in the litigated cases relied on the *WEPCO* test in determining which activities were routine in those cases, further embedding the four factors in routine maintenance analysis.⁵³

The next major development came in 2003 when EPA promulgated the Equipment Replacement Provision (ERP).⁵⁴ The ERP was EPA’s response to criticism that the *WEPCO* factors lacked predictability and EPA’s narrow

46. *Id.* at 906, 910.

47. *Id.* Subsequent EPA guidance documents and court decisions combine nature and extent into one factor. *E.g.*, *United States v. E. Ky. Power Coop., Inc.*, 498 F. Supp. 2d 976, 993–94 (E.D. Ky. 2007) (applying *WEPCO* factors in PSD litigation); Lyons Letter, *supra* note 42 (applying *WEPCO* factors in PSD applicability determination).

48. *Wis. Elec. Power Co.*, 893 F.2d at 910–13. *See infra* Part II (discussing the deference shown to EPA’s regulatory interpretations of the CAA).

49. LARRY B. PARKER & JOHN E. BLODGETT, CONG. RESEARCH SERV., AIR QUALITY AND ELECTRICITY: ENFORCING NEW SOURCE REVIEW tbl.3 (2000), available at <http://www.cnire.org/NLE/CRSreports/air/air-35.cfm>.

50. *Id.*

51. *Id.*

52. *E.g.*, *United States v. S. Ind. Gas & Elec. Co.*, 245 F. Supp. 2d 994 (S.D. Ind. 2003); *United States v. Ohio Edison Co.*, 276 F. Supp. 2d 829 (S.D. Ohio 2003); *United States v. Duke Energy Corp.*, 278 F. Supp. 2d 619 (M.D.N.C. 2003), *aff’d*, 411 F.3d 539 (2005), *vacated*, 549 U.S. 461 (2007).

53. *See, e.g.*, *S. Ind. Gas & Elec. Co.*, 245 F. Supp. 2d at 1015–20 (applying *WEPCO* test); *Ohio Edison*, 276 F. Supp. 2d at 850–62 (same); *Duke Energy*, 278 F. Supp. 2d at 632–40 (same).

54. Prevention of Significant Deterioration (PSD) and Non-attainment New Source Review (NSR): Equipment Replacement Provision of the Routine Maintenance, Repair and Replacement Exclusion, 68 Fed. Reg. 61,248 (Oct. 27, 2003) (codified at 40 C.F.R. pts. 51 & 52).

approach to the *WEPCO* test “discourage[d] plant owners or operators from engaging in replacements that are important to restoring, maintaining and improving plant safety, reliability, and efficiency.”⁵⁵ The rule replaced the old case-by-case analysis with a bright-line test for triggering PSD.⁵⁶ The rule defined as routine (and therefore not a modification) any equipment replacement project costing less than twenty percent of the replacement value of the unit, so long as the replacement components were identical to or the functional equivalent of the old parts.⁵⁷ This broad definition of routine, and conversely narrow definition of modification, quickly came under fire as a gutting of the CAA and PSD.⁵⁸ Several states joined to file suit in federal court, arguing that the rule violated the clear meaning of the CAA.⁵⁹ The court agreed and concluded that the CAA deems “*any physical change*” a modification if it results in increased emissions of any pollutant.⁶⁰ The court held that EPA’s expansive definition of routine maintenance effectively read the term “any,” as it is commonly understood, out of the statute.⁶¹ With this bright-line routine maintenance test invalidated, EPA, state enforcement agencies, and the courts continue to use the *WEPCO* factors in identifying routine maintenance.⁶²

II. *EAST KENTUCKY POWER COOPERATIVE*: TWO VIEWS ON THE DEFINITION OF ROUTINE

EPA and various regulated entities have presented two opposing views of the definition of routine, and both views have found support in recent court decisions. The opposing views are well explored in *United States v. East Kentucky Power Cooperative, Inc. (EKPC)*.⁶³ The case involved several changes the East Kentucky Power Cooperative (East Kentucky) made to three of its coal-fired power plants throughout the 1990s.⁶⁴ In 2004,

55. *Id.* at 61,250.

56. *Id.* at 61,250–51.

57. *Id.*

58. Bruce Barcott, *Changing All the Rules*, N.Y. TIMES, Apr. 4, 2004, § 6 (Magazine), at 38, available at 2004 WLNR 5394787.

59. *New York v. Env'tl. Prot. Agency (New York II)*, 443 F.3d 880, 881–82, 884 (D.C. Cir. 2006).

60. *Id.* at 883.

61. *Id.* at 885–87.

62. *E.g.*, *Sierra Club v. Morgan*, No. 07-C-251-S, 2007 WL 3287850, at *12–17 (W.D. Wis. Nov. 7, 2007) (applying *WEPCO* factors to five alleged modifications at a coal-fired heating and cooling plant).

63. *United States v. E. Ky. Power Coop., Inc.*, 498 F. Supp. 2d 976, 982–84 (E.D. Ky. 2007) (outlining defendant’s argument). The court also outlined six cases regarding PSD modification. *Id.* at 985–93. A more recent case, *United States v. Ala. Power Co.*, No. 2:01-cv-00152-VEH (N.D. Ala. July 24, 2008), also explores similar cases and relies heavily on the *E. Ky. Power Coop.* court’s reasoning.

64. *E. Ky. Power Coop.*, 498 F. Supp. 2d at 979–80.

EPA filed suit, alleging the changes constituted modifications and therefore subjected the plants to PSD.⁶⁵ East Kentucky argued that the changes were routine maintenance and exempt from PSD requirements.⁶⁶ In their respective arguments, each party offered an interpretation of the definition of routine.⁶⁷

A. EPA's View—Routine at the Source

Relying on *Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc.*,⁶⁸ EPA argued that it is entitled to deference in the interpretation of its own regulation and its definition of routine.⁶⁹ Under *Chevron*, an administrative agency's interpretation of a statute is entitled substantial deference when (1) the statute does not explicitly preclude that interpretation, and (2) the interpretation is reasonable.⁷⁰ EPA asserted that its interpretation of the routine maintenance exception to "exclude only activities that are routine at the unit" is "reasonable and consistent with the plain language of the term 'routine' . . . and, therefore, is entitled to deference."⁷¹ EPA further argued that its definition of routine has been "consistent and long-standing."⁷² According to EPA, the routine-at-the-source interpretation is clearly outlined in the 1988 Clay memorandum from WEPCO.⁷³ In that memo, "EPA refused to endorse WEPCO's argument that routine is measured by 'established business procedure' in the industry as a whole."⁷⁴ Instead, the Clay memo "concluded that WEPCO's proposed activities were not routine repairs because they were a one-time occurrence at the units in question, despite purported evidence that similar replacements by other utilities were common."⁷⁵ EPA went on to argue this interpretation was consistent with earlier PSD applicability determinations dating back to 1987 and 1978.⁷⁶ Indeed, in 1987, without referencing projects at other similar facilities, EPA determined that a project at a copper processing facility was nonroutine.⁷⁷ In 1978, again

65. *Id.* at 980.

66. *Id.* at 982–84.

67. *Id.* at 981–85.

68. *Chevron U.S.A., Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837 (1984).

69. *E. Ky. Power Coop.*, 498 F. Supp. 2d at 981.

70. *Chevron*, 467 U.S. at 842–43.

71. *E. Ky. Power Coop.*, 498 F. Supp. 2d at 981–82.

72. *Id.* at 982.

73. *Id.* at 981–82.

74. *Id.* at 982.

75. *Id.*

76. *Id.*

77. Letter from David P. Howekamp, Dir., Air Mgmt. Div., Region IX, U.S. Envtl. Prot.

without referencing industry practices, EPA determined that the replacement of an entire facility at the end of its useful life would be nonroutine.⁷⁸

EPA did not argue that industry experience is completely *irrelevant* to a routine maintenance analysis.⁷⁹ For example, routine maintenance activities at other sources in an industry may inform a subsequent determination of whether a specific project is routine or not.⁸⁰ EPA argued this does not, however, replace the rest of the *WEPCO* factors.⁸¹ To accept the industry arguments would make a new factor, prevalence, dispositive of routine maintenance.⁸² To illustrate the point, EPA used the example of heart-bypass surgery.⁸³ Heart surgeons across the country perform bypass surgeries every day, but “one would be hard-pressed to find a patient who said that . . . makes the surgery routine to him.”⁸⁴ In other words, heart bypass surgeries are prevalent, but they are hardly frequent and, therefore, hardly routine.

B. Industry’s View—Routine in the Industry

East Kentucky argued that EPA’s interpretation is contrary to the congressional intent behind the 1977 CAA Amendments, and is inconsistent with two decades of EPA practice.⁸⁵ East Kentucky pointed to the origin of the PSD routine maintenance exception and Congress’s intent to base it on the NSPS routine maintenance exception.⁸⁶ Under pre-PSD NSPS, routine was defined by industry practice.⁸⁷ In 1992, EPA issued a rule that changed how emissions increases were calculated for purposes of PSD review.⁸⁸ In the preamble to that rule, EPA stated that:

Agency, to Robert T. Connery, Esq. (Nov. 6, 1987) at 1, 6, <http://www.epa.gov/region07/programs/artd/air/nsr/nsrmemos/cyprusca.pdf>.

78. Memorandum from Edward E. Reich, Dir., Div. Stationary Source Enforcement, U.S. Evtl. Prot. Agency, to Howard G. Bergman, Dir., Enforcement Div., Region VI, U.S. Evtl. Prot. Agency (Oct. 3, 1978), <http://www.epa.gov/Region7/programs/artd/air/nsr/nsrmemos/m100378.pdf>.

79. *E. Ky. Power Coop.*, 498 F. Supp. 2d at 985.

80. *Id.* at 984 n.9.

81. *Id.* at 984.

82. *Id.* at 984–85.

83. Memorandum in Support of Plaintiff’s First Motion for Summary Judgment at 37, *United States v. E. Ky. Power Coop., Inc.*, 498 F. Supp. 2d 976 (E.D. Ky. 2007) (No. 5:04-CV-00034-KSF).

84. *Id.*

85. *E. Ky. Power Coop.*, 498 F. Supp. 2d at 982–83.

86. *Id.* at 983.

87. *United States v. Duke Energy Corp.*, 278 F. Supp. 2d 619, 630–31 (M.D.N.C. 2003), *aff’d*, 411 F.3d 539 (2005), *vacated*, 549 U.S. 461 (2007).

88. *WEPCO Rule*, *supra* note 34, at 32,326.

[A] determination of whether the repair or replacement of a particular item of equipment is “routine” under the [PSD] regulations, while made on a case-by-case basis, must be based on the evaluation of whether that type of equipment has been repaired or replaced by sources *within the relevant industrial category*.⁸⁹

East Kentucky went on to argue that EPA’s actions over the first two decades of the PSD program properly conformed to the 1992 preamble and the NSPS definition of routine.⁹⁰ According to East Kentucky, EPA was acutely aware of similar “life-extension” projects at plants across the country throughout the 1980s but did not institute any PSD or other NSR enforcement proceedings.⁹¹ The implied conclusion is that EPA viewed these projects as routine and not subject to PSD, even though the projects rarely take place at a given source.⁹² This conclusion would make no sense, East Kentucky argued, if EPA had not applied a routine-in-the-industry standard.⁹³

East Kentucky further argued that the Clay memo itself and *WEPCO* endorsed the routine-in-the-industry approach.⁹⁴ The Clay memo “based its decision in large part on its consideration of information regarding industry practice as a whole.”⁹⁵ The Seventh Circuit “confirmed the relevance of industry practice under the [routine maintenance] analysis by subscribing significance to both the frequency of a project at an individual unit and in the industry.”⁹⁶ Thus, the only way such significance makes sense is if EPA were evaluating industry practice.⁹⁷

East Kentucky argued EPA first took the routine-at-the-source position at the outset of the 1999 enforcement initiative.⁹⁸ Therefore, EPA had not been consistent with its interpretation of the routine maintenance exception.⁹⁹ East Kentucky argued EPA’s new routine-at-the-source interpretation was neither lawful nor entitled to *Chevron* deference, even if it passed the *Chevron* test.¹⁰⁰ In their words, “[o]nce an agency gives its

89. *Id.* (emphasis added).

90. *E. Ky. Power Coop.*, 498 F. Supp. 2d at 983–84.

91. Memorandum in Support of Defendant’s Motion for Partial Summary Judgment No. 1 at 22, *United States v. E. Ky. Power Coop., Inc.*, 498 F. Supp. 2d 976 (E.D. Ky. 2007) (No. 5:04-CV-00034-KSF).

92. *Id.* at 34.

93. *E. Ky. Power Coop.*, 498 F. Supp. 2d at 983.

94. *Id.*

95. *Id.*

96. *Id.*

97. *Id.*

98. *Id.*

99. *Id.*

100. *Id.* at 982–83.

regulation an interpretation, it can only change that interpretation through the process of notice and comment rulemaking.”¹⁰¹ In other words, even if the routine-at-the-source test is reasonable and within the scope of the CAA, EPA went with the routine-in-the-industry test first. The routine-at-the-source test may pass *Chevron* muster, but EPA would first have to publish a proposed rule in the *Federal Register*, allow the public to comment, and then promulgate a final rule to that effect.¹⁰²

Lastly, East Kentucky attacked EPA’s heart-bypass analogy as simply restating the debate: “[W]hile a heart bypass operation may not be a ‘routine’ medical procedure for a given patient, if the question is framed as whether such an operation is a ‘routine’ medical procedure for the medical community (and, specifically, for cardiac surgeons), the answer is obviously yes.”¹⁰³

C. Outcome of EKPC and Other Recent Litigation

Different district courts in recent cases have come down on both sides of the routine maintenance exception issue. The *EKPC* court relied heavily on the district court’s decision in *United States v. Duke Energy Corp.* for its reasoning and came to essentially the same conclusion.¹⁰⁴ In *Duke Energy*, the district court sided with the utility and rejected EPA’s routine-at-the-source standard.¹⁰⁵ The court found persuasive Duke Energy’s characterization of Congress’s intent to incorporate the NSPS routine maintenance definition into PSD.¹⁰⁶ The court implied that EPA’s arguments were, in light of the words of the 1992 rulemaking preamble, “nonsensical,” and found that EPA’s position in *WEPCO* “confirme[d] Congress’s intent to define [routine maintenance] under PSD according to the relevant source category.”¹⁰⁷ The *EKPC* court scolded EPA for

101. *Id.* at 983. *See also* *Paralyzed Veterans of America v. D.C. Arena*, 117 F.3d 579, 586 (D.C. Cir. 1997) (noting that an agency must change its interpretation of a regulation “as it would formally modify the regulation itself”); *Shalala v. Guernsey Mem’l Hosp.*, 514 U.S. 87, 100 (1995) (stating that notice and comment rulemaking is required where an interpretation “adopt[s] a new position inconsistent with . . . existing regulations”).

102. *See, e.g., Shalala*, 514 U.S. at 100 (noting in dicta that when an agency adopts a new position that causes a substantive change to a regulation, the agency is required to follow notice and comment rulemaking).

103. Memorandum in Opposition to Plaintiff’s First Motion for Summary Judgment at 4, *United States v. E. Ky. Power Coop., Inc.*, 498 F. Supp. 2d 976 (E.D. Ky. 2007) (No. 5:04-CV-00034-KSF).

104. *E. Ky. Power Coop.*, 498 F. Supp. 2d at 993–94.

105. *United States v. Duke Energy Corp.*, 278 F. Supp. 2d 619, 630–32 (M.D.N.C. 2003), *aff’d*, 411 F.3d 539 (2005), *vacated*, 549 U.S. 461 (2007).

106. *Id.*

107. *Id.* at 632 n.12, 635.

enforcing PSD “with no discernible consistency.”¹⁰⁸ However, both the *EKPC* and *Duke Energy* courts also concluded the *WEPCO* factors were entitled to *Chevron* deference even though the routine-in-the-industry test applied.¹⁰⁹ Therefore, a routine maintenance determination “cannot turn exclusively on whether a particular replacement project has ever occurred in the industry. If this were dispositive, it would render the PSD program a nullity.”¹¹⁰ In other words, the *WEPCO* factors still apply, but under these decisions, EPA must evaluate them against industry experience and not just the pollution source in question. Other cases similarly decided in favor of industry include *United States v. Alabama Power Co.*¹¹¹ and *New York v. American Electric Power Service Corp.*¹¹²

United States v. Ohio Edison Co., decided just 19 days before *Duke Energy*, exemplifies the cases in which courts have sided with EPA.¹¹³ There, the district court found EPA’s routine-at-the-source interpretation reasonable and entitled to deference.¹¹⁴ The court reasoned that a broad interpretation of routine would “swallow both the rule and specific provisions of the [CAA]. . . . [T]he CAA should not be interpreted in a way that ‘would open vistas of indefinite immunity from the provisions of . . . PSD.’”¹¹⁵ In the court’s view, EPA’s narrow interpretation fits this objective better than the broad interpretation offered by industry.¹¹⁶

*United States v. Southern Indiana Gas & Electric Co.*¹¹⁷ and *United States v. Cinergy Corp.*¹¹⁸ offer something of a hybrid view, although they side mostly with EPA. The courts in these cases found activities at other sources relevant, but only to the extent they informed the analysis of the frequency prong of the *WEPCO* test.¹¹⁹

The routine maintenance issue has not been examined by a federal appellate court since the *WEPCO* case. *Duke Energy* reached the circuit and Supreme Court level on PSD issues, but not on the routine maintenance issue.¹²⁰ Nonetheless, the Supreme Court’s decision in *Duke Energy* could

108. *E. Ky. Power Coop.*, 498 F. Supp. 2d at 993.

109. *Duke Energy*, 278 F. Supp. 2d at 638.

110. *Id.*

111. *United States v. Ala. Power Co.*, 372 F. Supp. 2d 1283 (N.D. Ala. 2005).

112. *New York v. Am. Elec. Power Serv. Corp.*, No. 2:04-cv-1098, 2007 WL 539536, at *2 (S.D. Ohio Feb. 15, 2007).

113. *United States v. Ohio Edison Co.*, 276 F. Supp. 2d 829 (S.D. Ohio 2003).

114. *Id.* at 856.

115. *Id.* at 855 (quoting *Wis. Elec. Power Co. v. Reilly*, 893 F.2d 901, 909 (7th Cir. 1990)).

116. *Id.*

117. *United States v. S. Ind. Gas & Elec. Co.*, 245 F. Supp. 2d 994 (S.D. Ind. 2003).

118. *United States v. Cinergy Corp.*, 495 F. Supp. 2d 909 (S.D. Ind. 2007).

119. *S. Ind. Gas & Elec. Co.*, 245 F. Supp. 2d at 1009; *Cinergy Corp.*, 495 F. Supp. 2d at 936.

120. *Env’tl Def. v. Duke Energy Corp.*, 549 U.S. 561, 570 (2007).

bear on the outcome of the industry–source routine maintenance debate. The issue before the Supreme Court involved projecting the change in emissions after a pollution source has been modified.¹²¹ The lower courts had determined the alleged modifications were indeed nonroutine modifications.¹²² The next question in a PSD analysis is whether that modification resulted in a significant emissions increase of a regulated pollutant.¹²³ Different CAA programs have different standards that, when applied to the same set of circumstances, yield very different results. Specifically, the standard by which emissions increases are evaluated under NSPS is the change in *hourly* emissions; the PSD standard is the change in *annual* emissions.¹²⁴ To illustrate, consider a particular power plant that has trouble with a large and essential boiler component. Every time that component fails, the boiler has to shut down for repairs. Frustrated with this downtime and the expense of repeated repairs, the operators of the plant modify the boiler by replacing the component with a new and improved version of the component. That new component probably does not cause the boiler to operate any more efficiently during the time the boiler is in use, but it does allow the boiler to avoid downtime and operate more often. If that is the case, the *hourly* emissions of the boiler are the same before and after the modification, but the actual *annual* emissions are probably much higher. Therefore, use of the hourly rate test is less likely to result in PSD applicability, whereas use of the annual-rate test is more likely to trigger PSD. *Duke Energy* turned on this distinction.¹²⁵

The arguments on both sides of this issue largely mirrored the arguments outlined above on both sides of the routine maintenance issue. As one might expect, EPA argued for the annual-rate test, and Duke Energy argued for the hourly rate test.¹²⁶ As with the definition of “routine,” Congress borrowed the definition of “emissions increase” from NSPS to use in PSD.¹²⁷ Accordingly, Duke Energy argued the NSPS hourly rate should apply.¹²⁸

However, according to the Court, subsequent PSD rules never adopted, nor even hinted at adopting, the NSPS hourly rate standard.¹²⁹ Duke Energy

121. *Id.* at 569.

122. *Id.* at 571–72.

123. *Id.* at 570. *See also* 40 C.F.R. § 52.21(b)(2)(i) (2007) (defining major modification).

124. *Duke Energy*, 549 U.S. at 569.

125. *See id.* at 570 (stating that the disagreement over measuring air-pollutant emissions on an hourly rate or by annual discharge “is the nub of this case”).

126. *Id.*

127. *Id.* at 576 (citing 42 U.S.C. § 7479(2)(C) (2000)).

128. *Id.* at 576–77 n.6.

129. *Id.* at 577.

argued that a 1980 rule¹³⁰ had adopted that definition, but the Court flatly disagreed: “True, the 1980 PSD regulations may be no seamless narrative, but they clearly do not define a ‘major modification’ in terms of an increase in the ‘hourly emissions rate.’”¹³¹ The Court found there was no rule that required EPA “to ignore the reasons for regulating PSD and NSPS ‘modifications’ differently,” and therefore EPA was free to do so “within the limits of what is reasonable” under the CAA.¹³² Conceivably, a court could apply this reasoning to the debate regarding the definition of routine. Thus, under *Duke Energy*, it does not matter that Congress took language from NSPS when it enacted PSD. What matters is EPA’s interpretation of the statute. The Court did not address, however, the question of inconsistent interpretations, such as those identified in *EKPC*, and it is unclear what the Court would conclude on that issue.¹³³

III. RISKS AND BENEFITS OF THE TWO DEFINITIONS OF ROUTINE

It is apparent that there is sufficient legal uncertainty to allow either of the two competing definitions of routine to apply, depending on the jurisdiction in which a pollution source is located. But what are the policy reasons for choosing one over the other?

On the one hand, the industry-based approach could provide greater certainty and predictability to sources potentially subject to PSD. In a highly organized industry—such as coal-fired utilities where plant operators can easily follow industry developments and trends—a specific operator is likely to know whether a particular project is routine for purposes of PSD if plants all across the country are undertaking similar projects.¹³⁴ But this organization, and the strong motive provided by the looming threat of expensive BACT requirements, could lead to orchestrated manipulation of what is routine in the industry. As illustrated by the case law discussed above, profit-minded utilities are not exactly lining up to subject themselves to “the relevant strictures of [BACT].”¹³⁵ Some state regulators have long argued that the utility industry has conducted a carefully orchestrated

130. Requirements for Preparation, Adoption, and Submittal of Implementation Plans; Approval and Promulgation of Implementation, 45 Fed.Reg. 52,676 (Aug. 7, 1980) (codified at 40 C.F.R. pts. 51, 52, and 124).

131. *Duke Energy*, 549 U.S. at 577.

132. *Id.* at 576.

133. *Id.* at 581–82.

134. See *New Source Review Policy, Regulations and Enforcement Activities: Joint Hearing Before the S. Comm. on Environment and Public Works and the S. Comm. on the Judiciary*, 107th Cong. 173–75 (2002) (statement of Eliot Spitzer, Att’y Gen. of N.Y.) (describing the role of industry associations in the collective understanding of PSD and routine maintenance).

135. *Wis. Elec. Power Co. v. Reilly*, 893 F.2d 901, 906 (7th Cir. 1990).

campaign to avoid PSD.¹³⁶ Forfeiture of regulatory authority to the regulated entities seems antithetical to the CAA's stated purpose "to *protect* and *enhance* the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population."¹³⁷ The industry interpretation would allow at least some aging, dirty plants—some more than fifty years old—to continue operating with no more than a bare minimum of pollution control.¹³⁸ At about the time of EPA's NSR enforcement initiative in 1999, coal-fired utility and industrial boilers accounted for more than half of the 158 tons of mercury annually released into the atmosphere in the United States,¹³⁹ and utilities alone account for two-thirds of sulfur dioxide (SO₂) emissions and one-quarter of nitrogen oxides (NO_x) annually.¹⁴⁰

On the other hand, and of equal prominence, the CAA's statement of purpose emphasizes the need for "productive capacity."¹⁴¹ A broad definition of routine would allow industry to restore, maintain, and improve plant safety, reliability, and efficiency.¹⁴² This translates into lower utility rates, which promotes the productive capacity of the population. With stiff global competition, perhaps the U.S. economy needs every advantage it can get.¹⁴³

IV. ALTERNATIVES TO THE CURRENT ROUTINE MAINTENANCE EXCEPTION AND A PATH FORWARD

Under the current routine maintenance structure, operators of pollution sources facing a potential PSD-triggering project have five choices.¹⁴⁴ First,

136. *See, e.g., id.* (noting that industry had once argued that certain life-extension projects, which industry later argued were routine, "transcend routine maintenance").

137. 42 U.S.C. § 7401(b)(1) (2000) (emphasis added).

138. *See, e.g., United States v. Cinergy Corp.*, 495 F. Supp. 2d 909, 916 (S.D. Ind. 2007) (describing a life extension project that was "designed to obtain an additional thirty years of service" from a unit that was already thirty-one years old).

139. U.S. ENVTL. PROT. AGENCY, MERCURY STUDY REPORT TO CONGRESS 3–5 (1997), available at www.epa.gov/ttn/atw/112nmerc/volume1.pdf.

140. U.S. Env'tl. Prot. Agency, Sulfur Dioxide: What is it? Where does it come from?, <http://www.epa.gov/oar/urbanair/so2/what1.html> (last visited Apr. 21, 2008); U.S. ENVTL. PROT. AGENCY, NO_x: HOW NITROGEN OXIDES AFFECT THE WAY WE LIVE AND BREATHE (1998), <http://www.epa.gov/oar/urbanair/nox/noxfldr.pdf>.

141. 42 U.S.C. § 7401(b)(1).

142. Equipment Replacement Provision of the Routine Maintenance, Repair and Replacement Exclusion, 68 Fed. Reg. 61,248, 61,248 (Oct. 27, 2003) (codified at 40 C.F.R. pts. 51 & 52).

143. *See* Stephen Ryan, *The Costs of Environmental Regulation in a Concentrated Industry 2* (M.I.T. Ctr. for Energy and Env'tl. Policy Research Working Papers, Paper No. 0510, 2004), available at <http://www.duke.edu/~spr6/RVAN2004.pdf> (arguing that environmental regulation has economic costs beyond actual engineering and implementation costs, such as the costs of entry and investment).

144. Equipment Replacement Provision of the Routine Maintenance, Repair and Replacement

operators can seek an applicability determination from EPA or the state regulatory agency with CAA enforcement authority.¹⁴⁵ The determination process, though, is lengthy and expensive, and could result in expensive BACT requirements if the permitting authority finds that the project triggers PSD.¹⁴⁶ Further, a negative determination does not shield a source from future litigation. Second, operators can skip the applicability determination and seek a PSD permit, subjecting themselves to a lengthy and expensive permitting process that would likely result in BACT requirements.¹⁴⁷ Third, operators can risk going forward with the project without a PSD determination, potentially exposing themselves to an expensive enforcement action and litigation that also could result in BACT.¹⁴⁸ Fourth, operators could do nothing, forego the project, and continue operating the source as it is.¹⁴⁹ Clearly, there is no risk of triggering PSD because there is no project. Finally, operators could accept enforceable emissions limitations or limit the scope of the project to better ensure that it meets the routine maintenance exception.¹⁵⁰

In EPA's experience, operators are not likely to choose either of the first two options, and the last three either expose operators to economic risk or curtail the productivity of the source.¹⁵¹ Environmental groups argue that because either air quality continues to decline or is not improving, old emissions sources must upgrade their pollution controls. Therefore, any option that does not lead to significant reductions in pollution is not in the long-term public interest, nor is it in line with CAA's stated purpose.¹⁵² Given these options and competing interests, what are some of the alternatives to the current routine maintenance structure?

A. Eliminate PSD Altogether

PSD was meant to ease old emissions sources into the world of pollution controls to avoid the perceived impact that across-the-board environmental mandates would have on the economy. As discussed in Part I, the idea was to let old sources live out their useful lives and only

Exclusion, 68 Fed. Reg. at 61,250.

145. *Id.*

146. *Id.*

147. *Id.*

148. *Id.*

149. *Id.*

150. *Id.*

151. *Id.*

152. *See, e.g.,* Sierra Club, Clean Air: Dirty Coal Power, available at <http://www.sierraclub.org/cleanair/factsheets/power.asp> (last visited Apr. 21, 2009) (noting public-health risks presented by declining air quality).

force state-of-the-art pollution controls on them if and when they underwent some physical change. PSD is now thirty years old. The plants that were in the middle of their productive lives thirty years ago are now near the end of or beyond their thirty- to fifty-year expected lifespan. At some point, it will no longer make sense to allow *any* major pollution source to avoid installing BACT. It is reasonable to assume that a source with a forty-year expected lifespan that was in operation prior to 1977, and is still operating ten or more years from now without BACT, was modified but no one caught it. An obvious way to prevent an old, dirty source from falling through the PSD cracks is to eliminate the program altogether and require BACT whether a plant was modified or not. In 2007, Senator Bernard Sanders of Vermont introduced legislation along these lines.¹⁵³ The Clean Power Act would, among other things, force power plants to comply with BACT either by 2015 or forty years after the plant was built.¹⁵⁴ This option is attractive from an environmental point of view because forcing more power plants to implement BACT would result in dramatic reductions in air pollution.¹⁵⁵

At the same time, this option would require future regulation to ensure that emissions sources keep up with future emissions-control technologies. Some emissions sources were subject to PSD in the past.¹⁵⁶ What was BACT in 1989 may not be BACT in 2009. What is BACT in 2009 presumably will not be BACT in 2029, or even 2019. This option lacks an enforcement mechanism to require sources operating outdated equipment to install new, modern equipment—which is strikingly familiar to the situation that begat PSD in the first place.¹⁵⁷

153. Clean Power Act of 2007, S. 1201, 110th Cong. § 719 (2007). Former Senator Jim Jeffords, whose seat Senator Sanders now occupies, was the chief sponsor of similar legislation in past Congresses. *E.g.* Clean Power Act of 2005, S. 150, 109th Cong. (2005).

154. *Id.*

155. See BRANDON WU, U.S. PUB. INTEREST RESEARCH GROUP EDUC. FUND, LETHAL LEGACY: A COMPREHENSIVE LOOK AT AMERICA'S DIRTIEST POWER PLANTS 10 (2003), available at http://www.csu.edu/cerc/documents/LethalLegacy_001.pdf (arguing that more stringent BACT application would result in an 80% and 36% reduction in sulfur dioxide and nitrogen oxide emissions, respectively).

156. See, e.g., *Wis. Elec. Power Co. v. Reilly*, 893 F.2d 901, 907–10 (7th Cir. 1990) (upholding EPA's determination that several projects in the 1980s were nonroutine).

157. For a discussion of the benefits to immediate, across-the-board BACT implementation over the current PSD regime, see Liz Darling Edmondson, Note, *The Increased Emissions Test Under New Source Review: Regulatory Uncertainty Calls for an Amendment to the Clean Air Act*, 45 BRANDEIS L.J. 175, 193–96 (2006).

B. Emissions Trading

An alternative to PSD is an emissions trading system, such as that employed by the CAA's acid rain program.¹⁵⁸ Under such a system, EPA would calculate emissions limits for different pollutants and distribute emissions credits amongst different pollution sources.¹⁵⁹ The idea, then, is that sources with excess credits, acquired perhaps by upgrading emissions-control equipment, could sell credits to those who need or want them.¹⁶⁰ Any emissions reductions would come at the lowest economic cost.¹⁶¹

This approach addresses one major criticism of the current PSD structure. PSD requires emissions reductions at great economic cost with no regard for the benefit (i.e., overall improvement of air quality) achieved.¹⁶² By setting an emissions goal, EPA could have the opportunity to proactively address air quality, and industry could facilitate that improvement without undue economic burden by implementing the most economically efficient controls available.

Critics of a cap-and-trade alternative to PSD have pointed to several unresolved problems with such a system. For example, one problem arises in setting the cap.¹⁶³ Critics of specific cap-and-trade proposals have noted that those proposals would result in greater emissions than would result under continued PSD enforcement.¹⁶⁴ Other critics argue that national or even regional emissions caps would do little to address high, localized pollution concentrations, known as "hotspots."¹⁶⁵ A caps trading system would strip EPA of its ability to make case-by-case BACT determinations that take into account, among other things, the environmental impact of any emissions increase on an area with relatively clean air.¹⁶⁶ This inability could allow an emissions source in such an area to significantly degrade air

158. 42 U.S.C. § 7651 (2000).

159. For a discussion of several options for emissions trading program reform, see Brian H. Potts, *Trading Grandfathered Air—A New, Simpler Approach*, 31 HARV. ENVTL. L. REV. 115, 143–56 (2007).

160. *Id.*

161. *Id.*

162. U.S. Env'tl. Prot. Agency, *An Emissions Cap Alternative to New Source Review* (Sept. 27, 1999), available at http://www.epa.gov/ttn/caaa/t1/fr_notices/nsrkap.ppt [hereinafter *Emissions Cap Alternative*].

163. Barcott, *supra* note 58.

164. *E.g., id.* (noting President Bush's Clear Skies Initiative would result in greater emissions than those resulting from rigorous enforcement of current PSD regulations).

165. See *Emissions Cap Alternative*, *supra* note 162 (noting criticism of hotspot emitters operating under a cap-and-trade system by pointing out economic incentives to clean up old high-emitting plants).

166. *Clear Skies Act of 2003: Hearing on S. 385 Before the S. Comm. on Environment & Public Works*, 108th Cong. (2003) (statement of David G. Hawkins, Dir., Climate Ctr. Program, Natural Res. Def. Council), available at http://epw.senate.gov/108th/Hawkins_040803.htm.

quality as long as it purchased enough credits to cover its emissions.¹⁶⁷ Although the “productive capacity” benefits of a cap-and-trade alternative are readily apparent, the health and welfare benefits are unproven.

C. A Modest Bright-Line Routine Maintenance Test

A third option is a bright-line test, where a clearly defined threshold demarcates the boundary between routine and nonroutine, therefore determining PSD applicability. EPA attempted to implement a bright-line test with its 2003 Equipment Replacement Provision (ERP).¹⁶⁸ Under the ERP, any project that costs less than twenty percent of the replacement value of the unit would qualify as routine, so long as the project involved replacing old parts with identical or functionally equivalent parts.¹⁶⁹

In a case known as *New York II*, several states and environmental groups challenged the ERP in federal court.¹⁷⁰ They argued that the ERP failed the *Chevron* test because it was inconsistent with the plain language of the CAA.¹⁷¹ The rule’s challengers pointed out that “the statutory definition of ‘modification’ applies unambiguously to *any physical change* that increases emissions,” and argued that the ERP, with its very narrow reading of “physical change,” effectively “relegate[d] the word ‘any’ to an insignificant role.”¹⁷² The court sided with the challengers, holding that their “expansive reading of the phrase ‘any physical change,’ gives natural effect to all the words used by Congress and reflects both their common meanings and Congress’s purpose in enacting the [CAA].”¹⁷³ The court went on to note that “any” is not without limits.¹⁷⁴ EPA has long “exclude[d] changes of trivial regulatory concern on a *de minimis* rationale,” allowing the agency to “diverge from the plain meaning of a statute only so far as is necessary to avoid its futile application.”¹⁷⁵

EPA’s rationale for promulgating the rule in the first place was sound: the routine maintenance exception needs certainty. Discerning PSD compliance under the current regulations is difficult at best. Combine that with good-faith attempts to comply gone wrong and possible intentional

167. *Id.*

168. Equipment Replacement Provision of the Routine Maintenance, Repair and Replacement Exclusion, 68 Fed. Reg. 61,248, 61,248 (Oct. 27, 2003) (codified at 40 C.F.R. pts. 51 & 52).

169. *Id.* at 61,251.

170. *New York v. Env’tl. Prot. Agency (New York II)*, 443 F.3d 880, 883–84 (D.C. Cir. 2006). Vermont was one of the plaintiff states. *Id.* at 881.

171. *Id.* at 884.

172. *Id.* (emphasis added).

173. *Id.* at 887.

174. *Id.*

175. *Id.* at 888 (citing *Ala. Power Co. v. Costle*, 636 F.2d 323, 360–61, 400 (D.C. Cir. 1979)).

exploitation of PSD exemptions, and what results is the “abysmal breakdown in the administrative process”¹⁷⁶ and the attendant lack of compliance, contentious litigation, and lack of consistent enforcement as seen over the last thirty years.

If the rationale was appropriate, but the conclusion was not, perhaps only the conclusion requires modification. The *New York II* court only invalidated the ERP and did not foreclose future administrative promulgation of some other bright-line definition of routine maintenance.¹⁷⁷ A routine maintenance threshold of 0.1 to five percent is more likely to meet the *de minimis* standard laid out in *New York II*. According to government estimates, the replacement value of a thousand-megawatt power plant is about \$800 million.¹⁷⁸ Under the invalidated ERP, an unlimited number of projects costing up to \$160 million could take place at one of these plants. Such projects are clearly beyond the scope of *de minimis* exemptions. EPA was much more reasonable in its proposed ERP rule.¹⁷⁹ EPA had planned on setting the routine maintenance threshold for each individual industrial category based on long-term tracking of maintenance budgets.¹⁸⁰ The percentages of replacement cost for projects in different industries ranged from one-half percent to twenty percent.¹⁸¹ Power plants landed at about five percent.¹⁸² With a five percent threshold and an \$800 million replacement value, projects costing more than \$40 million would be subject to PSD. Whether this would pass *de minimis* muster is unclear. Obviously, a lower threshold, like one percent, would have a better chance of surviving a *New York II* and *Chevron* analysis, and would better ensure that “life extension” projects designed to circumvent current PSD regulations would be subject to PSD and BACT requirements, thus reducing overall air pollution.

As an alternative to administrative rulemaking and the *Chevron* requirements that come with it, Congress could step in and amend the CAA to define routine maintenance with a bright-line test. As it did when it enacted PSD in 1977, Congress could render EPA interpretation of the CAA moot with such explicit statutory authority.

176. *United States v. Ohio Edison*, 276 F. Supp. 2d 829, 832 (S.D. Ohio 2003).

177. *New York II*, 443 F.3d at 890.

178. GOV'T ACCOUNTABILITY OFFICE, CLEAN AIR ACT: NEW SOURCE REVIEW REVISIONS COULD AFFECT UTILITY ENFORCEMENT CASES AND PUBLIC ACCESS TO EMISSIONS DATA 18 (2003), available at <http://www.gao.gov/new.items/d0458.pdf>.

179. Prevention of Significant Deterioration (PSD) and Non-attainment New Source Review (NSR): Routine Maintenance, Repair and Replacement, 67 Fed. Reg. 80,290, 80,298 (proposed Dec. 31, 2002) (to be codified at 40 C.F.R. pts. 51 & 52).

180. *Id.*

181. *Id.*

182. *Id.*

As an added benefit, the bright-line approach would still subject plants that have installed BACT in the past to future BACT requirements because it maintains the grandfathering structure. This approach addresses one of the major shortcomings of eliminating the PSD program altogether while still ensuring environmental accountability. Further, by retaining source-specific BACT determinations, the bright-line test would be more sensitive to regional and local air quality needs than would a cap-and-trade system.

CONCLUSION

PSD and the routine maintenance exception have been in a constant state of disarray since their inception. As evidenced by long periods of relative PSD quiet followed by spates of litigation¹⁸³ and administrative rulemakings, the program does not lend itself well to compliance or enforcement. As a result, PSD struggles to carry out the dual goals of the CAA: to protect air quality while protecting productive capacity.

Much of this inefficiency can be traced to the routine maintenance exception. Whether it is due to inconsistencies in application or a lack of clear standards for application, the routine maintenance exception has resulted in many lawsuits and has allowed some emissions sources to avoid PSD pollution controls. For the sake of predictability, for the ease of compliance and enforcement, and to preserve the air quality in areas with relatively clean air, Congress and EPA must revisit the routine maintenance issue.

Reform options, such as eliminating PSD altogether and forcing all emissions sources to install state-of-the-art pollution controls or a cap-and-trade system, have their attractive traits. Of the many options for PSD and routine maintenance reform, however, the bright-line routine maintenance test is superior.

The premise behind PSD is sound. Under the CAA, the government has an obligation to prevent the degradation of air quality in clean-air regions. Congress and especially EPA have shirked this responsibility to the detriment of human health and welfare. In the time that has passed since PSD's enactment in 1977, the routine maintenance test has been corrupted into an instrument of confusion and inefficiency.

A bright-line test would restore the certainty Congress sought in 1977 by putting everyone—regulators and regulated entities alike—on notice of what is expected under PSD. Such clear standards might help stem the tide

183. District courts continue to struggle with the definition of routine, with no consensus on the horizon. *See, e.g.*, *United States v. Ala. Power Co.*, No. 2:01-cv-00152-VEH (N.D. Ala. July 24, 2008) (deciding that "routine" should be evaluated with reference to the relevant source industry).

of costly and inefficient litigation, and the myriad rules and standards offered by the various courts, plaintiffs, and defendants. A bright-line test would also preserve the positive aspects of grandfathering regulation by continuing to require technology upgrades after future modifications. While this approach failed once before, a more modest, less industry-friendly threshold could survive the scrutiny courts have applied in the past, and provide for better technology and cleaner air in the future.

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