

EVALUATING THE MODIFICATION OF POWER PLANTS: A STREAMLINED FIVE QUESTION APPROACH

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INTRODUCTION

The United States is powered by many old coal power plants.¹ These ancient electric generators “are up to ten times dirtier than new power plants built today.”² Coal power plants need to be modernized so that they will continue to operate “in a safe, reliable, and efficient manner.”³

Before enactment of the Clean Air Act (CAA),⁴ such modernization ignored environmental concerns and focused solely on efficiency and profitability for the power companies.⁵ After the passage of the CAA, the Environmental Protection Agency (EPA) had tools to force these polluters to account for environmental degradation by requiring permits.⁶ Such enforcement efforts have led to numerous lawsuits.⁷ The defendant power

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* J.D., Capital University Law School, 2007. I would like to thank Professor Dennis D. Hirsch for his assistance in the development of this Comment. The Staff Members and the Executive Board of the *Capital University Law Review* tirelessly fine-tuned my writing, and deserve recognition for their hard work.

¹ Arnold W. Reitze, Jr., *State and Federal Command-and-Control Regulation of Emissions from Fossil-Fuel Electric Power Generating Plants*, 32 ENVTL. L. 369, 371–72 (2002).

² Yekaterina Korostash, *EPA’s New Regulatory Policy: Two Steps Back*, 5 N.C. J. L. & TECH. 295, 295 (2004).

³ Robert A. Greco, *When is Routine Maintenance Really Routine? A Proposed Modification to the EPA’s New Source Review Program*, 88 MARQ. L. REV. 391, 391 (2004). “Coal-fired power plants also require periodic replacement of both minor and major portions of the generating units, just as cars require periodic replacement of transmissions, water pumps, or tires.” *Id.*

⁴ Clean Air Act, 42 U.S.C. §§ 7401–7671q (2000).

⁵ See Greco, *supra* note 3, at 391 & n.3.

⁶ See *id.* at 391–96.

⁷ *E.g.*, *Envtl. Def. v. Duke Energy Corp.*, 127 S. Ct. 1423 (2007); *New York v. Env’tl. Prot. Agency*, 443 F.3d 880 (D.C. Cir. 2006); *New York v. U.S. Env’tl. Prot. Agency*, 413 F.3d 3 (D.C. Cir. 2005); *United States v. Ala. Power Co.*, 372 F. Supp. 2d 1283 (N.D. Ala. 2005); *United States v. Ohio Edison Co.*, 276 F. Supp. 2d 829 (S.D. Ohio 2003).

companies use various strategies to avoid the EPA's regulatory programs.⁸ A recent Supreme Court ruling has resolved some of the uncertainty in the area, but the law is still unclear in some areas.⁹

This Comment will show that the litigation positions of the utility companies are unsupported by law. An analysis of five recent federal court decisions will prove this: *United States v. Ohio Edison Co.*,¹⁰ *Environmental Defense v. Duke Energy Corp.*,¹¹ *United States v. Alabama Power Co.* [hereinafter *Alabama Power II*],¹² *New York v. United States Environmental Protection Agency* [hereinafter *New York I*],¹³ and *New York v. Environmental Protection Agency* [hereinafter *New York II*].¹⁴ The cases focus on different elements of the controversy, creating a minefield that hinders predictability in this area of environmental law.

To organize the complexities of these opinions, an appropriate analysis involves a series of five questions. These questions are: (1) How should "modification" be construed in the Prevention of Significant Deterioration (PSD) context?; (2) How should "physical change or change in the method of operation" be interpreted?; (3) How should increase be measured?; (4) How should courts interpret and apply the hours of operation exclusion?; and (5) How should courts interpret and apply the routine maintenance exemption?¹⁵ This Comment will show how the five decisions answer the questions and then propose answers. Organizing and consolidating the decisions should serve to aid all parties involved in the litigation, ensuring fair predictability in enforcement. The resulting clarity will help both the power companies and the EPA.

When a court approaches the problem of a utility company upgrading its facilities to allow for longer lives and increased production, that court

⁸ Industry's arguments generally focus on the interpretation of various terms in the statutes, especially on the term "modification." Another option is to claim the "routine maintenance exception." For more detail on these arguments, see *infra* Part IV.

⁹ *Duke Energy Corp.*, 127 S. Ct. at 1433, 1436 (ruling that Congress did not intend to use the meaning of modification from NSPS to apply to PSD, and that the regulations do not allow such incorporation either).

¹⁰ 276 F. Supp. 2d 829 (S.D. Ohio 2003).

¹¹ 127 S. Ct. 1423 (2007).

¹² 372 F. Supp. 2d 1283 (N.D. Ala. 2005).

¹³ 413 F.3d 3 (D.C. Cir. 2005).

¹⁴ 443 F.3d 880 (D.C. Cir. 2006).

¹⁵ These questions are similar to the "logic tree" chart used by Ohio Edison's counsel, but the chart was not used to formulate the questions here. See *United States v. Ohio Edison Co.*, 276 F. Supp. 2d 829, 876 (S.D. Ohio 2003).

should proceed with the five question inquiry. The court should not use the definition of “modification” the same way in Prevention of Significant Deterioration as in the New Source Performance Standards. It should treat “physical change” as an easy-to-meet standard. Emissions calculations should be made with the tons-per-year method. The physical change exemption should only be used when there is no physical change. Routine maintenance should be compared based on particular units, not as a blanket comparison across the electricity production industry.

Part I describes the extent of the great air pollution problem from power plants. Part II details the statutory scheme for these stationary sources and the relevant regulations promulgated by the EPA. Part III outlines the major decisions issued by courts to resolve interpretation problems in the statutes. Part IV discusses five recent decisions, organizes them according to a convenient framework, and then describes how each case answers the questions. Part V evaluates the effectiveness of the proposed solutions.

I. THE AIR POLLUTION PROBLEM

Fossil-fuel power plants are the single most contributory force behind our present air pollution problems.¹⁶ The hazardous pollutants emitted from generators and other sources have caused serious health problems, including bronchitis, lung cancer, increased asthma, and pulmonary emphysema.¹⁷ Scientific data indicates that coal power plants are responsible for a high percentage of hazardous pollutants found in the air today.¹⁸

In addition to the emission of hazardous pollutants, the continued use of coal burning in this country spews an astronomical amount of carbon dioxide into the atmosphere.¹⁹ “Coal is a particularly pernicious fuel because, even burned efficiently, it puts fully a third more carbon dioxide

¹⁶ “Environmental protection requirements imposed on fossil-fuel electric power generators by the United States Environmental Protection Agency (EPA) are subject to ongoing review because this is the industry most responsible for conventional air pollutant emissions and is a significant source category of hazardous air pollutants.” Reitze, *supra* note 1, at 371.

¹⁷ See THAD GODISH, AIR QUALITY 150–64 (3d ed. 1997).

¹⁸ “In 1998, electric utilities emitted 67.2% of the nation’s SO₂, 24.9% of NO_x, and about 10.6% of the small particulate (PM₁₀) emissions.” Reitze, *supra* note 1, at 372.

¹⁹ See R.T. Pierrehumbert, *Climate Change: A Catastrophe in Slow Motion*, 6 CHI. J. INT’L L. 573, 586–87 (2006).

in the air than natural gas for a given amount of energy released.”²⁰ The human impact on the carbon dioxide presence in the atmosphere threatens to cause an unprecedented shift in the earth’s climate that may only be reversed at an exceedingly slow pace.²¹

The process of burning coal is the cheapest and the most common option for creating electricity in the United States, so it has continued to produce a bulk of our power supply.²² The biggest polluters today are plants built between 1950 and 1980.²³ Indeed, for nearly one hundred years, power companies operated in an unregulated environment.²⁴

The primary legal tool to protect the environment was the use of private or public nuisance law, but other theories have also been less successfully advanced.²⁵ Unfortunately, tort law failed to abate the problem because it “is an expensive method of protecting a few at the expense of many.”²⁶ Money damages seldom help plaintiffs and even more rarely change industry behavior.²⁷

Therefore, the failure of tort law to reduce air pollution requires regulation.²⁸ A regulatory program is also needed because without one, electricity generators will continue to rely on older coal-fired plants and

²⁰ *Id.* at 587.

²¹ *See id.* at 576–77. The following excerpt demonstrates the connection between carbon dioxide buildup and climate change:

Carbon dioxide is implicated in virtually all of the great climate shifts in Earth’s history, including the coming and going of the Ice Ages; the eons of warm ice-free states that the dinosaurs lived in some seventy million years ago; the collapse of the Earth into a globally frozen state in the Neoproterozoic era some six hundred million years ago; and the maintenance of conditions favorable to life on the very young Earth, when the Sun was much fainter than it is today.

Id. at 575.

²² Reitze, *supra* note 1, at 372. “Fossil fuels are used to generate about 68% of the electricity in the United States; coal is used to generate about 44% of the electricity.” *Id.* at 371–72.

²³ *Id.* at 372.

²⁴ Greco, *supra* note 3, at 391.

²⁵ Arnold W. Reitze, Jr., *A Century of Air Pollution Control Law: What’s Worked; What’s Failed; What Might Work*, 21 ENVTL. L. 1549, 1554–56 (1991).

²⁶ *Id.* at 1567–68.

²⁷ *Id.* at 1568.

²⁸ *See id.* at 1564.

exacerbate the problem.²⁹ Recognizing the increasing threat to the public health, the federal government acted to control air pollution in the 1960s.³⁰ President Johnson signed the Clean Air Act (CAA) into law in 1963.³¹ Congress passed important amendments in the 1970s that increased the regulatory scope of the CAA.³² These amendments include the Prevention of Significant Deterioration (PSD) and New Source Performance Standards (NSPS) programs,³³ which are discussed below. The CAA has been successful in the reduction of air pollutants, but stemming the tide of pollution remains an elusive goal.³⁴

II. THE REGULATORY SCHEME

A. *The Clean Air Act (CAA)*

A big threat to the EPA's regulatory program is the interpretation of key terms within the CAA. Incorrect interpretations of the statutes and the regulations by courts reduce the effectiveness of the plans. The basis of the 1970 amendments to the CAA is the setting of the National Ambient Air Quality Standards (NAAQS).³⁵ The EPA sets these using health effects data.³⁶ Once the levels are set, states submit State Implementation Plans (SIPs) that show how they will reach the standards.³⁷

The SIPs and the NAAQS are set for existing stationary sources, including large power plants.³⁸ All new sources are subject to the New Source Performance Standards (NSPS), which have been in place since 1970.³⁹ The standards also apply to "modified" sources.⁴⁰

²⁹ See William G. Rosenberg, *Restructuring the Electric Utility Industry and Its Effect on the Environment*, 14 PACE ENVTL. L. REV. 69, 73 (1996).

³⁰ Arnold W. Reitze, Jr., *The Legislative History of U.S. Air Pollution Control*, 36 HOUS. L. REV. 679, 697 (1999).

³¹ *Id.* at 698.

³² *Id.* at 702.

³³ *Id.* at 709–10.

³⁴ See Rosenberg, *supra* note 29, at 69–70.

³⁵ Reitze, *supra* note 25, at 1591.

³⁶ *Id.*

³⁷ *Id.* at 1597.

³⁸ See 42 U.S.C. § 7410(a) (2000).

³⁹ Robert J. Martineau, Jr. & Michael K. Stagg, *New Source Performance Standards*, in THE CLEAN AIR ACT HANDBOOK 299, 299 (Robert J. Martineau, Jr. & David P. Novello eds., 2d ed. 2004).

⁴⁰ *Id.* Modified sources are grouped in with new sources because the definition of "new source" includes modified sources. "The term 'new source' means any stationary source,"
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If NSPS is triggered, the stationary source is forced to use “the best system of emission reduction which . . . the Administrator determines has been adequately demonstrated.”⁴¹ This standard can be applied in both areas that have reached the appropriate NAAQS level (attainment areas) and those that have not (non-attainment areas).⁴² The EPA may bring an NSPS enforcement action when a utility constructs a “new source,” which is defined as “any stationary source, the construction or modification of which is commenced after the publication of regulations.”⁴³ The inclusion of the word “modification” in this definition means that old power plants are intended to fall under the purview of the regulatory program in certain situations. Therefore, the definition of modification is crucial, as it determines whether the plant will be subject to the NSPS rules. Such stationary sources reflect “any physical change in, or change in the method of operation of, a stationary source which increases the amount of any air pollutant emitted by such source or which results in the emission of any air pollutant not previously emitted.”⁴⁴

Because the NSPS program was not entirely successful, especially in areas attaining the NAAQS, the EPA created a new regulatory program, known as PSD.⁴⁵ The scheme was codified by Congress in 1977.⁴⁶ This can be applied to stationary sources in areas that have reached the appropriate NAAQS standard (attainment areas).⁴⁷

As written in the statute, the purpose of the PSD program is “to protect public health and welfare from any actual or potential adverse effect which in the Administrator’s judgment may reasonably be anticipate[d] to occur from air pollution.”⁴⁸ The purpose is fulfilled by requiring permits whenever a facility is “constructed.”⁴⁹ Such a permit requires using the “best available control technology for each pollutant subject to regulation

the construction or modification of which is commenced after the publication of regulations (or, if earlier, proposed regulations) prescribing a standard of performance under this section which will be applicable to such source.” 42 U.S.C. § 7411(a)(2) (2000).

⁴¹ 42 U.S.C. § 7411(a)(1).

⁴² Martineau & Stagg, *supra* note 39, at 299.

⁴³ 42 U.S.C. § 7411(a)(2).

⁴⁴ *Id.* § 7411(a)(4).

⁴⁵ See *United States v. Duke Energy Corp.*, 411 F.3d 539, 542–43 (4th Cir. 2005), *cert. granted*, 126 S. Ct. 2019 (2006).

⁴⁶ *Id.* at 543.

⁴⁷ See *id.*

⁴⁸ 42 U.S.C. § 7470(1) (2000).

⁴⁹ 42 U.S.C. § 7475(a) (2000).

under this chapter emitted from, or which results from, such facility.”⁵⁰ Most importantly, the definition of “construction” for PSD is incorporated from NSPS: “The term ‘construction’ when used in connection with any source or facility, includes the modification (as defined in section 7411(a) of this title) of any source or facility.”⁵¹

Analysis of the Congressional intents of the NSPS and PSD programs in the 1977 amendments show the inherent differences between the programs.⁵² The purposes of the NSPS program are:

- (1) to provide a greater role for the States in standard setting under the act; (2) to assure that industries do not play off States with weak or no environmental controls against States with stronger controls in decisions to locate new sources; and (3) to provide a check on the Administrator's inaction or failure to control emissions adequately.⁵³

Meanwhile, Congress expected PSD:

- (1) To protect health from harmful exposures occurring at levels below the ambient standards; (2) To protect national parks and other areas of special natural, recreational, scenic, or historic value; (3) To assure economic growth in a manner consistent with preservation of existing clean air resources; (4) To prevent interstate air pollution which significantly degrades air quality; [and] (5) To assure careful evaluation of all consequences and opportunity for full public participation prior to a State's decision allowing deterioration in existing clean air areas.⁵⁴

Such differing purposes show that the two acts were designed to be distinct. PSD ensures that states have individualized pollution strategies to promote the goal of lower interstate pollution. NSPS, on the other hand, is designed with national uniformity in the forefront. Enforced in harmony, the two acts sufficiently regulate the American power industry. Court

⁵⁰ *Id.* § 7475(a)(4).

⁵¹ 42 U.S.C. § 7479(2)(C) (2000).

⁵² *See generally* H.R. REP. NO. 95-294, at 7-11 (1977), *reprinted in* 1977 U.S.C.C.A.N. 1077, 1084-89.

⁵³ H.R. REP. NO. 95-294, at 11 (1977), *reprinted in* 1977 U.S.C.C.A.N. 1077, 1089.

⁵⁴ H.R. REP. NO. 95-294, at 8 (1977), *reprinted in* 1977 U.S.C.C.A.N. 1077, 1085.

decisions mixing the purposes of the two programs threaten to destroy this harmony.

B. Regulations Pursuant to the Clean Air Act

Based on the organic statutes of the Clean Air Act, the EPA provided more precise guidance to the utility industry with detailed regulations. The most important regulations concern the measurement techniques of both the NSPS and PSD programs. Indeed, the issue of how to measure the threshold of subjecting parties to the programs hinges on the measurement method.

For NSPS, “any physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies shall be considered a modification,” and the facility must then acquire an NSPS permit.⁵⁵ The next subsection declares that the relevant emission rate “shall be expressed as kg/hr of any pollutant discharged into the atmosphere for which a standard is applicable.”⁵⁶

An entirely different measurement scheme is employed by the EPA for the PSD program. For these permits, the baseline comparison is first determined, which is “the rate of emissions, in tons per year, of a regulated NSR pollutant.”⁵⁷ The baseline is then used to determine whether there is a “significant emissions increase,” which may be found by one of two methods.⁵⁸ If such an increase is found, then PSD applies.⁵⁹

⁵⁵ 40 C.F.R. § 60.14(a) (2006).

⁵⁶ *Id.* § 60.14(b).

⁵⁷ 40 C.F.R. § 52.21(b)(48) (2006).

⁵⁸ The following excerpt from the Code of Federal Regulations defines the two computation methods for emissions as promulgated by the EPA:

(c) *Actual-to-projected-actual applicability test for projects that only involve existing emissions units.* A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the difference between the projected actual emissions (as defined in paragraph (b)(41) of this section) and the baseline actual emissions (as defined in paragraphs (b)(48)(i) and (ii) of this section), for each existing emissions unit, equals or exceeds the significant amount for that pollutant (as defined in paragraph (b)(23) of this section).

(d) *Actual-to-potential test for projects that only involve construction of a new emissions unit(s).* A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the difference between

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The PSD also defines “modification” in a different way than the NSPS program. Instead of just a “modification,” the EPA requires a “major modification.”⁶⁰ This means “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 . . . and a significant net emissions increase of that pollutant from the major stationary source.”⁶¹ Because “net emissions increase” is used, the EPA measures an increase in total emissions rather than as a change in the rate of emissions.

The main strategy that utility companies use to avoid the requirements of NSPS and PSD is to argue that the changes they have made to modernize their plants either do not meet the definition of modification or fall into the “routine maintenance” exception.⁶² If the activity is deemed to be “routine,” it is exempt from CAA compliance.⁶³ The EPA has justified the exception by saying that the NSR program (that includes PSD) before inclusion of the exception “has impeded or resulted in the cancellation of projects which would maintain and improve reliability, efficiency and safety of existing energy capacity.”⁶⁴ The EPA promulgated the exception to promote these goals, and to ensure that the NSR program would be

the potential to emit (as defined in paragraph (b)(4) of this section) from each new emissions unit following completion of the project and the baseline actual emissions (as defined in paragraph (b)(48)(iii) of this section) of these units before the project equals or exceeds the significant amount for that pollutant (as defined in paragraph (b)(23) of this section).

Id. § 52.21(a)(2)(iv)(c)–(d).

⁵⁹ This means that there may not be construction “without a permit that states that the major stationary source or major modification will meet those requirements.” *Id.* § 52.21(a)(2)(iii).

⁶⁰ See 40 C.F.R. § 51.166(b)(2)(i) (2006); 40 C.F.R. § 51.21(b)(2)(i).

⁶¹ 40 C.F.R. § 51.166(b)(2)(i).

⁶² See *New York v. U.S. Env'tl. Prot. Agency*, 413 F.3d 3, 10 (D.C. Cir. 2005); *United States v. Duke Energy Corp.*, 411 F.3d 539, 544–45 & n.2 (4th Cir. 2005), *cert. granted*, 126 S. Ct. 2019 (2006); *United States v. Ala. Power Co.*, 372 F. Supp. 2d 1283, 1289 (N.D. Ala. 2005); *United States v. Ohio Edison Co.*, 276 F. Supp. 2d 829, 834, 854–56 (S.D. Ohio 2003).

⁶³ *Id.* at 854.

⁶⁴ Greco, *supra* note 3, at 397 (quoting ENVIRONMENTAL PROTECTION AGENCY, NEW SOURCE REVIEW: REPORT TO THE PRESIDENT 1 (June 2002), *available at* http://www.epa.gov/nsr/documents/nsr_report_to_president.pdf).

“administratively feasible.”⁶⁵ Historically, the exception has been applied by the EPA on a “case-by-case basis using a multi-factor test.”⁶⁶ The EPA has read the exception “narrowly for over two decades to ensure that only truly routine maintenance activities would escape CAA pollution control requirements.”⁶⁷ Interpretation of the exemption has been hotly contested, with industry seeking a broad reading and the EPA seeking a more narrow reading that will subject more industry activity to the NSPS and PSD programs.⁶⁸

The regulation exempts all “[m]aintenance, repair, and replacement which the Administrator determines to be routine for a source category.”⁶⁹ NSPS has a very similar definition of the exemption.⁷⁰ The key to the definition is the interpretation of “source category,” which is at issue in the cases in this comment.

An ongoing conflict is the point at which power plants built before 1970 would be subject to the regulations.⁷¹ Exempting these old plants is logical because power plants built before the Clean Air Act cannot be expected to adopt standards that were not yet in place. However, the plants need upgraded technology, especially because they form a large proportion of the electricity production of the United States.⁷²

Another exemption can be used to prevent a plant activity from becoming a “physical change.”⁷³ In the NSPS program, there is no

⁶⁵ Adrian P. Castro, Note, *Far From Routine: Exempting Existing Sources from New Source Review Under the Equipment Replacement Provision*, 33 HOFSTRA L. REV. 711, 718 (2004).

⁶⁶ PSD and NSR: Equipment Replacement Provision of the Routine Maintenance, Repair, and Replacement Exclusion, 68 Fed. Reg. 61,248, 61,249 (Oct. 27, 2003) (to be codified at 40 C.F.R. pts. 51 and 52); *see also infra* text accompanying note 117.

⁶⁷ Castro, *supra* note 65, at 712.

⁶⁸ An example of the arguments is shown in *Ohio Edison Co.* “The few courts that have considered the issue have noted that the EPA interprets the routine maintenance exemption narrowly.” *United States v. Ohio Edison Co.*, 276 F. Supp. 2d 829, 854 (S.D. Ohio 2003). On the other hand, Ohio Edison argued that the exemption should be read broadly to mean “that what is routine should be measured by the types of activities which are performed in the industry as a whole.” *Id.* at 855.

⁶⁹ 40 C.F.R. § 60.14(e)(1) (2006).

⁷⁰ *See* 40 C.F.R. § 52.21(b)(2)(iii) (2006).

⁷¹ *See Ohio Edison Co.*, 276 F. Supp. 2d at 832.

⁷² *See Reitze, supra* note 1, at 371–72.

⁷³ 40 C.F.R. § 60.14(e)(2) (NSPS program); 40 C.F.R. § 52.21(b)(2)(iii)(f) (PSD program).

physical change if there is “[a]n increase in production rate of an existing facility, if that increase can be accomplished without a capital expenditure on that facility.”⁷⁴ The other exemption for the NSPS program excludes an increase in the number of hours of operation for the facility.⁷⁵ According to the EPA, this exemption is meant “to distinguish between situations in which permits would be changed for primarily administrative reasons, such as a change to reflect a revised construction schedule, and situations in which the permit change involves a significant increase in emissions.”⁷⁶ The EPA believed that changes in the way that plants were run should not trigger forced compliance.⁷⁷

For PSD, the exemption is stated differently: “An increase in the hours of operation or in the production rate.”⁷⁸ As one court noted, the exclusion “was provided to allow facilities to take advantage of fluctuating market conditions, not construction or modification activity.”⁷⁹

In 2003, the EPA categorically changed the routine maintenance exclusion.⁸⁰ It added the “Equipment Replacement Provision” (ERP).⁸¹ This provision excludes an “electric utility steam generating unit” from compliance if “the fixed capital cost of the replacement component(s) plus the cost of any associated maintenance and repair activities that are part of the replacement [does] not exceed 20 percent of the replacement value of the process unit, at the time the equipment is replaced.”⁸² Also, according to the new regulation, the power plant’s replacement procedure is routine maintenance if it “does not change the basic design parameter(s) of the process unit to which the activity pertains.”⁸³

This provision was enacted due to the common belief that the case-by-case determination of whether an activity is routine maintenance lacked

⁷⁴ 40 C.F.R. § 60.14(e)(2).

⁷⁵ *Id.* § 60.14(e)(3).

⁷⁶ Requirements for Preparation, Adoption, and Submittal of Implementation Plans, 45 Fed. Reg. 52,676, 52,727 (Aug. 7, 1980) (to be codified at 40 C.F.R. pts. 51, 52, and 124).

⁷⁷ *See id.*

⁷⁸ 40 C.F.R. § 52.21(b)(2)(iii)(f) (2006).

⁷⁹ *Wis. Elec. Power Co. v. Reilly*, 893 F.2d 901, 916 n.11 (7th Cir. 1990) (citing 45 Fed. Reg. 52,676, 52,704 (1980)).

⁸⁰ *See New York v. Env'tl. Prot. Agency*, 443 F.3d 880, 883 (D.C. Cir. 2006).

⁸¹ *Id.*

⁸² 40 C.F.R. § 52.21(cc)(1)(i).

⁸³ *Id.* § 52.21(cc)(2).

certainty to the regulated parties.⁸⁴ The old method of finding routine maintenance was praised for its flexibility, but was criticized for “hampering activities important to assuring the safe, reliable and efficient operation of existing plants.”⁸⁵ The EPA believed that the Equipment Replacement Provision would allow power plants to “replace components under a wider variety of circumstances.”⁸⁶ The Agency also promulgated the rule to provide more certainty to the owners of the plants and to reviewing authorities.⁸⁷ The overall effect the EPA was striving for was “to remove disincentives to undertaking RMRR activities falling within the rule, thereby enhancing key operational elements such as efficiency, safety, reliability, and environmental performance.”⁸⁸

III. THE FIRST INTERPRETATION PROBLEMS

Two prominent early cases interpreting the CAA are *ASARCO Inc. v. United States Environmental Protection Agency*⁸⁹ and *Alabama Power I.*⁹⁰ In *ASARCO*, a mining corporation and the Sierra Club challenged regulations issued by the EPA.⁹¹ The new regulations used the “bubble concept” for the NSPS program.⁹² The D.C. Court of Appeals explained the concept as follows:

The “bubble concept” is based on defining a stationary source as a combination of facilities, such as an entire plant, and applying the NSPSs only when a new plant is constructed or when an existing plant is physically or operationally changed in such a way that net emissions of any pollutant from the entire plant increase. If applied consistently, the bubble concept would allow the operator of an existing plant to avoid application of the strict NSPSs by offsetting any increase in pollution caused by a

⁸⁴ See PSD and NSR: Routine Maintenance, Repair and Replacement, 67 Fed. Reg. 80,290, 80,293 (Dec. 31, 2002) (to be codified at 40 C.F.R. pts. 51 and 52).

⁸⁵ PSD and NSR: Equipment Replacement Provision of the Routine Maintenance, Repair and Replacement Exclusion, 68 Fed. Reg. 61,248, 61,250 (Oct. 27, 2003) (to be codified at 40 C.F.R. pts. 51 and 52).

⁸⁶ *Id.* at 61,251.

⁸⁷ *Id.*

⁸⁸ *Id.*

⁸⁹ 578 F.2d 319 (D.C. Cir. 1978).

⁹⁰ 636 F.2d 323 (D.C. Cir. 1979).

⁹¹ *ASARCO*, 578 F.2d at 320–21.

⁹² *Id.* at 321.

change in the plant (*e.g.*, modification or replacement of an existing facility, or even addition of a new facility) against a decrease in pollution from other units within the plant as a whole.⁹³

The Sierra Club and ASARCO had vastly differing theories of why the concept should be discarded by the court. ASARCO argued that “the bubble concept must be applied to allow emission increases from reconstruction and new construction to be offset.”⁹⁴ The regulations in place before the occurrence of the lawsuit imposed NSPS regulations on only newly constructed facilities.⁹⁵ On the other hand, the Sierra Club argued that the “bubble concept” should be completely discarded because the CAA specifically defines a “source” as “an individual facility, as distinguished from a combination of facilities such as a plant.”⁹⁶

Ultimately, the court agreed with the Sierra Club.⁹⁷ The court sought to prevent companies from delaying the implementation of new technology and maintaining current emission levels.⁹⁸ The court noted additionally that the bubble concept formed a pervasive inconsistency throughout the CAA.⁹⁹ Finally, the concept also failed to serve the stated purpose of providing flexibility to operators of facilities.¹⁰⁰

A case decided shortly after *ASARCO—Alabama Power I*—reached exactly the opposite conclusion with regard to the PSD statutory scheme. The landmark decision contained rulings by three different judges in the D.C. Court of Appeals.¹⁰¹ The case originated in challenges by the Alabama Power Company to regulations promulgated by the EPA.¹⁰² The opinions issued by the judges came before them on “narrowly focused petitions for reconsideration.”¹⁰³ Circuit Judge Wilkey wrote the opinion relevant to this Comment, discussing the definition of “source.”¹⁰⁴

⁹³ *Id.* at 322 (emphasis omitted).

⁹⁴ *Id.* at 325.

⁹⁵ *See id.*

⁹⁶ *Id.* (emphasis omitted).

⁹⁷ *Id.* at 327–28.

⁹⁸ *Id.* at 328.

⁹⁹ *Id.*

¹⁰⁰ *Id.* at 328–29.

¹⁰¹ *Ala. Power Co. v. Costle*, 636 F.2d 323, 343 (D.C. Cir. 1979).

¹⁰² *Id.*

¹⁰³ *Id.*

¹⁰⁴ *Id.* at 394.

Judge Wilkey allowed the inconsistency between the NSPS and PSD programs to survive because: “EPA has latitude to adopt definitions of the component terms of ‘source’ that are different in scope from those that may be employed for NSPS and other clean air programs, due to differences in the purpose and structure of the two programs.”¹⁰⁵

In sum, the court used semantic arguments, the structure of the statutes, and the legislative intent regarding the purpose of enacting the statute to determine the definition of terms. The legislative intent factor was most determinative in this case because the court found that “Congress clearly envisioned that entire plants could be considered single ‘sources.’”¹⁰⁶

These two cases read together indicate that “stationary source,” when applied in the NSPS context, means the emissions of an individual polluting part of a plant, not the entire facility. Meanwhile, the same term applied to a PSD setting means the emissions of the entire plant. Though the scheme is confusing, it has persisted for many years and is still applicable.

The case that has drawn the most controversy and has been differently cited is *Wisconsin Electric Power Co. v. Reilly*.¹⁰⁷ One of the old power plants owned by Wisconsin Electric Power Company [hereinafter WEPCO] in Port Washington, Wisconsin, needed “extensive” renovation to continue its operation.¹⁰⁸ The company designed the renovation projects to extend the lives of the units to continue operation.¹⁰⁹ Before completing the modernization projects, WEPCO asked the EPA if it would need NSPS or PSD permits.¹¹⁰ The EPA issued a memo to WEPCO indicating that the project would constitute a “physical change” significant enough to constitute a “modification.”¹¹¹ Therefore, WEPCO knowingly ignored recommendations and when it failed to properly install correct environmental controls.

¹⁰⁵ *Id.* at 397–98.

¹⁰⁶ *Id.* at 397.

¹⁰⁷ 893 F.2d 901 (7th Cir. 1990).

¹⁰⁸ *Id.* at 905. Specifically, air heaters and steam drums on the coal-firing units needed to be replaced. *Id.*

¹⁰⁹ *Id.* at 906.

¹¹⁰ *Id.*

¹¹¹ *See id.*

The court first noted how little of a project is necessary to constitute a physical change.¹¹² It insisted that this project involved a physical change because to hold otherwise would unravel the statutory scheme.¹¹³ The court noted that there were two distinct purposes between the NSPS and the PSD programs; therefore, the EPA could appropriately use different measurement techniques for the two statutory schemes.¹¹⁴ Specifically, it allowed the EPA to measure emissions by kg/hr for NSPS and total net emissions for PSD.¹¹⁵ By rejecting the routine maintenance exception for this case, it affirmed the EPA's interpretation of the situation.¹¹⁶ The EPA used four factors to evaluate whether the power plant's activity fell into the routine maintenance exemption: nature and extent, purpose, frequency, and cost of the work.¹¹⁷

For nature and extent, the court noted that WEPCO's activities were entirely unprecedented.¹¹⁸ The project replaced an entire unit of the power plant, not an individual part in the system.¹¹⁹ The court allowed the comparison of other units only to surmise whether the EPA's regulatory effort in this situation mirrored that of its past regulatory efforts.¹²⁰ Therefore, it used a deferential standard to EPA's interpretation of the exemption, and allowed the agency to construe it narrowly.¹²¹

The other three factors also led the court to conclude that the activities should not be considered to be routine maintenance.¹²² The company itself admitted that the purpose of the extensive renovation was to extend the lives of the units, and that such a renovation would normally only happen once or twice throughout the entire lives of the units.¹²³ It also admitted

¹¹² See *id.* at 909 ("Were we to hold that the replacement of major generating station systems—including steam drums and air heaters—does not constitute a physical change (and is therefore not a modification), the application of NSPS and PSD to important facilities might be postponed into the indefinite future.").

¹¹³ *Id.*

¹¹⁴ *Id.* at 904–05.

¹¹⁵ See *id.*

¹¹⁶ See *id.* at 911–13.

¹¹⁷ *Id.* at 910.

¹¹⁸ See *id.* at 911.

¹¹⁹ *Id.*

¹²⁰ See *id.*

¹²¹ See *id.*

¹²² *Id.*

¹²³ *Id.* at 912.

that it had never replaced such items before.¹²⁴ Finally, “the Port Washington renovation project [would] cost at least \$70.5 million.”¹²⁵ The court found this fact influential in reaching its nonroutine project conclusion.¹²⁶

This decision lasted for several years until the Justice Department filed a rash of lawsuits in 1999.¹²⁷ A discussion of the general fact pattern of five of these recent cases is appropriate here.¹²⁸ Utility companies owning power plants built before the NSPS and PSD CAA Amendments sought to modernize their plants.¹²⁹ Such modernization procedures allowed the plants to operate for more hours of the day, even though they did not

¹²⁴ *Id.*

¹²⁵ *Id.*

¹²⁶ *See id.*

¹²⁷ On November 3, 1999,

[t]he Justice Department, on behalf of the EPA, . . . filed seven lawsuits against electric utility companies in the Midwest and South, . . . [alleging] that the electric utility companies—American Electric Power, Cinergy, FirstEnergy, Illinois Power, Southern Indiana Gas & Electric Company, Southern Company, Tampa Electric Company—or their subsidiaries, and the TVA, violated the Clean Air Act by making major modifications to many of their plants without installing the equipment required to control smog, acid rain and soot.

Press Release, U.S. Department of Justice, U.S. Sues Electric Utilities in Unprecedented Action to Enforce the Clean Air Act (Nov. 3, 1999), <http://www.usdoj.gov/opa/pr/1999/November/524enr.htm>; *see also* Korostash, *supra* note 2, at 306; Reitze, *supra* note 1, at 389.

¹²⁸ Again, the five cases are: *Envtl. Def. v. Duke Energy Corp.*, 127 S. Ct. 1423 (2007); *New York v. Env'tl. Prot. Agency*, 443 F.3d 880 (D.C. Cir. 2006); *New York v. U.S. Env'tl. Prot. Agency*, 413 F.3d 3 (D.C. Cir. 2005); *United States v. Ala. Power Co.*, 372 F. Supp. 2d 1283 (N.D. Ala. 2005); *United States v. Ohio Edison Co.*, 276 F. Supp. 2d 829 (S.D. Ohio 2003).

¹²⁹ *United States v. Duke Energy Corp.*, 411 F.3d 539, 542–44 (4th Cir. 2005); *Ala. Power Co.*, 372 F. Supp. 2d at 1285; *Ohio Edison Co.*, 276 F. Supp. 2d at 839. *New York I* involved a facial challenge to the statutes involved in the other cases, so no fact pattern was presented in the case. *New York*, 413 F.3d at 10. The court considered many of the same issues as the other cases, however, and will therefore be analyzed along with them. *See id.* at 18–27. *New York II* had a similar procedural posture to *New York I*; it consisted of challenges to the second rule promulgated at the same time as the rule at issue in *New York I*. *New York*, 443 F.3d at 883. The case focused primarily on the physical change and routine maintenance issues. *See id.* at 883–85.

necessarily increase the per hour emissions rate.¹³⁰ None of the utility companies obtained NSPS or PSD permits, probably because they did not want to use the technologies required for such emissions reductions.¹³¹ Such technologies would be an extra expense that would not fit into the profitability of the power plants. The lawsuits sought to assign them liability for failure to obtain the appropriate permits.

IV. FIVE RECENT CASES IN STRUCTURED FRAMEWORK

Ohio Edison Co., *Duke Energy Corp.*, *Alabama Power II*, *New York I*, and *New York II* serve as paradigms for NSPS and PSD enforcement actions. The decisions have varying results and methods of analysis.¹³² First, the facts and procedural postures of each case will be discussed in turn. Then, a new structural framework will be offered. Each case will be discussed as it fits into my proposed five question framework.

In *Duke Energy*, the United States brought an enforcement action against Duke Energy Corporation.¹³³ The corporation used eight plants to generate electricity for North Carolina and South Carolina.¹³⁴ The action alleged that “Duke Energy on numerous occasions modified these plants without first obtaining appropriate permits in violation of the Clean Air Act.”¹³⁵ Specifically, in the years between 1988 and 2000, “Duke Energy engaged in twenty-nine projects on the coal-fired generating units, most of which consisted of replacing and/or redesigning one or more of the boiler

¹³⁰ See *Duke Energy Corp.*, 411 F.3d at 544–45; *Ala. Power Co.*, 372 F. Supp. 2d at 1291; *Ohio Edison Co.*, 276 F. Supp. 2d at 835–49.

¹³¹ See *id.* at 835 (“[P]reconstruction approval, which was never sought, was required by law.”).

¹³² Indeed, differences in opinion among the circuit courts have led to a split in the circuits. See *United States v. Cineroy Corp.*, 458 F.3d 705, 710 (7th Cir. 2006). On May 15, 2006, the Supreme Court granted certiorari to the United States Court of Appeals for the Fourth Circuit to resolve the *Duke Energy* case. See *Envtl. Def. v. Duke Energy Corp.*, 126 S. Ct. 2019 (2006). The Supreme Court ruled on the case on April 2, 2007, marking the first time that the Court has contributed to this area of the law. See *Envtl. Def. v. Duke Energy Corp.*, 127 S. Ct. 1423 (2007).

¹³³ *Duke Energy Corp.*, 411 F.3d at 542.

¹³⁴ *Duke Energy Corp.*, 127 S. Ct. at 1430.

¹³⁵ *Duke Energy Corp.*, 411 F.3d at 542.

tube assemblies.”¹³⁶ The projects carried immense expense, costing many times more than the original units.¹³⁷

The facts in *Ohio Edison* are quite similar. The opinion, however, analyzed the problem in markedly greater detail than the *Duke Energy* court of appeals or district court opinions.¹³⁸ A major difference from *Duke Energy* was the fact that the decision involved only one plant: the Sammis Plant, situated along the Ohio River in Jefferson County, Ohio.¹³⁹ The case involved “eleven construction projects at the seven Sammis Units. The total cost of the projects was approximately \$136.4 million.”¹⁴⁰ Ohio Edison Company replaced many different plant components.¹⁴¹

Alabama Power II made no qualms about its comparisons to the other cases.¹⁴² The court makes these analogizes despite a lack of any discussion of the construction done by Alabama Power or any factual comparison to the other cases.¹⁴³ Nevertheless, it reached many of the same legal issues.¹⁴⁴ However, these issues were addressed differently in the opinion,

¹³⁶ *Id.* at 544. These projects were done “to extend the life of the units and allow them to run longer each day.” *Duke Energy Corp.*, 127 S. Ct. at 1430.

¹³⁷ *See Duke Energy Corp.*, 411 F.3d at 544.

¹³⁸ This fact is largely the cause of the greater persuasiveness and thoroughness of the court’s holding and rationale.

¹³⁹ *United States v. Ohio Edison Co.*, 276 F. Supp. 2d 829, 835 (S.D. Ohio 2003).

¹⁴⁰ *Id.* at 834.

¹⁴¹ *See id.* at 840. The opinion includes a detailed description of the replaced parts:

The parts that were replaced were both pressure and non-pressure components. The pressure parts of the Sammis boilers include the furnace water wall tubes, economizer tubes, superheater tubes and reheater tubes. The economizer, superheater and reheater function as heat exchangers with water or steam flowing on the inside and the hot boiler combustion gases passing on the outside. The non-pressure parts are comprised of burners, coal pipes, pulverizers and low pressure turbine rotors.

Id. (citations omitted).

¹⁴² “This CAA enforcement action is similar, if not identical, to a number of other November, 1999, CAA enforcement actions brought by EPA against other regional utilities (e.g. Ohio Edison, Southern Indiana Gas and Electric, and Duke Energy) in the midwestern and southeastern United States.” *United States v. Ala. Power Co.*, 372 F. Supp. 2d 1283, 1285 (N.D. Ala. 2005).

¹⁴³ *See generally id.*

¹⁴⁴ *Id.*

and thus its scope is contained in different parts of the five-question framework below.

In *New York I*, industry, government, and environmental officials challenged the 2002 final rule promulgated by the EPA.¹⁴⁵ The challengers petitioned the United States Court of Appeals, District of Columbia Circuit, for review of the rule.¹⁴⁶ Even though the procedural posture of this case differed from that of the other cases, the decision reached many of the same issues, and therefore can be put in the same analytical framework with the other cases.

New York II focused on the Equipment Replacement Provision (ERP) of the routine maintenance exemption.¹⁴⁷ Environmental groups and governmental entities challenged the act, claiming that the EPA exceeded its authority in expanding the routine maintenance exception.¹⁴⁸ The court agreed with the challengers and vacated the ERP.¹⁴⁹

Each question will now be addressed, with relevant parts of each opinion used whenever they apply. Important statutory-interpretation Supreme Court precedents are also discussed. Then, the courts' answers to each question will be analyzed. Finally, the answers will be synthesized to create the best answer to the power-plant-modification problem.

A. How should "modification" be construed in the PSD context?

The threshold issue of deciding which definition to use for the term "modification" was enough for the Fourth Circuit Court of Appeals in *Duke Energy* to make a final ruling in favor of industry.¹⁵⁰ It reached this conclusion by finding that, because Congress incorporated the definition of "modification" from the NSPS program into the PSD statutes, the EPA must interpret the definition in the same way.¹⁵¹ This includes the measurement technique; because it uses the per hour method in the NSPS program, it must also do so in the PSD program.¹⁵² When it applied this principal to the case before it, the per hour test did not result in an increase

¹⁴⁵ *New York v. U.S. Env'tl. Prot. Agency*, 413 F.3d 3, 10 (D.C. Cir. 2005).

¹⁴⁶ *Id.*

¹⁴⁷ *New York v. Env'tl. Prot. Agency*, 443 F.3d 880, 883 (D.C. Cir. 2006).

¹⁴⁸ *Id.* at 884.

¹⁴⁹ *Id.* at 890.

¹⁵⁰ *United States v. Duke Energy Corp.*, 411 F.3d 539, 551 (4th Cir. 2005). That method was later rejected by the Supreme Court. *See Env'tl. Def. v. Duke Energy Corp.*, 127 S. Ct. 1423, 1433–34 (2007).

¹⁵¹ *Duke Energy Corp.*, 411 F.3d at 551.

¹⁵² *Id.* at 550.

in emissions.¹⁵³ Therefore, the plant did not need to obtain preconstruction permits.¹⁵⁴

To see how the court reached this conclusion, a study of two Supreme Court cases is required. In *Rowan Cos. v. United States*,¹⁵⁵ the Supreme Court ruled on a tax case involving the definition of “wages” in different tax provisions.¹⁵⁶ An employer allowed its workers on an offshore oil and gas rig to eat and sleep on the rigs during ten-hour tours of duty, rather than transporting the workers back and forth from the mainland for each work shift.¹⁵⁷ None of the workers included the cost of the meals and lodging as wages in their tax returns.¹⁵⁸ Two different types of taxes were implicated: the Federal Insurance Contributions Act (FICA) and the Federal Unemployment Tax Act (FUTA).¹⁵⁹ The Internal Revenue Service (IRS) performed an audit and “included the fair value of the meals and lodging in the employees’ ‘wages’ for the purpose of FICA and FUTA, but not for the purpose of income-tax withholding under § 3402 (a).”¹⁶⁰

The basis for the Service’s action was consistent “with the present Treasury Regulations that interpret[ed] the definition of ‘wages’ in FICA and FUTA to include the value of these meals and lodging, whereas the substantially identical definition of ‘wages’ in § 3401 (a) is interpreted by Treasury Regulations to exclude this value.”¹⁶¹ The workers challenged the IRS’s interpretation of the regulations and sought a refund.¹⁶² The issue before the Court, therefore, was whether it must interpret the term “wages” in the same way in FICA as in FUTA.¹⁶³

The Court proceeded to analyze the statutory scheme, and found that “wages” should be interpreted identically in both taxes.¹⁶⁴ The Court cited the fact that Congress consistently used the term for several different

¹⁵³ *See id.* at 545.

¹⁵⁴ *Id.*

¹⁵⁵ 452 U.S. 247 (1981).

¹⁵⁶ *Id.* at 248.

¹⁵⁷ *Id.* at 248–49.

¹⁵⁸ *Id.* at 249.

¹⁵⁹ *Id.*

¹⁶⁰ *Id.* at 249–50.

¹⁶¹ *Id.* at 250.

¹⁶² *Id.*

¹⁶³ *Id.*

¹⁶⁴ “In view of this sequence of consistency, the plain language of the statutes is strong evidence that Congress intended ‘wages’ to mean the same thing under FICA, FUTA, and income-tax withholding.” *Id.* at 255.

aspects of the Tax Code.¹⁶⁵ It then indicated that the legislative history supports this same result.¹⁶⁶ Congress was concerned with “the interest of simplicity and ease of administration.”¹⁶⁷ The Court noted, “It would be extraordinary for a Congress pursuing this interest to intend, without ever saying so, for identical definitions to be interpreted differently.”¹⁶⁸ The Court held that, for this particular statutory scheme, the term “wages” must have a standard interpretation.¹⁶⁹

*Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc.*¹⁷⁰ also involved the interpretation of “stationary source” and, again, the “bubble concept.”¹⁷¹ The *Chevron* analysis has two parts: “First, always, is the question whether Congress has directly spoken to the precise question at issue. If the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress.”¹⁷² The Court used this analytical framework to conclude “that the EPA’s definition of the term ‘source’ is a permissible construction of the statute which seeks to accommodate progress in reducing air pollution with economic growth.”¹⁷³

Duke Energy used the *Chevron* analysis to determine that it was in fact “the end of the matter.”¹⁷⁴ Congress mandated that “modification” be used in the same way since it was incorporated in the statute.¹⁷⁵ The court

¹⁶⁵ *Id.*

¹⁶⁶ *Id.* at 255–56.

¹⁶⁷ *Id.* at 255.

¹⁶⁸ *Id.* at 257.

¹⁶⁹ *See id.* at 263.

¹⁷⁰ 467 U.S. 837 (1984).

¹⁷¹ “The question presented by these cases is whether EPA’s decision to allow States to treat all of the pollution-emitting devices within the same industrial grouping as though they were encased within a single ‘bubble’ is based on a reasonable construction of the statutory term ‘stationary source.’” *Id.* at 840.

¹⁷² *Id.* at 842–43.

¹⁷³ *Id.* at 866.

¹⁷⁴ *United States v. Duke Energy Corp.*, 411 F.3d 539, 547 n.3 (4th Cir. 2005), *cert. granted*, 126 S. Ct. 2019 (2006) (quoting *Chevron*, 467 U.S. at 842).

¹⁷⁵ The court also used the precedent of two past environmental decisions, distinguishing the following statement:

PEPCo and *Northern Plains Resource Council* illustrate the principle that the same word or phrase will generally be presumed to have the same meaning when used in different parts of the statute, but this “presumption of the uniform usage . . . relents” when there is “a

(continued)

emphasized this principle: “[T]he presumption of uniform usage has become effectively irrebutable because Congress’ decision to create identical statutory definitions of the term ‘modification’ has affirmatively mandated that this term be interpreted identically in the two programs.”¹⁷⁶ This included the measurement technique.¹⁷⁷

The *Duke Energy* court used the exact same definition for “modification” and identical kg/hr measurement methods for NSPS and PSD.¹⁷⁸ Each program was triggered when the rate of emissions increased as a result of a physical change to a power plant.¹⁷⁹ Thus, industry could significantly increase the number of hours it uses its power plants at will without having to use the technology mandated by the EPA. Whenever the government brings an enforcement action under the precedent of this decision, the NSPS definition of modification must be used.

The Supreme Court rejected the approach of the Fourth Circuit Court of Appeals and prevented industry from using that argument in the future.¹⁸⁰ The Court did not accept an effort to construe PSD regulations as matching with NSPS because doing so would be “an implicit declaration that the PSD regulations were invalid as written.”¹⁸¹

The Court found that the Court of Appeals too rigidly applied the rule of construction requiring the EPA to maintain the same definition of “modification.”¹⁸² In doing so, the court mischaracterized the presumption of identical meaning as “effectively irrebutable.”¹⁸³ The Court cited a prior case stating that the presumption of identical meaning “is not rigid and readily yields whenever there is such variation in the connection in which the words are used as reasonably to warrant the conclusion that they were employed in different parts of the act with different intent.”¹⁸⁴

variation in the connection in which the words are used as reasonably to warrant the conclusion that they were employed in different parts of the act with different intent.”

Id. at 550.

¹⁷⁶ *Id.*

¹⁷⁷ *Id.*

¹⁷⁸ *Id.*

¹⁷⁹ *Id.*

¹⁸⁰ *Env'tl. Def. v. Duke Energy Corp.*, 127 S. Ct. 1423, 1433, 1436 (2007).

¹⁸¹ *Id.* at 1432.

¹⁸² *Id.*

¹⁸³ *Id.*

¹⁸⁴ *Id.* (quoting *Atlantic Cleaners & Dyers, Inc. v. United States*, 424 U.S. 427, 433 (1932)).

To defeat the court's use of *Rowan* to reach its ultimate result, the Court cited the compatible case of *Robinson v. Shell Oil Company*, which more comfortably fits the facts here.¹⁸⁵ In *Robinson*, the Court analyzed whether "employees" in the Civil Rights Act included former employees.¹⁸⁶ The governing principle of interpretation, according to the Court, was the context of the term.¹⁸⁷ Such context "gives the term a further meaning that would resolve the issue in dispute."¹⁸⁸

The *Duke Energy* Court ruled that the *Robinson* case, besides being merely the later case, was also compatible with *Rowan*.¹⁸⁹ In *Rowan*, the Court interpreted "wages" also according to the context of the act.¹⁹⁰ In that case, the context was different, however.¹⁹¹ In that situation, the act was written out of "congressional concern for the interest of simplicity and ease of administration."¹⁹² Because the same interpretation of "wages" better served the ease of administration, the Court used that identical definition.¹⁹³ The presumption of using the same meaning in different parts of the act, then, was not "effectively irrebuttable."¹⁹⁴

¹⁸⁵ *Id.*

¹⁸⁶ *Robinson v. Shell Oil Co.*, 519 U.S. 337, 339 (1997).

¹⁸⁷ *Id.* at 343–44.

¹⁸⁸ *Id.* at 344.

¹⁸⁹ *Duke Energy Corp.*, 127 S. Ct. at 1433.

¹⁹⁰ *Id.*

¹⁹¹ *Id.*

¹⁹² *Id.* (quoting *Rowan Cos. v. United States*, 452 U.S. 247, 255 (1981) (internal quotation marks omitted)).

¹⁹³ *Id.* (citing *Rowan Cos.*, 452 U.S. at 255). The Court also cited *United States v. Cleveland Indians Baseball Co.* in support of its ruling. 532 U.S. 200 (2001). In that case, according to the Court:

We rejected the notion that using the phrase 'wages paid' in both 'the discrete taxation and benefits eligibility contexts' can, standing alone, 'compel symmetrical constructions'; we gave 'substantial judicial deference' to the 'long-standing,' 'reasonable,' and differing interpretations adopted by the Internal Revenue Service in its regulations and Revenue Rulings.

Duke Energy Corp., 127 S. Ct. at 1433 (quoting *Cleveland Indians Baseball Co.*, 532 U.S. at 213, 218–20 (internal citations omitted)).

¹⁹⁴ *Duke Energy Corp.*, 127 S. Ct. at 1432 (quoting *United States v. Duke Energy Corp.*, 411 F.3d 539, 550 (4th Cir. 2005)).

In other words, according to the Court, “[c]ontext counts.”¹⁹⁵ The Court used this context to allow the EPA to use different definitions of “modification” for NSPS and PSD.¹⁹⁶ In the words of the Court: “Absent any iron rule to ignore the reasons for regulating PSD and NSPS ‘modifications’ differently, EPA’s construction need do no more than fall within the limits of what is reasonable, as set by the Act’s common definition.”¹⁹⁷

New York I used statutory construction principles differently. The court did not accept the incorporation theory of the lower court *Duke Energy* opinion quite as easily.¹⁹⁸ This opinion was not in a direct conversation with *Duke Energy*; in fact, it “express[ed] no opinion as to whether Congress intended to require that EPA use identical regulatory definitions of modification across the NSPS and NSR programs.”¹⁹⁹ Strong language indicates that if it had to rule on such a question, it would not follow the *Duke Energy* court’s approach. The court noted that it was by no means clear the way the EPA defined “modification” at the time of

¹⁹⁵ *Id.* at 1433.

¹⁹⁶ *See id.* at 1433–34.

¹⁹⁷ *Id.* at 1434 (citation omitted). It is worth mentioning that this decision was unanimous, with Justice Thomas concurring in part. *Id.* at 1437–38 (Thomas, J., concurring). According to Justice Thomas,

The majority opinion does little to overcome the presumption that the same words, when repeated, carry the same meaning. Instead, it explains that this Court’s cases do not compel identical language to be interpreted identically in all situations. Granting that point, the majority still has the burden of stating why our general presumption does not control the outcome here. It has not done so.

Id. at 1438.

¹⁹⁸ *New York v. U.S. Env’tl. Prot. Agency*, 413 F.3d 3, 20 (D.C. Cir. 2005).

¹⁹⁹ *Id.* In the text of the decision, the court uses a “Cf.” signal when citing *United States v. Duke Energy*. *See id.* This indicates a subtle intent to distance itself from that opinion. Another recent opinion, however, directly rejected the reasoning in *Duke Energy*. *See United States v. Cinergy Corp.*, 458 F.3d 705, 710 (7th Cir. 2006). That case ruled that the “statutory amendment does not purport to incorporate the agency’s regulatory definition of modifications under the New Source Performance Standards into the provisions relating to the Prevention of Significant Deterioration program.” *Id.* Judge Posner reinforced that idea later in the opinion, when he wrote, “Because many words have multiple meanings, the same word might well be used in one sense in one part of a statute and another sense in another.” *Id.*

the NSPS program.²⁰⁰ Therefore, Congress did not expressly adopt one particular method of measuring emissions from that NSPS program.²⁰¹ The court went on to apply the different measurement operations for NSPS and PSD.²⁰² Thus, this decision is more closely in line with the Supreme Court.

The *Alabama Power II* court spent a large portion of the opinion preaching about the need for deference to an agency's interpretation of the statutory authority underlying it.²⁰³ Then, in a confusing bit of logic, it ignored that general trend with the following statement: "It is fair to assume generally that Congress contemplates administrative action with the effect of law when it provides for a relatively formal administrative procedure tending to foster the fairness and deliberation that should underlie a pronouncement of such force."²⁰⁴ The court was very willing to strike down the EPA's methods. It ruled, "Emission increases, for purposes of NSR/PSD analysis, are calculated only on the basis of 'maximum hourly emission rates,' not 'annual actual emissions'. Maximum hourly emissions must increase before PSD permitting is triggered; greater annual facility utilization is irrelevant to the analysis."²⁰⁵ Thus, the court agreed with the lower *Duke Energy* court, but not with the Supreme Court in finding that only the definition and regulatory scheme for NSPS was needed in these types of enforcement actions.²⁰⁶

²⁰⁰ *New York*, 413 F.3d at 20.

²⁰¹ *See id.*

²⁰² *Id.*

²⁰³ One example of the deferential language is: "In general, reviewing courts typically grant substantial deference to the EPA's interpretation of the CAA Amendments and its implementing regulations. The reasoning behind this deferential review is that 'considerable weight should be accorded to an executive department's construction of a statutory scheme it is entrusted to administer.'" *United States v. Ala. Power Co.*, 372 F. Supp. 2d 1283, 1301 (N.D. Ala. 2005) (quoting *Chevron U.S.A. Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837, 844 (1984)). The court also encouraged deference to agency interpretation "where the subject being regulated is technical and complex." *Id.* (citing *Aluminum Co. of Am. v. Cent. Lincoln Peoples' Util. Dist.*, 467 U.S. 380, 390 (1984)).

²⁰⁴ *Id.* at 1303-04.

²⁰⁵ *Id.* at 1307.

²⁰⁶ *Id.* at 1309.

Like the Supreme Court, *Ohio Edison* treated the NSPS and PSD programs differently.²⁰⁷ It found that a statutory construction in which the definition is the same is not necessary here.²⁰⁸ Congress intended for different programs with entirely different purposes that can be measured by the EPA with different measurement techniques.²⁰⁹

Now, the resolutions of the cases will be discussed. The court in *Duke Energy* immediately resolved the case at bar on purely statutory grounds with the incorporation reasoning discussed above.²¹⁰ The Supreme Court confirmed that this reasoning was incorrect, rejecting the argument that the EPA must use the same definition of “modification” in NSPS and PSD.²¹¹ Because of this ruling, courts faced with such a problem should use the appropriate definition and measuring technique that is relevant to the regulation imposed by the EPA. That is, if the EPA is attempting to regulate using NSPS, it should use the tons-per-year unit of emissions, and if it uses PSD, it should calculate the emissions based on tonnage per year.

The lower court’s *Chevron* analysis was incorrect. As the United States brief to petition the court for a rehearing shows, the court did not use the precedent of the *Alabama Power I* and *Potomac Electric Power Co. v. Environmental Protection Agency*²¹² correctly.²¹³ A significant error was

²⁰⁷ The difference that the court finds between the two programs is evident when comparing their measurement techniques. See *United States v. Ohio Edison Co.*, 276 F. Supp. 2d 829, 875 (S.D. Ohio 2003).

²⁰⁸ See *id.*

²⁰⁹ See *id.*

²¹⁰ *United States v. Duke Energy Corp.*, 411 F.3d 539, 550 (4th Cir. 2005), *cert. granted*, 126 S. Ct. 2019 (2006).

²¹¹ *Env’tl. Def. v. Duke Energy Corp.*, 127 S. Ct. 1423, 1434 (2007).

²¹² 650 F.2d 509 (4th Cir. 1981). The case involved a challenge by Potomac Electric Power Company (PEPCO) of a decision by the EPA to subject one of the company’s boilers to NSPS regulations. *Id.* at 510. The court ruled on interpretations of several definitions found in NSPS:

Our own interpretation, to the contrary, effectuates the congressional purpose in enacting the NSPS provisions by broadening the scope of examination of “construction” of an “affected facility” to include “contractual obligations” for the construction of facilities essential to the eventual “erection” and “installation” of an “affected facility.”

Id. at 519–20. The court also ruled that the EPA regional administrator’s decision denying an exemption to PEPCO was not “an abuse of discretion inasmuch as our correction of the flaws does not change the ultimate result.” *Id.* at 520.

the court's ruling that the EPA could not interpret components of the definition of "modification" differently in two different statutory contexts. Both of the decisions suggested by the United States as precedent indicate that this conclusion is incorrect.²¹⁴

Alabama Power I expressly ruled that an agency such as the EPA has the ability to interpret the same term differently in separate places in the United States Code.²¹⁵ In fact, this decision was directly on point: "EPA has latitude to adopt definitions of the component terms of 'source' that are different in scope from those that may be employed for NSPS and other clean air programs, due to differences in the purpose and structure of the two programs."²¹⁶ The *Potomac Electric Power Co.* court used the same rule, applied in the interpretation of the term "stationary source."²¹⁷

Logic is stretched past the breaking point to conclude that Congress expressly intended for the EPA to operate complicated statutory provisions with specific increase measurement techniques in mind.²¹⁸ Indeed, this type of situation falls under the deferential principle that gives agencies the latitude to interpret statutory language for technical matters.²¹⁹ A basic reading of the statutes indicates no technical calculation direction from Congress.²²⁰ The court should have passed to the second stage of the *Chevron* analysis and determined whether or not the EPA's usage of the measurement of tons per year was a permissible construction of the statute. The statute requires only an increase of emissions for the technology requirement to apply.²²¹ Therefore, the court should have construed the statute to have this meaning. Agencies are the only governmental body equipped to determine the best measurement tool for technical data.

²¹³ See United States' Petition for Panel Rehearing and Petition for Rehearing En Banc, *United States v. Duke Energy Corp.*, 411 F.3d 539 (4th Cir. 2005) (No. 04-1763).

²¹⁴ See *id.*

²¹⁵ *Ala. Power Co. v. Costle*, 636 F.2d 323, 397-98 (D.C. Cir. 1979).

²¹⁶ *Id.*

²¹⁷ *Potomac Elec. Power Co. v. Env'tl. Prot. Agency*, 650 F.2d 509, 518 (4th Cir. 1981). "The EPA has, we believe, pointed out a significant difference between the PSD and NSPS programs that justifies a different construction of the definition of 'stationary source' that is to be applied to the two programs." *Id.*

²¹⁸ *United States v. Duke Energy Corp.*, 411 F.3d 539, 550 (4th Cir. 2005), *cert. granted*, 126 S. Ct. 2019 (2006).

²¹⁹ See *Chevron U.S.A. Inc. v. Natural Res. Def. Council*, 467 U.S. 837, 865-66 (1984).

²²⁰ See *id.* at 864.

²²¹ See 42 U.S.C. § 7411(a)(4) (2000).

Chevron contained support for the proposition that technical matters should be left for the experts in an executive agency:

Judges are not experts in the field, and are not part of either political branch of the Government. Courts must, in some cases, reconcile competing political interests, but not on the basis of the judges' personal policy preferences. In contrast, an agency to which Congress has delegated policymaking responsibilities may, within the limits of that delegation, properly rely upon the incumbent administration's views of wise policy to inform its judgments. While agencies are not directly accountable to the people, the Chief Executive is, and it is entirely appropriate for this political branch of the Government to make such policy choices—resolving the competing interests which Congress itself either inadvertently did not resolve, or intentionally left to be resolved by the agency charged with the administration of the statute in light of everyday realities.²²²

Opposing Court of Appeals opinions are clearly invalidated under the new Supreme Court opinion because they come to the opposite conclusion. Courts should follow the new precedent to allow the EPA to appropriately regulate new source polluters. Otherwise, the judicial branch of government will be forced into an overly active role for which it is not equipped. Though the Supreme Court opinion did not mention *Chevron*, clearly its principals apply to allow the EPA to regulate new source polluters with the definition of “modification” of its choosing.

For its statutory construction result, the lower *Duke Energy* court used more than just the *Chevron* decision. It also used the precedent set in *Rowan Cos., Inc. v. United States*.²²³ But the court refused to consider the fact that *Chevron* was decided later than *Rowan*.²²⁴ The court also did not take into account other statutory construction precedent used by the

²²² *Chevron*, 467 U.S. at 865–66. *Accord* *United States v. Cinergy Corp.*, 458 F.3d 705, 711 (7th Cir. 2006) (“[A] vague statutory term in a regulatory statute can operate as a delegation to the regulatory agency to supply meaning.”).

²²³ *Duke Energy Corp.*, 411 F.3d at 547. “When Congress mandates that two provisions of a single statutory scheme define a term identically, the agency charged with administering the statutory scheme cannot interpret these identical definitions differently.” *Id.* at 546–47.

²²⁴ *Id.* at 548 n.6.

Supreme Court, including *Robinson v. Shell Oil Co.* and *United States v. Cleveland Indians Baseball Co.*²²⁵ Instead of distinguishing the two decisions or discussing how they interplay, the court disposed of the comparison in a footnote.²²⁶ Clearly, the court stretched for an argument that *Rowan* should apply more than *Chevron*. Indeed, *Chevron* was decided three years later and seems to give a different method of statutory interpretation than *Rowan*.²²⁷ Therefore, the *Chevron* analysis should be performed without the use of *Rowan*, or the cases cited by the Supreme Court should take precedence over using *Rowan* alone.

Moreover, the court primarily ignored the obviously important fact that the Congressional purposes for the NSPS and PSD programs are different.²²⁸ The Supreme Court confirmed this fact in a different way, ruling that there must be a clear purpose evident from Congress to treat the definition as identical across various parts of the Act.²²⁹ Indeed, other

²²⁵ See *Env'tl. Def. v. Duke Energy Corp.*, 127 S. Ct. 1423, 1432–33 (2007).

²²⁶ See *Duke Energy Corp.*, 411 F.3d at 548 n.6. In the footnote, the court explained: “We note that the standards of judicial review followed in *Rowan* differ somewhat from those established three years later in *Chevron* This difference does not in any way lessen the precedential value of *Rowan* here.” *Id.*

²²⁷ *Id.*

²²⁸ See *supra* text accompanying notes 52–54. The discussion of the purposes in *New York I* is also helpful. According to the court, the purpose of the NSPS program is to include in the CAA sources that are newly built or modified so that they are not permanently outside of its scope. *New York v. U.S. Env'tl. Prot. Agency*, 413 F.3d 3, 12 (D.C. Cir. 2005). Meanwhile, the court noted that PSD was originally enacted by the EPA because the agency was “[s]eeking to prevent backsliding in regions whose air quality met NAAQS.” *Id.* at 12. Judge Posner of the Seventh Circuit has recently weighed in on the issue:

The New Source Performance Standards part of the Act, the older part, imposes specific technical requirements on polluters, and it is natural therefore that “modification” in that part of the Act should refer to physical changes in the plant. The Prevention of Significant Deterioration part of the Act leans toward the more modern approach of limiting output (pollution) rather than inputs (technology), and so it is equally natural to interpret “modification” in that part more broadly in order to prevent opening a loophole that would allow pollution to soar unregulated.

Cinergy Corp., 458 F.3d at 710–11.

²²⁹ *Duke Energy Corp.*, 127 S. Ct. at 1433–34 (“Nothing in the text or the legislative history of the technical amendments that added the cross-reference to NSPS suggests that
(continued)

influential decisions concerning the Clean Air Act have used that as determinative. For instance, in *Northern Plains Resource Council v. United States Environmental Protection Agency*,²³⁰ the court noted key differences.²³¹ Such differences led the court to conclude that “the definition of ‘commenced’ for each of those programs need not be exactly the same.”²³² *Potomac Electric Power Co. v. United States Environmental Protection Agency* had a similar result: “The EPA has, we believe, pointed out a significant difference between the PSD and NSPS programs that justifies a different construction of the definition of ‘stationary source’ that is to be applied to the two programs.”²³³ In light of this directly applicable precedent, Congress clearly had different objectives in mind when it crafted the two statutory schemes to regulate these stationary sources. Forcing the EPA to interpret “modification” identically is illogical in light of the possibility that Congress simply did not want to waste time in ink-crafting two virtually identical definitions.

Congress had details of regulatory interpretation in mind when it imposed PSD requirements on modified sources; the cross-reference alone is certainly no unambiguous congressional code for eliminating the customary agency discretion to resolve questions about a statutory definition by looking to the surroundings of the defined term, where it occurs. . . . Absent any iron rule to ignore the reasons for regulating PSD and NSPS ‘modifications’ differently, EPA’s construction need do no more than fall within the limits of what is reasonable, as set by the Act’s common definition.” (citation omitted)).

²³⁰ 645 F.2d 1349 (9th Cir. 1981).

²³¹ The following excerpt is the court’s distinction between the NSPS and PSD programs:

The focus of the NSPS program under the EPA’s regulations is upon the “affected facility” component in a stationary source, *i.e.* the particular *apparatus* to which a standard is applied. 40 C.F.R. § 60.2(e) (1979). The NSPS program is therefore equipment oriented. On the other hand, the PSD program covers the whole stationary source, and focuses on where the plant will be located and its potential effect on environs. The PSD program is therefore site oriented.

Id. at 1356.

²³² *Id.*

²³³ *Potomac Elec. Power Co. v. Env’tl. Prot. Agency*, 650 F.2d 509, 518 (4th Cir. 1981). The example used by the court was the different position taken by the EPA of the interpretation of “construction” in that case as compared to its position in a prior case. *Id.* at 519.

Also, in the regulations, there are many statements by the EPA that contradict one another.²³⁴ These were made at different times by different EPA officials.²³⁵ If Congress meant to incorporate the definition of modification and all of the regulations that go along with it, what regulations did they mean to incorporate? The proper analysis is to proceed to the second stage of the *Chevron* analysis²³⁶ because Congress did not directly speak to the problem here.²³⁷ The court should then defer to the EPA's preference to use differing measurement techniques for the two programs, and the Supreme Court clearly dictates this course of action.

²³⁴ An example of a contradiction is the varying definitions for "modification" that appear in the regulations: "Given the two quite differently worded regulatory definitions of 'modification' *within* the NSPS program at the time of the 1977 amendments, it would take a rather pointed indication from Congress to support the idea that it expressly adopted one of them for NSR." *New York v. U.S. Env'tl. Prot. Agency*, 413 F.3d 3, 20 (D.C. Cir. 2005).

²³⁵ *See id.*

²³⁶ Here is the Supreme Court's language for the second stage of the analysis:

If, however, the court determines Congress has not directly addressed the precise question at issue, the court does not simply impose its own construction on the statute, as would be necessary in the absence of an administrative interpretation. Rather, if the statute is silent or ambiguous with respect to the specific issue, the question for the court is whether the agency's answer is based on a permissible construction of the statute.

Chevron U.S.A. Inc. v. Natural Res. Def. Council, 467 U.S. 837, 843 (1984).

²³⁷ Indeed, it did not have to act for a vague term like "modification." *See United States v. Cinergy Corp.*, 458 F.3d 705, 711 (7th Cir. 2006). According to the *Cinergy Corp.* court:

The New Source Performance Standards and Prevention of Significant Deterioration provisions of the Clean Air Act are at one in defining a modification as a physical change in a plant that results in an increase in emissions, but are silent on whether the increase is in the hourly rate of emissions or in some other rate. The task of deciding was left to the EPA. There was nothing to require that it flesh out the vague statutory meaning in the identical way in different parts of the Clean Air Act adopted years apart and reflecting, to an extent anyway, different philosophies of pollution control.

Id.

B. How should physical change or change in the method of operation be interpreted?

The *Wisconsin Electric Power Co. v. Reilly* court broadly interpreted “physical change.”²³⁸ The power company argued that it could replace major systems without falling into the “physical change” requirement.²³⁹ The court stated that holding that such replacements did not change the units physically would open the facility to immunity, because it could replace aging systems at will without being subject to the more stringent technology requirements.²⁴⁰ By performing replacements as needed, plants could conceivably permanently avoid the programs.²⁴¹

Ohio Edison clarified the standard by offering a more concrete analysis. The court found a physical change when the company “changed the units in a significant sense by either replacing critical components or rebuilding damaged elements.”²⁴² If a plant ever commences a project to replace a system that is integral to the production of electric power, the “physical change” threshold is triggered.²⁴³

In *Alabama Power II*, the EPA argued that because “physical change” was not specifically defined in the statute, it had the ability to define the term as it saw fit.²⁴⁴ The court explained that such a *Chevron*-based argument was not made in *Ohio Edison* because it found that very little activity was needed to constitute a physical change (i.e., *de minimis*).²⁴⁵ The court considered the interpretation of this term as grouped in with its final analysis of all other terms, but seemed to be unwilling to accept that the EPA was entitled to deference.²⁴⁶ The court ruled that the EPA’s statement sounded more like a “litigation position” than a regulatory position.²⁴⁷

²³⁸ “A too restrictive interpretation of ‘modification’ might upset the economic-environmental balance in unintended ways.” *Wis. Elec. Power Co. v. Reilly*, 893 F.2d 901, 909 (7th Cir. 1990).

²³⁹ *Id.* at 908.

²⁴⁰ *Id.* at 909.

²⁴¹ *Id.*

²⁴² *United States v. Ohio Edison Co.*, 276 F. Supp. 2d 829, 854 (S.D. Ohio 2003).

²⁴³ *Id.*

²⁴⁴ *United States v. Ala. Power Co.*, 372 F. Supp. 2d 1283, 1296–97 (N.D. Ala. 2005).

²⁴⁵ *See id.* at 1296.

²⁴⁶ *See id.* at 1306.

²⁴⁷ *Id.*

The court may have been combining its analysis of “physical change” with the “routine maintenance exemption.”²⁴⁸ Realizing that it could not regulate all physical changes to stationary sources, it provided this exemption.²⁴⁹ In other words, the existence of routine maintenance somehow nullified the presence of a physical change. However, industry has thrown more persuasive roadblocks in front of the EPA’s efforts to enforce its technology standards.

New York II also discussed the interpretation of physical change, in the context of evaluating the validity of the Equipment Replacement Provision (ERP).²⁵⁰ The dispute arose over Congress’s decision to insert the word “any” in the definition of modification.²⁵¹ The EPA argued that the use of this qualifier made the term “physical change” ambiguous, and that it was therefore free to use Agency expertise to change the contours of the routine maintenance exemption.²⁵² Environmental and government petitioners countered with the assertion that “any” modified “physical change” to include “any activity at a source that could be considered a physical change that increases emissions.”²⁵³

The court ruled that the EPA’s reading of the word “any” violated rules of statutory interpretation.²⁵⁴ Arguing that “any” made “physical change” ambiguous removed any meaning from the word, rendering it superfluous.²⁵⁵ Also, such an approach would require a high degree of specificity for definitions, which courts have not required.²⁵⁶

The court praised the petitioners’ approach, ruling that it “[gave] natural effect to all the words used by Congress and reflect[ed] both their

²⁴⁸ The court offered a sensible justification for the routine maintenance exception based on the broad reading of “any physical change”: “In short, because the statute plainly states that ‘any physical change’ is to be covered, it necessarily requires a narrow reading of any exclusion to that broad statutory language.” *Id.* at 1294. Later, the court only discussed the routine maintenance exception. Therefore, the court lumped the two together into one test, when the statutory scheme clearly demands two separate determinations.

²⁴⁹ *See id.*

²⁵⁰ *See generally* *New York v. Env’tl. Prot. Agency*, 443 F.3d 880 (D.C. Cir. 2006).

²⁵¹ *Id.* at 885.

²⁵² *Id.*

²⁵³ *Id.*

²⁵⁴ *Id.* at 887.

²⁵⁵ *Id.*

²⁵⁶ *Id.* “EPA’s approach would ostensibly require that the definition of ‘modification’ include a phrase such as ‘regardless of size, cost, frequency, effect,’ or other distinguishing characteristic.” *Id.*

common meanings and Congress's purpose in enacting the 1970 and 1977 amendments.²⁵⁷ The court found that the phrase "any physical change" excused "only physical changes that do not result in emission increases."²⁵⁸ Therefore, "any" means whenever an emissions increase occurs, no matter how small it may be. The EPA may not solely regulate activities by stationary sources that constitute more than 20% of the cost of the facility and ignore all others.²⁵⁹ The court accepted the petitioners' argument and vacated the ERP, finding no ambiguity in the term "any physical change."²⁶⁰

Another review of the purposes of the underlying legislation is appropriate here. The CAA was passed in the 1970s with aggressive, sweeping goals.²⁶¹ The statutory scheme contained provisions that sought to achieve these goals, but realized that it must impose traditional values of fairness when implementing them.²⁶² Later, in order to reinforce Congress' former actions, it created the PSD program, again exempting the already constructed power plants.²⁶³ Of course, Congress did not mean to exempt such power plants forever. Thus, it counted "modified" sources as

²⁵⁷ *Id.*

²⁵⁸ *Id.*

²⁵⁹ *See id.* at 883.

²⁶⁰ *Id.* at 890.

²⁶¹ Congress outlined the purposes of the CAA at the beginning of the Act:

(1) 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; (2) to initiate and accelerate a national research and development program to achieve the prevention and control of air pollution; (3) to provide technical and financial assistance to State and local governments in connection with the development and execution of their air pollution prevention and control programs; and (4) to encourage and assist the development and operation of regional air pollution prevention and control programs.

42 U.S.C. § 7401(b)(1)–(4) (2000). For a discussion of the legislative history of the Clean Air Act 1977 Amendments, see *supra* notes 52–54 and accompanying text.

²⁶² This is the reason why it used the NSPS of § 7411 that applied to only new and modified sources, and did not choose to regulate the older facilities. *See* 42 U.S.C. § 7411(a)(1)–(2) (2000).

²⁶³ 42 U.S.C. § 7470 (2000).

the same target as newly constructed facilities.²⁶⁴ A physical change is a significant component of the modification definition.²⁶⁵

The interpretation of physical change used by the *Ohio Edison* court makes sense, because it gives a concrete and easy-to-apply usage of the term.²⁶⁶ The court found that there was a physical change when a system was replaced that was vital to the electrical production process.²⁶⁷ Such an interpretation clearly followed the “plain meaning” of such language.²⁶⁸ In summary, this is a common sense determination—if part of the plant is changed, there is a physical change.²⁶⁹ *New York II* reinforced this conclusion when it found a lack of ambiguity in the term “any physical change” in the process of invalidating the ERP.²⁷⁰

One court has characterized such an approach as *de minimis*.²⁷¹ But to characterize it as *de minimis* is a blatant misuse of the term. The term has traditionally been used by the Supreme Court to mean an exception to a general rule.²⁷² The physical change conception in *Ohio Edison* is, however, the general rule. In light of the purposes of the acts as described above, they are most fulfilled by the interpretation that allows this to be attained.

Courts may have been incorporating the routine maintenance exception into the physical change analysis.²⁷³ This exception, however, is more

²⁶⁴ See *supra* text accompanying note 43.

²⁶⁵ See *supra* text accompanying note 44.

²⁶⁶ See *United States v. Ohio Edison Co.*, 276 F. Supp. 2d 829, 854 (S.D. Ohio 2003).

²⁶⁷ *Id.*

²⁶⁸ See *id.*

²⁶⁹ *Id.*

²⁷⁰ *New York v. Env'tl. Prot. Agency*, 443 F.3d 880, 890 (D.C. Cir. 2006).

²⁷¹ Here is the *Alabama Power* court's characterization of the *Ohio Edison* approach:

EPA argues here that the term ‘change’ in the statute is not defined, and it therefore has discretion to define that term and to provide for some exclusions to it. This argument was not made by EPA in *Ohio Edison* because EPA argued for and agreed with that court's *de minimis* conclusion.

United States v. Ala. Power Co., 372 F. Supp. 2d 1283, 1296 (N.D. Ala. 2005).

²⁷² An example of the usage of the *de minimis* exception can be seen in a recent Supreme Court *Chevron*-based telecommunications decision: “First, in the context of telephone services, the Court recognizes a *de minimis* exception to contamination of a telecommunications service by an information service.” *Nat'l Cable & Telecomms. Ass'n v. Brand X Internet Servs.*, 545 U.S. 967, 1012 (2005) (Scalia, J., dissenting).

²⁷³ See *supra* note 248 and accompanying text.

properly put at the end of the analysis, once it has been determined whether there is a modification or not. The general rule must first be found applicable before determining if it is then exempt from the regulation.

C. How should increase be measured?

A common dichotomy in the recent decisions involves the correct way to measure whether an increase has occurred. The two options are to measure the total annual net emissions measured in kilograms per hour (from the regulations for the NSPS program)²⁷⁴ or to measure the rate of emissions in tons per year (from the regulations for the PSD program).²⁷⁵ An increase is more likely when the per-year measurement is used because most activities by the utilities industry increase the number of hours per day that the plants are running.²⁷⁶ Because the power plants work more hours, they have more total emissions when spread over the entire year. The per-hour determination, on the other hand, is not likely to increase after the procedures.

Because industry seeks to avoid the determination when they have to use the expensive technology, it will always litigate in favor of using the per hour determination.²⁷⁷ As discussed previously in the statutory background section, this rate is used in the NSPS program of the CAA.²⁷⁸ The measurement is not in the statutes themselves, but actually in the EPA regulations that enforce those statutes.²⁷⁹ Through the statutes, the

²⁷⁴ See *supra* text accompanying note 56.

²⁷⁵ See *supra* text accompanying note 57.

²⁷⁶ See, e.g., sources cited *supra* note 130.

²⁷⁷ See, e.g., Duke Energy's argument in the EPA's case against it:

Duke Energy counters that its projects do not constitute modifications subject to PSD because they did not increase the units' levels of emissions. The company maintains that, under the PSD program, a net emissions increase will result only if there is an increase in the hourly rate of emissions. Because none of its projects increased a unit's hourly capacity to emit pollution (but increased only the number of hours the unit could operate), the projects did not increase emissions from pre-project levels, and so, according to Duke Energy, it did not have to obtain permits.

United States v. Duke Energy Corp., 411 F.3d 539, 544–45 (4th Cir. 2005), *cert. granted*, 126 S. Ct. 2019 (2006).

²⁷⁸ See *supra* text accompanying note 56.

²⁷⁹ See *id.*

definition of “modification” is incorporated into the PSD statutes.²⁸⁰ Thus, the per-hour standard should be used.

The Supreme Court’s ruling in *Environmental Defense v. Duke Energy Corp.* definitively answered this question.²⁸¹ The Court concluded that the NSPS statutory scheme and the NSPS regulatory scheme did not apply to PSD.²⁸² As a result, the proper measurement method for emissions was tons per year, not an hourly rate.²⁸³

To reach this conclusion, the Court noted the significant differences between the two regulatory programs.²⁸⁴ The Court found that the PSD regulations generally do not specify a rate, implying that the EPA is free to set a rate of its choice.²⁸⁵ But when they did mention a rate, the regulations consistently use language indicating a “tons per year” increase, not an hourly increase.²⁸⁶ It further noted that there were two components of the term “major modification”: a physical change and a resulting significant net emissions increase.²⁸⁷ Therefore, “a mere increase in the hours of operation, standing alone, is not a ‘physical change or change in the method of operation.’”²⁸⁸ The Court also rejected an interpretation where an increase in operating hours should be ignored.²⁸⁹ Finally, the Court ignored attempts by Duke Energy to avoid regulatory attempts by the EPA based on contrary assertions in letters.²⁹⁰

The *Ohio Edison* court ruled that the appropriate calculation method was to use the total net emissions for the entire year measured in tons per year.²⁹¹ The court justified this conclusion by identifying the differences

²⁸⁰ See *supra* text accompanying note 51.

²⁸¹ *Envntl. Def. v. Duke Energy Corp.*, 127 S. Ct. 1423 (2007).

²⁸² *Id.* at 1434.

²⁸³ *Id.*

²⁸⁴ *Id.*

²⁸⁵ *Id.*

²⁸⁶ *Id.*

²⁸⁷ *Id.* at 1435.

²⁸⁸ *Id.* (quoting 40 C.F.R. § 51.166(b)(2)(iii)).

²⁸⁹ *Id.* “That reading, however, turns an exception to the first component of the definition into a mandate to ignore the very facts that would count under the second, which defines ‘net emissions increase’ in terms of ‘actual emissions,’ during ‘the units actual operating hours.’” *Id.* (quoting 40 C.F.R. § 51.166(b)(2)(i), (3) (internal citations omitted)).

²⁹⁰ *Id.* at 1436. Even if the Court found that the letters supported the company’s position, it probably would not have followed them because “[t]heir persuasiveness is elusive.” *Id.*

²⁹¹ See *United States v. Ohio Edison Co.*, 276 F. Supp. 2d 829, 876 (S.D. Ohio 2003).

between the NSPS and the PSD schemes.²⁹² Despite the differences, Ohio Edison argued that both programs used the emissions rate.²⁹³ The court rejected that argument: “In light of the plain language of the regulations as well as Ohio Edison’s apparent understanding of the issue, Ohio Edison’s present contention that this Court should analyze the comparison of hourly emissions changes for PSD liability is rejected.”²⁹⁴

The approach of the *Alabama Power II* court expressly adopted the opinion of the *Duke Energy* district court.²⁹⁵ To start, the court criticized the *Ohio Edison* decision.²⁹⁶ Then, it explained why it used the *Duke Energy* approach, because it was “clearly more thorough, comprehensive and rigorous in its analysis, and therefore the more persuasive decision on the two (2) issues discussed here.”²⁹⁷ The court supported this conclusion with few details, focusing exclusively on the assertion that Congress intended it to be calculated that way.²⁹⁸

In line with the differing purposes for NSPS and PSD as described above, the *Ohio Edison* court used the total-net approach expressed yearly rather than the rate-per-hour approach.²⁹⁹ The statute expressly required a net emissions increase.³⁰⁰ The plain language indicates that it would make more sense to look at a calculation that is the summation of an entire year’s emissions, not a per-hour determination. The regulations clearly specify

²⁹² See *id.* at 875.

²⁹³ *Id.* at 875–76.

²⁹⁴ *Id.* at 876 (emphasis omitted).

²⁹⁵ *United States v. Ala. Power Co.*, 372 F. Supp. 2d 1283, 1306 (N.D. Ala. 2005).

²⁹⁶ The following excerpt from *Alabama Power* shows its criticisms of *Ohio Edison*:

Applying this test, the *Ohio Edison* court found that each Ohio Edison project resulted in an emissions increase, based on EPA’s calculation of projected increased emissions from increased operations of the plant(s) due to decreased power outages and periods where the plant(s) would have to shut down. . . .

The advantage to using this analysis here would be its ease of application with a corresponding gain in judicial time saved.

Id. at 1297.

²⁹⁷ *Id.* at 1306.

²⁹⁸ See *id.* at 1298.

²⁹⁹ *Ohio Edison Co.*, 276 F. Supp. 2d at 876.

³⁰⁰ See *supra* text accompanying note 44.

that the PSD program requires the yearly calculation, so that is the one that should be used by courts.³⁰¹

The parties conflicted over the proper interpretation of the phrase “total net emissions,” with some suggesting that the per-year-tonnage-emissions calculation works better.³⁰² Critics suggest that the court should use the NSPS measurement calculation for the PSD program, even though the regulations clearly delineate otherwise.³⁰³ The only real justification that *Alabama Power II* used was that it preferred *Duke Energy’s* analysis and approach.³⁰⁴ Admiring another court’s analysis and then choosing to adopt it is not an appropriate way to base a decision that has severe consequences on the environment, involves millions of dollars, and involves the vital operations of public utilities. Decisions like this point toward a preconceived viewpoint on the case that may indicate the favoring of the industry position. A court, faced with the question of how to measure the emissions with regard to the PSD program, should clearly use the tons-per-year calculation expressly endorsed by the Supreme Court.³⁰⁵

D. How should courts interpret and apply the hours of operation exclusion?

The court in *Wisconsin Electric Power Co. v. Reilly* was the first to address the question. As noted in the study of the regulations above, the exclusion “was provided to allow facilities to take advantage of fluctuating market conditions, not construction or modification activity.”³⁰⁶ The EPA created an exception in the regulatory scheme to allow utility companies to increase or decrease their rates of production to change according to varying demand for electricity.³⁰⁷ Therefore, the court agreed with the EPA that the hours of operation exclusion was proper.³⁰⁸

³⁰¹ See *supra* text accompanying note 57.

³⁰² *Ohio Edison Co.*, 276 F. Supp. 2d at 881–83.

³⁰³ See *supra* text accompanying notes 56–57.

³⁰⁴ See *United States v. Ala. Power Co.*, 372 F. Supp. 2d 1283, 1306 (N.D. Ala. 2005).

³⁰⁵ See *Envtl. Def. v. Duke Energy Corp.*, 127 S. Ct. 1423, 1434 (2007) (“But even when a rate is mentioned, as in the regulatory definitions of the two terms, ‘significant’ and ‘net emissions increase,’ the rate is annual, not hourly.”).

³⁰⁶ *Wis. Elec. Power Co. v. Reilly*, 893 F.2d 901, 916 n.11 (7th Cir. 1990).

³⁰⁷ See *id.*

³⁰⁸ *Id.* at 916. This case involved the NSPS program, so the court only discussed this exemption there. *Id.* at 904.

The court in *Ohio Edison* explained that the exemption applies “when there is an increase in hours of operation unaccompanied by physical construction to the unit itself.”³⁰⁹ The court then provided a concrete example for the intended application of the exception—“when there is a temporary increase in electricity demand which, without a physical change at a unit, results in an increased output of electricity.”³¹⁰ Thus, once a court finds that there has been a physical change to a plant, the exemption may not be applied. The court ruled that Ohio Edison actually understood that the exemption was to be used in this manner, so it concluded that the company may not use that argument.³¹¹

Duke Energy Corporation made the same claim to the exemption as Ohio Edison Company, but its contentions were only addressed at the district court level,³¹² not when the case reached the Court of Appeals. The district court ruled that refusing to apply the exemption when there is a physical change “is not provided for in the plain text of the regulations.”³¹³ Therefore, the EPA’s interpretation may not be deferred to because “that interpretation imposes an additional condition on a regulatory exemption.”³¹⁴ Also, the court concluded that the interpretation of the exemption clearly ran contrary to prior interpretations.³¹⁵ Finally, the court noted:

³⁰⁹ *United States v. Ohio Edison Co.*, 276 F. Supp. 2d 829, 876 (S.D. Ohio 2003) (emphasis omitted).

³¹⁰ *Id.*

³¹¹ “In sum, the Court concludes that Ohio Edison’s present contention that the hours of operation exclusion applies to the projects at issue is misplaced and is contrary to the evidence showing Ohio Edison’s own understanding of the correct interpretation and application of the regulation.” *Id.* at 878.

³¹² *United States v. Duke Energy Corp.*, 278 F. Supp. 2d 619, 640–49 (M.D.N.C. 2003).

³¹³ *Id.* at 641 (citing *Hughes Aircraft Co. v. Jacobson*, 525 U.S. 432, 438 (1999)).

³¹⁴ *Id.* (citing *Christensen v. Harris County*, 529 U.S. 576, 588 (2000)).

³¹⁵ The inconsistency in interpretations is demonstrated by the following excerpt:

Because the available data indicated that there would be no increase in the hourly rate of emissions following the contemplated change, Reich concluded that “[a]ctual emissions could increase only if there [was] an increase in the production rate or hours of operation, both of which are specifically exempt from PSD review.” This determination reconfirmed an earlier PSD applicability determination in which Reich stated that increased hours of operation, even when coupled with a physical or operational change, would not be considered a modification.

Id. at 641–42 (citations omitted).

The interpretation that requires an increase in the hourly emissions rate and the exclusion of any increase in the hours of operation is not only consistent with the plain language of the regulations and the EPA's contemporaneous interpretations, but is also consistent with the NSPS definition of "modification" which was incorporated by explicit reference into PSD.³¹⁶

The *Alabama Power II* court essentially adopted the approach of the *Duke Energy* district court.³¹⁷

The *Ohio Edison* court appropriately applied the exclusion to situations where a plant increases its hours of operation without undergoing a physical change.³¹⁸ This approach simply follows the realistic idea that during some periods of the year, a power plant requires a greater number of hours of operation to meet fluctuating demands.

In its dismissal of the argument, the *Alabama Power II* court expressed the primary justification well. It noted that the "exclusion is an exemption from the 'physical change/change in methods of operation' prong of the regulations, and *not* the 'emissions increase' prong, which is separately defined."³¹⁹ From that perspective, the utility company was basically arguing that an exception to a general rule may still be applied even when the general rule applies. This result clearly makes no logical sense, and the *Alabama Power II* court avoided it by using the same NSPS/PSD incorporation argument as discussed previously.³²⁰ The discredit of that approach reinforces the idea that the court should defer to the EPA's historic interpretation.

³¹⁶ *Id.* at 642. The court then proceeded to justify this conclusion using many of the principles found in the discussion of the *Duke Energy* Court of Appeals decision. *Id.*

³¹⁷ *United States v. Ala. Power Co.*, 372 F. Supp. 2d 1283, 1298–99 (N.D. Ala. 2005).

³¹⁸ *See United States v. Ohio Edison Co.*, 276 F. Supp. 2d 829, 876 (S.D. Ohio 2003).

³¹⁹ *Ala. Power Co.*, 372 F. Supp. 2d at 1298.

³²⁰ The *Alabama Power* court ruled that the exception does not work because it is not compatible with the NSPS scheme:

The argument has logical appeal, but it isn't very well supported by EPA's NSPS precedent. NSPS does exclude hours of operation from coverage as "modifications," but only because it does not need the exclusion to its emissions increase test; that test is already separately defined as a "maximum hourly increase" test.

Id.

E. How should courts interpret and apply the routine maintenance exemption?

Besides the “hours of operation” exclusion, utilities use another strategy to avoid the requirements of NSPS or PSD: the routine maintenance exemption. The EPA sought to allow power plants to perform some activities that are outside the scope of regulation.³²¹ Two interpretations of the exception are prevalent in enforcement action litigation. One considers whether the activity is routine with respect to the industry,³²² and the other determines whether the activity passes the case-by-case, four-part analysis to find whether it is routine to the specific unit at issue.³²³ A third method, which classifies all activities as routine maintenance so long as they “do not exceed 20% of the replacement value of the process unit and [do] not change its basic design parameters”³²⁴ was invalidated by the D.C. Circuit Court in *New York II*.³²⁵

The *Alabama Power II* court ruled that routine maintenance should be based on a comparison throughout the entire utilities industry.³²⁶ This is inherent to the incorporation of the NSPS program to the PSD framework, as discussed previously.³²⁷ The court did not go so far as to accept “that any project performed within the industry was automatically RMRR.”³²⁸ In criticizing the *Ohio Edison* approach, the court noted that the other court failed to account for the EPA’s varying enforcement efforts.³²⁹ The court articulated that the standard to be used was not the four-part test from *Wisconsin Electric Power Co. v. Reilly*, but was actually determined by looking at the routine activities within the industry, “by which is meant work of a type performed commonly within the industry, although perhaps infrequently at any specific one or more of [a company’s] particular plants.”³³⁰

³²¹ See *supra* text accompanying note 64.

³²² See *Ala. Power Co.*, 372 F. Supp. 2d at 1307.

³²³ See *Ohio Edison Co.*, 276 F. Supp. at 855.

³²⁴ *New York v. Env'tl. Prot. Agency*, 443 F.3d 880, 883 (D.C. Cir. 2006).

³²⁵ *Id.* at 890; see also *infra* text accompanying notes 339–44.

³²⁶ *Ala. Power Co.*, 372 F. Supp. 2d at 1307.

³²⁷ See *supra* text accompanying note 51.

³²⁸ *Ala. Power Co.*, 372 F. Supp. 2d at 1296.

³²⁹ See *id.*

³³⁰ *Id.* at 1307. This test seems to be particularly vague, but the court evidently sees it as an improvement over the traditional four-part test. The court’s disdain for the other test can be seen in the following footnote:

(continued)

Ohio Edison, on the other hand, discussed the test extensively: “[T]he EPA reviews the activities on a case-by-case basis, taking into account the nature and extent of the activity, as well as its purpose, frequency and cost.”³³¹ This case put the burden on the party claiming the benefit of an exemption to prove that the activities were in fact routine maintenance.³³² When applying the nature and extent of the activities test, the court found that the changes made to the power plant were on a large scale, and thus they were not routine maintenance.³³³ The purpose of these activities were to extend life and to increase reliability, which again did not point to routine maintenance.³³⁴ These activities were not frequently performed; in fact, they had never before been performed.³³⁵ The cost was huge, which definitely indicated that it was not done on a routine basis.³³⁶ Thus, the court ruled that Ohio Edison could not exempt itself from compliance using the routine maintenance exemption.³³⁷

Using the industry approach, utility companies have a lot of wiggle room and, conceivably, could band together to take a position that is most beneficial to them. Also, the problem exists that “the exemption would swallow both the rule and specific provisions of the Clean Air Act.”³³⁸

The court observes, and it is only an observation, that a “case by case” enforcement policy using four (4) different factors that are capable of differing and subjective interpretation, is particularly ill-suited to a regulated industry with huge capital investment in plant and equipment where operators cannot quickly change their methods of operation. The four factor approach also seems to undercut the national purpose behind the Clean Air Act, because what the “nature, frequency, extent, and purpose” of a project in one part of the country might be seen quite differently in another, regardless of the implementing regulations or regulatory guidance. Case by case offers little guidance to an operator, particularly where, as here, the rules seem to change over time.

Id. at 1290 n.9.

³³¹ *United States v. Ohio Edison Co.*, 276 F. Supp. 2d 829, 855 (S.D. Ohio 2003).

³³² *Id.* at 856.

³³³ *See id.* at 858–60. For a detailed explanation of the maintenance activities performed by Ohio Edison, see *id.* at 835–59.

³³⁴ *Id.* at 860.

³³⁵ *Id.* at 861.

³³⁶ *Id.* at 861–62.

³³⁷ *Id.* at 862.

³³⁸ *Id.* at 855.

Such an exception is made to be just that, and must not be over-emphasized to become a general rule.

The *New York II* court invalidated the EPA's categorical change to the routine maintenance exemption.³³⁹ The court rejected the EPA's ambiguity argument of the term "any physical change."³⁴⁰ The EPA, therefore, cannot expand the routine maintenance exemption to all activities that constitute below 20% of the total capital cost of the stationary source.³⁴¹ The threshold for routine maintenance may not be an arbitrary percentage of replacement value because "any physical change" was a specific directive to the EPA from which the Agency may not deviate.³⁴² In the language of the D.C. Circuit Court, "As Congress limited the broad meaning of 'any physical change,' directing that only changes that increase emissions will trigger NSR, no other limitation . . . can be implied. The definition of 'modification,' therefore, does not include only physical changes that are costly or major."³⁴³ The EPA may not simply look at the cost of a project; it must use the old multi-factor test as in *WEPCO*.³⁴⁴ Following *New York II*, the third interpretation of routine maintenance will no longer be an option to parties or courts.

To maintain the appropriate balance between the exception and the rule forcing modified sources to acquire permits, the narrow reading of the exception must be observed. Multimillion dollar projects that are meant to exclusively increase the efficiency and lengthen the lives of power plants could not conceivably be considered routine maintenance. Evidence shows that the industry leaders actually knew that, and simply took up the argument as a litigation position.³⁴⁵ The courts should recognize these as such and not be persuaded by backhanded attempts to fall into a purposefully narrow exception.

³³⁹ *New York v. Env'tl. Prot. Agency*, 443 F.3d 880, 890 (D.C. Cir. 2006).

³⁴⁰ *Id.* at 890.

³⁴¹ *Id.*

³⁴² *Id.*

³⁴³ *Id.*

³⁴⁴ *See id.* at 855.

³⁴⁵ One example of this is *WEPCO's* request for a determination from the EPA on whether it needs to acquire permits for its proposed operations. When the EPA responded that such permits were necessary, *WEPCO* proceeded with the planned activities anyway. *Wis. Elec. Power Co. v. Reilly*, 893 F.2d 901, 906 (7th Cir. 1990).

V. EVALUATION OF THESE SOLUTIONS

The above approach will add clarity to a highly confusing problem that is treated differently by various courts. Using the statutory scheme in this manner would effectively regulate the problem of major stationary source pollution. Another advantage of using the five question framework in this paper is the uniformity of decisions that would result. This can develop a basis of precedent that will provide a standard for industry and the government as well.

For the statutory scheme to have any environmental effect at all, it must be enforced so that changes made to power plants follow more rigid standards. Besides just adding the technology to lessen the emissions from the power plants, the standards will provide an incentive for power companies to develop new energy sources that will have less of an effect on the environment, yet still provide enough energy to meet America's very high energy needs.

Courts should bear some of the criticism for the breakdown as described by the *Ohio Edison* court.³⁴⁶ They should practice the strong deferential language that exists in most administrative law opinions and not be so willing to invalidate regulations. Such an aggressive position forces courts to interpret and implement very technical measurements and data that are much better left to skilled experts and scientists. Also, the courts should not stretch conventions to reach the conclusions they want,

³⁴⁶ A good example of the breakdown of the enforcement efforts is the experience regulating the Sammis Plant, as described by the Southern District of Ohio:

By any standard, the enforcement of the Clean Air Act with regard to the Sammis Plant has been disastrous. From a public health perspective, thirty-three years after passage of the Act, the plant to this day emits on an annual basis 145,000 *tons* of sulphur dioxide, a pollutant injurious to the public health. From an employment perspective, Ohio Edison has chosen to meet other statewide and regional air quality standards by switching to out of state, low sulphur coal, a strategy which in conjunction with other utilities has caused a huge loss of coal mining and related jobs in Ohio. From the standpoint of Ohio Edison, since 1970 the company has invested over \$450 to install pollution control devices on the Sammis units yet still fails to meet the new source pollution standards. Thirty-three years later, the air is still not clean, tens of thousands of jobs have been lost, and enforcement by the EPA has been highly inconsistent.

United States v. Ohio Edison Co., 276 F. Supp. 2d 829, 833 (S.D. Ohio 2003).

and then call such conclusions “irrebutable.”³⁴⁷ Such actions undermine confidence in the judicial system. Courts form part of a unique governmental branch that rests almost entirely on public confidence. The courts that refuse to follow procedures like my suggested framework favor industry at the expense of the environment, destroying the effectiveness of the laws designed to reduce America’s air pollution.

It is noteworthy that the Supreme Court has endorsed two of the five steps of the structured framework. This indicates its willingness to prevent industry from using interpretive arguments to skirt the guidelines of the CAA. Because it is the only Supreme Court precedent in the area, and the Court was ruling on a question of first impression, courts should follow the spirit of the ruling and allow the EPA to appropriately regulate new source polluters.

CONCLUSION

The EPA should use the existing statutory scheme and enforce it consistently. Modification should carry its logical meaning and encompass industry actions to increase energy output. A physical change should embody an easy-to-meet standard that can be met whenever the plant acts to change the way it produces electricity. Increases should be determined by finding changes in the net emissions based entirely on the mass of the emissions, not by using a rate calculation that allows power plants to either increase their actual polluting or maintain it by running the plant for more hours of the day. Routine maintenance should be just that—routine. It should not represent major changes in plants that basically allow the power companies to avoid facing up to environmental responsibility by maintaining the status quo. The five question framework should be used, and the results it obtains should offer a template for future decisions. The CAA as it is written can be used to regulate the power production community so long as courts allow it to work effectively and not adopt contrary-to-law litigation positions. Air pollution is a severe problem, and courts should not get in the way of its reduction. Lower courts can achieve this if they correctly follow the new Supreme Court precedent.

³⁴⁷ See, e.g., *United States v. Duke Energy Corp.*, 411 F.3d 539, 550 (4th Cir. 2005), *cert. granted*, 126 S. Ct. 2019 (2006).