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Environmental Defense v. Duke Energy Corp.: Paving the Way for Cap and Trade?

Shawn Eisele*

The EPA is shifting its air quality regulation platform from traditional "command and control" to market-based "cap and trade." Environmental Defense v. Duke Energy Corp. opens a window on this changing agenda.

Duke Energy asked whether EPA had the flexibility to interpret the same term ("modification") differently in two sections of the Clean Air Act, where the term was defined by cross-reference between the two uses. The Court found in favor of EPA, ruling that a term could be interpreted differently, depending on the context. Yet despite that holding, EPA promoted a policy that disregarded the Court's decision. Instead of using the two separate interpretations of "modification" that the Court upheld, EPA attempted to unify the interpretations by proposing a less stringent rule.

This Note suggests that EPA's action was more accurately an attempt to marginalize the Clean Air Act's Prevention of Significant Deterioration program, as it applies to modified sources, and instead rely solely on cap and trade regulations to govern power plant modifications. As such, EPA's rule was an attempt to use agency regulations to override congressional intent—that PSD apply to power plant modifications. That action would have exceeded the authorization granted in Duke Energy and not withstood judicial review.

Introduction ................................................................. 364
I. Statutory and Regulatory Foundation of Duke Energy .......... 365
   A. Clean Air Act Programs: PSD and NSPS ...................... 366
   B. Difference between Annual and Hourly Tests .............. 367
   C. Recent Air Regulation: Cap and Trade ..................... 368

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INTRODUCTION

On April 2, 2007, a unanimous Supreme Court ruled in favor of the Environmental Protection Agency (EPA) and other environmental petitioners in Environmental Defense v. Duke Energy Corp. The Court held that when a term is used twice in a single statute, context may allow an agency to interpret each use of the term differently, even though the term is defined by cross reference between the two uses. The decision supports EPA’s ability to use an annual emissions test under the Clean Air Act’s Prevention of Significant Deterioration (PSD) program, and an hourly emissions test under New Source Performance Standards (NSPS). Both tests quantify emissions in order to determine if a “modification” has occurred at a power plant; when it has, both programs require permits and certain pollution controls.

EPA’s reaction to the case is surprising and belies a wider agenda. The holding should be a clear victory for EPA but it appears the agency would have preferred to lose. EPA, the original plaintiff, petitioned against certiorari following its Fourth Circuit loss, and then proposed a rule that used a less stringent, hourly standard for PSD regulation, despite Duke Energy’s authorization otherwise. By using the less stringent hourly test to quantify

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3. Id.
emissions, EPA would have regulated fewer power plant modifications under PSD. EPA effectively attempted to marginalize the PSD program in favor of the agency’s cap and trade program, the Clean Air Interstate Rule (CAIR).  

Recently, EPA backed away from the proposed rule, and was wise to do so. Dubbed a Bush Administration “parting gift to the utility industry,” the rule would have reshaped the Clean Air Act to favor industry interests over consistent air quality regulation.

This Note argues that the proposed rule was not firmly grounded either in the PSD statute or in the Duke Energy holding. By removing power plant modifications from PSD controls, EPA would have failed to fulfill the requirements of the PSD statute, which explicitly covers modifications. Essentially, EPA’s action went beyond interpreting “modification” and instead marginalized the very statute it was supposedly enforcing. Although Duke Energy validated EPA’s discretion, the holding did not support such a radical departure from the terms of the statute. EPA’s rule would not have withstood a Chevron analysis, nor the hard look review required under the Administrative Procedure Act.

Part I of this Note provides a background for the air quality programs at issue in Duke Energy. Part II discusses the Supreme Court’s Duke Energy holding. Part III explores EPA’s recent actions, which favored cap and trade but attempted to marginalize PSD by adopting less stringent regulations. Part IV concludes that the EPA’s change in direction would have been inconsistent with the holding in Duke Energy and would not survive judicial review.

I. STATUTORY AND REGULATORY FOUNDATION OF DUKE ENERGY

The major issue in Duke Energy was how to reconcile two different programs of the Clean Air Act: Prevention of Significant Deterioration (PSD) (regulating annual emissions) and New Source Performance Standards (NSPS)
(regulating hourly emissions). The differences in these two programs are complicated by EPA’s new regulatory program, the Clean Air Interstate Rule (CAIR). All of these programs govern emissions from power plants such as the one at issue in Duke Energy.9

A. Clean Air Act Programs: PSD and NSPS

The Clean Air Act is organic in the sense that frequent revisions and reinterpretations allow it to grow. NSPS was implemented in 1970, and was an early aspect of the statute.10 Congress introduced PSD in a later amendment in 1977.11 NSPS and PSD overlap to some degree, but focus on two different aspects of air pollution—NSPS regulates emissions based on the technology used at the emissions point, whereas PSD regulates based on local air quality.

Because federal air quality standards are more rigorous in some geographic areas,12 NSPS evens out regional differences by regulating based on the emission source (technology) regardless of the local air quality.13 NSPS’s hourly emissions test measures the maximum potential emissions per hour of a given technology.14 The end result is to require new industrial pollution sources to use clean technology when manufacturing or modifying a facility—regardless of its geographic location.15 NSPS “level the playing field” so that an industry does not have the incentive to build a dirty plant in a cleaner area, just because the air quality standards are already met in that area.16 In addition to regulating new power plants, NSPS also govern modifications.17 EPA defined “modification” for NSPS purposes as “any physical or operational change to an existing facility which results in an increase in the emission rate . . . .”18 Emissions rates are defined as kilograms of pollution per hour.19

12. In addition to establishing NSPS, the 1970 Clean Air Act Amendments established federal air quality standards, known as National Ambient Air Quality Standards (NAAQS). Clean Air Act §§ 108–110, codified at 42 U.S.C. §§ 7408–7410 (2006). The federal air quality standards are structured such that states implement their own air pollution programs in order to meet the federal air quality standards set by the EPA. Id. Some states are stricter than others, resulting in differing programs by region, where relaxed standards can compete for industry investment. See 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).
13. See Martineau & Stagg, supra note 12, at 299
19. Id. § 60.14(b).
In contrast, PSD, adopted by Congress in 1977, regulates power plant emissions according to the local air quality, not the technology at the source.\textsuperscript{20} Congress enacted PSD partly because NSPS was not completely successful.\textsuperscript{21} PSD was intended to keep areas of good air quality from deteriorating.\textsuperscript{22} Like NSPS, PSD requirements apply to modified sources, as well as new sources.\textsuperscript{23} To define modification, the 1977 PSD statute refers back to the 1970 definition of modification in NSPS.\textsuperscript{24} However, unlike NSPS, which looks at hourly emissions increases, EPA defined modification under PSD as the net actual annual emissions increases.\textsuperscript{25}

**B. Difference between Annual and Hourly Tests**

Under both PSD and NSPS, a change to a power plant constitutes a “modification” only if it increases emissions. The difference is that PSD quantifies net emissions per year (annually) and NSPS quantifies net emissions per hour.\textsuperscript{26}

This distinction makes a difference in determining which power plants are subject to permitting. A power plant repair or retrofit, allowing that plant to operate more hours per year, and thus pollute more annually, but at unchanged hourly emission rates, would only constitute a “modification” and trigger permitting under an annual emission standard but not under an hourly emission standard.\textsuperscript{27} PSD, currently regulating under an annual standard, would require a permit for this modification, whereas the hourly rate standard used in NSPS would exempt the plant from permitting.

If a modification triggers the permitting system, the plant must upgrade to cleaner technology.\textsuperscript{28} However, if no permit is required, older power plants can continue to operate without installing newer air pollution technology. That is,
without "modification" (and thus permitting), the older power plants continue to be "grandfathered" into the Clean Air Act, and are not subject to current pollution controls. 29 Grandfathering was a compromise in the drafting of the Clean Air Act, designed to balance "environmental controls and economic growth" by exempting old power plants from installing clean air technology unless they make a modification.30 In theory, older polluting sources will eventually become obsolete and shut down, or they will be forced, via permitting, to install pollution devices when making the renovations necessary to keep the plant running.31

The end result of EPA's proposed change from an annual emissions test to an hourly one for PSD would be that power plants could avoid permitting if they undergo tremendous renovations that result in longer hours and more pollution, but no hourly emissions rate increase.

C. Recent Air Regulation: Cap and Trade

The Bush Administration proposed a cap and trade program to Congress in 2003 as part of the "Clear Skies" legislation, but Congress did not approve it.32 That proposal included a cap and trade system for point source pollution,33 and exempted power plants from New Source Review so that power plants could make changes without the burden of the permitting process.34

After the Clear Skies legislation stalled in Congress, EPA introduced similar policies under the Clean Air Interstate Rule (CAIR) in May 2005.35 CAIR imposes a cap and trade program to control emissions in 28 eastern

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29. See United States v. Cinergy Corp., 458 F.3d 705, 709 (7th Cir. 2006) (Posner, J.) ("[T]here is an expectation that old plants will wear out and be replaced by new ones that will be subject to the more stringent pollution controls.... One thing that stimulates replacement of an old plant is that aging produces more frequent breakdowns and so reduces a plant's hours of operation and hence its output. [The hourly standard] would give the company an artificial incentive to renovate ... rather than to replace the plant."); See generally Jonathan Remy Nash and Richard L. Revesz, Grandfathering and Environmental Regulation: The Law and Economics of New Source Review, 101 NW. U.L. REV. 1677 (2007).


31. See Cinergy Corp., 458 F.3d at 709.

32. See Jamie Gibbs Pleune, Do We CAIR About Cooperative Federalism in the Clean Air Act?, 2006 UTAH L. REV. 537, 546-49.


35. Rule To Reduce Interstate Transport of Fine Particulate Matter and Ozone (Clean Air Interstate Rule), 70 Fed. Reg. 25,162 (May 12, 2005) (codified at 40 C.F.R. pts. 51, 72, 73, 74, 77, 78, 96) [hereinafter CAIR Rule]. For a survey of other recent regulatory actions, see http://epa.gov/nss/actions.html (annotated list of New Source Review regulations from the past five years).
states.\textsuperscript{36} CAIR is an agency regulation that, taken with the emissions test change discussed in this Note, extensively mirrors many significant aspects of the rejected Clear Skies proposal—it introduced a cap and trade program and changed PSD to an hourly test for “modification.”\textsuperscript{37} The promulgation of CAIR marked a policy shift from “command and control” to “cap and trade” within EPA and the Bush administration.

Cap and trade programs place a limit or “cap” on emissions, ideally below current or projected levels. When a power plant lowers its emissions below the limit, it earns a credit—essentially a quantity of emissions reductions that it can “trade” to a different polluter that is exceeding the allowable emissions.\textsuperscript{38} Cap and trade’s appeal is that it allows each pollution source to decide how to achieve its emissions limit, and allows free trade in the marketplace to reward those power plants successfully limiting their pollution.\textsuperscript{39}

Cap and trade programs can thread the needle between environmental goals and political demands. Their market-based aspect pleases industry opposed to carbon taxes or heavy-handed regulation. And absent skepticism about whether the plans will be fairly implemented, cap and trade’s potential to reduce emissions often satisfies environmental groups.

\textbf{D. Reviewing Agency Action: Chevron, and Hard Look Review}

EPA’s actions—both promulgating CAIR rules, and promulgating rules to enforce the Clean Air Act—can be reviewed by courts under at least two different frameworks. One analysis, developed in \textit{Chevron U.S.A. Inc. v. Natural Resources Defense Council},\textsuperscript{40} asks whether the agency action was a reasonable interpretation of Congress’s mandate. The other analysis, pursuant to Administrative Procedures Act (APA) § 706(2)(A), is known as “hard look review” and asks whether the agency made an appropriate policy choice. \textit{Chevron’s} two step analysis evaluates whether an agency regulation is within the bounds of the statute that authorized the agency regulation in the first place.\textsuperscript{41} The first step asks whether there is any ambiguity in Congress’s legislation—or whether Congress has already “spoken to” the issue.\textsuperscript{42} If there is no ambiguity, the agency must follow the unambiguous statutory directive. On the other hand, if there is ambiguity as to congressional intent, the court moves to the second step, asking whether the agency’s regulation is a

\begin{itemize}
\item \textsuperscript{36} CAIR Rule, \textit{supra} note 35, at 25,167.
\item \textsuperscript{37} In addition to CAIR, EPA’s transition to cap and trade involves an earlier program, the Clean Air Mercury Rule. This Note primarily refers to CAIR because EPA’s rationale for PSD’s proposed change is premised on a comparison to CAIR. See 2005 Notice of Proposed Rulemaking, \textit{supra} note 4, at 61,084–87.
\item \textsuperscript{38} CAIR Rule, \textit{supra} note 35, at 25,167.
\item \textsuperscript{39} \textit{See id.} at 25,256–57.
\item \textsuperscript{41} \textit{Id.} at 842–43.
\item \textsuperscript{42} \textit{Id.} at 842.
\end{itemize}
reasonable interpretation of the ambiguous statute. Reasonableness is ultimately a lenient standard—the test does not ask whether a given regulation is the best or even a good option, only whether it is reasonable.

The other framework for judicial review of agency action is hard look review, which is premised on section 706(2)(A) of the APA. That statute allows courts to “hold unlawful and set aside agency action, findings, and conclusions found to be . . . arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law . . . .” The hard look doctrine allows the court a “thorough, probing, in-depth review” of an agency decision. An agency’s decision is likely arbitrary and capricious when the agency failed to consider an important aspect of the problem, or failed to consider alternatives.

II. ENVIRONMENTAL DEFENSE V. DUKE ENERGY CORP.

In Environmental Defense v. Duke Energy Corp. (Duke Energy), a unanimous Supreme Court found that the exact same term, “modification,” used and cross referenced in two different sections of the Clean Air Act, may be interpreted differently in each use depending on context—and that EPA intended two different interpretations when it promulgated regulations to that effect. In so doing, the Court upheld EPA’s annual emissions test regulating power plant modifications under the Prevention of Significant Deterioration (PSD) program.

A. Factual Background

On December 22, 2000, shortly following the 2000 presidential election and Bush v. Gore, EPA filed enforcement actions against Duke Energy Corporation because the company completed 29 renovations to eight power plants in the Carolinas, allegedly without the requisite PSD permits. The power plants are coal fired, using boilers and steam turbines to generate electricity. The repairs varied in scope, but generally included “replacement and/or redesign of one or more of four sets of boiler tube assemblies—

43. Id. at 843.
44. Id.
47. See Motor Vehicle Mfr. Ass’n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983) (“Normally, an agency rule would be arbitrary and capricious if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.”).
49. Id.
52. Id. at 623.
economizers, portions of waterwalls, superheaters, and reheaters. These are systems of tubing that allow coal combustion to superheat water into steam above 900 degrees Fahrenheit in order to run a turbine generating electricity. Although the repair details were disputed, the impact was to allow decrepit units, some of which had been shut down completely, to run at full capacity. The repairs were so extensive they allegedly cost over seven times the original value of the plant.

Five months after EPA brought suit, three environmental organizations petitioned to join EPA as intervenor-plaintiffs. The intervenors stayed with the action through the appeals, and eventually were responsible for petitioning for certiorari in 2005, over the opposition of EPA.

B. Procedural History

At issue in the North Carolina District Court was whether EPA should use an hourly or annual emissions test for PSD. On cross motions for summary judgment, the court found that EPA was required to apply an hourly test. The court relied on declaration testimony by an EPA administrator who opined that an increase in the hours of operation is not a modification. Therefore, since increased hours would lead to increased annual emissions (triggering a "modification" under the annual test), the district court decided the hourly test was more appropriate.

The Fourth Circuit affirmed the district court's decision, but on different grounds. Relying on step one of the *Chevron* analysis, the Fourth Circuit found that the term "modification" unambiguously had to be interpreted

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53. *Id.* at 624.
54. *Id.* at 623.
55. *Id.* at 625.
60. *Id.*
62. *Duke Energy*, 278 F. Supp. 2d at 640 (finding an annual test, where hours of operation must be held constant, to be essentially an hourly emissions test). The court's analysis of the plain language was not sound: even though an increase in hours of operation alone is not a modification, that does not mean that a physical renovation to the plant allowing more operating hours is also not a modification. See Envtl. Def. v. Duke Energy Corp., 127 S. Ct. 1423, 1435 (2007).
identically in NSPS and PSD. The court found that "Congress has indeed 'directly spoken to the precise question at issue'" by cross referencing modification in the two statutes. The circuit court relied on *Rowan Cos., Inc. v. United States* to find that identical statutory definitions could not be interpreted differently. Because NSPS used an hourly emissions rate test, that was the appropriate test for PSD.

The Fourth Circuit walked a fine jurisdictional line—forcing EPA to interpret its PSD regulation differently, while avoiding the need to strike down the regulation. Because the district court had held that EPA's PSD regulation could justify an hourly or annual test, the Fourth Circuit contended it was not striking down the regulation, only specifying how the EPA must interpret the regulation (hourly). By approaching the case in this manner, the court purportedly avoided any problems with the Clean Air Act's provision requiring parties to bring challenges to EPA rules in the D.C. Circuit within 60 days of the rule's promulgation—the rule was not being challenged, rather the interpretation was challenged.

EPA petitioned for a review en banc, which was denied. Thereafter, EPA shifted positions. While the environmental intervenors petitioned for certiorari, EPA briefed against certiorari, arguing in favor of the Fourth Circuit's holding against the agency. Certiorari was granted over EPA's objection. Not since 1972 has the Court granted certiorari for a non-governmental environmental petitioner over the opposition of the Solicitor General.

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65. *Duke Energy*, 411 F.3d at 546-47 ("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.").

66. *Id.* at 546 (quoting *Chevron*, 467 U.S. at 842).

67. *Id.* at 547. See *Rowan Cos., Inc. v. United States*, 452 U.S. 247 (1981) (IRS Commissioner could not interpret "wages" differently in various tax codes when Congress defined it similarly in each case). For a detailed analysis of the Fourth Circuit's opinion, specifically addressing the applicability of *Rowan*, see Brian H. Potts, *The U.S. Supreme Court's New Dukedom: The Hour and Year, or a Proposal Quite Near*, 33 *ECOLOGY L.Q.* 517 (2006).

68. *Duke Energy*, 411 F.3d at 550 (noting that EPA could use rulemaking to change the test used under both statutes).

69. *Id.* ("The EPA must, therefore, interpret its PSD regulations defining "modification" congruently [with NSPS].").


C. Supreme Court Analysis

A unanimous Supreme Court vacated and remanded the Fourth Circuit's decision. Applying principles of statutory interpretation, the Court found that an agency may interpret an identical term differently when it is used twice in the same statute, even though it is defined by cross reference within the statute. Further, it was clear to the Court that EPA interpreted "modification" differently under PSD (annual emissions) than under NSPS (hourly emissions). Therefore, the Court found that the Fourth Circuit's reading amounted to an invalidation of EPA's regulations (not just an interpretation of them), and was likely improper because the challenge was not brought in the D.C. Circuit within 60 days of the regulation's enactment. The decision vindicated EPA's use of the more stringent annual test when calculating emissions for PSD.

The Court demonstrated that statutory construction does not require a term to have "the same meaning when it occurs here and there in a single statute." The Supreme Court found the Fourth Circuit's reliance on Rowan was misplaced because it only provided a presumption of identical interpretation, and pertained uniquely to Congress's intent to simplify the tax code. The Court instead relied on two recent decisions deferring to reasonable agency interpretations. The Court found that the presumption of identical interpretation "readily yields." Essentially, "[t]here is, then, no effectively irrebuttable presumption that the same defined term in different provisions of the same statute must be interpreted identically . . . . Context counts.

Having decided different interpretations were permissible, the Court addressed whether EPA's interpretations of "modification" under NSPS and PSD were actually different. The Court found they were, thus overruling the lower courts' findings. The Court determined that EPA's PSD regulation defined "modification" as an emission increase annually, not hourly: "True, the . . . PSD regulations may be no seamless narrative, but they clearly do not define a major modification in terms of an increase in the hourly emissions

76. Id. at 1432–33.
77. Id. at 1434–36.
78. Id. at 1432, 34–36. See 42 U.S.C. § 7607(b)(1) (2006). The Court explicitly implicated the statute for challenging rules, restating that statute's requirements, and citing to two circuit cases holding that rulemaking challenges need to occur in the D.C. Circuit within 60 days of the rulemaking.
80. Id. at 1432–33.
81. Id.
82. Id. at 1432.
83. Id. at 1434 (omitting internal cite to the Fourth Circuit's opinion).
84. Id.
rate. This meant that by forcing EPA to interpret "modification" hourly, the lower courts had essentially struck down EPA's regulation.

Although the Court's decision was not based on *Chevron*, the decision was structured according to the logic of *Chevron*. The Court did not actually state that an annual emissions standard was reasonable, per *Chevron* step two. Rather, the Court essentially held that the statute was ambiguous under *Chevron* step one, allowing for different interpretations (such as hourly or annual emissions) of the same term (modification). This rejected the Fourth Circuit's *Chevron* step one decision.

In theory, on remand the Fourth Circuit could still strike down an annual standard as unreasonable (*Chevron* step two), or arbitrary and capricious under the APA—but that action is unlikely because of the Supreme Court's reasoning. The Supreme Court hinted at the reasonableness of the annual test, finding no indication that Congress intended one standard or the other or even consistency between the programs: "Nothing in the text or the legislative history . . . suggests that Congress had details of regulatory implementation in mind when it imposed PSD . . . [t]he cross-reference alone is certainly no unambiguous congressional code for eliminating the customary agency discretion . . . ." The Court noted that PSD was a response to failures of NSPS, and thus the EPA was permitted to use a different interpretation. Therefore, on remand the Fourth Circuit would be hard-pressed to consider the annual test unreasonable.

The Supreme Court's decision left other important issues open on remand, such as whether the maintenance in question satisfied an exemption for "routine maintenance" or whether EPA had given fair notice of the requirements of PSD regulation. Although the Court's decision was

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85. *Id.* The Court quickly dismissed the basis for the district and appellate courts' holdings. Those courts had interpreted EPA regulations to omit increased hours of operation when calculating annual emissions increases. The Supreme Court found this to contradict the regulations. The Court also did not find the additional documentation on record influential. That documentation included a letter from an EPA official attesting to an hourly, not annual, standard. "[A]n isolated opinion of an agency official does not authorize a court to read a regulation inconsistently with its language." *See id.* at 1434–36.

86. *Id.* at 1433–34.

87. *Id.* at 1433–34, 1434 n.6 (2007).

88. *Id.* at 1429 (citing *Belden, supra* note 9), 1433–34.

89. The district court's determination about routine maintenance was unaddressed on appeal. That decision held that maintenance done only once in a power plant's lifespan is not a modification if it is routine throughout the industry. United States v. Duke Energy Corp., 278 F. Supp. 2d 619, 630–40 (M.D.N.C. 2003). Despite any emissions increase, Duke's repairs would be exempt from permitting if they meet this definition. Also, this specific enforcement action against Duke has not been upheld, and on remand Duke could suggest that it did not have fair notice of the annual standard. *Duke Energy*, 127 S. Ct. at 1437. The memo from EPA's Director of the Division of Stationary Source Enforcement was strongly in Duke's favor, and may show that Duke acted on a reasonable belief that PSD requirements would not apply. *Duke Energy*, 278 F. Supp. 2d at 641–42.
unanimous, there is still tremendous conflict within EPA regarding the interpretation of "modification."

III. DUKE ENERGY SHEDS LIGHT ON INCONSISTENCY IN EPA'S CURRENT REGULATORY DIRECTION

EPA's regulatory reaction to Duke Energy shows a conflicted agency, where political choices ended up trumping sound policy. After the Supreme Court's holding in Duke Energy—allowing a stringent annual test—EPA surprisingly proposed rules that would have weakened PSD by using a less stringent, hourly standard. Although the proposal was recently abandoned, its history provides a telling window into EPA policy-making. Instead of strengthening PSD, EPA would have marginalized it and allowed CAIR to govern power plant modifications with a cap and trade system. While CAIR is a laudable approach, PSD remains an important backstop in abating air pollution. EPA's direction was ill advised, and would have left air quality at risk.

A. EPA's Proposed Rule Regressed to an Hourly Standard for PSD

EPA's 2005 and 2007 revisions to PSD, each premised on the Duke Energy litigation, relaxed the PSD definition for modification, even though the Supreme Court ultimately upheld the more stringent annual emissions test.

While petitioning against certiorari in 2005, EPA promulgated regulations effectively cementing the Fourth Circuit's Duke Energy decision against the agency. EPA's 2005 proposed regulations brought PSD in line with the hourly emissions standard under NSPS. This mooted the issue litigated in Duke Energy—whether modification had to be interpreted identically in both places. In fact, when proposing the 2005 regulations, EPA credited the changes to the Fourth Circuit's Duke Energy decision: "As the result of a recent decision from

90. Although the decision was unanimous, Justice Thomas issued a concurring opinion that disagreed with a fundamental statutory interpretation aspect of the majority's decision. In contrast to the majority, Thomas found that statutory "cross-reference carries more meaning than the mere repetition of the same word" and "prevents the [EPA] from adopting differing regulatory definitions." Thomas found the majority's supporting cases inapplicable because they dealt only with repetition of a word, not statutory cross reference. Moreover, Thomas did not feel the majority produced evidence to overcome the presumption, albeit rebuttable, that "words repeated in different parts of the same statute have the same meaning." Thomas agreed with other aspects of the majority's remand, however, which concluded that EPA intended an annual test, and that lower courts would have to decide whether a rulemaking challenge was timely and in the correct venue. Therefore he concurred with the remand. See Duke Energy, 127 S. Ct. at 1437–38.

91. See 2005 Notice of Proposed Rulemaking, supra note 4, at 61,083, 61,094 (concluding that New Source Review impedes power plant projects); see 2007 Supplemental NPM, supra note 5, at 26,204.

92. See Childers, supra note 6.

93. 2007 Supplemental NPM, supra note 5, at 26,204.

94. 2005 Notice of Proposed Rulemaking, supra note 4, at 61,083.
the Fourth Circuit Court of Appeals, the emissions tests in five states and the
District of Columbia now differ from that used in the rest of the country.\textsuperscript{95}

EPA further relaxed PSD after the Supreme Court's 2007 decision in the
\textit{Duke Energy} case. Although the Court's holding allowed the more stringent
annual standards, EPA responded by supplementing its proposed 2005 rule to
make even less stringent standards.\textsuperscript{96} Where the 2005 proposal implemented an
hourly test, EPA now would require PSD permits only if the modification
increased both annual emissions and hourly emissions.\textsuperscript{97} Essentially, EPA used
the Supreme Court's \textit{Duke Energy} holding to create weaker standards. EPA
considered the opinion a validation of its broad discretion—discretion which
could authorize a standard different from the one upheld in \textit{Duke Energy}.\textsuperscript{98}

\textbf{B. EPA's Regulations Marked a Re-orientation of the Clean Air Act towards
Industry Interests}

The 2005 regulation and 2007 amendments represent EPA's desire to
marginalize the impact of PSD review in favor of cap and trade programs such
as CAIR. The bulk of the 2005 Notice of Proposed Rulemaking compares
CAIR to PSD, finding that emissions will be better controlled by CAIR and
complementary programs.\textsuperscript{99} In the 2007 amendments, EPA made it clear that
its main rationale was removing perceived hurdles to CAIR: "[w]hile there is
no longer a need to provide national consistency in light of the Fourth Circuit
decision [because the Supreme Court vacated that holding], we believe that the
options for [an hourly test] are an appropriate exercise of our discretion,
especially in light of... more efficient air quality programs promulgated after
1980."\textsuperscript{100}

\textsuperscript{95} U.S. E.P.A., FACT SHEET: PROPOSED CHANGES TO NEW SOURCE REVIEW FOR ELECTRIC
provide national consistency for [power plants] is apparent following a recent Fourth Circuit Court of
Appeals decision.").

\textsuperscript{96} 2007 Supplemental NPM, \textit{supra} note 5, at 26,202.

\textsuperscript{97} \textit{Id.}; \textit{see also} U.S. E.P.A., FACT SHEET, PROPOSED CHANGES TO NEW SOURCE REVIEW FOR
ELECTRIC GENERATING UNITS I (2007) [hereinafter 2007 FACT SHEET], available at http://epa.gov/nsr/fs20070424.html ("In other words, under the new option, if a physical or operational change would not
increase an EGU's hourly emission, major NSR would not apply. If an EGU's hourly emissions would
increase, then projected annual emissions would be reviewed using the annual emissions increase
provisions in the current rules and an EGU would be subject to major NSR if the annual emissions
would increase but not if annual emissions do not increase.").

\textsuperscript{98} 2007 FACT SHEET, \textit{supra} note 97 ("[In 2005] EPA proposed revising the [PSD] emissions test
... in response to a decision of the U.S. Court of Appeals for the Fourth Circuit Court in [Duke Energy]
... The U.S. Supreme Court vacated that decision... The Supreme Court, however, indicated that
EPA may be able to revise the regulations to contain such a test when, as here, it has a rational reason
for doing so.").

\textsuperscript{99} 2005 Notice of Proposed Rulemaking, \textit{supra} note 4, at 61,087.

\textsuperscript{100} 2007 Supplemental NPM, \textit{supra} note 5, at 26,204.
In proposing the 2005 notice of rulemaking and enacting the 2007 amendments, the agency essentially re-oriented the Clean Air Act around industry interests. The 2005 notice of proposed rulemaking turned the Clean Air Act on its head, stating that “the primary purpose of [PSD] is not to reduce emissions, but to balance the need for environmental protection and economic growth. That is, the goal of [PSD] is to minimize emissions increases from new source growth.” This re-definition of PSD is simply wrong, going against the fundamental air quality foundations of the Clean Air Act.

The Clean Air Act and PSD were intended to increase air quality by reducing emissions. The Clean Air Act begins by declaring findings of air pollution, followed by a list of four purposes revolving around enhanced air quality, and then listing a final goal of “pollution prevention.” The section creating the PSD program begins with five air quality oriented goals. Only one of the goals concerns economic development, and even then it only includes it to encourage development “in a manner consistent with the preservation of existing clean air resources.” Admittedly, the Clean Air Act recognized society’s desire for energy and the needs of the industry. Some aspects of PSD, such as grandfathering, are intended to balance industry interests. But the goal of the Clean Air Act is ultimately clean air; it is not a stimulus package for economic growth.

Moreover, PSD was specifically intended to apply beyond new sources. “Congress meant NSR to apply to both new and modified sources.” In fact, when a technical oversight in drafting omitted modified sources from the original PSD legislation, Congress went back and specifically added it.

EPA’s shift in policy also involved a subtle re-orientation of goals. Reliability, safety, and efficiency have become the agency’s focus. This triad of goals is ultimately recited 18 times in the 2005 and 2007 notices of proposed rules. Safety and reliability are important, but to focus PSD on these goals conflicts with the purpose of the Clean Air Act. The concept of grandfathering relies on the fact that power plants age, and will require renovations—at which time either a new plant would be constructed (less polluting and safe and
reliable), or a modification would be made, requiring PSD permits (again less polluting and safe and reliable).\textsuperscript{108}

Efficiency is similarly a questionable goal—it is only important for air quality if it decreases emissions.\textsuperscript{109} If a power plant is only slightly more efficient, but runs more hours, it will result in more emissions. EPA does not make this important distinction.\textsuperscript{110} This is like a hybrid car driver reasoning that the more she or he drives, the more emissions she or he saves. In the short term, EPA’s logic is correct when viewed system-wide: a single plant operating more hours at a slightly decreased rate can be preferable if it reduces demand on another, more polluting facility.\textsuperscript{111} However, this fails to include the necessary long term emissions reductions that would be required under PSD. If EPA continued enforcing PSD, the older, more polluting plants would age and eventually have to “modify” or be replaced—a measure resulting in more savings than what is achieved in the short-term by minor efficiency improvements elongating the life older plants.\textsuperscript{112} Essentially, taking grandfathering into account, marginalizing PSD achieves minor, immediate efficiency savings at the cost of more significant pollution controls down the road.\textsuperscript{113}

EPA’s reliance on the “safety, reliability, and efficiency” terminology gives utilities the opportunity to do exactly what PSD was intended to prevent—modify a plant in a way that could increase emissions and significantly decrease air quality. It might make sense for industry, but fails to address the environmental goals of the Clean Air Act.

\textsuperscript{108} See United States v. Cinergy Corp., 458 F.3d 705, 709 (7th Cir. 2006); cf. Nash & Revesz, supra note 29, at 1678–82.

\textsuperscript{109} A modification that results in a more efficient plant will often emit fewer emissions annually. This is good, and would not trigger PSD permitting because it would not meet the “increased emissions” requirement.

\textsuperscript{110} 2007 FACT SHEET, supra note 97 (“The hourly emissions test would allow units to operate more hours each year. The more hours a unit operates, the more likely it will be to control emissions.”).

\textsuperscript{111} If there were another power plant producing energy with more pollution, shifting that production onto the modified, slightly less polluting facility would be beneficial. Even if the modified source is emitting more annually, it is offset by reduced generation at the other facility.

\textsuperscript{112} See Nash & Revesz, supra note 29, at 1679, 1718, 1733. Nash and Revesz discuss the impact of grandfathering plants into new regulations, and conclude that there are significant environmental risks with allowing the older plants to indefinitely continue in operation. “The incentive to retain older power plants in operation is especially problematic. Old coal-burning electricity-generating power plants . . . generate a disproportionately large amount of pollution. . . . Thus, the environmental impact of keeping those plants in operation over a longer period of time is especially dramatic.” Id. at 1718. They conclude: “[T]he new regulations may retard the introduction of new, clean plants and keep inefficient plants operating longer than they otherwise would. . . . The plants that are the major beneficiaries of the policy have already exceeded their anticipated useful lives.” Id. at 1733. Please note that Nash and Revesz discuss grandfathering as a negative, because they oppose opening it to newer power plants. That concept is aligned with this Note’s discussion of grandfathering as a positive, when it is enforced only in older plants. See also Cinergy Corp., 458 F.3d at 709 (Posner, J) (“[T]here is an expectation that old plants will wear out and be replaced . . . . [Lenient regulations] give the company an artificial incentive to . . . increase the plant’s hours of operation, rather than to replace the plant.”).

\textsuperscript{113} See Nash & Revesz, supra note 29, at 1679, 1718, 1733 (as discussed in the above note).
C. EPA's Analysis was Insufficient: the Agency was Rash to Marginalize PSD by Moving to an Hourly Standard

The agency’s shift to CAIR, mitigating PSD, was based on unsound data. EPA presented studies showing that implementing CAIR would result in fewer emissions if PSD was not in force. These studies failed to consider alternative options and the potential drawbacks of eliminating PSD. Because cap and trade regulation on a broad scale in the United States remains unproven, PSD should instead complement CAIR, providing an important safety check for air quality.

1. Policy Options Go Unaddressed

EPA’s reasons for preferring an hourly standard are not persuasive. For example, one of EPA’s rationales for conforming PSD to NSPS’s hourly standard was to establish “a uniform national emissions test.” This goes against the fact that CAIR’s cap and trade regulates actual annual emissions, which would not be in conformity with PSD’s proposed hourly standard. Although PSD and CAIR’s measurements vary somewhat, if EPA was interested in consistency, it could have found it in an annual standard, not an hourly one.

Likewise, EPA did not consider alternatives that might alleviate drawbacks to the permitting system. EPA suggested PSD permitting is problematic because it is “time-consuming and expensive.” Yet EPA’s proposals did not consider options for making the permit determinations less burdensome. CAIR, on the other hand, will require detailed annual emissions information to ensure that plants meet the cap. Any plant manager considering a modification would be wise to approximate how a modification would impact that plant’s annual emissions. Given this potential, it seems EPA could come up with an annual permitting test under PSD that requires little extra cost.

The agency’s assumptions were also troubling. The 2007 Supplemental Notice of Proposed Rulemaking used modeling to predict that CAIR without PSD will reduce even more emissions than CAIR with PSD. The agency’s logic was that more emissions will be under control without PSD because “the more hours [a power plant] operates, the more likely it is to install controls.”

114. See 2007 Supplemental NPM, supra note 5.
117. See CAIR Rule, supra note 35.
118. 2005 Notice of Proposed Rulemaking, supra note 4, at 61,093.
119. 2007 Supplemental NPM, supra note 5, at 26,208.
120. Id. at 26,209.
The source for this argument is a 2006 power point presentation by the agency. That presentation states that dirty power plants are used less frequently and plants running more hours are more likely to install emissions controls. While these statements may be true, they do not show a causal link. For example, the dirty plants might be used less since the plant operators are unable to refit them because of PSD’s limitation—which would be a weak argument for marginalizing PSD.

EPA also fails to consider the effect of PSD on grandfathered plants. EPA’s data only compare current emissions against modified plants. The data fail to compare current emissions against the potential of retiring older power plants, which could occur if PSD’s modification provisions were consistently enforced. In fact, retirement of old plants is not discussed a single time in either the 2005 or 2007 notice.

2. **EPA’s Numbers are Wrong**

   EPA’s data should likewise raise eyebrows. EPA underestimated the potential impact of increased hours of operation because the agency used math that was fundamentally incorrect and chose its numbers based on unfounded assumptions.

   First, EPA’s math was in error. EPA incorrectly added 572, 156, and 349 to get 1087 (the number of hours in a year when an average plant is out of commission due to planned outages, urgent outages, and forced outages, respectively). It should total 1077. Also, EPA asserted that outages represent fifteen percent of the year. However, 1087 (and 1077) is closer to twelve percent of the total hours than fifteen percent (a year consists of 8760 hours).

   More importantly, EPA’s assumptions, used to determine how many more hours of operation would result from a modification, were unsupported. EPA found that if PSD was marginalized, and therefore a plant was allowed to increase hours of operation without triggering permitting, that increase would be only four percent of the total hours of annual operation. Four percent is the percent of power plant outages due, simply put, to parts breaking unexpectedly—"forced outages." However, EPA’s assumption—that only

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122. Id. at 39.
124. 2007 Supplemental NPM, supra note 5, at 26,207.
125. Id.
126. Id. at 26,208-09.
127. Id.
forced outages would be changed—does not appear to be well-grounded.\footnote{128} Currently, plants are out of operation about twelve percent of the time.\footnote{129} Of this twelve percent, planned outages for maintenance are around six percent, unplanned (but relatively urgent) maintenance is two percent, and “forced outages” due to failure are four percent.\footnote{130} Without justification, EPA concludes that a power plant undergoing a modification would only increase its hours by the four percent attributable to forced outages.\footnote{131} But in reality, the other categories (six percent due to planned outages, and two percent due to urgent repairs) could also be diminished by an upgrade. Intuitively, plant administrators would try to minimize outages in each category, up to the maximum twelve percent. Oddly, EPA even ignores any change in hours due to management decisions beyond forced outages—it appears that EPA just disregarded these issues.\footnote{132}

3. \textit{PSD Should Complement CAIR} 

EPA would be wise to keep PSD in force. PSD rarely conflicts with cap and trade, and when it does PSD can provide an important safety check. Conflict is rare because cap and trade systems generally motivate power plants to make changes that will achieve savings in their annual emissions. These changes do not trigger the PSD permitting process because annual emissions are not increased.\footnote{133}

PSD and CAIR conflict when a power plant acquires pollution credits and then modifies in such a way that significantly increases emissions. In that case, PSD would require permits for the modification. While this is a conflict, it is not a prohibitive one,\footnote{134} and, more importantly, can be beneficial—in particular, it provides a safety check when cap and trade falters due to “slack caps.”

The term “slack caps” describes the situation where the emissions “cap” in cap and trade is set too high.\footnote{135} In that case it becomes easy for the industry to meet the emissions limit. Any savings power plants achieve by emitting

\footnote{128. Where 100 percent represents a power plant operating at full capacity twenty-four hours every day, EPA finds that 15.1 percent of this time power plants are not functioning. \textit{Id.} at 26,207. It concludes that 15 percent of the total hours in a year (8760) is 1087. \textit{Id.}}
\footnote{129. \textit{Id.}}
\footnote{130. \textit{Id.}}
\footnote{131. \textit{Id.} at 26,208–09.}
\footnote{132. The agency’s process “does not attempt to model unit-specific decisions to make equipment change or upgrades to non-environmental equipment . . . .” This is a hole in the EPA’s study. For example, Duke Energy’s repairs were all non-environmental controls but resulted in changes in emissions. \textit{Id.} at 26,207.}
\footnote{133. 40 C.F.R. § 52.21(b)(3), (23) (2008).}
\footnote{134. The power plant can still proceed with the modification, but it must meet the permit’s requirements.}
emissions below the cap are "credits," which can be traded to other plants that emit or want to emit above the cap. When the cap is set too high (i.e., it is "slack"), power plants will easily emit below the cap, making the value of credits low. This makes it affordable to pollute, because the credits can be cheaply purchased. This is exactly what has happened with many cap and trade programs to date. And this is exactly when PSD could kick in: when a policy-biased market failure created cheap permits and a market that encouraged increased emissions. EPA's move to marginalize PSD would have removed this safety check.

IV. EPA TOOK ITS DISCRETION FURTHER THAN THE COURT AUTHORIZED

Based on the above discussion, EPA's proposal to use an hourly emissions test should not survive judicial review. Although either an annual or hourly test might be appropriate in a vacuum, the above discussion shows that EPA's action was effectively a move to marginalize PSD's application to modified sources, not simply a decision to use one test or another. That move was not authorized by statute and exceeds the agency's authority acknowledged in Duke Energy.

Duke Energy did not give EPA the wide latitude of discretion the agency purports it did. The Supreme Court instead found that "[c]ontext counts" when it comes to statutory interpretation, so the different statutory contexts for PSD and NSPS permitted the EPA to use different emissions tests. Therefore, EPA is correct that the holding in Duke Energy vindicates EPA's discretion to use an appropriate test. However, the agency is incorrect in its conclusion that its discretion is without bounds. The Court certainly did not find that an hourly test was appropriate, and perhaps more importantly, the Court did not authorize EPA to take action essentially marginalizing the PSD statute by removing modifications from the purview of PSD.

EPA's action would have faced hurdles at both Chevron steps. In a vacuum, either an hourly or annual standard might be legitimate—but in context they are not interchangeable. As this Note points out, the agency's proposal was an attempt to marginalize PSD permitting requirements for modifications. It was not a simple change in calculations, but instead intentionally removes statutory requirements. This chafes against Duke Energy.


138. See 2007 Supplemental NPM, supra note 5, at 26,204.
which shows that Congress did speak to the issue of modifications, and specifically meant for them to be covered by PSD (Chevron step one).139

Moreover, it is not reasonable (under Chevron step two) to choose an interpretation that is intended to marginalize the very statute it purportedly enforces. To do so would allow administration politics, via agency regulations, to override congressional intent. The D.C. Circuit recently struck down, on Chevron step two grounds, EPA's attempt to marginalize air quality standards in favor of EPA's political agenda:140

[R]equirements may [not] be stripped away if EPA becomes convinced that it may achieve attainment more efficiently . . . . As knowledge about the causes and cures of pollution has increased, Congress has not previously hesitated to step in and modify its approach. That Congress has not provided for an agency override of its methodology is telling . . . . EPA cannot replace Congress's judgment with its own . . . . EPA's interpretation of the Act in a manner to maximize its own discretion is unreasonable because the clear intent of Congress . . . . was to the contrary.141

EPA's reaction to Duke Energy—using the hourly standard despite the Duke Energy holding—should fall victim to the same logic as employed by the D.C. Circuit.

Further, the agency's proposed action should not survive hard look review under APA section 706(2)(A). In the present case, EPA's proposed rule was arbitrary and capricious because it failed to consider alternatives such as streamlining the permitting process and has completely ignored the issue of grandfathering. Ultimately, the decision appears more aligned with politics than with the agency's thorough review of the situation or options.142

Further, the political decision to marginalize the PSD program is problematic under section 706(2)(A). By revising PSD with the intent to avoid permitting of modified sources, EPA would essentially use an administrative regulation to override a statutory mandate. If EPA can make a case that the new rule covers modifications adequately, then it might be on sound footing. However, if EPA actively seeks to exempt modifications in order to align with other administration policy considerations, as this Note argues, then the footing is less sure.

On the same day as Duke Energy, the Court decided Massachusetts v. EPA, finding that EPA's failure to act in a similar situation was arbitrary and

139. Duke Energy, 127 S. Ct. at 1429. Moreover, it is unreasonable to go to an hourly standard, in light of the different intents of NSPS (technology) and PSD (emissions), and given that PSD was legislated to solve the problems of NSPS. (Chevron step two) Id. at 1429–30.


141. S. Coast Air Quality Mgmt. Dist., 472 F.3d at 895.

142. See Pear, supra note 7.
Specifically, the Court criticized the administration for allowing executive policy preferences to trump statutorily delegated duties.  

[ EPA ] has offered a laundry list of reasons not to regulate . . . . Although we have neither the expertise nor the authority to evaluate these policy judgments, it is evident they have nothing to do with [ emissions ] . . . . In particular, while the President has broad authority in foreign affairs, that authority does not extend to the refusal to execute domestic laws.

Similarly, EPA's action after Duke Energy appears to be a political choice to avoid enforcing a statute, and should face the same result as Massachusetts v. EPA.

Ultimately, EPA attempted to stray from the logic of Duke Energy. Duke Energy did not give EPA the authority to marginalize the PSD program such that modifications went unregulated. When Duke Energy and Massachusetts v. EPA were decided on April 2, 2007, the Court sent a strong message: EPA has the authority to regulate air quality, and it has a mandate to regulate air quality. Duke Energy, stressing that "[c]ontext counts," does not authorize the agency to marginalize a statute in favor of a novel regulatory scheme. Unless the hourly test is premised on sound rationale, or until Congress amends PSD, EPA is bound to have PSD regulate power plant modifications. EPA's proposed action, effectively removing modifications from permitting, would not have upheld the PSD statute, and was not authorized by Duke Energy.

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145. Id.

We welcome responses to this Note. If you are interested in submitting a response for our online companion journal, Ecology Law Currents, please contact ecologylawcurrents@boalt.org. Responses to articles may be viewed at our website, http://www.boalt.org/elq.