Joint Comments of Environmental and Public Health Organizations on the New Source Review Regulatory Changes Proposed With EPA's Proposed Emission Guidelines for Greenhouse Gas Emissions From Existing Electric Utility Generating Units; Revisions to Emission Guideline Implementing Regulations; Revisions to New Source Review Program	**Docket No. EPA-HQ-OAR-2017-0355** *Submitted via regulations.gov* *Date October 31, 2018*

Environmental and public health organizations[1] Appalachian Mountain Club, Center for Biological Diversity, Clean Air Council, Clean Air Task Force, Clean Wisconsin, Coalition to Protect America's National Parks, Conservation Law Foundation, Earthjustice, Environmental Defense Fund, Environmental Law & Policy Center, Minnesota Center for Environmental Advocacy, National Parks Conservation Association, National Wildlife Federation, Natural Resources Defense Council, Sierra Club, and Union of Concerned Scientists hereby submit the following comments on the New Source Review Regulatory Changes Proposed With EPA's proposed rule "Emission Guidelines for Greenhouse Gas Emissions From Existing Electric Utility Generating Units; Revisions to Emission Guideline Implementing Regulations; Revisions to New Source Review Program," 83 Fed. Reg. 44,746 (Aug. 31, 2018).

Many of the sources cited in these comments are being submitted in an appendix to this docket, or were submitted to this docket on Apr. 20, 2018, in the "Joint Appendix of Environmental and Public Health Organizations and States Regarding the Proposed Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units."

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Environmental and Public Health Organizations submit these joint comments in strong opposition to the proposed changes to the New Source Review ("NSR") program as applied to existing Electric Generating Units ("EGUs") included with the so-called "Affordable Clean Energy" ("ACE") proposal. As discussed in detail herein, this aspect of ACE is clearly contrary to Clean Air Act requirements, and to court decision interpreting those requirements, and is moreover arbitrary and capricious – it is unsupported by the rationales or the analysis the Agency puts forward, and impermissibly enables significant pollutant emissions increases. Its inclusion with the section 111(d) proposal makes very clear that the Agency's main objective for it is not to protect public health and the environment, but to promote more reliance on coal-fired utility units, while shielding them from the requirement to install or operate modern pollution controls. This proposal promotes coal as an energy source, and represents an unlawful attempt by EPA to use its rulemaking power in a way that will *increase* air emissions. It can be understood only in the context of this Administration's promises to resurrect the coal industry, by providing regulatory support for coal-burning. Having failed in its attempt to push the Federal Energy Regulatory Commission to favor coal-fired energy generation, the Trump Administration now seeks to similarly favor the coal industry at the expense of public health and the environment, through this EPA proposal. That effort is blatantly unlawful, arbitrary and capricious, as we describe herein.

A. Introduction

EPA solicits comment on whether it should establish a special NSR applicability test for physical or operational changes made to EGUs.[2] The Agency proposes to add an hourly emissions rate increase test similar to that found in the NSPS regulations, as a new element of the applicability determination for the NSR program, such that a project that significantly increases actual annual emissions in tons would escape NSR, if it does not also yield an increase in the hourly emissions rate.[3] While EPA offers three alternative ways to measure how an hourly rate increase has occurred, as part of this proposal, all are based on the potential to emit after a physical or operational change, and not on actual emissions after the change, as we discuss *infra.*

Congress enacted the Clean Air Act's NSR program in 1977, in order to limit air pollution beyond what had until that time been achieved by the NSPS. That program had not proven as successful at curbing air pollution as had been expected, and the NSR permitting requirements were added to minimize actual pollution emissions increases from new and modified sources.[4] While Congress included a "grandfathering" exemption for existing sources, that exemption was not intended to be permanent, but rather existing sources were to be brought into the NSR program at the point when they made changes that would "increase emissions."[5]

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[2] 83 Fed. Reg. 44,746, 44,776-78 (Aug. 31, 2018)(Comment Request C-61).

[3] *Id*.

[4] Statement of Sen. Muskie, 123 Cong. Rec. 18022 (June 8, 1977)*, see also Wisconsin Elec. Power Co. v. Reilly,* 893 F.2d 901, 904 (7th Cir. 1990).

[5] *Alabama Power Co. v. Costle,* 636 F.2d 323, 350, 400 (D.C. Cir. 1979).

As the Seventh Circuit stated in *WEPCO:*

> Members of the House recognized that "building control technology into new plants at the time of construction will plainly be less costly then [sic] requiring retrofit when pollution control ceilings are reached." H.R. Rep. No. 294, 95th Cong., 1st Sess. 185, *reprinted in* 1977 U.S. Code Cong. & Admin. News at 1264. *But Congress did not permanently exempt existing plants from these requirements; section 7411(a)(2) provides that existing plants that have been modified are subject to the Clean Air Act programs at issue here.*[6]

In fact, beyond balancing the goals of cleaner air for the nation with reduced disruption for older facilities, the modification trigger was, to the Seventh Circuit, a means of "forcing" investment in cleaning the nation's airsheds:

> Congress intended to stimulate the advancement of pollution control technology. *See, e.g.*, S. Rep. No. 91-1196, 91st Cong., 2d Sess. 17 (1970) ("Standards of performance should provide an incentive for industries to work toward constant improvement in techniques for preventing and controlling emissions from stationary sources. . . ."). The development of emissions control systems is not furthered if operators could, without exposure to the standards of the 1977 Amendments, increase production (and pollution) through the extensive replacement of deteriorated generating systems.[7]

The NSR program thus was added as an additional layer of protection, *beyond the NSPS,* in order to limit or prevent actual emissions increases to a degree greater than had been achieved by the NSPS alone, and to ensure that advances in pollution control since the NSPS was established, and any source-specific pollution control opportunities would be captured. NSPS establishes national pollution limits for categories of sources, established based on an EPA determination of the best system of emissions reduction. NSR is source-specific, to ensure that a source that has potential to adversely impact air quality is required to control its actual annual emissions. Under the current Proposal, however, changes that significantly increase emissions would be exempt from NSR requirements. The Proposal addresses increases in maximum hourly emission rates, but does not limit total emissions or protect NAAQS or PSD increments. It is clear that due to the massive emissions increases that are allowed to result from the proposed rule, this exemption does not in any way comport with the ambient air quality protection purposes of the statute's NSR provisions.

In the Proposal, EPA proposes to conflate the two programs by adding the hourly emissions rate increase element[8] from the NSPS rules to the NSR determination, so that NSR

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[6] *WEPCO*, 893 F.2d at 909 (emphasis added).

[7] *Id.* at 909-10 (citation omitted).

[8] While the NSPS emissions rate trigger has historically been based on increased hourly emissions (in pounds per hour), the NSR program measures "actual" emissions increases in

review and the requirement to apply pollution control, are triggered only when a physical or operational change to an existing EGU results in *both* significantly increased actual tons of emissions *and* an increased hourly rate of emissions. This would be a significant alteration of the statutory requirement that a modification triggers NSR when it "increases the amount of any air pollutant," as well as a radical departure rom the current, longstanding regulatory scheme which does not incorporate a hourly rate test of the potential to emit pollution. As discussed *infra*, the proposal would be unlawful if finalized because it does not meet the statutory requirement that increases in the "amount" "emitted"[9] – i.e. actual annual emissions increases -- are the trigger for NSR.

EPA does not limit its proposed new NSR approach to projects undertaken in response to the ACE proposal, even while recognizing that projects to comply with the ACE rule could increase their emissions:

> [T]he EGU which undergoes [a] HRI project will typically experience greater unit availability and reliability, all of which contribute to lower operating costs. EGUs that operate at lower costs are generally preferred in the dispatch order by the system operator over units that have higher operational costs, and EPA's regulatory impact analysis (RIA) for this action … shows that improving an EGU's heat rate will lead to increased generation due to its improved efficiency and relative economics. … Thus, it is possible that a … HRI project at [an] EGU would…actually experience an increase in operation … and a corresponding increase in annual emissions [while decreasing or maintaining emissions rates].[10]

And the Agency well knows that these "corresponding increase[s] in annual emissions" are likely to be substantial, even where hourly emissions rates do not increase. For example, the power plant improvement projects that were the underlying basis of EPA's lawsuit against Duke Energy for NSR violations, and which (the company argued) did not increase hourly emissions rates,[11] were projected to result in significant increases in actual annual emissions.[12] One of the

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annual tons. While this "tons per year" metric can be described as a rate, it is a measure of total or actual pollution output, as opposed to a measure of potential output.

[9] 42 U.S.C. § 7411(a)(4)(defining modification as a physical or operational change which "increases the amount of any air pollutant emitted"); *see also* 42 U.S.C. § 7479(1) & (3) (defining in the NSR provisions, a "major emitting facility" as one emitting amounts in tons per year, and a modification by reference back to § 7411 (a)(4)).

[10] 83 Fed. Reg. at 44,775.

[11] Br. in Supp. of Duke Energy's Mot. in Limine under the Federal Rules of Evidence at 26, *EPA v. Duke Energy,* 278 F. Supp. 2d 619 (M.D.N.C. 2003) (No. 1:00CV1262).

[12] Plaintiff's Consolidated Opp. to Duke Energy's Mot. in Limine to Exclude the Testimony of Robert Koppe, Ranajit Sahu, Bruce Biewald, and Philip Hayet at 45-48, *EPA v. Duke Energy,* 278 F. Supp. 2d 619 (M.D.N.C. 2003) (No. 1:00CV1262).

projects, which included replacing and upgrading the economizer for unit 1 at the Belews Creek Steam Station, was projected to increase annual emissions of SO_2 by 1,319.80-14,909.30 tons, and NOx by 537.20 tons.[13] A project at the Allen Steam Station, which involved replacement of the economizer for Allen Unit 5, was projected to increase annual emissions of SO_2 by 123.30-14,294.10 tons, and NOx by 79.40-2,210.90 tons.[14] These projects were expected to improve unit availability and, in the case of the Belews Creek project, improve efficiency (heat rate).[15] They increased annual tons of emissions well above the regulatory (*de minimis* based) significance thresholds,[16] without undertaking NSR or applying the modern pollution control represented by the statute's Best Available Control Technology ("BACT"), or Lowest Achievable Emissions Rate ("LAER") provisions,[17] to limit those pollution increases.

The proposed approach will enable just such projects to escape NSR and increase actual annual emissions of air pollution by significant amounts. As EPA also is aware, this potential for significant increases in actual emissions results primarily from increased utilization of the unit and therefore exists regardless of how the increased hourly rate is calculated. Regardless, the Agency focuses on three alternative ways of evaluating whether the hourly rate of emissions of any regulated NSR pollutant has increased:

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[13] *Id.* at 46.

[14] *Id.* at 45.

[15] Plaintiff's Consolidated Opp. to Duke Energy's Mot. in Limine to Exclude the Testimony of Robert Koppe, Ranajit Sahu, Bruce Biewald, and Philip Hayet at 118-21, *EPA v. Duke Energy,* 278 F. Supp. 2d 619 (M.D.N.C. 2003) (No. 436-2); Plaintiff's Consolidated Opp. to Duke Energy's Mot. in Limine to Exclude the Testimony of Robert Koppe, Ranajit Sahu, Bruce Biewald, and Philip Hayet at 2-5, *EPA v. Duke Energy,* 278 F. Supp. 2d 619 (M.D.N.C. 2003) (No. 1:00CV1262).

[16] EPA has established regulatory "significance thresholds," describing the level of actual tons per year increases of air pollutants above which impacts will not be *de minimis* in nature, and therefore would trigger NSR. *See* 40 C.F.R. § 52.21(b)(23)(i), (establishing 40 tons per year significance thresholds for NOx and SO_2, for example). In *Alabama Power Co. v. Costle* the D.C. Circuit Court of Appeals, while recognizing the NSR program's focus on minimizing actual annual emissions increases, indicated EPA could (upon making specified rigorous showings) define levels of actual (tons per year) emissions increases which would produce no regulatory benefit under the statute. *See Alabama Power,* 636 F.2d 323, 360-61, 400 (D.C. Cir. 1979) (describing that authority to craft *de minimis* exemption is potentially available "when the burdens of regulation yield a gain of trivial or no value. That implied authority is not available for a situation where the regulatory function does provide benefits, in the sense of furthering the regulatory objectives, but the agency concludes that the acknowledged benefits are exceeded by the costs.").

[17] See 42 U.S.C. §§ 7479(3) (defining BACT levels of control) & 7501(3)(defining LAER).

- Alternative 1. Compare pre-change maximum actual hourly emissions rate in pounds per hour (highest in one 365 day period in the past 5 years) to a projection of the post-change maximum hourly emissions rate (maximum one hour in the 5 years operating after the change); OR

- Alternative 2. Compare pre-change maximum hourly emissions rate in pounds per hour (maximum 1 hour in past 5 years) to a projection of the post-change maximum actual hourly emissions rate (maximum one hour in the 5 years operating after the change); OR

- Alternative 3. Compare the maximum achievable hourly emissions rate in pounds per hour (during the 5 years before the change) to the maximum achievable hourly emissions rate immediately after the change.

These options represent, for a unit with 85% availability, an NSR applicability trigger based on comparing the highest single emissions rate in 37,230 hours before the change with the highest single emissions rate in the 37,230 hours following the change.[18] All three options are very similar, if not the same as, certain Agency proposals issued in 2005 and 2007, and on which many of us have previously submitted extensive comments, showing the unlawfulness of each of the alternative metrics, as well as of the overarching attempt to add an emissions rate increase requirement to the NSR applicability determination. We attach those comments so that they will be incorporated into this record.[19]

EPA's proposed revisions are a continuation of a decades-old effort by industry advocates to offer power companies a way to extend the life of older, inefficient plants, without installing modern and health-protecting pollution controls.[20] The changes would, in fact, exempt

[18] 8760 hours/year X 5 years X 0.85 = 37,230 hours.

[19] Environmental Organization Comments on EPA's Proposed "Prevention of Significant Deterioration, Nonattainment New Source Review, and New Source Performance Standards: Emissions Test for Electric Generating Units," 70 Fed. Reg. 61081 (October 20, 2005), Docket ID No. OAR–2005– 0163 (Dec. 19, 2005)("2005 Comments"); Environmental Organization Comments on EPA's Proposed "Supplemental Notice of Proposed Rulemaking for Prevention of Significant Deterioration and Nonattainment New Source Review: Emissions Increases for Electric Generating Units," 72 Fed. Reg. 26,202 (May 7, 2007), Docket ID No. EPA-HQ-OAR-2005-0163 (Aug. 8, 2007))("2007 Comments").

For example, EPA now asserts, 83 Fed. Reg. at 44778, that "[t]he 2007 SNPRM provided EPA's legal and policy basis for incorporating an hourly emissions increase test within the NSR program for EGUs." The comments we submitted in response to those arguments are therefore relevant here, and we incorporate them by reference.

[20] Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NSR): Baseline Emissions Determination, Actual-to-Future-Actual Methodology, Plantwide Applicability Limitations, Clean Units, Pollution Control Projects, 67 Fed. Reg. 80,185 (Dec. 31,

so-called "life extension" projects that permit continued use of old, poorly-controlled EGUs, allow them to compete unfairly against well-controlled EGUs, and deter investment in cleaner new generation. In truth, the ACE proposal is not a climate rule at all, but a Trojan Horse for these unlawful and unjustified NSR revisions. As we discuss further *infra* at Section B.4.k., EPA's own words make clear that the agency is attempting to create an exemption for EGUs of the very kind the D.C. Circuit Court of Appeals vacated as unlawful – contrary to clear statutory requirements -- in 2005 and 2006. EPA seeks comment on whether it may "read the definition of modification, in this context, to afford more flexibility to *exempt* sources from NSR requirements when they are compelled to make changes by an NSPS."[21]

Moreover, the new proposal is *not* limited to EGUs that undertake HRI projects "compelled…by [the] NSPS;" by its terms, the proposed new applicability requirements would apply to *any* modification undertaken at an EGU – EPA seeks comment on *limiting* its reach.[22] EPA does not even evaluate the full implications of the increased annual emissions expected to result from its proposal.[23] As was true of its earlier NSR "reform" proposals, EPA does not and

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2002); Prevention of Significant Deterioration (PSD) and Non-Attainment New Source Review (NSR): Equipment Replacement Provision of the Routine Maintenance, Repair and Replacement Exclusion; Reconsideration, 69 Fed. Reg. 40,278 (July 1, 2004); Prevention of Significant Deterioration, Nonattainment New Source Review, and New Source Performance Standards: Emissions Test for Electric Generating Units, 70 Fed. Reg. 61,081 (Oct. 20, 2005); Supplemental Notice of Proposed Rulemaking for Prevention of Significant Deterioration and Nonattainment New Source Review: Emission Increases for Electric Generating Units, 72 Fed. Reg. 26,202 (May 8, 2007). The current Administration has also issued a number of guidance level initiatives changing how NSR is implemented in practice. Memorandum from EPA Administrator E. Scott Pruitt to Regional Administrators, "Project Emissions Accounting Under the New Source Review Preconstruction Permitting Program," FRL-9975-OAR (Mar. 13, 2018), notice published at 83 Fed. Reg. 13,745 (Mar. 30, 2018); William L. Wehrum, Assistant Administrator, U.S. EPA, "Memorandum: Interpreting 'Adjacent' for New Source Review and Title V Source Determinations in All Industries Other Than Oil and Gas," at 1 (Sept. 4, 2018), *available at* https://www.epa.gov/sites/production/files/2018-09/documents/draft_adjacent_policy_memo_9_04_2018.pdf.; *see also* Letter from William L. Wehrum, Assistant Administrator, U.S. EPA, to Patrick McDonnell, Secretary, Pennsylvania Department of Environmental Protection, Protection (April 30, 2018), available at: https://www.epa.gov/sites/production/files/2018-05/documents/meadowbrook_2018.pdf (discussing a revised interpretation of "common control" for NSR purposes).

[21] 83 Fed. Reg. at 44,782 (emphasis added).

[22] *Id.* at 44781. Indeed, EPA fails to explain why if its legal theory is correct (which it is not) its proposal should not apply to all source types and categories.

[23] We requested our consultants the NorthBridge Group to analyze this question, see *infra* at Section D.3, and the results of that work show that pollution increases could be enormous. Our analysis should not be taken as sufficient to meet EPA's obligation to do its own work to assess

cannot claim that this aspect of the ACE rule would promote the protection of public health, air quality, the environment, national parks and wilderness areas, or any of the other clean air objectives of the PSD/NSR programs or the Clean Air Act generally – indeed the opposite is true. Nor can the Agency credibly claim that the proposed weakening of the NSR program is somehow necessary to implement section 111(d) emissions reductions at EGUs.

Even were the statute ambiguous, EPA's new interpretation is impermissible because it goes beyond the scope of any ambiguity, thwarts the statute's goals, and is unsupported by reasoned explanation.[24] While agencies may change position with changing circumstances, they are bound by the statutes they implement and the requirement to provide am reasoned basis and adequate justification for any change. With this proposal, EPA seeks to make significant changes in long standing policy without distinguishing its earlier positions, offering any new good reason, and without providing adequate analysis of the possible ramifications of its proposal or alternatives (including the reasonable alternative of retaining the approach embodied in EPA's current regulations and policies). It is therefore arbitrary and capricious and an abuse of discretion.[25]

For all these reasons, as further described below, EPA's NSR proposal must be withdrawn.

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the full impacts of its proposal, however. *See* 42 U.S.C. §7607(d)(3)(requiring the Agency to provide a complete record of support for a proposed Clean Air Act rule).

[24] *See Whitman v. American Trucking Assns,* 531 U.S. 457, 481 (2001); *Good Fortune Shipping Co. v. Commissioner of I.R.S*, 897 F.3d 256, 261-262 (D.C. Cir. 2018); *Petit v. Dept. of Education,* 675 F.3d 769, 785 (D.C. Cir. 2012).

[25] *Encino Motorcars v. Navarro*, 136 S. Ct. 2117, 2126 (2016) (when reversing a longstanding interpretation, agency must "provide "[a] reasoned explanation" for "disregarding facts and circumstances that underlay or were engendered by the prior policy. . . . an unexplained inconsistency in agency policy is a reason for holding an interpretation to be an arbitrary and capricious change from agency practice."(citation and internal quotation marks and brackets omitted)); *see also Michigan v. EPA*, 135 S. Ct. 2699, 2707 (2015) (failing to address "important aspect[s] of the problem" renders an agency decision arbitrary and capricious, citing *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Automobile Ins. Co.*, 463 U.S. 29, 43 (1983)); *Delaware Dep't of Natural Resources v. EPA,* 785 F.3d 1, 18 (D.C. Cir 2015)("Because EPA too cavalierly sidestepped its responsibility to address reasonable alternatives, its action was not rational and must, therefore, be set aside.")(citations omitted).

B. EPA's Proposal to Add an Hourly Emissions-Rate Based Element to the NSR Applicability Test Is Unlawful.

EPA proposes that to trigger NSR requirements, a project would need to produce both an actual net emissions increase[26] *and* an hourly emissions rate increase. The design of the new test is such that NSR is triggered only when an EGU increases its *potential* emissions, or its *capacity* to emit. The result would be to allow annual actual emissions increases in tons per year from modified EGUs far in excess of the "major emitting facilities" thresholds found in the statute for new EGUs,[27] and far in excess of any regulatory *de minimis* levels that EPA has established. Adoption of the new hourly rate-based element, including any of the proposed tests to evaluate whether hourly rate increases have occurred, would be illegal, as the entire enterprise is contrary to the statute's plain text requirements, and court decisions interpreting them.

1. The Proposed Rule Unlawfully Merges the NSR Program and the NSPS Program.

Implicit in the Agency's justification for the Proposal is the implied congressional intent argument that it cited to in 1992: that because the NSPS rules had a maximum hourly emissions rate test, Congress must have intended a similar approach to apply in the NSR context.[28] This argument fails to provide any support for the NSR Proposal. As described *supra,* Congress was directing additional air pollution control when it adopted the NSR program. The different focus of the two programs led EPA to conclude that there must be a stronger legal basis for the Agency to promulgate exemptions to the NSR program than the fact that exemptions existed in the NSPS program:

> The PSD review is a tool for air quality management and comprehensive consideration of increases of any pollutant regulated under the Act. The NSPS exemption is inconsistent with this approach. …The fact that both programs use the definition of modification contained in section 111 of the Act is not, in itself, sufficient to prove that Congress intended the NSPS exemptions then in effect would automatically be [sic] incorporated into PSD. … Apparently the only legislative history on the subject is a remark that Congress intended to conform the meaning of "modification" for PSD purposes to "other parts of the act [(1233 Cong. Rec. H11957)]. Given the distinct differences between the NSR regulatory processes promulgated in response to the 1977 amendments and the preexisting NSPS regulations defining "modification," it

[26] The PSD regulations allow a project proponent to "net" the total emissions increases in tons per year across the project, against "any … decreases in actual emissions at the … source[s] that are contemporaneous with the particular change…." 40 C.F.R. 52.21(b)(3)(i)(b).

[27] 42 U.S.C. § 7479(1).

[28] Requirements for Preparation, Adoption and Submittal of Implementation Plans; Approval and Promulgation of Implementation Plans; Standards of Performance for New Stationary Sources, 57 Fed. Reg. 32314, July 21, 1992.

> seems clear that Congress desired to conform the usage of that term only in the broad sense.[29]

This approach was consistent with past court decisions concerning other NSR terms. In *Alabama Power*, the court allowed EPA to expand its definition of "source" to include a combination of sources, notwithstanding the *ASARCO* decision that such a grouping was impermissible, "due to differences in the purposes and structure of the two programs."[30]

Any argument that congressional intent supports the current Proposal is therefore belied by the context in which Congress adopted the NSPS "modification" definition for NSR, the different purposes underlying NSR and NSPS, and the Agency's past determinations that such an interpretation of congressional intent is inappropriate.

When the D.C. Circuit, in *Alabama Power*, held that the definition of "'modification' [was] nowhere limited to physical changes exceeding a certain magnitude[,]"[31] the court instead limited any *de minimis* modification exceptions to those based on the magnitude of the *pollution increases*:

> Implementation of the statute's definition of "modification" will undoubtedly prove inconvenient and costly to affected industries; but the clear language of the statute unavoidably imposes these costs except for *de minimis* increases. . . . If these plants increase pollution, they will generally need a permit. Exceptions to this rule will occur when the *increases* are *de minimis*, and when the increases are offset by contemporaneous decreases of pollutants, as we discuss below. These two exceptions, we believe, will allow for improvement of plants, technological changes, and replacement of depreciated capital stock, without imposing a completely disabling administrative and regulatory burden.[32]

The court believed available *de minimis* authority to be limited to *de minimis* emissions impacts, either by allowing *de minimis* increases or no increases due to offsetting, contemporaneous emissions decreases. In response, EPA promulgated its 1980 regulations, which included *de*

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[29] Memorandum from Gerald A. Emison, Director, Office of Air Quality and Planning, U.S. EPA, to Director, Air Management Divisions, Regions I, III, V, and IX[;] Director, Air and Waste Management Division Region II[;] Director, Air Pesticides, and Toxic Management Division Region IV and VI[;] [and] Director, Air and Toxics Division Regions VII, VIII, and X, "Prevention of Significant Deterioration (PSD) Definition of 'Modification,'" at 2-3 (July 7, 1986).

[30] *Alabama Power*, 636 F.2d at 398; *See ASARCO v. EPA*, (D.C. Cir. 1978).

[31] *Id.* at 400.

[32] *Id.* (emphasis added).

minimis significance emissions levels below which NSR would not be triggered.[33] The agency adopted those significance thresholds pursuant to notice-and-comment rulemaking only after evaluating the air quality impacts of those thresholds.

EPA's proposal rests on an implicit assertion that the agency possesses *de minimis* exemption authority that may ignore entirely the fact that the exempted changes will cause significant, that is greater than *de minimis*, emissions increases. This view runs afoul of a core holding in the *Alabama Power* decision and, indeed, contradicts the *de minimis* doctrine itself, which requires exercise of such authority to advance, and not frustrate, the objectives of the statutory program.[34]

The proposed merger of the NSPS and NSR programs, moreover, is fundamentally flawed. As reflected in the statutory scheme, and recognized repeatedly by Congress, the courts, and EPA itself, these programs are designed to achieve fundamentally different purposes in the nation's air pollution control strategy. While both programs are concerned with balancing environmental protection and economic growth, they strike this balance in significantly different ways.

The NSPS program, introduced in the 1970 amendments to the Clean Air Act, grew out of Congressional concern that the state planning process then in effect "was insufficient by itself to achieve the goal of protecting and *improving* air quality."[35] As stated in the 1970 House debates:

> The purpose of this new authority is to prevent the occurrence anywhere in the United States of significant new air pollution problems arising from [new stationary] sources either because they generate extra hazardous pollutants or because they are large-scale polluters. . . . At present emissions standards for stationary sources are established exclusively by the States. . . . The promulgation of Federal emission standards for new sources in the aforementioned categories will preclude efforts on the part of the States to compete with each other in trying to attract new plants and facilities without assuring adequate control of extra hazardous or large-scale emissions therefrom.[36]

Representative Vanik explained further:

> A steel mill, operating anywhere in Ohio, or the Nation, should be required to make the same kind of effort to control the pollution

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[33] Requirements for Preparation, Adoption, and Submittal of Implementation Plans; Approval and Promulgation of Implementation Plans, 45 Fed. Reg. 52,676, 52,699 (Aug. 7, 1980).
[34] See *Alabama Power*, 636 F.2d at 360 ("The ability. . . to exempt *de minimis* situations from a statutory command is not an ability to depart from the statute, but rather a tool to be used in implementing the legislative design.").

[35] *ASARCO v. EPA*, 578 F.2d at 327 (emphasis in original).

[36] 91 Cong. House Debates 1970, 19202, 19209 (Representative Jarman).

> emission of an oxygen steel furnace. A steel mill creates pollution in certain ways wherever it is located. The procedures to control this form of pollution are likely to be substantially alike. If we would insist on uniform approaches for pollution control of this industry – wherever the plants are located – the competitive benefits of a dirty plant would be eliminated. . . . There would be no profit in pollution. There would be no production cost advantage to the dirty producer. When the profit is eliminated in pollution by uniform high standards in air quality and pollution control, the battle will be won.[37]

By 1977, however, states had made little headway in the battle for clean air. Congress recognized that the existing NSPS program was not sufficient either to clean the air in the most polluted areas of the country, or to keep the air clean in areas that currently complied with ambient air quality standards. In addition to strengthening the NSPS program, Congress determined that "[s]ome mechanism [was] needed to assure that before new and expanded facilities are permitted, a State demonstrate that these facilities can be accommodated within its overall plan to provide for attainment of air quality standards."[38] Accordingly, Congress adopted the NSR program.[39]

At the heart of NSR is a preconstruction review and permitting program that was rejected as part of NSPS in 1970 because it was viewed as "overly elaborate and would impose a heavy and unnecessary burden on both the Government and industry."[40] Among other things, the preconstruction permit requires a case-by-case determination of BACT (or LAER if the source is locating in a nonattainment area) rather than the automatic application of NSPS, and a demonstration that emissions from the source will not cause or contribute to the deterioration of air quality.

In addition, Congress chose to place much greater emphasis on public health and impacts on air quality, and less emphasis on economic feasibility, in designing the NSR program. For example, in the Conference Committee Report for the 1977 Amendments, in a discussion of the LAER requirement for the NSR program, the Committee stated that "[i]n determining whether an emission rate is achievable, cost will have to be taken into account, but cost factors in the nonattainment context will have somewhat less weight than in determining new source

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[37] *Id*. at 19218. *See also Nat'l Asphalt Pavement Ass'n v. Train*, 539 F.2d 775, 783 (D.C. Cir. 1976) (discussing 1970 legislative history).

[38] S. Rep. No 95-127, *55 (May 10, 1977).

[39] 42 U.S.C. §§ 7470-7479 (Prevention of Significant Deterioration); 7501-7515 (nonattainment areas).

[40] 91 Cong. Senate Debates 1970, at 42490 (letter from Secretary of Health, Education and Welfare).

performance standards under section 111. Of course, health considerations are of primary importance."[41]

The NSR program, by its terms, does not apply to sources in operation or under construction when the program was created in 1977. Congress did not intend to create a perpetual exemption from NSR for existing sources, however. To prevent this result, Congress defined construction for the purposes of NSR to include modifications, as that term is defined in the NSPS program, CAA § 111(a)(4).[42] Although Congress incorporated the statutory NSPS definition of modification into the NSR program, EPA appropriately adopted different definitions of modification in order to comply with the different statutory purposes of the two programs. Under NSPS, EPA measures an "increase [in] the [emission rate] of any air pollutant" for the purpose of determining whether a modification has occurred in terms of hourly emission rate increases in order to be consistent with the program's industry-wide focus.[43] Under the NSR definition of modification, by contrast, emissions increases are measured in terms of total annual emissions, in order to be consistent with the NSR program's local and ambient air quality-based purpose.[44]

> Courts have long recognized the different purposes and requirements of the NSR and NSPS programs, and have rejected attempts to import provisions and rationales from one program to the other. In *Alabama Power*, the D.C. Circuit upheld EPA's application of the "bubble concept" to calculate emission increases in NSR, after having rejected its use in the NSPS program.[45] As the Court explained: "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."[46]

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[41] 95 Cong. Conf. Report H. Rept. 564, 175 (Aug. 3, 1977). *See also* House Rep. No. 95-294, *214-15.

[42] 42 U.S.C. §§ 7479(2)(C); 7501(4). *See Alabama Power*, 636 F.2d at 400.

[43] 40 C.F.R. § 60.14(a), (b).

[44] *Id.* § 51.165(v), (vi). *See* 57 Fed. Reg. 32314, 32316 (July 21, 1992) (Emissions increase component of modification definition differs under NSPS and NSR, reflecting distinct purposes of the two programs).

[45] 636 F.2d 323 (D.C. Cir. 1979). *See ASARCO v. EPA*, 578 F.2d 319 (D.C. Cir. 1978).

[46] 636 F.2d at 397-98. *See also Potomac Elec. Power Co. v. EPA*, 650 F.2d 509, 518 (4th Cir. 1981) (upholding EPA's different construction of the definition of "stationary source" based on "a significant difference between the PSD and NSPS programs," noting the emphasis in PSD on new air emissions).

In *WEPCO*, the Seventh Circuit observed that by 1977 the NSPS program, with its focus on hourly rates of emissions, had resulted in "only varying degrees of success in controlling pollution in different parts of the country."[47] Consequently, Congress added the PSD program, "concerned with increases in total annual emissions" from major sources of pollution rather than its hourly rate of emissions, and ensuring that sources "in relatively unpolluted areas would not allow a decline of air quality . . . ."[48] Likewise, the Ninth Circuit has, on at least two occasions, rejected attempts to import provisions and rationales from one program to the other. As stated in *Citizens for Clean Air v. EPA*: "While the NSPS program and the PSD are both interrelated parts of a comprehensive federal legislative effort to protect and enhance this national's air quality, the *two programs play different roles in achieving that broad general goal*."[49]

The NSPS and NSR programs were designed by Congress to achieve fundamentally different purposes in the nation's air pollution control strategy. Proposals to incorporate provisions of the NSPS program into the NSR program must be evaluated within this statutory and legal framework.

The maximum hourly emissions rate tests proposed here are like the emissions increase threshold used to determine whether a physical change constitutes a modification under NSPS. Yet it is the manner in which the two programs define "emissions increase" that forms a fundamental distinction between the two programs. As the Seventh Circuit has observed:

> To determine whether a physical change constitutes a modification for purposes of NSPS, the EPA must determine whether the change increases the facility's *hourly rate* of emission. . . . For PSD purposes, current EPA regulations provide that an increase in the *total amount* of emissions activates the modification provisions of the regulations.[50]

Likewise, in the preamble to the *WEPCO* rule, EPA pointed to the difference in how the emissions increase is measured as the primary distinguishing characteristic between the two programs: "[The] two-step test for determining whether activities at an existing facility constitute a modification subject to new source requirements . . . [branches apart at the emissions increase step,] reflecting the fundamental distinctions between the … NSPS and the air quality-based provisions of NSR."[51]

Because of NSR's focus on a source's location and its potential effect on air quality and the environment, the source's hours of operation and overall annual emissions are key factors in determining whether NSR is triggered. Under the proposed annual allowance exemption,

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[47] 893 F.2d at 904.

[48] *Id.*

[49] *Citizens for Clean Air v. EPA,* 959 F.2d 839, 849 (9th Cir. 1992)(emphasis added).

[50] *WEPCO*, 893 F.2d at 905 (citations omitted, emphasis in original).

[51] 57 Fed. Reg. 32,314, 32316 (July 21, 1992).

however, a physical change to a source can result in an increase in hours of operation or an increase in production, and accordingly a significant increase in emissions, and still escape NSR. The proposed maximum hourly emissions rate safeguard will do nothing to prevent this from occurring.

EPA's proposal to incorporate a maximum hourly emissions rate test for measuring emissions increase is in direct conflict with the statutory purpose of NSR.

2. NSR Applicability Must Be Based on Increases in "the Amount" of any Air Pollutants "Emitted" – that is, on Actual Annual Emissions Increases.

The Clean Air Act requires an existing source to undergo NSR whenever it makes a "modification," which is defined in the statute as, *inter alia*, any physical or operational change that "increases *the amount of* any air pollutant emitted."[52] And, nowhere in parts C and D of Title I of the Act does Congress describe major stationary sources, modifications, or emissions increases as being measured in terms of hourly emissions rates; emissions increases in tons per year are identified as the relevant metric in all instances in which parts C and D identify emissions magnitude.[53]

The D.C. Circuit has held that the Act "unambiguously defines 'increases' in terms of actual emissions."[54] The *New York I* court reached this result after evaluating the text and history of the Clean Air Act's New Source Review provisions, concluding that Congress was "conscious of the distinction between actual and potential emissions," and "use[d] the term 'emitted' to refer to actual emissions."[55] The decision followed earlier precedent in *Alabama Power v. Costle,* 636 F.2d 323, 353 (D.C. Cir. 1979), holding that the term "emit" is a "reference to some measure of actual emissions."

EPA now asserts that the Supreme Court's decision, in *Environmental Defense v. Duke Energy Corp*.,[56] "*allows* … EPA to define "modification" the same way in both the NSPS and

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[52] 42 USC §7411(a)(4) (emphasis added). *See* 42 U.S.C. §7479(2)(C)(adopting §7411(a)(4) into the prevention of significant deterioration program definition of "modification"); 42 U.S.C. § 7501(4)(adopting §7411(a)(4) into the nonattainment new source review program).

[53] See *infra* at Section B.4.

[54] *New York v. EPA,* 413 F.3d 3, 39-40 (D.C. Cir. 2005) (*New York I)*; *see also New York v. EPA,* 443 F.3d 880, 885, 889-90 (D.C. Cir. 2006) (*New York II*) (holding that "to the extent industry…rel[ies] on the NSPS regime to reargue their position that 'modifications' require an increase in maximum emission rates, that issue was resolved in *New York I.*").

[55] 413 F.3d at 39.

[56] *Environmental Defense v. Duke Energy Corp*., 549 U.S. 561, 581 & n.8 (2007).

NSR programs,"[57] even if the Act does not mandate that result. In the Agency's view, the Court has left open the possibility that the rate based NSPS modification definition can be a *subset* of the applicability determination, as it is proposing with ACE. In an attempt to support this interpretation, EPA places a good deal of emphasis on the fact that the majority in *Duke Energy* said in *dicta* that that idea "*sounds right*," but ignores that the Court also noted that it couldn't *be* right, because "[t]he NSPS and PSD regulations are complementary and not related as set to subset."[58] Similarly, and as a matter of logic (although the Agency ignores this aspect of the issue in the ACE proposal), the *Duke Energy* Court's view of the "complementary" nature of the NSPS and PSD must also be the case for the NSPS and PSD programs under the statute – subsuming one into the other would write the PSD provisions out of the statute, because triggering PSD permitting only when NSPS also apply would leave uncontrolled by BACT or LAER (modern pollution controls) many modified sources that will significantly increase annual emissions.

The *Duke Energy* Court did not find "any iron rule to ignore the reasons for regulating PSD and NSPS 'modifications' differently."[59] The Court noted that the cross-reference to the NSPS definition found in the PSD section of the statute was added in a technical amendment to the Act, and that "[n]othing in the text or the legislative history of the technical amendments that added the cross-reference to NSPS suggests that Congress had details of regulatory implementation in mind when it imposed PSD requirements on modified sources."[60] Far from overturning or questioning *New York I*'s holding that the statute *requires* NSR applicability to be measured on the basis of *actual emissions increases*,[61] the *Duke* Court in fact relies on *New York I* as support for its own holding. Furthermore, the *Duke Energy* Court did not have before it, and did not consider, the question whether an hourly rate-based standard is consistent with the statute even as applied to the NSPS program. Rather, the industry respondent's position in *Duke Energy* was that because EPA had adopted the hourly test for NSPS, it was therefore *bound* to adopt the same test into the PSD program.

Thus, *Duke Energy* did not provide a new understanding of the statutory language, and in particular did not consider the contextual evidence (*e.g.*, that emissions increases in tons per year are identified as the relevant metric in all instances in which parts C and D identify emissions magnitude), confirming Congress's focus on annual emissions. Nor did the *Duke Energy* Court override judicial precedent (*New York I &II*) requiring an actual tonnage emissions increase to *be the measure* of whether a modification triggers NSR review. Despite this settled law, EPA's ACE proposal asserts that

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[57] 83 Fed. Reg. at 44,779 (emphasis in original).

[58] *Duke Energy*, 549 U.S. at 581 n.8.

[59] *Id.* at 576.

[60] *Id.* (further citing *New York I,* 413 F.3d at 19 for this proposition).

[61] *New York I,* 413 F.3d at 40.

> …the Clean Air Act is silent on how to determine whether a physical change or change in method of operation "increases the amount of any air pollutant emitted." 42 U.S.C. 7411(a)(4); *New York I,* 413 F.3d at 22 ("[T]he CAA . . . is silent on how to calculate such 'increases' in emissions."). Accordingly, EPA has broad discretion to propose a reasonable method by which to calculate the "amount" of an emissions "increase" for purposes of NSR applicability.[62]

But EPA is wrong. The Clean Air Act is not silent about whether it is actual (annual tons) of emissions that provide the trigger for NSR applicability: that is confirmed both by section 111(a)(4)'s reference to "amounts" "emitted" and by statutory context (*e.g.,* that emissions increases in tons per year are identified as the relevant metric in all instances in which parts C and D identify emissions magnitude. That was the holding in *New York I*, and EPA's proposal mischaracterizes that part of the decision[63]. The quoted material from page 22 of *New York I* was part of a discussion about how to calculate the *actual annual* emissions before and expected after a change. The Circuit Court was considering the question of how to determine what baseline year against which an *"actual"* (annual tonnage) emissions increase must be measured. So that portion of the opinion has nothing to do with the question whether an *hourly emissions rate increase* can be the defining trigger for NSR applicability. Compounding its error, EPA glides over the Circuit Court's holding later in the same decision, that evaluating the actual emissions change *is* required:

> [W]hen Congress enacted the 1977 amendments to the CAA, it distinguished between actual, potential, and allowable emissions. If Congress had intended for "increases" in emissions to be measured in terms of potential or allowable emissions, it would have added a reference to "potential to emit" or "emission limitations." The absence of such a reference must be given effect. … [T]he plain language of the CAA indicates that Congress intended to apply NSR to changes that increase actual emissions instead of potential or allowable emissions ….[64]

The court relied on the contrast between "emit" and "potential to emit" in the PSD definition of major emitting facility, *see* 42 U.S.C. §7479(1), and the reference to "an *emission limitation* based on the maximum degree of reduction of each pollutant…*emitted* from any major emitting facility" in the definition of best available control technology, *see* 42 U.S.C. §7479(3).[65] EPA thus does not have the "broad discretion" it claims to propose an hourly rate test. Changes in the hourly rate (which would be the defining factor under the EPA proposal) are changes to potential

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[62] 83 Fed. Reg. at 44,779.

[63] *See also Puerto Rican Cement Co. v. EPA,* 889 F.2d 292, 297-98 (1st Cir. 1989)(upholding EPA's rejection of industry's claim for an exemption based on lower hourly emissions rate).

[64] *New York I*, 413 F.3d at 40.

[65] *Id.* at 39 (emphasis in D.C. Circuit opinion).

emissions, unless they are accompanied by a cap on the number of hours the unit may run post-change.[66] The statute is not "silent" on these issues.

Also in *New York I*, the Court of Appeals invalidated as unlawful an exemption the Agency had finalized for "pollution control projects" under which if a source reduced emissions of a primary air pollutant but increased actual tonnage emissions of collateral pollutants, it would avoid triggering the NSR review and control requirements. Because EPA could not prove that Congress didn't mean what it said in the plain text (that actual emissions increases are the measure for NSR applicability), the plain meaning of the statute could not be overcome, and thus the exemption was vacated.[67] The *New York I* court vacated another, different NSR exemption, for so-called "Clean Units," because it also would have allowed actual emissions increases.[68]

And the D.C. Circuit a year later vacated yet another NSR exemption, citing *New York I*'s holding that the statute requires that actual emissions increases must be evaluated in the NSR applicability determination.[69] The vacated exemption had allowed utility life extension projects (equipment replacements) that cost less than an arbitrary threshold EPA said represented "routine maintenance repair or replacement" to escape NSR. The Circuit Court held that "any physical change" was not ambiguous, and that Congress defined the phrase "physical change" in terms of actual emissions, such that "only physical changes that do not result in emission increases are excused from NSR."[70] While EPA had not attempted to justify the equipment replacement exemption on the basis that actual emissions increases would be *de minimis,* the court considered the question and said that the word "any" in the phrase "any physical change," 42 U.S.C. §7411(a)(4), "makes clear that activities within each of the common meanings of the phrase are subject to NSR when the activity results in an emission increase," and that "Congress defined 'modification' in terms of emission increases, but [the exemption] would allow [physical changes] resulting in non-*de minimis* emissions increases to avoid NSR. Therefore …it violates the Act…."[71]

Because EPA's proposal also would allow physical and operational changes that increase the "amount" "emitted" – *i.e.* annual air emissions -- of regulated NSR pollution beyond *de minimis* levels, it violates the *NY II* holding that the clear statutory text means that physical changes which will increase actual emissions by significant amounts trigger NSR.

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[66] At that point, (hourly rate) x (hours run per year), yields an actual amount per year, which is already the NSR trigger.

[67] *Id.* at 40-41.

[68] *Id.* at 38-40.

[69] *New York II,* 443 F.3d at 887-90.

[70] *Id.* at 887.

[71] *Id.* at 890.

3. EPA's Proposed Hourly Rate Tests Do Not Measure Actual Emissions Increases (and Exclude Large and Obvious Actual Emissions Increases).

EPA cannot justify the proposed change on the basis that any of its proposed hourly rate tests *are* a measure of the "amount" emitted – *i.e.* actual emissions increases. The relationship between changed emissions rates and actual emissions increases can be seen using simple arithmetic. That is, annual emissions amounts are a product of the hourly rate of emissions times the number of hours the unit actually is run during the year. To the extent that the unit becomes more attractive to run as a result of the physical changes being made, it will run for more hours, and the total emissions may increase even if the hourly emissions rate were to *decrease* as a result of the changes. The kinds of physical changes that EPA's proposed test would exempt will also extend the lives of older EGUs such that they will run for many additional years.[72] So, in addition to increased actual emissions in any given year, the proposal also would permit significant additional lifetime actual emissions from EGUs, with no requirement to have applied and/or operated modern pollution controls to limit such emissions. EPA does not even discuss this aspect of its proposal, or analyze its emissions repercussions. So, for EPA to limit the applicability of NSR to projects that *both* increase annual emissions *and* increase the hourly emissions rate would leave exempted from NSR those projects that keep hourly rates steady or decrease them, while still increasing actual annual emissions of NSR regulated air pollution.

Each of the three proposed options for measuring whether an hourly emissions rate increase has occurred is a measure of *potential* emissions, post change – but none measures *actual* annual tonnage increases. That is because hourly emissions rates, alone do not describe actual tonnage emitted, without accompanying information about how much more a unit will actually run as a result of the change.

a. Alternatives 1 and 2, comparing pre-change maximum actual hourly emissions rates to projected post-change maximum hourly emissions rates, measure the potential to emit, not how much actual emissions will increase.

The currently proposed Alternatives 1 and 2, the two actual maximum hourly rate to projected maximum hourly rate metrics for assessing whether an rate increase has occurred, are substantially similar to two of the options presented in the 2007 proposal. They did not then, and they do not now, provide a metric for measuring all actual emissions increases that may occur.

EPA repeats the same erroneous statements it made in the 2007 proposal, in attempting to show that the maximum achievable hourly emissions comparison tests measure actual emissions changes. The Agency asserts:

> In the 2007 action, EPA also explained how an applicability test based on maximum achievable hourly emissions is, in fact, a test based on actual

[72] *See infra* at 72, text at n.251 (discussing Duke Energy's stated unit-life extension purpose in undertaking HRI and other projects which they claimed did not increase hourly emissions rates.).

> emissions. The reason is that, as a practical matter, "for most, if not all EGUs, the hourly rate at which the unit is actually *able* to emit is substantively equivalent to that unit's historical *maximum* hourly emissions. That is, most, if not all EGUs will operate at their *maximum* actual physical and operational *capacity* at some point in a 5-year period. In general, the highest emissions occur during the period of highest utilization. As a result, both the *maximum* achievable and *maximum* achieved hourly emissions increase tests allow an EGU to utilize *all of its existing capacity*, and in this aspect the hourly rate at which the unit is actually *able* to emit is substantively equivalent under both tests."[73]

As the italicized words and phrases in this passage reveal, EPA's maximum achieved and achievable hourly emissions alternatives are potential or allowable-based tests rather than actual emissions tests. What an EGU is "able" to emit or "capable" of emitting at its "maximum" capacity are just different synonymous terms but the same concept for its potential or allowable emissions rather than its actual emissions. (Similarly, the concept of "achievability" is no more a reflection of actual emissions than a unit's potential or allowable emissions or what it is capable of emitting.) EPA cannot change these conclusions by clumsily placing the word "actually" before "able."[74] One could have accomplished the same evasion by placing the word "actual" before the words "potential" or "allowable" -- an EGU is "actually able" to emit at its "potential to emit" or "allowable" emissions level. But that stratagem would not have changed the nature of those tests or the D.C. Circuit's holding in *New York I.*

This excerpted passage just compares two different hourly rate tests, but offers nothing about actual emissions increases. It is also neither accurate nor internally consistent. First, it is just not accurate to say that the hourly rate at which a unit is able to emit is equivalent to that unit's historical maximum hourly emissions. That statement completely ignores the aging of equipment and facilities, and the loss of efficiency as a result.[75] Second, achieved hourly emissions rates do not represent actual total annual emissions levels, because there is nothing measuring or limiting how many hours the unit will be called on during the year. The passage's conclusory statements are belied by the Agency's own acknowledgement just three pages earlier in the proposal, that when older EGUs undertake heat rate improvements, the result will be that they are more economical to dispatch, and therefore will be called on to run more often after the physical or operational change.[76] Whether or not they were running at maximum capacity at some point during the five years before the change is irrelevant to the question whether they will be called on more after the change, because their operations will be cheaper. In other words, the

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[73] 83 Fed. Reg. at 44,779 (citing and quoting 72 FR 26,219 (May 8, 2007) (emphases added)).

[74] *Id.* (citing and quoting 72 FR 26,219 (May 8, 2007) ("the hourly rate at which the unit is actually able to emit").

[75] Final Rule, Carbon Pollution Emissions Guidelines for Existing Stationary Sources, Electric Generating Units, 80 Fed. Reg. 64,662, 64,727 & n.379, 64,745, 64,748-51 (Oct. 23, 2015).

[76] *Id.* at 44,775.

maximum post-change and pre-change rates could be substantially similar, but actual emissions increases would still occur if the unit is dispatched more post-change. EPA admits that enabling that emissions increase to occur and yet not trigger NSR is allowed by – *indeed is the point of* -- its current proposal.[77] EPA's explanation confirms that the tests it proposes in this rulemaking would ignore actual emission increases that *are* related to a change so long as they fall within the source's pre-change emissions capacity.[78]

b. Alternative 3, comparing pre- and post-change maximum achievable hourly emissions rates, measures the *potential* to emit, not how much *actual* emissions will increase.

In *New York I,* the Circuit Court held that "[t]the plain language of the CAA indicated that Congress intended to apply NSR to changes that increase actual emissions instead of potential or allowable emissions."[79] As many of us commented to the Agency in 2007, and repeat here, EPA's attempt to characterize its third Alternative, the "maximum achievable" hourly emissions test, as a measure of actual emissions changes is completely without merit. In 2007, and equally applicable today, we explained:

> EPA asserts that its "maximum achievable" tests, … can be viewed as an actual emissions increase test because it is based on "what a source has been actually able to emit based on physical and operating capacity during a representative period prior to the change." 70 Fed. Reg. at 61,091/2. EPA continues to push this assertion in the current rule proposal. *See* 72 Fed. Reg. at 26,219/3. [*Compare* 83 Fed. Reg. at 44761/3; 44778/2-3 (same assertions)]. EPA now asserts that the "maximum achievable" test is an actual emissions test because it is similar to the maximum achieved emissions test. *Id.* These assertions are ludicrous. A demonstration that a source "has been actually able" to emit at a particular hourly rate prior to a change says nothing about whether the change will lead the source to operate in a way that increases actual emissions, *e.g.*, by operating for more hours per day or more days per year, or even by enabling the source to run harder each hour. The fact that the source was "actually able" to emit at a given hourly rate for at least one hour during the past five years does not somehow render the increased amount of pollution spewing from the source's smokestack on a daily, monthly, and/or annual basis something other than "actual."

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[77] *Id.*

[78] As we noted in 2007: It is revealing that when EPA adopted the existing NSR "actual-to-projected-actual" test in 2002, the agency extolled the benefits of that test on the basis that "the end result is that State and local reviewing authorities can appropriately focus their limited resources on those activities *that could cause real and significant increases in pollution*." 67 Fed. Reg. at 80,192 (emphasis added). Apparently, EPA has discarded its concern for "real and significant increases in pollution." 2007 Environmental Group Comments at 43.

[79] *New York I,* 413 F.3d at 40 (short forms in original).

Additionally, saying a source is "actually able" to emit something is just a linguistic variant on what the source is "capable" of emitting, i.e., its "capacity" or potential to emit. The fact that the agency clumsily places the word "actually" in front of the word "able" does not render the test any less based on potential emissions.

In reality, an examination of EPA's description of its "maximum achievable" test reveals that it [is] nothing more than a dressed-up definition of "emissions capacity." After all, a source's capacity cannot exceed the amount that it is "actually able to emit." Moreover, in determining what a source's pre-change capacity is for NSPS purposes, EPA has historically looked at what a facility has actually been able to emit prior to the change. For example, in *Wisconsin Electric Power Co. v. Reilly*, the Court explained:

> The EPA compares the hourly emissions of the unit at its *current* maximum capacity to its potential emissions at maximum capacity after the change. In this calculation, the agency disregards the unit's maximum design capacity; this factor often sheds little light on the unit's *actual current capacity* to produce emissions.

To determine the "current maximum capacity," EPA asked the source "to submit figures for the actual operations and emissions of each unit" from recent years. *Id.* Though the hourly emissions level used in the test reflected hourly emission rates actually achieved, all parties to the proceeding, and the court itself, understood this number to reflect the plant's "capacity." This is not surprising, as EPA has described the NSPS test as a capacity test for at least the past decade. *See, e.g.*, 57 Fed. Reg. 32,314, 32,316 (July 21, 1992) ("Under current NSPS regulations, emissions increases for applicability purposes, are calculated by comparing the hourly emission rate, at maximum physical capacity, before and after the physical or operational change.").

If, as EPA attempts to do here, a source's "actual emissions" could be defined in the same way as its "potential" emissions or emissions "capacity," there would have been no reason for Congress' careful distinction in the Clean Air Act between actual and potential emissions. *See New York*, 413 F.3d at 39. Because Congress did make this distinction, EPA's attempt to merge these two concepts is plainly unlawful. In implementing Congress' clear directive for NSR to apply to any physical or operational change that "increases the amount of any pollutant emitted," EPA must utilize a test that measures whether a change threatens to negatively impact ambient air quality by increasing a source's actual emissions. EPA's "maximum achievable" test plainly does not fulfill that requirement. Merely inserting the word "actual" into its description of its proposed "maximum achievable hourly emissions" test does not convert

what is plainly a capacity test into an actual emissions increase test.[80]

In 2007, moreover, EPA asserted that there is no "substantive difference" between a "maximum achievable hourly emissions" rate test and a "maximum achieved hourly emissions" rate test.[81] Thus, by EPA's own admission, the only difference between the two tests is that the latter test incorporates the word "achieved." The "achievable rate" test, just like the "achieved rate" test, is simply not an assessment of whether actual emissions will increase as the result of a physical or operational change. Its adoption as an NSR trigger would be illegal, as contravenes the statute's plain text, is an unreasonable interpretation of the statute, and conflicts with court decisions interpreting the statute.

Indeed, EPA's reasons for advancing this Proposal are essentially the same ones advanced by the agency on behalf of the Clean Unit exemption vacated by the D.C. Circuit in *New York I*: because EGUs allegedly will be "clean enough" as a result of CAIR and other rules ("in light of the substantial EGU emission reductions from more efficient air quality programs promulgated after 1980,"[82] EPA wished to resort to a potential, allowable, capacity-based emissions increase test to radically reduce and eliminate the instances in which NSR would be triggered, thereby eviscerating the program's applicability to modifications and violating the Act. The *New York I* court's description of the Clean Unit exemption bears an uncanny resemblance to the rationale advanced by the agency for this rulemaking:

> To maximize source flexibility and to encourage sources to install state-of-the-art pollution control technology, the 2002 rule establishes "an innovative approach to NSR applicability" that measures "increases" in terms of "Clean Unit" status instead of actual emissions. 67 Fed. Reg. at 80,222. Under this approach, a change does not "increase" emissions and thus does not trigger NSR as long as it does not alter the unit's Clean Unit status, even if the change increases the source's net actual emissions. Id. A unit automatically qualifies for Clean Unit status if it has installed "state-of-the-art" pollution control technology (LAER or BACT) as a result of major NSR within the last ten years. See id. at 80,279-80 (codified at 40 C.F.R. § 52.21(x)(3)). A unit that has not undergone major NSR can also qualify for Clean Unit status if it demonstrates that its pollution control technology is "comparable" to LAER or BACT and that its allowable emissions will not violate national ambient air quality standards or new source performance standards. See id. at 80,281-83 (codified at 40 C.F.R. § 52.21(y)).[83]

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[80] 2007 Environmental Group Comments, *supra* n. 6 at 15-16.

[81] 72 Fed. Reg. 26,219/3.

[82] 72 Fed. Reg. at 26,204/2.

[83] *NY I,* 413 F.3d at 38-39 (emphasis added).

The present Proposal is even more irresponsible and illegal, however, in that individual EGUs need not even be controlled at all, certainly not equipped with "state-of-the-art" pollution control technology, as under the Clean Unit exemption, and certainly not to levels corresponding to BACT or LAER today and certainly not over the course of the period – forever – in which EPA intends its radically weaker test to govern.[84]

There is yet another highly revealing parallel between the Clean Unit exemption and the instant EGU proposal. EPA only made the irresponsible potential/allowable-based emissions increase test under the Clean Unit exemption available to sources that had adopted state-of-the art controls within the past 10 years. It is telling that EPA in both instances refuses to make the potential/allowable/capacity emissions increase test available to other sources. Why? Because even this EPA recognizes that those tests are so irresponsible and radical that they would allow and produce enormous actual net emissions increases that would frustrate and impede efforts to attain national health-based air quality standards.

The D.C. Circuit's reasoning in vacating the Clean Unit exemption is equally controlling to show the unlawfulness of the instant proposal. As the court wrote:

> It is a "cardinal principle of statutory construction that a statute ought, upon the whole, to be so construed that, if it can be prevented, no clause, sentence, or word shall be superfluous, void, or insignificant." *TRW Inc. v. Andrews*, 534 U.S. 19, 31 (2001) (quoting *Duncan v. Walker*, 533 U.S. 167, 174 (2001)) (internal quotation marks omitted). Moreover, "when Congress includes particular language in one section of a statute but omits it in another section of the same Act, it is generally presumed that Congress acts intentionally and purposely in the disparate inclusion or exclusion." *Barnhart v. Sigmon Coal Co*., 534 U.S. 438, 452 (2002) (quoting *Russello v. United States*, 464 U.S. 16, 23 (1983)) (internal quotation marks omitted).
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> In the 1977 amendments to the CAA, Congress defined "major emitting facilit[ies]" as "stationary sources of air pollutants which emit, or have the potential to emit, one hundred tons per year or more of any air pollutant." 42 U.S.C. § 7479(1) (emphasis added). The juxtaposition of the terms "emit" and "potential to emit" indicates that when Congress enacted the NSR program in 1977, it was conscious of the distinction between actual and potential emissions, using the term "emit" to refer to actual emissions and the term "potential to emit" to refer to potential emissions. Indeed, the court stated in Alabama Power that the use of the term "emit," as opposed to "potential to emit," is a "reference to some measure of actual emissions." 636 F.2d at 353. Similarly, in the same section of the 1977 amendments to the CAA, Congress defined "best available control

[84] In this respect too, the present proposal is even more irresponsible and illegal than the Clean Unit exemption, since EPA allowed the effective exemption from NSR under that 2002 exemption to last only for a period of 10 years. The present proposal's effective exemption from NSR controls for modifications lasts forever, essentially rendering the NSR program inapplicable to EGU modifications.

technology" as "an emission limitation based on the maximum degree of reduction of each pollutant . . . emitted from any major emitting facility." 42 U.S.C. § 7479(3) (emphasis added). Again, the juxtaposition of the terms "emission limitation" and "emitted" indicates that Congress was conscious of the distinction between actual and allowable emissions, using the term "emitted" to refer to actual emissions and the term "emission limitation" to refer to allowable emissions.

In the same section of the 1977 amendments to the CAA, Congress applied NSR to "the modification (as defined in section 7411(a) of this title) of any source or facility." 42 U.S.C. § 7479(2)(C). Section 7411(a) defines a "modification" as any physical or operational change that "increases the amount of any air pollutant emitted by [the] source." 42 U.S.C. § 7411(a)(4) (emphasis added). As noted, when Congress enacted the 1977 amendments to the CAA, it distinguished between actual, potential, and allowable emissions. If Congress had intended for "increases" in emissions to be measured in terms of potential or allowable emissions, it would have added a reference to "potential to emit" or "emission limitations." The absence of such a reference must be given effect. See *Barnhart*, 534 U.S. at 452; *TRW*, 534 U.S. at 33. Moreover, even if the word "emitted" does not by itself refer to actual emissions, the phrase "the amount of any air pollutant emitted by [the] source" plainly refers to actual emissions. 42 U.S.C. § 7411(a)(4) (emphasis added). EPA itself came to the same conclusion in the preamble to the 1980 rule. See 45 Fed. Reg. at 52,700.[85]

The terms "achievable" and "achieved" are used throughout the Act, *e.g.*, CAA §§ 111(a)(1), 42 U.S.C. § 7411(a)(1), 111(b)(1)(B), 42 U.S.C. § 7411(b)(1)(B), 112(d)(3), 42 U.S.C. § 7411(d)(3), yet Congress did not apply those terms or concepts to calculation of actual emissions increases under section 111(a)(4), just as Congress failed to add references to "potential to emit" or "emission limitations." Equally, section 111(a)(1) nowhere uses the terms "capacity" or "maximum achievable" or "maximum achieved" emissions rates, despite those concepts being well understood as a matter of industry and regulatory practice by the time Congress authored the 1977 amendments. Finally, nowhere do parts C and D of Title I mention major stationary sources, modifications, or emissions increases being measured in terms of hourly emissions rates; in contrast, Congress identified annual emissions as the only relevant metric in all instances in which parts C and D identify emissions magnitude for regulatory purposes.

The unlawfulness of "potential" or "allowable" emissions as a measure of emissions increases for NSR purposes shares the following dispositive characteristic with the various options in EPA's 2007 proposal:[86] each reflects the artificial, outer limits of some approach different from, and at odds with, measuring actual emissions increases resulting from a

[85] *New York I,* 413 F.3d at 39.

[86] See 72 Fed. Reg. at 26,205, Table 1.

modification. For example, "potential to emit" represents not actual emissions but what a source's maximum potential emissions might be. Similarly, allowable emissions correspond to the outer limits of source emissions bounded by an "emission limitation," with no necessary relationship to actual emissions.[87]

In this same fashion, any "maximum" emissions test by definition reflects not actual emissions but the outer limits of emissions by reference to some theoretical or historic artificiality. A "maximum achievable" emissions test compounds that distance from actual emissions even further by linking the "maximum" framework to a concept, "achievability," that is a virtual synonym for "potentiality" and that the D.C. Circuit has already renounced. EPA does not and cannot explain how a maximum achievable emissions test differs materially or legally from potential or allowable emissions. Instead, in its 2007 proposal, EPA offered an explanation that is both conclusory and damning confirmation of the unlawfulness of the instant Proposal:

> We believe that a test based on maximum actual hourly emissions is a reasonable measure of actual emissions. It measures actual emissions at peak, or close to peak, physical and operational capacity.[88]

This explanation is conclusory to the extent that EPA simply slaps the word "actual" between "maximum" and "hourly emissions," and then follows that maneuver with unjustified "belief" that the test measures actual emissions. The damning confirmation comes from resort to the use of peak or close to peak "capacity," a concept inextricably linked by common understanding and industry usage to refer to the degree to which an EGU is capable of operating – a reference point as far from actual emissions as potential or allowable emissions.

Indeed, EPA well knows that maximum achievable emissions tests are a function of potential emissions. In a 2005 memorandum, the agency's attorneys made clear their understanding that the then-proposed "'achievable' test is a measure of the 'potential' emissions of a source ... in the classic and historic sense of the use of that term."[89] Indeed, an earlier version of EPA's 2005 proposal in fact refers to maximum hourly emissions tests as a potential-based test.[90]

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[87] See *New York I,* 413 F.3d at 39-40.

[88] 72 Fed. Reg. at 26,219/3.

[89] Memorandum to William Harnett, Director EPA IPTID/OAQPS from Adam M. Kushner, Director EPA AED/OECA, "Air Enforcement Division's Comments on the Draft New Source Review Clean Air Interstate Rule," Aug. 25, 2005 (hereinafter "AED/OECA Memo") at 9.

[90] Deliberative Draft EGU NSR Proposal (June 15, 2005), Docket Id., EPA-HQ-OAR-2005-0163-0045, at 71 ("We believe *the potential-to-potential test as proposed in the form of a maximum hourly emissions test* considering controls for CAIR Units is particularly well suited for striking the required balance between effective environmental protection at a cost that is not detrimental to economic growth.") (emphasis added); *see also* 68 Fed. Reg. at 61,272 ("The NSPS program requires a change to result in an increase in the *hourly potential to emit* of the

EPA's response brief in *New York I* freely described the Clean Unit exemption as being based upon a "maximum hourly emissions rate" test, just the test that the D.C. Circuit vacated for being based upon potential emissions: "The proposed test would allow facilities to make any change to a 'Clean Unit' as long as the change did not increase the unit's maximum hourly emissions rate (*i.e.*, the NSPS test)."[91] EPA attempted to defend that potential-based increase test by resorting to the same argument employed here: as "an exercise of EPA's *Chevron* discretion to interpret the ambiguous statutory term 'increase.'"[92] But the court found no ambiguity concerning the statute's obligation to measure emissions increases in actual emissions rather than potential or allowable emission, notwithstanding EPA's "respectful disagree[ment]" with the D.C. Circuit's opinion,[93] and that continues to animate the current Proposal more than a decade after EPA declined to seek cert. of the *New York I* decision with the Supreme Court.

In defense of the Clean Unit exemption in its response brief in *New York I*, EPA argued that it had discretion to establish the "baseline" for measuring emissions "increases" by reference to some artificial framework and emissions level not corresponding to actual emissions. In that case the artificiality was a source's emissions limitations in its permit:

> The question the Act leaves unanswered, and that EPA addressed in creating the Clean Unit test, is how an "increase" in emissions is to be measured. For units qualifying as Clean Units, EPA reasonably determined that an "increase" can be measured with reference to the emissions limitations or work practice requirements contained in their permits. 67 Fed. Reg. 80228/2. In other words, the terms of the permit establish the Clean Unit's baseline.[94]

In the Proposal, EPA simply resorts to different artificialities to establish a baseline for measuring emission increases that do not correspond to actual emissions: potential emissions-based Alternatives 1, 2 & 3, which do not cure the nonactual nature of the tests.

EPA was unsuccessful in persuading the *NY I* court that the Clean Unit exemption measured actual emission increases, even though those emission limitations or work practice requirements could be said in some sense to be a measure of actual emissions. The court recognized rightly that establishing such an artificial baseline would not measure actual emission

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facility. 40 CFR 60.14(a)-(b). In contrast, under NSR, we require an increase in annual emissions. *E.g.*, 40 CFR 51.165(a)(1)(x).") (emphasis added).

[91] Brief of Respondent EPA, *New York v. EPA,* No. 02-1387 and consolidated cases (Aug. 9, 2004), at 22.

[92] *Id.* at 31.

[93] 70 Fed. Reg. at 61,091/1.

[94] *Id.* at 111.

increases. And EPA's brief in that case has already conceded that a maximum hourly emissions rate test suffers from the same flaw, representing as it does a measure of potential not actual emissions.[95]

The Joint Brief of Industry Petitioners and Joint Brief of Industry Intervenors in *New York I* confirm that the Proposal's capacity-based maximum hourly tests are illegal "potential"-based emissions increase tests, contrary to the D.C. Circuit's decision in *New York I*.[96]

As EPA knows, industry and certain States reject its contention that the NSPS hourly rate test measures actual emissions. They hold the view, instead, that the NSPS hourly test is one triggered only when a source's capacity, or potential to emit, is increased. Indeed, although camouflaged through the years in different language, industry has been fairly plain in making the claim that an hourly rate test measures potential to emit, not actual emissions.

This view was on display in *Duke Energy*, where a variety of industries, utilities and associated trade groups filed briefs characterizing the hourly test as one that measures capacity to emit.[97] Duke itself has dressed the "design capacity" test in various garbs throughout the years.

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[95] Brief of Respondent EPA, D.C. Cir. No. 02-1387 and consolidated cases (Aug. 9, 2004), at 22.

[96] See Joint Brief of Industry Petitioners, *New York v. EPA,* D.C. Cir. No. 02-1387 and consolidated cases, at 6 (characterizing an increase in a facility's maximum hourly emissions rate as an increase in its existing capacity to emit, and recognizing that to be a modification under NSPS regulations); at 8 (the NSPS modification provision applies to "activities that increase a unit's 'potential' emission rate"); at 9 (for a project to "create 'new' capacity to emit," it "must first increase an existing facility's maximum achievable emissions rate" and "Activity that increases an existing facility's maximum achievable emissions rate is referred to hereinafter as 'NSPS modification activity.'"); at 10-11 (equating "potential to emit" with a facility's "existing design capacity."); at 23 (equating a unit "maximum emissions rate" with its "capacity to emit"); at 26 (NSPS regulatory "'modification' is a physical or operational-method change that creates new pollution capacity – *i.e.*, that increases an existing unit's maximum emissions rate) (emphasis in original); id. (equating the preceding test to a change that "increases the potential emission rate" of a regulated pollutant") (emphasis in original); see also Joint Brief of Industry Intervenors, *New York I*, at 3 (Alleging that "EPA established a regulatory definition of "modification" [under NSPS], which provided that the determination of whether an emissions increase occurs is made by reviewing whether maximum emissions after a change would be greater than maximum emissions at full capacity before the change, i.e., a "potential-to-potential" test. 40 C.F.R. § 60.14; see 67 FR 80,199 (2002)."); & at 11 ("'potential-to-potential' test" compares "maximum emissions before a change to maximum emissions after a change."); & at 12 (linking increases in potential emissions rate to operation at full design capacity) & 13 ("increase in a major source's "potential" emissions, i.e., in the source's maximum pre-change emissions level.").

[97] *See, e.g.*, Briefs in *Environmental Defense v. Duke Energy Corp.,* U.S. S.Ct. No. 05-858: Nat'l Env. Development Ass'n Br. at 3 (stating increase in "maximum achievable hourly emissions" typically does "not occur unless a manufacturer makes a change that increases production

Before the Supreme Court, Duke described the NSPS hourly rate test as capturing "actual emissions capabilities,"[98] and unveiled the new, oxymoronic phrase "actual emissions capacity" to characterize the test,[99] as if "actual capacity" were something other than . . . actual capacity. Aware that it isn't, Duke elsewhere admitted this test measures "basic emissions capacity," "basic capacity to emit pollutants," and "physical and operating capacity."[100] The company was more frank with the Fourth Circuit, equating the test with "designed emitting capacity" and "maximum emissions rate,"[101] and with the district court, where it spoke of changes in "capacity rating," [102]and increased "capacity beyond original design."

With the electric utility industry and EPA having vigorously opposed the D.C. Circuit's holding that it is unlawful to measure emissions increases under PSD/NSR based upon potential emissions rather than actual emissions, and the Supreme Court not having granted *cert.*, it is now unlawful for EPA to disregard that ruling. As industry rightly realized in their briefs before the D.C. Circuit struck down the Clean Unit exemption and soundly rejected their NSPS incorporation arguments, a potential-based emissions increase test has gone by many labels, all deviating unlawfully from actual emissions: maximum hourly emissions, increase in capacity to emit, creation of "new" capacity, increases in maximum achievable emissions rate, existing design capacity, comparing whether maximum emissions after a change would be greater than maximum emissions at full capacity before the change, source's maximum pre-change emissions level.

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capacity") (emphasis added), 10 (projects "that do not increase production capacity . . . do not increase maximum achievable hourly emissions"); State of Alabama, *et al*., Br. at App. A (Grusnick Decl.) ("maximum hourly rate of emissions" triggered when projects "would increase unit capacity")(emphasis added); Electric Util. Indus. Br. at 3 (NSPS test captures "a change that increases a unit's intrinsic capability to emit pollution (i.e., its hourly emissions rate), not one that maintains the unit's ability to operate in the future as it was constructed and permitted to do") (emphasis added); Manufacturers Assoc. Work Group Br. at 11-12 (equating "permitted and constructed capacity" and "maximum capacity" with "actual emitting capability") (emphasis added); 24 (favoring "capacity" netting for units within source).

[98] *Environmental Defense v. Duke Energy Corp.,* U.S. S.Ct. No. 05-858, Brief of Duke Energy at 5.

[99] *Id. at* 22, 32 n.13.

[100] *Id. at* 2, 6.

[101] *Environmental Defense v. Duke Energy Corp.*, 4th Cir. No. 04-1763, Brief of Duke Energy, at 8, 10.

[102] *U.S. v. Duke Energy Corp.,* M.D.N.C. No. 1:00cv1262, Duke Energy Reply to U.S. Mot. S.J. at 8 & n.11.

These formulations all correspond to EPA's maximum achievable hourly emissions rate tests. And with EPA's necessary admission that the maximum achieved hourly emissions test is effectively the same as the maximum achievable hourly emissions test,[103] the Proposal must fall under the weight of the D.C. Circuit's decision in *New York I* invalidating potential emissions as a lawful metric for measuring emissions increases under PSD/NSR.

4. EPA's Proposed Hourly Rate-based Applicability Determination Is Precluded By the Context of Section 111 and Contravenes the NSR Program's Structure and Purpose.

As EPA itself notes in the preamble, the context in which the NSR provisions are situated is fundamental to determining whether EPA's interpretation of the statute is consistent with Congress's intentions.[104] And yet EPA's proposal includes no discussion – or evaluation – of its effects on other Title I programs, which make up the statutory context into which Congress inserted the NSR program to support. In particular, there is no analysis of the impacts on air quality attainment or maintenance, PSD increment consumption, or the related adverse impacts on visibility and air quality Class I areas, either in the preamble or the accompanying Regulatory Impacts Analysis.

a. Closely Related Provisions Demonstrate that Congress Was Concerned with Actual Annual Emissions Increases.

EPA's proposal would allow changes at EGUs that cause significant annual actual tonnage emissions increases to evade NSR review and the requirement to install pollution controls. The interpretation underlying this proposal is impermissible, as it disregards the context in which Congress's established the NSR program, and its purpose to guard against such annual tonnage increases.

That Congressional direction is demonstrated by statutory provisions requiring NSR prior to construction of any new source that emits, or has the potential to emit, more than the "*tons per year*" threshold applicable to that source category.[105] Specifically, the statute establishes a 100

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[103] 72 Fed. Reg. at 26,219/3.

[104] *King v. Burwell*, 135 S.Ct. 2480, 2492 (2015) ("A provision that may seem ambiguous in isolation is often clarified by the remainder of the statutory scheme ... because only one of the permissible meanings produces a substantive effect that is compatible with the rest of the law.") (ellipsis in original; quotation marks and citation omitted).). It is "a fundamental canon of statutory construction that the words of a statute must be read in their context and with a view to their place in the overall statutory scheme." *FDA v. Brown & Williamson Tobacco Corp*., 529 U.S. 120, 133 (2000). "[R]easonable statutory interpretation must account for both the specific context in which language is used and the broader context of the statute as a whole." *UARG v. EPA,* 134 S.Ct. 2427, 2442 (2014).

[105] *See* CAA § 169(1), 42 U.S.C. §7479(1).

tons per year threshold for certain specified sources (including "fossil-fuel fired steam electric plants of more than two hundred and fifty million British thermal units per hour heat input), and a 250 tons per year threshold for all other sources.[106] In sharp contrast, EPA's proposal would authorize sources to proceed without review even when making changes that cause annual emission increases many times the amount that would have triggered NSR if the source were being built from scratch. *See infra* Section D.3. Congress could not have intended for EPA to interpret CAA § 111(a)(4) in a way that leads to such a an incongruous, even absurd result – 100 tons of air pollutant causes the same environmental and public health harms, and creates the same challenge for attainment with ambient air quality standards, whether it comes from a new or existing, modified source. And as noted *supra,* Congress never intended existing sources to permanently escape NSR and the requirement to install controls.[107] The statute's precision in defining tons per year thresholds for new sources, and its description of modifications as those triggered by "any" physical or operational change that increases the "amount" "emitted" describe a program in which older sources making modifications are to make the choice to clean up or shut down, not to receive a pass enabling eternal life while avoiding NSR and the requirement to install pollution controls.

Notably, in its decision in *Utility Air Regulatory Group v. EPA*,[108] the Supreme Court paired the Act's definition of "major emitting facility"—one with the potential to emit 100 or 250 tons per year of "any air pollutant" —with the statutory definition of "modification" as a change "that causes the facility to emit more of any air pollutant":

> The Act defines a "major emitting facility" as any stationary source with the potential to emit 250 tons per year of "any air pollutant" (or 100 tons per year for certain types of sources). §7479(1). It defines "modification" as a physical or operational change that causes the facility to emit more of "any air pollutant." §7411(a)(4).[109]

It is irrational, arbitrary and capricious, and an abuse of discretion for EPA to contend that the Supreme Court would not consider a facility modification to "emit more of any air pollutant" when it increases annual emissions by ten or one hundred *times* the major emitting facility thresholds of 100 or 250 tons per year. Yet that is exactly what EPA contends in the Proposal.

That Congress expected EPA to define "modification" for NSR purposes in terms of whether a change would lead to an annual actual tonnage emission increase is further confirmed by CAA § 165(b), 42 U.S.C. § 7475(b), which provides an exemption from NSR's air quality analysis under limited circumstances that include instances where a source limits its post-modification burden on air quality to "less than *fifty tons per year*." (emphasis added).

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[106] *Id.*

[107] *Alabama Power,* 636 F.2d at 350, 400.

[108] *UARG v. EPA,* 573 U.S. 302, 134 S.Ct. 2427 (2014).

[109] *Id.,* 134 S.Ct. at 2435.

The Seventh Circuit observed, "Congress added a program for the Prevention of Significant Deterioration ("PSD"), *concerned with increases in total annual emissions*, to ensure that operators of regulated sources in relatively unpolluted areas would not allow a decline of air quality to the minimum level permitted by the NAAQS."[110] Indeed, ever since adopting its first final NSR regulations in 1980, EPA has also interpreted the Act's NSR provisions as focusing on annual emission increases, because it is actual yearly emissions increases that affect attainment with national ambient air quality standards. In light of EPA's long history of utilizing an annual emissions increase test for NSR purposes, it is no surprise that Congress legislated against that background when it amended the Act in 1990. Thus, in CAA § 182(c)(6), 42 U.S.C. § 7511a(c)(6), discussing NSR applicability in areas classified as severe for ozone non-attainment, Congress adopted a special *de minimis* rule for sources that emit volatile organic compounds, and couched that rule as well in terms of *tons per year increases*. Specifically, that provision states:

> The new source review provisions under this part shall ensure that increased emissions of volatile organic compounds resulting from any physical change in, or change in the method of operation of, a stationary source located in the [serious nonattainment] area shall not be considered de minimis for purposes of determining the applicability of the permit requirements established by this chapter unless the increase in net emissions of such air pollutant from such source does *not exceed 25 tons when aggregated with all other net increases in emissions from the source over any period of 5 consecutive calendar years which includes the calendar year in which such increase occurred.*[111]

Immediately following that provision, another provision creates a "special rule for modifications of sources emitting less than 100 tons," which applies whenever such a source makes a change "except for a *de minimis* increase" as established in § 182(c)(6), 42 U.S.C. § 7511a(c)(6). *See* CAA § 182(c)(7), 42 U.S.C. § 7511a(c)(7). Thus, the applicability of this provision depends on whether a change would lead to more than a *de minimis* increase, which § 182(c)(6), 42 U.S.C. § 7511a(c)(6) defines in terms of the annual tonnage increase resulting from a planned change. *Id.* The same is true for § 182(c)(8), 42 U.S.C. § 7511a(c)(8), which establishes a "special rule for modifications of sources emitting 100 tons or more." These provisions confirm that Congress understood, and intended that NSR would focus on annual actual emissions, not hourly emissions or output.

In sum, the contextual statutory provisions discussed above demonstrate that the NSR program was created to guard against those changes to a stationary source that would lead to an increase in the source's *actual annual* emissions – because it is annual emissions increases that imperil attainment. Because all three of EPA's proposed tests are effectively measures of the *potential* to emit, not measures of actual emissions increases, and indeed, would ignore such

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[110] *WEPCO*, 893 F.2d at 904 (emphasis added).

[111] 42 U.S.C. § 7511(c)(6)(emphasis added).

increases, adoption of any of these tests would be unlawful, and an unreasonable interpretation of the statute.

b. If Adopted, EPA's Proposed New Hourly Rate-based Test Will Thwart Congress' Intent for NSR to Protect Against Emissions Increases that Threaten to Degrade Ambient Air Quality and Interfere with NAAQS Attainment, and run counter to the *de minimis* rationale for EPA's own regulatory significance thresholds.

The focus on *actual* emissions increases in the definition of modification in section 111(a)(4), and cross-referenced in the statute's NSR provisions at section 169(2)(C), 42 U.S.C. § 7479(2)(C), is central to the structural role and effective operation of NSR in the Clean Air Act.[112] The statute refers to "amounts" of air pollution, in both the PSD and nonattainment contexts.[113] Congress intended the NSR program to guard against increases in air pollution, a goal that the NSPS alone had failed to address. EPA's original rulemaking reflected this, laid out in a 1980 memorandum supporting its *de minimis* NSR tons per year thresholds, and reflecting EPA's understanding that the NSR program itself is based on concerns about actual annual increases in air pollution and the threat to air quality. The Agency additionally focused at that time on the fact that changes to individual sources that increase emissions can be cumulative.[114] Accompanying the rule, the Agency undertook a significant modelling exercise to estimate the outcome if multiple major sources in an area undertook projects causing only *de minimis* emissions, at the same time. The Agency analyzed the potential for cumulative impacts to learn whether its approach might pose a problem for increment consumption.[115]

By allowing changes that lead to actual emission increases to proceed without undergoing NSR, and applying modern pollution controls, EPA's current proposal could lead to massive cumulative increases in air pollution. This was the Agency's concern in the *De Minimis* Impact Study, even about cumulative *de minimis* increases. However, EPA entirely fails to model the full potential for air emissions increases resulting from the current proposal.[116] EPA's reading of the statute to allow such a result is unreasonable and an impermissible resolution of any statutory ambiguity the Agency believes may remain. Finally, by failing even to evaluate what its current proposal's impacts would be on NAAQS attainment and maintenance, EPA acts arbitrarily and

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[112] 42 U.S.C. §7411(a)(4); 42 U.S.C. § 7479(2)(C).

[113] Congress enacted the NSR provisions to address air quality increases that the NSPS provisions alone had not been able to solve, because the NSPS focus on emissions rates did not cap acceptable levels of actual emissions increases. *See supra* Section A. for a discussion of the distinction between the NSPS and NSR programs, and that history.

[114] U.S. EPA, Impact of Proposed and Alternative De Minimis Levels for Criteria Pollutants, EPA-450/2-80-20 (June 1980)("*De Minimis* Impact Study").

[115] 45 Fed. Reg. 52,676, 52,707 (Aug. 7, 1980).

[116] See *infra* Sections D.2. and D.3., for a discussion of the levels of emissions increases that could be possible, based on analysis we provide, but which the Agency failed to perform.

capriciously in making this proposal.[117]

The fact-finding and analytical steps that EPA undertook to establish the current NSR program's *de minimis* exemptions provide further evidence that the NSR program, with its present focus on annual emissions, plays an integral role in EPA's emissions-increment enforcement regime, a role that the agency itself has historically acknowledged and fostered.

In *Alabama Power* the D.C. Circuit held that EPA could exempt from PSD review some emission increases on *de minimis* grounds.[118] As the Court made clear, the burden of justifying any such exemption would be on EPA, and the agency's inquiry must focus on the statutory goals:

> Unless Congress has been extraordinarily rigid, there is likely a basis for an implication of *de minimis* authority to provide exemption when the burdens of regulation yield a gain of trivial or no value. That implied authority is not available for a situation where the regulatory function does provide benefits, *in the sense of furthering the regulatory objectives,* but the agency concludes that the acknowledged benefits are exceeded by the costs.[119]

EPA directly cited this language in the *De Minimis* Impact Study: "The Agency does possess authority, inherent in the statutory scheme, to overlook circumstances that *in context* may be considered *de minimis*."[120] EPA continued:

> The court spoke to EPA's capability to exempt modifications with *small net increases* and to permit proposed sources (new or modified) to avoid BACT review and the ambient monitoring requirements through the application of *de minimis* thresholds for those pollutants emitted from a source that would otherwise be subject to review.[121]

This led EPA to create for each regulated air pollutant "an emission cutoff that would be considered to cause an insignificant or *de minimis* air quality impact."[122]

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[117] EPA must provide record support for its proposal, examine all relevant data and show it is accurate and defensible, and may not fail to consider an important part of the issue. *State Farm*, 463 U.S. at 43; *District Hosp. Partners v. Burwell*, 786 F.3d 46, 57 (D.C. Cir. 2015).

[118] *Alabama Power,* 636 F.2d at 400.

[119] *Id.* 360-61 (emphasis added).

[120] *De Minimis* Impact Study, at 2.

[121] *Id.*, at 2 (emphasis added).

[122] *Id.*

Crucially, the "context" for the PSD/NSR program--in which "small net increases" may be exempt, and EPA may be able to overlook "an insignificant or *de minimis* air quality impact"—is one in which Congress established statutory levels of 100 and 250 tons per year (tpy) statutory threshold for new "major emitting facilities."[123] Accordingly, it would be unlawful, arbitrary and capricious and an abuse of EPA discretion to permit emissions increases equal to or greater than the statutory "major emitting facilities" thresholds to escape review. Congress made very clear there is regulatory value and benefit from conducting review for new major emitting facilities of 100/250 tpy: implied *de minimis* exemption authority "is not available for a situation where the regulatory function does provide benefits, *in the sense of furthering the regulatory objectives*, but the agency concludes that the acknowledged benefits are exceeded by the costs."[124]

In its decision in *Utility Air Regulatory Group v. EPA*, the Supreme Court also made clear that EPA's authority to exempt emissions increases from "modifications" was limited by the *de minimis* doctrine. The Supreme Court indicated it was aware that EPA had established permissible *de minimis* emissions increases *below* the major emitting facility thresholds of 100 or 250 tons per year:

> Although the statute sets numerical thresholds (100 or 250 tons per year) for emissions that will make a facility "major," it does not specify by how much a physical or operational change must increase emissions to constitute a permit-requiring "modification." Nor does it say how much of a given regulated pollutant a "major emitting facility" must emit before it is subject to BACT for that pollutant. EPA, however, has established pollutant-specific numerical thresholds below which a facility's emissions of a pollutant, and increases therein, are considered *de minimis* for those purposes. See 40 CFR §§51.166(b)(2)(i), (23), (39), (j)(2)–(3), 52.21(b)(2)(i), (23), (40), (j)(2)–(3); see also *Alabama Power Co. v. Costle*, 636 F. 2d 323, 360–361, 400, 405 (CADC 1979) (recognizing this authority in EPA); *cf. Wisconsin Dept. of Revenue v. William Wrigley, Jr., Co.*, 505 U. S. 214, 231 (1992) ("[*D*]*e minimis non curat lex* . . . is part of the established background of legal principles against which all enactments are adopted").[125]

It is irrational, arbitrary and capricious and an abuse of discretion for EPA to contend, as it does in the Proposal, that the Act sets thresholds for "emissions that will make a facility 'major'" in "tons per year," but that the question of "how much a physical or operational change must increase emissions" may be determined in a manner other than "tons per year." Worse, EPA in the Proposal contends that how much a change "must increase emissions" to constitute a "modification" may *ignore* emissions increases in tons per year, *altogether*, even if those increases are orders of magnitude higher than the major emitting facility thresholds.

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[123] CAA § 169(1), 42 U.S.C. §7479(1).

[124] *Alabama Power*, 636 F.2d at 361 (emphasis added).

[125] *UARG,* 573 U.S. 302, 134 S. Ct. at 2435 n. 1.

EPA ignores the "'fundamental canon of statutory construction that the words of a statute must be read in their context and with a view to their place in the overall statutory scheme.'"[126] Read in context, section 111(a)(4)'s "increases the amount of any air pollutant" cannot be understood to allow many hundreds or thousands more tons of regulated air pollutants to result from a change, by denying that such increases are not 'increasing the amount' of any air pollutant.

Indeed, the "major emitting facilities" statutory thresholds of 100/250 tpy, coupled with the D.C. Circuit and Supreme Court recognition that *de minimis* exemption authority does not exist when "the regulatory function does provide benefits," together make clear that any EPA exemption authority exists only for emissions increases much smaller than 100 or 250 tons per year (the SO_2 threshold in the current regulations is 40 tons per year, for example).[127] The Proposal is unlawful, arbitrary and capricious and an abuse of EPA discretion by exempting emissions increases for EGU modifications far in excess of any small percentage of the "major emitting facilities" statutory thresholds, indeed, far in excess of these thresholds by factors of ten, one hundred or even higher.[128]

Critically, in the *De Minimis* Impact Study, EPA noted bluntly that

> Because major sources that make significant changes in their emissions (*i.e.*, greater than 100/250 tons/yr) are clearly subject to PSD review by virtue of the Clean Air Act and the associated regulations, the major impact of the *de minimis* levels will be on those major sources that make smaller, less significant changes in their emissions. In other words, depending upon where the *de minimis* levels are set, some sources would make emission changes that would be below those levels and therefore not be subject to PSD review.[129]

This passage is important for several reasons: EPA recognizes that "changes" at major sources that increase actual, annual emissions by more than 100/250 tons/year "are clearly subject to PSD review by virtue of the Clean Air Act," not just EPA regulations; any permissibly exempt *de minimis* levels must be "smaller, less significant changes in their emissions"--less than 100/250 tons/year, so that they will "not be subject to PSD review"; and those emissions changes

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[126] *FDA v. Brown & Williamson Tobacco Corp.*, 529 U. S. 120, 133 (2000)(internal citations omitted).

[127] *Alabama Power,* 636 F.2d at 360-61.

[128] *See infra*, at 52 discussing AED/OECA Memo and attachments, and *supra*, discussing inapplicability of PSD/NSR "significance" thresholds until *after* the application of the proposed new hourly rate test.

[129] *De* Minimis Impact Study, at 31-32.

must be measured in tons per year, like the "major emitting facilities" thresholds of 100/250 tons/year.[130]

EPA regulations, policy and practice have followed this same interpretation of the Act and EPA's permissible *de minimis* authority for PSD/NSR modifications—until the badly illegal (and never finalized) 2005 and 2007 proposals, and the badly unlawful instant Proposal. EPA's Proposal is arbitrary, capricious and an abuse of agency discretion by reversing longstanding positions and failing to provide a reasoned explanation for such reversals.[131] EPA may not cure these defects in a final rule but must, instead, re-propose those explanations and analyses prior to finalizing any version of the regulatory amendments in the Proposal.

Unsurprisingly, in light of this clear statutory understanding, EPA in the 1980 *De Minimis* Impact Study did not entertain using *de minimis* emissions levels for modifications *higher* than the "major emitting facilities" thresholds.[132] Instead, in implementing the *Alabama Power* ruling, EPA acknowledged that it could not label any pollution levels "*de minimis*" unless it first determined "the cumulative effect on increment consumption of multiple sources in an area each making the maximum *de minimis* emissions increase (thereby going unreviewed under PSD at the time of the change)."[133] That is, the agency recognized (1) that the Clean Air Act proscribes increment violations; (2) that PSD is a vital mechanism for enforcing increment restrictions; and thus, (3) that the agency lacks authority to exempt *de minimis* pollution increases from PSD if there is any chance that such exemptions could, individually or cumulatively, lead to increment violations.

The agency's specific reasoning on this point is instructive:

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[130] *Id.*

[131] *Encino Motorcars*, 136 S. Ct. at 2126 (when reversing a longstanding interpretation, agency must "provide "[a] reasoned explanation" for "disregarding facts and circumstances that underlay or were engendered by the prior policy: an unexplained inconsistency in agency policy is a reason for holding an interpretation to be an arbitrary and capricious change from agency practice.")(citation and internal quotation marks and brackets omitted)); *see also Michigan v. EPA*, 135 S. Ct. at 2707 (failing to address "important aspect[s] of the problem" renders an agency decision arbitrary and capricious, citing *State Farm,* 463 U.S. at 43); *Delaware DNR v. EPA,* 785 F.3d at 18 ("Because EPA too cavalierly sidestepped its responsibility to address reasonable alternatives, its action was not rational and must, therefore, be set aside.")(internal citations omitted).

[132] *See also De Minimis* Impact Study, at 44 (basing *de minimis* analysis on typical sources "expected to make small emissions changes over the course of a year," all below 100 tons per year), 45 (eliminating from analysis sources with mass emission rates greater than 100 tons per year, "because they would not be representative of emission changes that would be affected by the *de minimis* exemption").

[133] 45 Fed. Reg. 52,676, 52,707.

> While one source may modify its facility and not cause a significant air quality impact, a number of sources making such a change could cause a significant impact. If the sources were located near to each other, the cumulative air quality impact could consume a significant amount of the increment. Since the extent of the impact is directly proportional to the number of sources and their relative proximity to each other, it is important to determine the potential air quality impact from a number of existing sources making *de minimis* changes in emissions.[134]

To account for this concern, EPA undertook an extensive modeling effort using data from 37 existing sources in a real airshed – Dayton, Ohio. The study estimated the "maximum aggregate increment consumption projected to occur as a result of all [37] major sources each making a *de minimis* emissions increase" at the same time.[135] Ultimately, this study gave the agency the confidence to conclude that the selected *de minimis* thresholds (40 tons per year ("tpy") for sulfur dioxide and 25 tpy for particulate matter) would not lead to "[e]xcessive increment consumption" even if multiple plants in an airshed *simultaneously* increased pollution by the identified amounts. *Id.* Importantly, though, the agency declined to consider higher thresholds on the ground that "a source which, due to its own emissions, could potentially consume [a significant percentage] of increment should [not] be exempt from review."[136]

The instant Proposal abandons the *de minimis* emissions levels for EGU modifications whose actual emissions exceed those *de minimis* levels, but do not exceed "maximum actual hourly emissions rates" through the preliminary major NSR applicability tests for EGUs. This allows annual emissions increases from these EGU modifications to far exceed established *de minimis* levels. The Proposal thus reverses longstanding legal, policy and technical positions and fails to provide a reasoned explanation for such reversals, including the reversal's failure to 'maintain environmental protections' and prevent non-*de minimis* emissions increases.[137] EPA

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[134] *De Minimis* Impact Study, at 7.

[135] 45 Fed. Reg. at 52,708; *see also* De Minimis Impact Study.

[136] *Id.* at 52,707.

[137] *Encino Motorcars*, 136 S. Ct. at 2126 (when reversing a longstanding interpretation, agency must "provide "[a] reasoned explanation" for "disregarding facts and circumstances that underlay or were engendered by the prior policy: an unexplained inconsistency in agency policy is a reason for holding an interpretation to be an arbitrary and capricious change from agency practice."(citation and internal quotation marks and brackets omitted)); *see also Michigan v. EPA*, 135 S. Ct. at 2707 (failing to address "important aspects of the problem" renders an agency decision arbitrary and capricious, citing *State Farm,* 463 U.S. at 43); *Delaware DNR v. EPA,* 785 F.3d at 18 ("Because EPA too cavalierly sidestepped its responsibility to address reasonable alternatives, its action was not rational and must, therefore, be set aside.")(citations omitted).

may not cure these defects in a final rule but must, instead, re-propose those explanations and analyses prior to finalizing any version of the regulatory amendments in the Proposal.

In the *De* Minimis Impact Study, the factors listed below were integral to EPA's selection of the *de minimis* emission levels for modifications. Comparing the *De Minimis* Impact Study to the Proposal and accompanying docket shows that EPA with this Proposal has utterly failed to address the following "important aspects of the problem," and failed to "provide "[a] reasoned explanation" for "disregarding facts and circumstances that underlay or were engendered by the prior policy:[138]

- Failure to determine the number of sources potentially affected by the Proposal's abandonment of *de minimis* emissions levels for EGU modifications whose actual emissions exceed those *de minimis* levels, but do not exceed "maximum actual hourly emissions rates" under the preliminary major NSR applicability tests for EGUs;[139]

- Failure to "determine the overall air quality impact for an area if all the major sources within the area emitting over 100 or 250 tons/yr proposed to modify."[140]

- Failure to assess individual and cumulative impacts from non-*de minimis* emissions from modifications on Class I areas.[141]

- Failure to conduct any analysis of previously modified sources in the utility sector or otherwise, to determine whether prior modifications were typical of the types of modifications that would be expected from the source category in the future.[142]

- Failure to employ modelling techniques taking into account plume or effective stack heights; stack exit velocities and gas temperatures; terrain and topography; mixing heights; background concentrations; aerodynamic downwash; windspeed and other meteorological conditions; atmospheric transport and dispersion; distance from Class I areas.[143]

- Failure to evaluate the level of air quality impacts and increment consumption that would be considered insignificant as a percentage of the NAAQS, using the strengthened NAAQS levels for PSD/NSR-regulated air pollutants that are much lower than the NAAQS levels

[138] *Encino Motorcars,* 136 S. Ct. at 2126.

[139] *De Minimis* Impact Study, at 7.

[140] *Id.*

[141] *Id.* at 8.

[142] *Id.* at 12.

[143] *Id.* at 14-19, 56-57.

used in the 1980 *De Minimis* Impact Study. In other words, EPA must consider what is considered a *de minimis* air quality impact in 2018 resulting from EGU modifications that evade review, based on today's NAAQS that are significantly strengthened compared to the NAAQS in 1980.[144]

- Failure to conduct cumulative frequency distributions for all PSD/NSR-regulated air pollutants and the distribution of emission levels.[145]

- Failure to evaluate regulated air pollutant-specific air quality concentration distributions for EGU and non-EGU sources for a cumulative source emissions analysis to determine any "excessive increment consumption" even if multiple sources in an airshed *simultaneously* increased pollution by the identified amounts.[146]

- Failure to evaluate the relationship between mass emission rates and air quality concentrations for any sources.[147]

- Failure to evaluate urban area or regional air quality impact of non-*de minimis* emissions increases from modifications.[148]

- Failure to evaluate how many source modifications would be subject to review under current rules in any states, versus how many under the Proposal, an exercise undertaken by EPA in the *De* Minimis Impact Study.[149]

These details of the increment restrictions and the agency's *de minimis*-threshold modeling analysis place two important and unavoidable limits on EPA's discretion to redefine the NSR emissions increase test. First, the agency has absolutely no authority to define the NSR trigger in a way that prevents the PSD permitting program from preventing PSD increment violations. Second, EPA may not arbitrarily abandon its prior concern with protection of increments by eliminating the *de minimis* thresholds and dismissing increment restrictions by pretending that *national* emissions programs will mitigate local, actual emissions increases and increment violations.[150] Yet EPA now proposes to eliminate significance levels altogether when

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[144] *Id.* at 18.

[145] *Id.* at 22.

[146] *Id.* at 39-44.

[147] *Id.* at 52-53.

[148] *Id.* at 54.

[149] *Id.* at 62.

[150] *See*, *e.g.*, 72 Fed. Reg. at 26,208 (asserting that any increase in emissions due to increased operating hours allowed under 2007 proposal would be "diminished" by CAIR and BART) and

there is no capacity increase, through the addition of the hourly emissions rate test to the preliminary NSR applicability determination.

To see the significant limits on the agency's discretion, one must consider all statutory NSR provisions. The provisions regulate "construction" activities, providing, among other things, that such activities may not cause or contribute to increment violations, 42 U.S.C. § 7475(a); a different provision of the Act defines "construction" as "includ[ing] … modification (as defined in section 7411(a) …)," *id.* at § 7479(3); and finally, § 111(a)(4) defines "modification" by reference to "emissions … increases," *id.* at § 7411(a)(4). Given this layered statutory structure, it is clear that the NSR program's limits on construction activities – including the increment restrictions – also constrain "modifications" and, in turn, emissions increases.

Fundamentally, the methodology utilized by EPA for determining NSR applicability must be consistent with the agency's obligation to ensure that the PSD permitting program prevents modified sources from "caus[ing], or contribut[ing] to" an increment violation.[151] As described above, to comply with the latter limitation: (1) sources must model the possible pollution-loading consequences of proposed modifications; and (2) such modeling requires consideration of projected post-change hours of operation. Thus, EPA is not free to adopt an "emissions increase" methodology that ignores changes that increase emissions by enabling a source to increase its hours of operation. EPA's Proposal would do exactly that, and is therefore unlawful.

Indeed, in the context of the 2002 NSR rulemaking, EPA itself recognized that focusing the program on increases in potential hourly emissions would not adequately protect pollution increments. For example, in the rulemaking proposal, the agency observed:

> Finally, one of the most troubling side effects of [a potential-to-potential hourly emissions test] is that it could ultimately stymie major new source growth by allowing unreviewed increases of emissions from modifications of existing sources to consume all available increment in PSD areas. After the minor source baseline date has been established in an area, all increases, whether subject to major NSR or not, consume increment. As illustrated in the example above, under the [the potential-to-potential hourly emissions] test an old grandfathered source could experience a "significant" net increase in annual actual emissions, yet it would not necessarily be subject to review. Since increment consumption after the minor source baseline date is calculated based on actual emissions increases, the "minor" modification of the grandfathered source would still consume increment. If a major new source with state-of-the-art emission controls proposes to locate in an area in which the increment has been consumed in this manner, it would be barred from building unless and until the increment problem was resolved. At the

70 Fed. Reg. at 61,094 (asserting that CAIR and BART would "decrease the likelihood" that an unreviewed source could cause an increment violation).

[151] 42 U.S.C. § 7475(a).

> same time, older plants would continue to be able to make changes resulting in significant unreviewed, and possibly uncontrolled, actual emission increases.[152]

And later, in its Technical Support Document for the 2002 NSR Rule, EPA continued in a similar vein:

> In the preamble, we discussed our concerns about the environmental effects that could result from the general use of an applicability test based on the CMA Exhibit B approach. We indicated that the approach, based on increases in hourly potential emissions, could result in unreviewed emissions increases on a tons per year basis from modifications of existing sources consuming all available increment in PSD areas. … We continue to believe that the "actual-to-projected actual" test – and not the CMA Exhibit B test – is the more appropriate method for measuring actual emissions increases that result from a physical or operational change, while not counting for applicability purposes.…
>
> With regard to the comment that the CMA Exhibit B approach would not have an impact on increment consumption because permitting, emissions inventories, and SIP's consider potential emissions, we believe that this conclusion overlooks the fact that the regulatory increment consumption process is based on changes in "actual emissions." PSD increment analyses performed with potential emissions tend to be screening analyses, which are accepted if the results show that no violations will result. Hence, while many analyses may be done initially with potential or allowable emissions, PSD applicants always have the ability to perform a more refined analysis should the initial analysis reveal problems meeting the increment. That is, actual emissions increases ultimately may need to be (and in some cases have been) used to determine whether an increment is being violated. This is one reason why we believe that it is important to retain an applicability process that triggers NSR on the basis of actual emissions increases.[153]

Finally, it is worth quoting in full from EPA's 2005 NSR proposal the agency's absurdist, anticipatory response to any comments that raise concerns about the increment violations that will likely result from an hourly emissions rate proposal:

> States' implementation of the Acid Rain, CAIR, and BART programs will generate significant reductions in pollution and thereby decrease the likelihood that an unreviewed source could cause an increment violation. We conducted modeling to estimate the impact of the CAIR program on nationwide emissions

[152] Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NSR): Notice of Proposed Rulemaking, 61 Fed. Reg. 38,250, 38,270 (Jul. 23, 1996).

[153] Technical Support Document for the Prevention of Significant Deterioration and Nonattainment Area New Source Review Regulations, Nov. 2002, Docket No. A-90-37, at I-6-9.

> trends and ambient concentrations. The modeling shows that emissions are predicted to decline in all parts of the country. With nationwide emissions declining, there is a decreased likelihood that unpermitted emissions increases could violate a PSD increment by returning a given geographical area to levels above that area's historical actual levels.[154]

This reasoning is staggeringly flawed. The Clean Air Act *prohibits* construction projects that "cause, or contribute to," increment violations. EPA's palliative assurance that "there is a decreased likelihood" of increment violations under a regional emissions program (like CAIR, or now, CSAPR) does absolutely nothing to enforce that statutory prohibition.[155] The Act does not direct EPA to decrease the likelihood of increment violations by relying on national or regional programs. Rather, the agency has a clear legal obligation to use the statutory NSR programs to address significant, real-time, localized, actual pollution increases through case-by-case *pre*-construction review. Like the air quality impacts review under PSD, and offsets under nonattainment NSR, the increments process requires contemporaneous, source-specific, localized air quality review. The agency cannot possibly discharge that responsibility by relying on unrelated national or regional trading programs.

Nor would the Proposal prevent increment violations. EPA has previously claimed that it is impossible to predict how any particular EGU will choose to comply with the new rules or, rather, pleads "model size" as an excuse. In the instant
Proposal, EPA devotes *no* time or analysis or consideration to the fact that the Proposal will allow increment violations.

EPA's adoption of the Proposal would not only squarely violate the express terms of the Clean Air Act's increment provisions, but would also arbitrarily and capriciously depart from the agency's prior approach to increment protection. As noted above, EPA has repeatedly and vocally defended pollution increments – by adopting an elaborate dispersion modeling procedure (that requires input of annual emissions data) for sources to use in projecting the pollution loading consequences of proposed modifications; by conducting extensive modeling of a real airshed (Dayton, OH) to confirm that the identified "*de minimis*" levels are truly "*de minimis*" in their cumulative impact; and by rejecting CMA Exhibit B. The agency's wholesale reversal of that posture, without acknowledgment let alone explanation, is the essence of arbitrariness.[156] The Proposal reverses longstanding positions and fails to provide a reasoned explanation for such reversals, above all how the reversal would 'maintain environmental protections' and prevent non-*de minimis* emissions increases. The Proposal fails to address

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[154] 70 Fed. Reg. at 61,094. *See also* 72 Fed. Reg. at 26,208 (repeating the same argument in 2007 NSR proposal).

[155] *Id.*

[156] *See, e.g.*, *Nat'l Coalition Against the Misuse of Pesticides v. Thomas*, 809 F.2d 875, 883 (D.C. Cir. 1989) (discussing the "well-settled principle that an agency may not shift its position without supplying a reasoned explanation for doing so," and citing *State Farm,* 463 U.S. at 57).

"important aspects of the problem," including the 'maintenance of environmental protections,' prevention of non-*de minimis* emissions increases, protection of increments, and the other public health and air quality concerns discussed in these comments.[157] EPA may not cure these defects in a final rule but must, instead, re-propose those explanations and analyses prior to finalizing any version of the regulatory amendments in the Proposal.

EPA has recognized previously that ton-per-year *de minimis* thresholds cannot be squared with the hourly rate emissions tests in the instant Proposal, leading EPA to suggest abandoning the thresholds. Rather than defending this reversal of policy, however, the agency instead pretended that doing away with the thresholds somehow strengthens the NSR program:

> By eliminating the use of a significant emission rate threshold for modifications, we balance the differences in these tests, and focus permitting authority resources on reviewing all changes that result in increases in existing capacity. We believe that this result is consistent with our interpretation of Congressional intent in that it assures that, at a minimum, increases in existing capacity undergo major NSR review.[158]

Similarly, EPA claimed that by doing away with thresholds (and netting) "all emission increases, including those less than 40 tpy, would be reviewed."[159] EPA repeated these assertions in its 2007 supplemental proposal.[160] Those claims, of course, were badly false. EPA proposed no significance levels for Option 2, on the purported basis that establishing significance levels is "discretionary."[161] EPA instead stated that significance levels aren't necessary because changes they don't increase the hourly emissions rate, and whether significant or not, would not be regulated to begin with.[162]

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[157] *Encino Motorcars*, 136 S. Ct. at 2126 (when reversing a longstanding interpretation, agency must "provide "[a] reasoned explanation" for "disregarding facts and circumstances that underlay or were engendered by the prior policy: an unexplained inconsistency in agency policy is a reason for holding an interpretation to be an arbitrary and capricious change from agency practice."(citation and internal quotation marks and brackets omitted)); *see also Michigan v. EPA*, 135 S. Ct. at 2707 (failing to address "important aspects of the problem" renders an agency decision arbitrary and capricious, citing *State Farm,* 463 U.S. at 43); *Delaware DNR v. EPA,* 785 F.3d at 18 ("Because EPA too cavalierly sidestepped its responsibility to address reasonable alternatives, its action was not rational and must, therefore, be set aside.")(citations omitted). *See Michigan v. EPA*, 135 S. Ct. at 2707 (citing *State Farm*, 463 U.S. at 43).

[158] 70 Fed. Reg. at 61,092.

[159] *Id.* at 61,094.

[160] 72 Fed. Reg. 26,220.

[161] *Id.*

[162] *Id.*

The ACE NSR Proposal similarly allows massive, actual, annual emissions increases far in excess of *de minimis* levels. As discussed elsewhere in these comments, the agency's proposed approach in fact permits emissions increases well in excess of 40 tpy to escape review.[163] Even if EPA has authority to reverse course and exempt such significant emissions increases from NSR review – which we strongly contest – it certainly may not do so without reasoned explanation.[164] EPA may not cure these defects in a final rule but must, instead, re-propose those explanations and analyses prior to finalizing any version of the regulatory amendments in the Proposal. And it may not do so without establishing an administrative record for different *de minimis* levels, pursuant to notice and comment rulemaking, with the burden on EPA to establish trivial and miniscule emissions impact -- something the agency has utterly failed to do in the Proposal or earlier proposals.

c. The Proposal Would Allow Greater Than De Minimis Emissions Increases to Escape Control, in Contravention of the Statute and EPA's Own De Minimis Impacts Study.

As discussed, EPA has established significance levels under PSD and nonattainment NSR for the various regulated air pollutants, corresponding to *de minimis* emissions increases below which a net emissions increase is deemed not to have occurred.[165]

EPA's ability to exempt emission increases under the modification provisions of section 111(a)(4) is limited by the *de minimis* doctrine, something the agency has admitted previously and a fact that led to the creation of the significance thresholds below which net emissions increases were deemed not to have occurred, meaning controls were not required.

The D.C. Circuit wrote the following about the *de minimis* doctrine in *New York II*:

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[163] *See, e.g.*, *supra* at 29 & n. 89 (discussing AED/OECA Memo and attachment).

[164] *Encino Motorcars*, 136 S. Ct. at 2126 (when reversing a longstanding interpretation, agency must "provide "[a] reasoned explanation" for "disregarding facts and circumstances that underlay or were engendered by the prior policy: an unexplained inconsistency in agency policy is a reason for holding an interpretation to be an arbitrary and capricious change from agency practice."(citation and internal quotation marks and brackets omitted)); *see also Michigan v. EPA*, 135 S. Ct. at 2707 (failing to address "important aspects of the problem" renders an agency decision arbitrary and capricious, citing *State Farm,* 463 U.S. at 43); *Delaware DNR v. EPA,* 785 F.3d at 18 ("Because EPA too cavalierly sidestepped its responsibility to address reasonable alternatives, its action was not rational and must, therefore, be set aside.")(citations omitted).

[165] See, *e.g.*, 40 C.F.R. § 51.166(b)(23)(i) (PSD significance levels); 40 C.F.R. § 51.165. For purposes relevant to this proposal, the PSD program significance (or *de minimis*) levels include 40 tpy for NOx, 40 tpy for SO_2, 25 tpy for PM and 15 tpy of PM_{10}. *Id.* The nonattainment NSR program significance (or *de minimis*) levels for NOx and SO_2 are also 40 tpy. *Id.* § 51.165(a)(1)(x)(A).

> [The doctrine] reflects an agency's inherent power to overlook "trifling matters," *id.* at 360, a "principle [that] is a cousin of the doctrine that, notwithstanding the 'plain meaning' of a statute, a court must look beyond the words to the purpose of the act where its literal terms lead to 'absurd or futile results,' " *id.* at 360 n. 89 (citations omitted). As the Supreme Court has instructed, "the venerable maxim *de minimis non curat lex* ('the law cares not for trifles') is part of the established background of legal principles against which all enactments are adopted, and which all enactments (absent contrary indication) are deemed to accept." *Wisconsin Dep't of Revenue v. William Wrigley, Jr., Co.,* 505 U.S. 214, 231, 112 S.Ct. 2447, 120 L.Ed.2d 174 (1992). Reliance on the *de minimis* doctrine invokes congressional intent that agencies diverge from the plain meaning of a statute only so far as is necessary to avoid its futile application. Thus, the court in *Alabama Power* acknowledged that "EPA does have discretion, in administering the statute's 'modification' provision, to exempt from PSD review some emission increases on grounds of *de minimis* or administrative necessity." 636 F.2d at 400. As applied, the court explained that *de minimis* standards served to alleviate "severe" administrative and economic burdens by lifting requirements on "minuscule" emission increases. *See id.* at 405.[166]

EPA arrived at the creation of the significance or *de minimis* thresholds discussed above following its *De Minimis* Impact Study and pursuant to notice and comment rulemaking, having provided the public opportunity to analyze and comment upon the agency's methodology. That study, earlier rulemaking, air quality impacts analysis, and the resulting *de minimis* thresholds represent the only effort by the agency to establish *de minimis* increase levels for the PSD and nonattainment NSR programs. These materials are not addressed, contradicted, or critiqued by any agency analysis or documents in the Proposal or the docket. Nor is there any alternative analysis nor factual findings in the docket or elsewhere suggesting alternative *de minimis* emissions increase thresholds for any of the regulated air pollutants under PSD/NSR. The agency continues to rely upon these materials to support the longstanding *de minimis* thresholds established not just for EGUs, but all stationary sources subject to the PSD/NSR programs. Any attempt by EPA to critique, contradict or supplant existing *de minimis* thresholds and the underlying, supporting analysis must be done only through notice-and-comment rulemaking with an opportunity for public comment, since such actions would be material to adoption of these proposals.[167]

The Proposal pretends to retain significance/*de minimis* thresholds for EGU modifications, but in reality, it does no such thing. O*nly* if a change to an EGU is determined to be a modification *first* because its projected emissions exceed the unlawful and arbitrary "maximum actual hourly emissions rate" test, only then does an operator determine if a change is

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[166] *New York II,* 443 F.3d at 888.

[167] *See*, *e.g.*, CAA § 307(d)(3), 42 U.S.C. § 7607(d)(3).

a "major modification" under the background major NSR programs, which continue to base significance/*de minimis* levels on tons per year amounts.[168] Accordingly, changes at EGUs that result in non-*de minimis* emissions—indeed, increases of many hundreds or thousands of tons per year—evade review, so long as the changes do not trigger the "maximum actual hourly emissions rate" test, first. Finally, it bears noting that EPA retains the significance/*de minimis* thresholds in tons per year for all other PSD/NSR-regulated source activity by other industry sectors within the same airshed as EGUs.

EPA's proposal violates the Act and is arbitrary, capricious and otherwise an abuse of discretion by allowing greater than *de minimis* emissions increases from EGU modifications to escape control. As discussed below, the Proposal allows emissions increases greater than the long-established *de minimis* thresholds; EPA itself projects the Proposal will result in emissions increases greater than these *de minimis* thresholds; experience with the NSR enforcement cases demonstrates that the Proposal will allow and result in greater than *de minimis* emissions increases, see *infra*; and the internal structure of EPA's own proposal demonstrates that emissions increases greater than established *de minimis* levels would be allowed to escape control.

The PSD/NSR *de minimis* levels are established on the basis of tons per year, not pounds per hour or any other hourly metric. This reflects in part the statutory PSD/NSR programs' concern with annual emissions; the definition of major stationary source and modifications in terms of tons per year;[169] the *De Minimis* Impact Study's concern for "[e]xcessive increment consumption" even if multiple plants in an airshed *simultaneously* increased pollution by the identified amounts; the necessity of considering annual emissions and daily emissions in implementing the statutory increment program;[170] and the recognition that a new major stationary source of 100 tpy locating in an airshed impacts air quality just as much as a major modification of 100 tpy.

Nowhere does the Proposal, administrative record, or pre-existing EPA regulations establish *de minimis* thresholds based upon hourly emissions. Nor is this concept alone even a coherent one in the context of the statutory PSD/NSR program, since hourly *de minimis* emissions thresholds would ignore the adverse impacts for air quality, public health, the environment, increment consumption, visibility, and Class I areas resulting from annual emissions increase following modifications that increased operational hours and annual emissions but did not increase hourly emissions. These are core concerns and objectives of the PSD/NSR program that an exclusive hourly emissions focus would not just ignore but undermine by allowing greater than *de minimis* annual emissions increases.

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[168] *See* 83 Fed. Reg. 44,798 (proposed 40 C.F.R § 51.167(c)) & 83 Fed. Reg. 44,801 (proposed §52.25(c)).

[169] *Id.*

[170] See 42 U.S.C. § 7473(b).

Any attempted resort to the *de minimis* doctrine to establish hourly *de minimis* thresholds without limiting annual emissions increases below *de minimis* levels could not be defended as an exercise of the agency's power to overlook trifling matters, to avoid futile application of the statute, or to lift requirements on miniscule emissions increases. First, nowhere does EPA's proposal, supplemental proposal or administrative record attempt to defend the NSR changes in the Proposal as an exercise of the agency's *de minimis* discretion. Second, because EPA is maintaining the actual annual emissions increase test for all other industry sectors, and because it has defended that approach before the Supreme Court in *Environmental Defense v. Duke Energy* and countless other ongoing enforcement cases, the agency cannot be heard to argue that its longstanding interpretation is absurd or futile or avoids futile application of the statute. Third, EPA does not and cannot demonstrate that the purposes of the Act compel or justify an hourly test in order to avoid any alleged absurd or futile results associated with the actual annual test. Fourth, EPA identifies nor justifies no "administrative necessity" or avoidance of "severe" administrative burden, either on the part of EPA or state and local permitting agencies, that would justify resort to the *de minimis* doctrine to back EPA's proposed changes. Fifth, EPA nowhere demonstrates that the Proposal would alleviate "severe" economic burdens on EGUs associated with the actual annual test.[171]

Finally, and crucially in the context of the statutory PSD/NSR programs and the seminal *Alabama Power* and *New York II* decisions, EPA does not and cannot demonstrate that exercise of *de minimis* discretion would be appropriate to avoid absurd or futile results, or to alleviate severe administrative or economic burdens, associated with "miniscule" emissions increases.[172] This "miniscule" or *de minimis* emissions increase standard plainly cannot be met by any of the proposed changes, which allow annual emissions increases wildly in excess of the PSD/NSR program's long-established significance/*de minimis* thresholds.

First, the very structure of EPA's proposal demonstrates that the proposed options will allow emissions increases greater than existing *de minimis* levels to escape control. EPA does not and cannot deny this. Under the Proposal, if physical or operational changes increase net actual annual emissions by greater than 15 or 25 or 40 tpy of PM_{10} or PM or SO_2/NO_x, respectively, the change need not even be evaluated further as a possible modification if there is not an increase in the proposed maximum actual hourly emissions rate test. In other words, the Proposal exempts from control and consideration as modifications changes that increase actual annual emissions above significance levels but do not boost hourly emissions rates.[173]

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[171] *See New York II,* 443 F.3d at 888.

[172] *Id.*

[173] See, *e.g.*, Prevention of Significant Deterioration (PSD) and Non-Attainment New Source Review (NSR): Equipment Replacement Provision of the Routine Maintenance, Repair, and Replacement Exclusion, 68 Fed. Reg. 61,248, 61,272 (Oct. 27, 2003) ("500 tpy is far above any level EPA has ever thought justifiable as *de minimis*. *E.g.*, 40 CFR 51.166(b)(23)(i) (definition of "significant")").

While the Proposal purports to maintain the significance thresholds in the current rules, *supra*, it is crucial to recognize that those significance levels will not even be reached unless there is first an increase in the "maximum actual hourly emissions rate," or "maximum achievable hourly emissions rate." That is, an EGU could experience actual annual emissions increases of SO_2 or NO_x totaling hundreds or thousands of tons per year as a result of a physical change, but not boost hourly emissions rates under the Proposal, and therefore not trigger NSR and the requirement to control that excess actual air pollution. In this fashion, the radical operation of the proposed hourly tests render nugatory the significance levels, and avoid pollution control in *all* instances in which changes increase annual emissions above significance levels but do not increase hourly emissions rates.

The Proposal thus demonstrates the internally arbitrary and contradictory nature of EPA's treatment of the annual *de minimis* thresholds. While purporting to preserve those annual *de minimis* thresholds as designed under current regulations, EPA's Proposal renders operation of the *de minimis* thresholds completely meaningless and nugatory as a legal and practical matter due to the operation of the proposed hourly emissions rate screen. In other words, the Proposal is designed to circumvent, through an hourly emissions rate screen, the very *de minimis* thresholds that EPA maintains based on annual emissions. It is internally incoherent and arbitrary to mix and match the measurement of emissions increases for applicability purposes and *de minimis* purposes in terms of hourly and annual emissions as EPA's Proposal does, for the simple reason demonstrated here: failure to trigger the hourly applicability test(s) allows emissions increases significantly above established *de minimis* thresholds.[174] Again, this is done without any attempt by EPA to demonstrate that these hourly approaches will not yield more than *de minimis* or "miniscule" impacts on air quality.

These structural consequences of the Proposal, allowing greater than *de minimis* increases in violation of the statute and EPA's only factual evidence and analysis, are confirmed by numerous pieces of evidence. First, the case studies accompanying the AED/OECA Memo, as well as the memo itself, confirm that maximum hourly emissions rate tests will result in actual annual emissions increases wildly in excess of existing *de minimis* thresholds. Examining actual emissions data for EGUs from the Clean Air Markets Division, OECA concluded that an earlier proposed maximum hourly achievable emissions rate test would fail to control actual annual emissions increases of 50 tpy of SO_2 and 978 tpy of NOx in one case study;[175] 13,096 tpy of SO_2 in another case study;[176] 939 tpy of SO_2 and 1,405 tpy of NOx in another;[177] and 1,700 tpy of SO_2 and 507 tpy of NOx in a fourth case study.[178] In one example, the annual SO_2 emissions increase that escapes control is over 327 times the *de minimis* threshold for

[174] *See id.*

[175] AED/OECA Memo, *supra*, n. 89, attachment, at 10).

[176] *Id.* at 2.

[177] *Id.* at 20.

[178] *Id.* at 27; *See also* AED/OECA Memo, *supra*, n. 89, at 3.

SO_2.[179] As discussed elsewhere, these exempted increase levels are significantly higher than even the major stationary source threshold for new power plants (100 tpy), that EPA continues to recognize should be subject to BACT and LAER. And in many cases, these uncontrolled emissions *increases* are well above the *total* SO_2 and NOx emissions from EGUs that CAIR covers in 2020.

OECA also found that these changes would have produced annual emissions increases well in excess of the *de minimis* significance threshold under a maximum hourly achieved emissions rate test.[180] Had SO_2 controls been installed, in contrast, the EGU's *total emissions* – not just the emissions increase magnitude – were assumed to be reduced by 95%. For NOx controls, the assumed reduction was to a BACT level of 0.100 lb/MMBtu.[181]

Similarly, experience with EPA's NSR enforcement cases against coal-fired EGUs demonstrate the enormous levels of SO_2, NOx and PM emissions increases that would escape control under a maximum achievable hourly emissions rate test.[182] These levels are well in excess of the regulatory *de minimis* levels, representing in some instances nearly *530 times* the *de minimis* threshold.[183]

The Technical Support Document (TSD) for EPA's 2007 NSR proposal also demonstrates the arbitrariness of EPA's instant Proposal by allowing numerous annual SO_2 emissions increases in excess of *de minimis* levels to escape control at the county level, the lowest grid-level analysis performed by EPA and a rough approximation for the airsheds in which air quality impacts and increment consumption would occur.[184] Examining the so-called

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[179] *Id.*

[180] *See* AED/OECA Memo, *supra* n. 89, at 5, 8, 14, 18, 22, 25, 29 & 32.

[181] *See*, *e.g.*, *id.* at 6, 9.

[182] *See* OECA Memo, *supra* n. 89.

[183] For example, EPA's proposals would have exempted the $23 million equipment replacement project undertaken by TVA at Unit 1 of its Cumberland plant, since that project did not experience an increase in maximum achievable or maximum achieved hourly emissions rates. Final Order on Reconsideration in *In re Tennessee Valley Authority*, (EPA Environmental Appeals Board, September 15, 2000). That project resulted in an NOx emissions increase of 21,187 tpy – nearly one-and-one-half times the total amount of NOx emitted annually by all sources in the District of Columbia. 21,187 tpy of NOx is approximately 530 times the 40 tpy NOx *de minimis* threshold, and nearly 212 times the 100 tpy statutory threshold for new "major emitting facilities." CAA § 169(1). *See* 68 Fed. Reg. at 61,272 ("500 tpy is far above any level EPA has ever thought justifiable as *de minimis*. *E.g.*, 40 CFR 51.166(b)(23)(i) (definition of "significant").").

[184] Technical Support Document for Prevention of Significant Deterioration And Nonattainment Area New Source Review: Emissions Increase Test for Electric Generating Units, EPA-457/R-07-001 (April 2007), Docket ID. No. EPA-HQ-OAR-2005-0163-0246 ("2007 NSR TSD").

NSR Efficiency Scenario, Table 5.3 of the 2007 NSR TSD reveals EPA's own finding that: 40 counties would experience SO_2 emissions increases between 40 and 1,000 tpy; 9 counties would experience SO_2emissions increases between 1,000 and 3,000 tpy; and 4 counties would experience SO_2 emissions increases between 3,000 and 34,276 tpy.[185] The picture for NOx is much the same in Table 5.4: 30 counties would experience NOx emissions increases between 40 and 1,000 tpy, and 5 counties would experience NOx emissions increases between 1,000 and 3,098 tpy.[186] None of these emissions increases are consistent with the agency's longstanding *de minimis* thresholds, nor can these permitted increases remotely be defended as an example of "miniscule" emissions increases or an absurd or futile subject for PSD/NSR control. Indeed, if any of these net emissions increases resulted from any other stationary source sector – or the net emissions increases exceeding 100 tpy (less in nonattainment areas) resulted from a new power plant -- they would be subject to PSD/NSR controls.

The Proposal is fundamentally at odds with the Clean Air Act and the Supreme Court's *UARG* ruling, in these respects, because the Proposal adopts an unreasonable interpretation that conflicts with statutory context and the Act's design and structure as a whole. As the *UARG* Court noted:

> Even under *Chevron's* deferential framework, agencies must operate "within the bounds of reasonable interpretation." *Arlington,* 569 U.S., at –, 133 S.Ct., at 1868. And reasonable statutory interpretatio must account for both "the specific context in which … language is used" and "the broader context of the statute as a whole." *Robinson v. Shell Oil Co.*, 519 U. S. 337, 341 (1997). A statutory "provision that may seem ambiguous in isolation is often clarified by the remainder of the statutory scheme . . . because only one of the permissible meanings produces a substantive effect that is compatible with the rest of the law." *United Sav. Assn. of Tex. v. Timbers of Inwood Forest Associates, Ltd.*, 484 U. S. 365, 371 (1988). Thus, an agency interpretation that is "inconsisten[t] with the design and structure of the statute as a whole," *University of Tex. Southwestern Medical Center v. Nassar,* 570 U.S. –, –, 133 S.Ct. 2517, 2529, 186 L.Ed.2d 503 (2013) does not merit deference.[187]

The Proposal would allow emissions increases from EGU modifications far in excess of current *de minimis* emissions levels, even while *maintaining* those *de minimis* levels for all other industrial source categories covered by the NSR program, out of continuing recognition that these *de minimis*/significance levels are necessary to safeguard local air quality and public health, by guarding against harmful individual and cumulative emissions increases. Indeed, EPA pretends to preserve these *de minimis* levels for EGUs, but as these comments show, that preservation is a fiction because emissions increases due to the proposed new hourly test may

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[185] *Id. at* 5-7.

[186] *Id.*

[187] *UARG*, 573 U.S. 302, 134 S. Ct. at 2442.

exceed *de minimis* levels by enormous amounts. In both these respects, the Proposal is internally contradictory, and arbitrary and capricious and an abuse of discretion.

Moreover, as discussed earlier, the Proposal tramples on the broader context of the statute as a whole, and the Act's design and structure, by exempting annual emissions increases orders of magnitude higher than the major emitting facility thresholds. It is irrational and arbitrary and capricious to contend, as the Proposal implicitly, that Congress would be sufficiently concerned about the addition of 100 tons per year of air pollution resulting from a new major stationary source locating in an airshed, to require BACT/LAER, emissions impact analysis and offsets, while remaining unconcerned about the addition of 1,000, 5,000 or 10,000 annual tons of air pollution or more resulting from an EGU modification. The Proposal does not and cannot explain or justify how this unreasonable interpretation comports with statutory context, design and structure.

Just as the Supreme Court found it unreasonable in *UARG* to apply the 100- and 250-tons-per-year levels in the PSD program to greenhouse gas emissions, because this was "incompatible" with "the substance of Congress' regulatory scheme,"[188] it would be no less incompatible with the substance of the Act's regulatory scheme to exempt from NSR annual emissions increases orders of magnitude higher than the major emitting facility thresholds.

d. EPA ignores the Role of BACT and LAER Controls.

EPA ignores the role of NSR in reducing emissions through installation of BACT and LAER controls, and offsets in nonattainment areas. EPA also ignores the role of NSR in constraining emissions increases through appropriate NSR avoidance strategies, such as netting, PTE limits, and adoption of more modest control measures (*e.g.*, cleaner fuels, controls that do not qualify as BACT or LAER) that prevent major modification thresholds from being triggered. All of this results in EPA knowingly and arbitrarily under-accounting for the differences between the Proposal and current law.

And it is no response for EPA to protest that it cannot predict when modifications might occur or when EGUs might forego modifications or adopt or fail to install controls under the current PSD/NSR program between now and 2020. EPA's entire IPM run exercises are a series of multiple assumptions and projections about utility source behavior – utilization, fuel use, control device adoption, retirement, capacity increases, efficiency improvements, allowance purchases and sales etc. EPA can easily, and should, account for application of the current PSD/NSR annual emissions test during the period between now and 2020 *in addition to* implementation of national emissions programs to project where additional or different pollution control measures would be adopted *across the country* – and not just in areas covered by regional trading programs.

EPA isn't saying in the current Proposal that it thinks other programs will take the place of NSR – that element of the 2007 proposal is absent here. EPA asks about whether BACT can

[188] *Id.*, 573 U.S. 302, 134 S. Ct. at 2443 (citing *Brown & Williamson*, 529 U. S., at 156).

help,[189] but of course BACT and LAER are entirely avoided for EGU life extensions. Does EPA mean can BACT and LAER on other industrial sources make up the difference for the enormous pollution increases under this EGU-specific proposal? That is not clear. EPA provides no answers to these questions in the Proposal. Even if EPA were correct that its other control programs or BACT and LAER on other industries *could* substitute for the emissions reductions objectives of PSD and NSR (*e.g.*, BACT, LAER, offsets) as they apply to EGUs, there is no element of these other programs that remotely satisfies or substitutes for the role of PSD in safeguarding against increment violations. And as BACT or LAER are not triggered by the many life extending EGU physical changes that the Proposal would allow to avoid NSR entirely, there is no help to be had from BACT or LAER on EGUs, under EPA's current Proposal.

Additionally, in its earlier 2007 NSR proposal, EPA offered a fundamentally arbitrary reason for refusing to model the actual impacts of the PSD/NSR proposals, compared to operation of the current annual emissions test: this would "greatly increase model size:"

> In the IPM, EPA does not attempt to model unit-specific decisions to make equipment change or upgrades to nonenvironmental related equipment that could affect efficiency, availability or cost to operate the unit (and thus the amount of generation). Modeling such decisions would require either obtaining or making assumptions about the condition of equipment at units and would greatly increase model size, limiting its applicability in policy analysis.[190]

Yet EPA proposed, then and now, to barrel ahead without understanding the actual impacts of the proposal(s) it was advancing, without understanding whether or which specific EGUs will make physical or operational changes in response to the proposal(s), without understanding increased hours of operation, increased emissions, increased generation/capacity, avoided pollution controls, avoided offsets and air quality impact analysis, impacts to Class I areas, or harms to public health or the environment. The IPM is built upon a myriad of assumptions, which EPA readily creates and accepts when it is in the agency's interest to do so – for example, in the past, to advance the Clear Skies legislation, to advance CAIR, and now to concoct IPM runs to support the agency's Proposal. It is completely arbitrary to rest on EPA's unwillingness to "greatly increase model size" – which itself is an admission that EPA could model the necessary information if it wished to do so – and to impose increased emissions and harms to public health as the price of EPA's unwillingness.

Thus did EPA disclose in 2007 the dirty little secret behind the air quality and source behavior analysis allegedly supporting its 2007 proposal, and by extension, the current Proposal: "Specifically, IPM does not project that any particular existing EGU will make physical or operational changes that increase its efficiency, generation, or emissions. Therefore, IPM does not predict which particular EGUs will be subject to the major NSR applicability requirements."[191]

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[189] 83 Fed. Reg. at 44,782.

[190] 72 Fed. Reg. at 26,207/2.

[191] *Id.*

This illustrates nothing more than that EPA must not rely upon a national utility model like the IPM, which is designed to model multi-emissions control programs, especially those involving emissions caps, allowances, trading and banking, to model NSR applicability or non-applicability. The very design and assumptions of the IPM are biased in favor of programs like CSAPR, and ill-designed and biased with respect to unit-specific control programs like PSD/NSR that focus not on the electric power sector as a whole, but individual unit activities arising from physical or operational changes. As discussed elsewhere, PSD/NSR are unit-specific control programs triggered by greater than *de minimis* emissions increases resulting from any physical or operational change. To refuse altogether to evaluate whether "any particular existing EGU will make physical or operational changes that increase its efficiency, generation, or emissions" is the equivalent of pretending the current NSR regulations do not exist under a baseline scenario, to pretending that the Proposal will have no legal or factual impact, then nonetheless proclaiming that the agency has performed a reasoned comparison and concluded that "none of the proposed options would have a detrimental impact on county-level emissions or local air quality."[192]

EPA's earlier 2007 IPM runs and comparative analysis also failed to account for the prospect of further settlements or successful court outcomes in then-pending and future NSR enforcement cases against coal-fired power plants. EPA had court cases pending against the largest electric utility companies in the country when that modelling was performed -- AEP, Southern Company, Duke, Cinergy -- and some of those cases achieved substantial emissions reductions via settlements in line with past EPA resolutions between now and the 2020 period examined by the agency.

And since past EPA-DOJ settlements did not permit required reductions to be used as emission reduction credits in any EPA trading program (*e.g.*, the acid rain program, NOx SIP Call, or CAIR), additional settlements with this same restriction on credit generation would result in the effective *lowering* of the various caps in these trading programs. This is an extremely positive air quality outcome driven by the PSD/NSR annual emissions test, and EPA fails to account for the prospect of these outcomes altogether.

EPA must at least examine probabilistic assessments of some or all of those cases achieving emissions reductions consistent with settlements to date. Moreover, as EPA well knows, since that earlier modelling was conducted, the agency has continued to file NSR enforcement cases against coal-fired power plant companies that violated NSR. These must be factored into the agency's comparative analysis as well, using a probabilistic assessment.

It bears repeating the obvious: PSD/NSR are not just facility-specific, but unit-specific pollution control programs, requiring "any" physical or operational change to control emissions increases greater than *de minimis* amounts. Tables 3.5 and 5.5 in the 2007 NSR proposal's

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[192] 72 Fed. Reg. at 26,206/2-3.

TSD[193] identify specific EGUs that EPA projects to increase emissions as a result of the proposal under the NSR Availability Scenario and NSR Efficiency Scenario, respectively.

e. The Proposal Fails to Give Full Effect to the Statute's PSD Provisions.

PSD is "the *principal* mechanism for monitoring consumption of allowable increments and for preventing significant deterioration."[194] Moreover, the statutory "Congressional declaration of purpose" declares that PSD is designed "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 or from exposures to pollutants in other media, which pollutants originate as emissions to the ambient air, notwithstanding attainment and maintenance of all national air quality standards."[195] Other stated purposes include protecting air quality in national parks and other "areas of special national or regional natural, recreational, scenic, or historic value" (CAA § 160(2), 42 U.S.C. § 7470(2)), preserving clean air resources, (*id.* § 160(3), 42 U.S.C. § 7470(3)), assuring that "emissions from any source in any State" will not interfere with other states' implementation plans, (*id.* § 160(4), 42 U.S.C. § 7470(4)), and "assur[ing] that *any decision to permit increased air pollution* in any area to which this section applies is made only after careful evaluation of all the consequences of such a decision and after adequate procedural opportunities for informed public participation in the decisionmaking process" (*id.* § 160(5), 42 U.S.C. § 7470(5)) (emphasis added)).

Related statutory provisions detailing what a source must demonstrate as a prerequisite to obtaining a PSD permit further emphasize the focus of the NSR program on minimizing actual air emissions increases. Significantly, the statute requires the owner or operator of a proposed new source or modification to demonstrate that emissions will not "cause, or contribute to" a significant increase in air pollution beyond the "baseline concentration of such pollutants."[196] "Baseline concentration" is defined as "the *ambient concentration levels* which exist at the time of the first application for a permit in an area subject to this part."[197] The statute further provides that issuance of a permit "shall be preceded by an analysis … of the ambient air quality at the proposed site and in areas which may be affected by emissions from such facility for each pollutant subject to regulation under this chapter which will be emitted from such facility."[198] That analysis "shall include continuous air quality monitoring data gathered for purposes of determining whether emissions from such facility will exceed the maximum allowable increases

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[193] 2007 TSD, *supra* n.184 at 3-12 to 3-13 (Table 3.5) & 5-10 to 5-11 (Table 5.5).

[194] *Alabama Power*, 636 F.2d at 362 (emphasis added).

[195] CAA §160(1), 42 U.S.C. § 7470(1)) (emphasis added).

[196] CAA §§ 165(a)(3) & 163(b), 42 U.S.C. §§ 7475(a)(3) & 7473(b).

[197] *Id.* § 169(4), 42 U.S.C. § 7479(4) (emphasis added).

[198] *Id.* § 165(e)(1), 42 U.S.C. § 7475(e)(1).

or the maximum allowable concentration permitted under this part."[199] The Act further specifies that the monitoring data should be "gathered over a period of one calendar year preceding the date of application for a permit…").[200]

By contrast, EPA's Proposal would not "protect public health and welfare" from the adverse effects of increased air pollution. Rather, each of the proposed hourly rate tests would authorize an EGU to proceed *without* undergoing PSD review, even when making a change that would dramatically impact ambient air quality near and downwind from the EGU.

f. The Proposal Fails to Give Full Effect to the Statute's Nonattainment NSR Provisions.

The nonattainment NSR program also is focused on minimizing or preventing actual emissions increases, to allow attainment of air quality standards. An hourly emissions-rate based trigger is not consistent with that context. Thus, EPA told the Supreme Court in *Chevron* that "the purpose of new source review is to ensure that emissions from new or modified sources do not prejudice the transition to attainment."[201] In furtherance of this purpose, the Act expressly requires each State to include a nonattainment NSR program in its plan to implement national ambient air quality standards.[202]

State Implementation Plan adoption requires establishment of attainment inventories, with enforceable plans approved to meet that inventory. Attainment inventories catalogue criteria pollutants in terms of actual emissions in tons per year. EPA's proposed tests, however, allow significant increases in actual, annual emissions to escape NSR controls, which for nonattainment pollutants must be based on LAER.

The statutory provisions establishing prerequisites for obtaining a nonattainment NSR permit also demonstrate Congress' intent for NSR to protect against those emission increases that could negatively impact ambient air quality, and that such effects are to be measured in total tons. Specifically, in addition to controlling emissions to the "lowest achievable emissions rate,"[203] the permit applicant must, *inter alia*:

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[199] *Id.* § 165(e)(2), 42 U.S.C. § 7475(e)(2) (emphasis added).

[200] *Id*.

[201] Reply Brief of U.S. Environmental Protection Agency, *Chevron U.S.A., Inc. v. NRDC,* U.S. S.Ct. No. 82-1005 (Feb. 17, 1984).

[202] *See* CAA §110(a)(2)(C), 42 U.S.C. § 7410(a)(2)(C) (plans must include "regulation of the modification and construction of any stationary source within the areas covered by the plan as necessary to assure that national ambient air quality standards are achieved, *including a permit program as required in parts C and D*")(emphasis added)).

[203] *Id.* at § 173(a)(2), 42 U.S.C. § 7503 (a)(2); *see also* CAA § 171(3), 42 U.S.C. § 7501(3)(LAER defined).

- obtain "sufficient offsetting emissions reductions ... such that total allowable emissions from existing sources in the region ... will be sufficiently less than total emissions from existing sources ... prior to the application for such permit ... so as to represent ... reasonable further progress" in attaining NAAQS compliance.[204] Such offsets "shall assure that the *total tonnage* of increased emissions of the air pollutant from the new or modified source shall be offset by an equal or greater reduction, as applicable, in the *actual* emissions of such air pollutant from the same or other sources in the area;"[205] and

- undertake "an analysis of alternative sites, sizes, production processes, and environmental control techniques for such proposed source [that] demonstrates that benefits of the proposed source significantly outweigh the environmental and social costs imposed as a result of its location, construction, or modification."[206]

These statutory references all discuss the implication of a new or modified source in terms of its actual emissions. They speak in terms of total tonnage of actual emissions increases, and in addition to requiring new and modified sources to install up-to-date controls, the nonattainment NSR provisions demonstrate Congress' concern for mitigation of the ambient air quality impacts of such sources, through the offsets provisions, even after LAER controls are installed. In light of that Congressional concern expressed in the Clean Air Act's text, it is unlawful and arbitrary for EPA to define "modification" for NSR purposes so as to allow an emissions-increasing change that threatens to degrade ambient air quality in non-attainment areas to proceed without review, merely because the source's post-change hourly emissions rate would not exceed the highest hourly rate achieved or achievable at any time during the preceding five years. Notably, that latter characteristic of a project is *irrelevant* to the question whether the modified source will further impair attainment, and also would enable modified sources to *increase* their emissions and evade pollution control requirements, such that attainment is further threatened or violated.

In short, the Act's structure and also makes clear that the current Proposal contravenes the statute and indeed thwarts the core focus of the nonattainment NSR program -- to protect ambient air quality by regulating any change that would cause a source's actual tonnage emissions to increase.

g. EPA's Proposed Tests Would Allow Unlawful Increment Violations.

A key feature of the PSD program is its reliance on pollution increments as the chief

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[204] *Id.* at § 173(a)(1)(A), 42 U.S.C. § 7503 (a)(1(A); *see also* CAA § 171(1), 42 U.S.C. § 7501(1)(reasonable further progress defined).

[205] *Id.* at § 173(c)(1), 42 U.S.C. § 7503(c)(1)(emphasis added).

[206] *Id.* at § 173(a)(5) 42 U.S.C. § 7503(a)(5).

method for preventing significant air quality deterioration. These "increments" are caps on the amount of new pollution that can be allowed in clean air areas.[207] Once the established increment has been met, no additional new or modified sources can be permitted until pollution from existing sources is reduced.[208] To assess the impact from a modified source on increment consumption, the PSD program focuses on projected increases in actual tons of pollution loading – the total amount of air pollution that will be emitted into the atmosphere after the physical or operational change at the source, as discussed *supra* section B.4.e. Allowing sources to bypass that analysis, by exempting them from the PSD program if their post-change emissions rate does not increase, as EPA proposes, will prevent states from properly managing their air quality and planning for new economic development.

As the Senate explained in 1977, "[t]he chief tool to be used in implementing the no significant deterioration requirements is the permit that must be issued by the State for any major emitting facility to be located in any clean-air area, including Federal lands."[209]

The legislative history further demonstrates that Congress intended for the PSD program to promote economic growth by ensuring that existing sources would not consume all available PSD increment, thereby preventing new sources from constructing in an area. As the Senate explained:

> In the long run, the growth potential of these clean-air areas may be quickly filled without a reasonable policy to prevent significant deterioration. The first new source built in an area would often absorb the entire available air resource, leaving no capacity for future expansion or growth. Under the policy to prevent significant deterioration in this bill, the growth options should be enlarged. This is because the provision requires that any major source be constructed to utilize the best available control technology. This should usually leave room for additional growth.[210]

The Senate Committee explained that it should be up to the community where a source proposed to construct as to whether to allow the source to increase emissions such that increment is consumed. Specifically, the Senate Report states:

> This directive enables the State to consider the size of the plant, the

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[207] CAA § 163, 42 U.S.C. § 7473.

[208] *See id.* § 165(a)(3), § 7475(a)(3) (requiring demonstration that increment violation will not be caused or contributed to, for permit in a clean air area).

[209] S. Rep. No. 95-127, at 32 (1977). *See also* H.R. Rep. No. 95-294, at 9 (1977) ("The purpose of the [PSD] permit is to assure that the allowable increments and allowable ceilings will not be exceeded as a result of emissions from any new or modified major stationary source.").

[210] S. Rep. No. 95-127, at 31.

> increment of air quality which will be absorbed by any particular major emitting facility, and such other considerations as anticipated and desired economic growth for the area. This allows the States and local communities to judge how much of the defined increment of significant deterioration will be devoted to any major emitting facility. If, under the design which a major facility proposes, the percentage of the increment would effectively prevent growth after the proposed major facility was completed, the State or community could refuse to permit construction, or limit its size. This is strictly a State or local decision: this legislation provides the parameters for that decision.[211]

Additionally, to implement the increment component of the PSD NSR program, EPA has established a procedure whereby a facility planning a modification can demonstrate to the agency that the proposed changes will not "cause or contribute to," a PSD violation.[212] Among other things, the applicant must:

- Determine a baseline concentration for each pollutant in the geographic area (that is, "essentially the air quality existing" prior to the start of the PSD program;[213]
- Determine the baseline dates for the area, or the dates after which "actual emissions associated with construction … at a major stationary source affect the available PSD increment[s];" [214]
- Define the "baseline area" within which the "proposed emissions" from the new or modified facility could cause "at least a 1 $\mu g/m^3$ annual increase in the average annual concentration of the applicable pollutant;"[215]
- Compile an inventory of other sources in the baseline area that contribute to the area's pollution load; and
- Use dispersion modeling to "estimate the ambient concentrations" in the area "that will result from the … proposed emissions in combination with emissions from

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[211] *Id*.

[212] U.S. EPA, "Draft New Source Review Workshop Manual, PSD and Nonattainment Area Permitting" (October 1990) at C.1, *available at:* https://www.epa.gov/nsr/nsr-workshop-manual-draft-october-1990.

[213] *Id.* at C. 6.

[214] *Id.*

[215] *Id.* at C.9.

existing sources."[216]

Once the dispersion modeling is complete, the applicant must use the output to "demonstrate that the proposed source" (or source modification) "will not cause or contribute to air pollution in violation of any … PSD increment."[217] There are three ways to prove compliance: (1) by demonstrating that "[t]he proposed new source or modification will not cause a significant ambient impact anywhere;"[218] (2) by demonstrating that the "predicted pollutant concentration increase over the baseline concentration is below the applicable increment,"[219] or (3) by "obtain[ing] emissions reductions" elsewhere at the facility "that are sufficient to offset enough of the source's ambient impact to avoid" the increment violation.[220]

In sum, then, the Clean Air Act requires the owner or operator of a proposed source to demonstrate that any proposed construction or modification project will not cause or contribute to increment violations; to do so, the applicant must predict the pollution-loading consequences of the proposed changes; and finally, to run the EPA-approved dispersion models and obtain accurate pollution-loading predictions, applicants must input accurate and complete information about their projected post-change operations, including *the number of hours they will operate each year, which will determine total actual emissions*. Defining the NSR trigger in a way that omits the latter factor simply cannot be squared with this reality or the statutory text.

More fundamentally, the test for NSR applicability must bear a rational relationship to the purposes of the program – *i.e.* it must bring existing sources into the program when they are modified in such a way as would imperil attainment or the effort to achieve attainment, so that they will implement effective pollution controls. In the effort to ensure ambient air concentrations of dangerous, health-harming pollutants are below the levels that harm human health and welfare, all that matters is the total amount of pollution emitted by the source. The hourly rate of emission is *irrelevant* to that question. Thus, by proposing to insert an hourly rate into the NSR applicability test, EPA not only defeats the purposes of the NSR program, but renders the new applicability test arbitrary and capricious.

Revealingly, the Proposal contains no discussion of the proposed NSR changes' impacts on increment violations, and absolutely no analysis of this question in the record. Indeed, the word "increment" does not even appear in the NSR section of the Proposal. The Proposal thus contradicts and ignores, without any explanation, longstanding EPA practice and understanding that the number of hours a changed unit operates over the course of a year, and the resulting

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[216] *Id.* at C.24.

[217] *Id.* at C.51.

[218] *Id.*

[219] *Id.*

[220] *Id.* at C.53.

annual emissions from that unit, are crucial to determining whether a proposed change will cause or contribute to an increment violation. Nor is there any assurance provided in or with the Proposal that no EGU will fail to "cause[s], or contribute[s] to, air pollution in excess of" the statutory and regulatory increments,[221] as a result of the Proposal. That is because under the Proposal, no one – not even the EGU owners or operators – is required to conduct the increment review, compliance demonstrations and dispersion modeling that would occur under the PSD program for individual changes.

EPA's Proposal is arbitrary, capricious and an abuse of agency discretion, as it reverses longstanding Agency positions without providing a reasoned explanation.[222] EPA may not cure these defects in a final rule but must, instead, re-propose those explanations and analyses prior to finalizing any version of the regulatory amendments in the Proposal.

EPA's Proposal would allow EGU modifications to completely bypass all of this analysis, so long as an EGU's hourly emissions rates do not increase post-change. As the analysis we have undertaken illustrates, very significant tonnage increases in SO_2 and NOx could result from the new applicability test, and increment violations could be threatened or occur. However, EPA fails to evaluate any aspect of this question in the analysis accompanying the NSR Proposal. Because EPA's Proposal ignores whether the outcome of such an exemption would permit emissions from modified sources to exceed allowable PSD increments, the Proposal is arbitrary and capricious, as the Agency fails to consider a fundamental aspect of its proposal.[223]

h. EPA's Proposal Would Adversely Affect Visibility in Class I Areas (cross cite to NPCA comments at 35.)

The potential for increment violations due to the NSR Proposal particularly threatens air quality and visibility in Class I areas, including National Parks, National Monuments, Wilderness Areas and certain large federal preserves.[224] The PSD program includes increment

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[221] CAA § 165(a)(3), 42 U.S.C. § 7475(a)(3).

[222] *Encino Motorcars*, 136 S. Ct. at 2126 (when reversing a longstanding interpretation, agency must "provide "[a] reasoned explanation" for "disregarding facts and circumstances that underlay or were engendered by the prior policy: an unexplained inconsistency in agency policy is a reason for holding an interpretation to be an arbitrary and capricious change from agency practice."(citation and internal quotation marks and brackets omitted)); *see also Michigan v. EPA*, 135 S. Ct. at 2707 (failing to address "important aspects of the problem" renders an agency decision arbitrary and capricious, citing *State Farm,* 463 U.S. at 43); *Delaware DNR v. EPA,* 785 F.3d at 18 ("Because EPA too cavalierly sidestepped its responsibility to address reasonable alternatives, its action was not rational and must, therefore, be set aside.")(citations omitted).

[223] *State Farm,* 463 U.S. at 43.

[224] *See* Joint Comments of Conservation Organizations Specific to America's Public Lands, at 35, filed in this docket (October 31, 2018). CAA § 164(a), 42 U.S.C. §7474(a) describes Class I areas.

levels that are the first level of protection for air quality and visibility in those areas, the effective first line of defense against air quality and scenic vista protection, which the Act's additional visibility program augments. Because the proposed changes to NSR would lead to annual tonnage increases in the air pollution that causes regional haze (power plant SO_2, NOx, and particulate matter), it has the potential to significantly disrupt progress towards clean air in Class I areas. Our analysis, *infra* at Sections D.2 and D.3., demonstrates the possible increases in pollution that could result if EPA's proposed NSR changes are finalized. We have not attempted to evaluate the effect of such large amounts of air pollution on visibility impairment in Class I areas, however it is not commenters' job to do so. EPA must provide a record supporting all aspects of its proposals – but the Agency has failed even to discuss the potential for visibility impairment in Class I areas to result from the significant pollution increases that could occur if this Proposal is finalized. That failure to consider an important aspect of the problem, makes the Agency's Proposal arbitrary and capricious.[225]

i. EPA's Failure to Evaluate the Regulatory Impact of its NSR Revisions on the Clean Air Act's Anti-Backsliding Requirements is Contrary to Law, Arbitrary and Capricious

EPA also fails to assess how its Proposed NSR changes will affect backsliding EPA must evaluate how states with approved state implementation plans (SIPs) for their NSR programs would continue to meet the anti-backsliding provisions of the CAA under these proposed NSR changes. CAA section 110(*l*) prohibits states and EPA from revising an implementation plan if the revision would weaken the existing plan's requirements. Section 110(*l*) states: "The Administrator shall not approve a revision of a plan if the revision would interfere with any applicable requirement concerning attainment and reasonable further progress… or any other applicable requirement of this chapter."[226] Reasonable further progress is defined as "such annual incremental reductions in emissions of the relevant air pollutant as are required by this part or may reasonably be required by the Administrator for the purpose of ensuring attainment of the applicable national ambient air quality standard by the applicable date."[227]

EPA has long interpreted section 110(*l*) as preventing implementation plan revisions that would increase overall air pollution or worsen air quality. For example, in *Kentucky Resources Council, Inc. v. EPA*,[228] EPA interpreted section 110(*l*) as allowing the agency to approve a plan revision that weakened some existing control measures while strengthening others, but only "[a]s long as actual emissions in the air are not increased."[229] The court upheld EPA's interpretation,

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[225] *State Farm,* 463 U.S. at 43 (failure to address important aspects of the problem renders an agency decision arbitrary and capricious).

[226] CAA § 110(*l*), 42 U.S.C. § 7410(*l*).

[227] *Id.* at § 171(1), 42 U.S.C. § 7501(1).

[228] *Kentucky Resources Council, Inc. v. EPA*, 467 F.3d 986 (6th Cir. 2006).

which "allow[ed] the agency to approve a [state implementation plan] SIP revision unless the agency finds it will make the air quality worse."[230] The Eleventh Circuit has similarly upheld EPA's interpretation of section 110(*l*) as prohibiting plan revisions that would increase emissions or worsen air quality.[231] Moreover, in a short discussion regarding a challenge to the Nevada regional haze plan, the Ninth Circuit indicated that a haze plan that "weakens or removes any pollution controls" would run afoul of section 110(*l*).[232]

EPA's ACER Proposal is likely to violate section 110(*l*) where its implementation results in states weakening or eliminating requirements for EGUs to weaken emission reduction requirements. The net effect of such new measures would lead to an increase in air pollution compared to the existing SIP requirements compelling NSR review that results in modified sources constraining emissions based on emission mitigation measures necessary to reduce air quality impairment including BACT or LAER. Such increases in air pollution would interfere with, *inter alia*, NAAQS compliance and making reasonable progress towards remedying Class I visibility impairment in violation of section 110(*l*).

j. EPA's Proposed Use of Emissions From Periods of Noncompliance For Purposes of Determining Pre-Change and Post-Change Emissions is Contrary to Law, Arbitrary and Capricious.

The Proposal omits any "data limitations" for Alternative 3 concerning use of "emissions rate data from periods of noncompliance when [the] EGU was operating above an emission limitation that was legally enforceable at the time the data were collected."[233] The Proposal includes these "data limitations" for Alternatives 1 and 2,[234] but allows the use of emissions rate data from periods of noncompliance when an EGU was not operating pursuant to any "emission limitation that was legally enforceable at the time the data were collected"—because the unit had unlawfully evaded application of a legally required emission limitation. This situation would arise, for example, in instances in which a unit was unlawfully modified or constructed without first obtaining a minor NSR permit or registration, or a major NSR or PSD permit. In those

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[229] *Id.* at 995 (quoting 70 Fed. Reg. 28,429, 28,430 (May 18, 2005)).

[230] *Id.*

[231] *Alabama Envtl. Council v. EPA*, 711 F.3d 1277, 1293 (11th Cir. 2013) (EPA interpreted section 110(*l*) to "permit approval of the SIP revision 'unless the agency finds it will make air quality worse'" (quoting 73 Fed. Reg. 60,957, 60,960 (Oct. 15, 2008))); *see also id.* at 1296 (Molloy, J., concurring in part and dissenting in part) (EPA properly concluded a plan revision did not comply with section 110(*l*) when the agency could not rationally determine whether the revision would increase particulate emissions).

[232] *WildEarth Guardians v. EPA*, 759 F.3d 1064, 1074 (9th Cir. 2014).

[233] 83 Fed. Reg. at 44,800/2.

[234] *id.* at 44,800/1-2.

situations, and others, an EGU could be in noncompliance with Clean Air Act requirements without "operating above an emission limitation that was legally enforceable at the time the data were collected."

The Proposal is unlawful, arbitrary and capricious and an abuse of discretion by purporting to allow use of emissions rate data under Alternatives 1, 2 or 3 from *any* periods of noncompliance. This is true regardless of whether the noncompliance results from "operating above an emission limitation that was legally enforceable at the time the data were collected," or results from any other violation of the Clean Air Act, including from constructing or modifying an EGU without first undergoing all required preconstruction reviews, obtaining any required permits (including Title V or state operating permits), or meeting any other requirement related to unit operation and emissions.

Notably, the Proposal does not identify a single word in the Clean Air Act that allows an operator to base a unit's projection of emissions increases on a comparison to pre-change emissions or emissions rates that reflects any noncompliance with the Clean Air Act. Accordingly, EPA acts without any statutory authority in proposing this permission. Moreover, it is inconsistent with the structure and purposes of the Act to pretend that Congress would have authorized EPA to allows any emissions from periods of noncompliance with the Act to comprise a source's pre-change emissions for purposes determining emissions increases from modifications under PSD or NSR.

Including higher emissions resulting from any noncompliance with the Act in that calculations is the essence of arbitrary and capricious, unlawful action, because a unit's pre-change emissions could be inflated by illegal emissions. This would make it less likely that any change would be determined to result in emissions increases, because the projected magnitude of the unit's post-change emissions would be reduced to the same extent that the unit's pre-change emissions were inflated by unlawful emissions. The approaches taken by the Proposal in this regard would therefore allow a change at an EGU to violate NSR/PSD by failing to subject modifications to review, emissions mitigation and control, and offset when significant emissions increases resulted from changes compared to pre-change, illegal emissions levels. Moreover, the proposed approach to Alternative 3—omitting *any* data limitations related to noncompliance—is independently arbitrary and capricious and an abuse of discretion, because it is internally contradictory and inconsistent with the approach taken for Alternatives 1 and 2.

Finally, the Proposal is additionally arbitrary and capricious and an abuse of discretion because its "data limitations" related to noncompliance depart from and contradict the longstanding approaches taken by EPA regulations in the existing PSD, NSR and NSPS programs. EPA does so without providing any reasoned explanations for its reversals, or for disregarding the reasons why EPA never has authorized noncompliance with the Act to be used to determine pre-change or post-change emissions under the PSD or NSR programs.

While agencies may change position with changing circumstances, they are bound by the statutes they implement and the requirement to provide a reasoned basis and adequate justification for any change. With this proposal, EPA seeks to make significant changes in long standing policy without distinguishing its earlier positions, offering any new good reason, and

without providing adequate analysis of the possible ramifications of its proposal or alternatives. It is therefore arbitrary and capricious and an abuse of discretion.[235] Even were the statute ambiguous, EPA's new interpretation is impermissible because it is unsupported, and contrary to the goals of the statute.[236] EPA may not cure these defects in a final rule but must, instead, re-propose those explanations and analyses prior to finalizing any version of the regulatory amendments in the Proposal.

k. EPA's Proposal Represents/Effectively Creates an Unlawful Exemption from NSR.

EPA asserts without reasoned explanation, that triggering NSR is problematic for EGUs, because it creates financial disincentives to individual state and EGU decisions to undertake significant efficiency improvements.[237] Not only is there no evidence offered for this assertion, this is a "problem" of the Agency's own making – by failing to identify an appropriate BSER or set a minimum stringency for state CO_2 emissions standards, EPA is left having to wonder what state responses will be to its guidelines. That is so because its unreasonably strained interpretation of the statute leaves the Agency, rather than directing a minimum level of CO_2 reductions, essentially promoting an ACE §111(d) program that is standardless and voluntary. Also it was *EPA's* decision that the BSER for the ACE Proposal is based on efficiency improvements, despite the Agency's own Clean Power Plan record showing that such improvements will result in actual emissions increases, and as such are manifestly not the "best" system.[238]

In response to its asserted dilemma, EPA proposes not just another unlawful Pollution Control Project exemption like that vacated by the D.C. Circuit in *New York I*, but one that goes even further: First, it is not limited to projects undertaken for the purposes of meeting the CO_2 guidelines; and Second, it would allow sources making physical changes to avoid triggering NSR, even where the changes being made will likely increase actual emissions even of the primary target pollutant. As the *New York II* court noted, such a result would be "strange,"

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[235] *Encino Motorcars v. Navarro*, 136 S. Ct. 2117, 2126 (2016) (when reversing a longstanding interpretation, agency must "provide "[a] reasoned explanation" for "disregarding facts and circumstances that underlay or were engendered by the prior policy"); see also *Michigan v. EPA*, 135 S. Ct. 2699, 2707 (2015) (failure to address "important aspects of the problem" renders an agency decision arbitrary and capricious, citing *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Automobile Ins. Co.*, 463 U.S. 29, 43 (1983)); *FCC v. Fox Television Stations, Inc.* 556 U.S. 502, 515 (2009) (reversing longstanding policy requires "good reasons" for the change).

[236] *See Good Fortune Shipping Co. v. Commissioner of I.R.S*, 897 F.3d 256, 261-262 (D.C. Cir. 2018).

[237] 83 Fed. Reg at 44,782.

[238] Final Rule, Carbon Pollution Emissions Guidelines for Existing Stationary Sources, Electric Generating Units, 80 Fed. Reg. 64,662, 64,727 & n.379, 64,745, 64,748-51 (Oct. 23, 2015).

indeed, as the NSR statute is "a law intended to limit increases in air pollution [being used to] allow sources … to increase significantly the pollution they emit without government review."[239]

And as described *supra*, actual annual emissions increases can and will occur even where the hourly rate – measured by any means – stays the same or falls, if the changes made to the source are such that it will run more often and longer after the changes occur than before they were undertaken. EPA clearly understands this. In 1996, in rejecting an hourly emissions rate trigger for NSR proposed by industry, EPA described a widget factory:

> emitting 10 pounds an hour, [and which] has historically operated at 40 percent capacity due to … age, reduced efficiency and reliability. … [if] the owner could modernize the unit, … increasing efficiency, … this change will allow the owner to use the machine at much higher levels (e.g., more hours per day or week) than it had in the past. As a result actual emissions (measured in t[ons] p[er] y[ear]) could more than double due to the increase in utilization even though hourly potential emissions remain the same.[240]

EPA conducted an analysis of state programs to estimate the environmental impacts associated with a maximum hourly potential test. EPA's resulting scrutiny of permitting activity in Texas and Illinois, two states deemed by EPA to have complete and accessible data and representative source categories, revealed that actual emissions are less than allowable emissions by a range of 30 to 86 percent:

> [T]ypical source operation frequently does result in actual emissions that are substantially below allowable emissions levels. In these two States, actual emissions represent from 30 to 86 percent of the allowable emissions, depending on source category and pollutant.[241]

In other words, based on EPA's own analysis, massive actual pollution increases could result that do not exceed the maximum hourly potential test.

In the ACE Proposal, EPA quite candidly notes its *expectation* that the heat rate improvements it proposes as the BSER for existing EGUs across the country will increase EGU efficiency, thereby making them cheaper to operate and more called on in the dispatch order and therefore that they will run for more hours post change than prior to the heat rate improvement related changes.[242] The Agency thus knows, that just as at the example widget factory, changes

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[239] *New York II,* 443 F.3d at 886.

[240] Prevention of Significant Deterioration and Nonattainment New Source Review, Proposed Rule, 61 Fed. Reg. 38250, 38269 (July 23, 1996).

[241] *Id.* at 38,270.

[242] 83 Fed. Reg. at 44,775 ("the EGU which undergoes the HRI project will typically experience greater unit availability and reliability, all of which contribute to lower operating costs. EGUs

that do not increase hourly emissions rates can increase actual emissions, yet proposes the NSR changes in any event.

Nor has EPA identified any administrative necessity grounds that could reasonably provide any support for its unlawful Proposal to move off the plain text requirement that the NSR trigger must be an assessment of actual emissions increases per year, although it dances around this idea in the Proposal. Specifically, EPA asserts that

> [i]ndividuals within the academic community have examined the NSR interplay with making efficiency gains at existing coal plants. A 2014 report projected that 80 percent of non-retiring coal-fired units have emissions rates for NOx and SO_2 at levels that exceed those typically required under NSR and concluded that the units would have to install additional controls for NOx or SO_2) if these HRI projects triggered the applicability of NSR. For these units then, *the potential requirement to undertake a HRI to satisfy 111(d) may result in substantial time, effort, and money to comply with the requirements of major NSR*. In addition, the potential need to permit so many of the projects being required under a 111(d) plan *could substantially increase the burden for permit agencies* in processing permit applications. To help reduce the effect this may have on the effective and prompt implementation of a revised CAA section 111(d) standard for EGUs, EPA is proposing revisions to the NSR regulations in this action.[243]

EPA also claims that the states will have to determine "work arounds" for sources from the NSR program requirements, in developing their plans.[244] EPA provides absolutely no support whatsoever for these assertions. Indeed, as noted *supra,* as EPA has not set a binding emissions guideline, the Agency admits it has no idea *how* states and the industry will respond. EPA has not provided any analysis of what types of controls would be required under NSR, if it

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that operate at lower costs are generally preferred in the dispatch order by the system operator over units that have higher operational costs, and EPA's regulatory impact analysis (RIA) for this action (located in the docket) shows that improving an EGU's heat rate will lead to increased generation due to its improved efficiency and relative economics. … Thus, it is possible that a source undertaking a HRI project at its EGU would project, or actually experience, an increase in operation of its EGU and a corresponding increase in annual emissions.").

[243] 83 Fed. Reg. at 44,775-776 (emphasis added). EPA cites Sarah K. Adair, David C. Hoppock, Jonas J. Monast, "New Source Review and coal plant efficiency gains: how new and forthcoming air regulations affect outcomes," 70 Energy Policy 183 (July 2014). The authors of this paper do *not* advocate the creation of exemptions from the NSR program, or a new hourly rate based applicability test, but simply point out that to keep the existing coal fleet in the mix of energy sources, while relying on an inside the fence approach with an HRI BSER for carbon dioxide limits, *will* trigger NSR and the requirement to put on additional SO_2 and NOx controls. The paper recommends a Clean Power Plan type approach if the industry or the Agency wants to avoid that outcome.

[244] *Id.* at 44,777.

remained in place, and affected EGUs were required by states to undertake HRI as a result of the Proposal, making its conclusion that NSR-driven pollution controls would entail unacceptable levels of "time, effort, and money" completely speculative and baseless.

Nor has the Agency apparently considered lawful mechanisms that are *already* available under the current NSR regulations, to mitigate the cost concerns it raises, without resorting to unlawful and harmful measures to weaken the NSR program. For example, affected EGUs that are required by states to implement HRI measures could avoid NSR entirely by adopting enforceable limits on increases in actual emissions.[245] In addition, CAA § 169(3), 42 U.S.C. § 7479(3), requires permitting authorities to consider costs in making case-by-case BACT determinations, a feature of the NSR program that ensures the resulting pollution controls are cost-effective. Perhaps of greatest concern, EPA ignores the Congressional directive embodied in the statute, that "time, effort, and money" actually must be expended to control dangerous air pollution.

And, even if one were to accept that EPA is correct that states and the industry may have difficulty in complying with the NSR requirements, unsupported vague assertions of difficulty do not meet the stringent test for invoking administrative necessity.[246] An exception from statutory requirements based on administrative necessity is rarely available – only where shortages "of time, or of the technical personnel needed to administer a program" absolutely necessitate one.[247] The Agency must show that "practical considerations make it *impossible* for the agency to carry out its mandate."[248] The Agency bears an especially "heavy burden" to justify moving off the requirements of the statutes it is charged with enforcing.[249] The mere assertion of some unquantified and admittedly unknown burden on states is insufficient as a matter of law to meet the test.[250]

In summary, to the extent EPA is asserting here that its proposed NSR applicability changes are needed because requiring NSR on EGU modifications would cause an undue administrative burden on states or the federal government, that argument is not supported by any

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[245] Sierra Club, "Comments on the Emissions Guidelines for Greenhouse Gas Emissions From Existing Electric Utility Generating Units, Revisions Emission Guideline Implementing Regulation; Revision to New Source Review Program," at Section VIII (discussing options to take enforceable "minor source" status, and the like)(filed in this docket on Oct. 31, 2018).

[246] *See Alabama Power*, 636 F.2d at 357-59.

[247] *Id.* at 359.

[248] *Id.* (emphasis added).

[249] See *id.,* see also *Environmental Defense Fund v. EPA,* 636 F.2d 1267, 1283 (D.C. Cir.1980).

[250] *Cf. Sierra Club v. EPA*, 719 F.2d 436, 463 (D.C. Cir 1983)(Agency must typically show a good faith effort to enforce statute as written, not rely only on "mere predictions" to support an exemption based on administrative necessity).

reasoned explanation, nor has the Agency met its heavy burden to provide the evidence needed to show any administrative necessity sufficient to allow it to create an exception from the statute's requirements. In addition to ignoring that the statute compels NSR applicability where a project increases actual emissions, EPA completely disregards the function and purpose of the NSR program. Congress intended for existing EGUs to apply pollution controls at the point when they undertake modifications that will "increase" "amounts" of harmful air pollutants, but EPA's proposal would impermissibly provide a permanent exemption from that statutory requirement. If EGUs can undertake life extending projects without triggering NSR, not only may annual emissions increase without the requirement to control them, but these increases will extend into the future far beyond the expected 30-40 year lifetime for an EGU. As the Duke Energy enforcement case discussions herein make clear, owners or operators undertaking unit life extensions seek toto *add* an additional 30 years to the life of a plant, without triggering the NSR program or applying pollution controls. Such a result would write the NSR program out of the Act as applied to EGUs.

C. EPA is Aware that Actual Emissions Increases Can and Will Result From The Physical And Operational Changes its Proposal Would Allow to Escape NSR.

As EPA admits in the preamble to the ACE Proposal: "it is possible that a source undertaking a HRI project…would project or actually experience an increase in operation of its EGU … and a corresponding increase in annual emissions."[251] The Agency understands this to be true as a possibility in this proposal. But the Agency *knows* that it has historically been true in the case of life extension projects that would also be exempt under this proposal, through its work on the enforcement cases against EGUs that have in the past undertaken the kinds of projects included on EPA's suggested list to states for the ACE "best system of emissions reduction." For example, in the Duke Energy case, the utility's projects, for which it claimed there would be no corresponding emissions rate increases, included replacement of portions of boiler water walls in the superheater, manufacturing and installing new generator coils and replacement of condenser tubes, complete rewinding of a condemned generator rotor considered too dangerous to operate, major replacements of boilers, replacement of precipitators, replacement feed water heaters, and the like.[252] Duke's intention in undertaking these projects clearly was life extension for its plants, "or there was "no way" its older units could make it into the 21st Century."[253] See also discussion supra at 3 (describing pollution increases from similar additional projects, that were claimed not to increase hourly emissions rates, at plants subject to EPA's enforcement actions).

Our comments in 2007 cited a memorandum and attachment from EPA's own Air

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[251] 83 Fed. Reg. at 44,775/2.

[252] *Environmental Defense v. Duke Energy Corp.,* U.S. S.Ct. No. 05-858, Envt'l Petrs Opening Brief at 19-20, & nn. 12 & 14 (describing the U.S. EPA's experts as estimating the project at one of Duke's units would increase SO_2 emissions by 873.2 tons per year).

[253] *Id.* at 20 n.12.

Enforcement Office,[254] in which the Agency's lawyers take the position that "conflating the emissions test for triggering NSR with the NSPS emissions test is contrary to Congressional intent."[255] The AED/OECA Memo provides case studies showing the likelihood that EPA's emissions rate-based applicability determination proposals will allow projects that actually increase emissions significantly to avoid NSR and the requirement to control those emissions increases. For example, Case Study #1 is of a 1,080 MW EGU the owner of which undertook to redesign and replace the economizer and to make steam upgrades including replacing the horizontal steam reheater and the steam path: the resulting SO_2 emissions for this project increased by *13,096 tons per year*.[256] These projects are similar to the kinds of projects EPA lists as BSER in the ACE Proposal.[257] The OECA Memo's authors were clear that they understood the intended result from "application of the so-called "achievable" [rate] test [to be] that no "change" causing an emissions increase (capacity or otherwise) at an EGU would trigger NSR requiring the source to seek a pre-construction permit from its permitting authority and install pollution controls. Moreover, one can only conclude from application of the so-called "achieved" [rate] test that only under the rarest of operational circumstances would a "change" causing an emissions increase (capacity or otherwise) at an EGU would trigger NSR requiring the source to seek a pre-construction permit."[258]

EPA also fully comprehends that the current proposal is *not* limited to freeing from NSR requirements only those EGUs undertaking HRI to comply with the 111(d) guidelines.[259] Any EGU undertaking any physical or operational change – for example to extend the lives of existing EGUs, make them more cost effective, more available to be dispatched, and therefore to operate more per year and for many more years – would be relieved from NSR requirements so long as the hourly emissions rate did not increase relative to a generous historical baseline. That is so under EPA's Proposal even if actual emissions from the power plant increase dramatically. Creation of such an exemption is simply unlawful, as the D.C. Circuit found in *New York I & II.*

The Agency's failure to assess the potential increases in air pollution resulting from its proposed unlawful exemption is completely untenable and arbitrary. EPA's statements that that no significant pollution emissions increases will result from the Proposal, are not just *misleading,*

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[254] AED/OECA memo *supra* n. 89. While this analysis was of the initial 2005 proposal, the analysis and results it presents are equally applicable to the 2007 supplemental proposal and the ACER NSR proposed changes, as discussed *supra*.

[255] *Id.* at 2 n. 1, citing *New York I,* slip op. at 9-11, 24-26.

[256] *Id.* at Attachment A, slide 2.

[257] *See* 83 Fed. Reg. at 44,757 (Table 1, listing economizer replacement and steam turbine upgrades among the list of "most impactful" candidate HRI actions).

[258] AED/OECA Memo at 5.

[259] See 83 Fed. Reg. at 44,781/2 (asking for comment on whether to "confine" the exemption to only those projects undertaken to comply with the proposed existing source CO_2 guidelines).

they are wrong.[260] Not only does that statement not reflect reality, it ignores a significant point about air emissions, which is that the impacts are not felt "system-wide" but in the state or near the source from which they are emitted, and downwind areas. EPA completely fails to consider what those impacts of its proposal would be. Such failure to address an important aspect of the problem renders the Proposal arbitrary and capricious.[261]

D. EPA's Proposal is Arbitrary and Capricious Because the Agency Fails to Consider The Significant Increases In Air Pollution that Can Result From It– an Important Aspect of the Issue.

EPA's failure to consider, evaluate, or even discuss important air quality ramifications of its proposal render it arbitrary and capricious. Because the NSR aspect of the ACE Proposal is not required in order to move forward with a section 111(d) guideline for carbon dioxide emissions from existing coal-fired power plants, and because EPA does not have the information necessary to issue a reasoned, non-arbitrary NSR Proposal, it must be withdrawn. EPA's failure even to assemble, much less evaluate, key facts before proposing sweeping and harmful rollbacks render the NSR Proposal arbitrary and capricious.

1. EPA's Regulatory Impact Analysis Is Woefully Inadequate and Fails to Assess the Full Implications of the NSR Proposal.

Far from assessing the implications of allowing physical changes at EGUs to avoid NSR simply because emissions rates do not increase, EPA throws up its hands and asserts that it can't predict what the response will be.[262] This is arbitrary and capricious decision making at its worst. The Agency "must make a reasonable effort to develop the facts. Where it has not made that effort, EPA cannot regulate on the basis of a guess about what the facts might be."[263] That is particularly true where the decision is an about-face from decades of agency regulatory and enforcement decision making.[264]

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[260] See 83 Fed. Reg. at 44,756 n. 17; (asserting that EPA's "analysis indicates that system-wide emission decreases from heat rate improvements will likely outweigh any potential system-wide emission increases").

[261] *State Farm,* 463 U.S. at 43.

[262] 83 Fed. Reg. at 44,777/2-3.

[263] *Small Refiner Lead Phase-Down Task Force v. EPA,* 705 F.2d 506, 531 (D. C. Cir. 1983) (citing *Ethyl Corp. v. EPA*, 541 F.2d 1 , 28 (D.C. Cir. 1976) for the proposition that the Agency must make the effort even where the evidence is 'difficult to come by, uncertain, or conflicting.)

[264] *See Encino Motorcars*, 136 S. Ct. at 2126 (when reversing a longstanding interpretation, agency must "provide "[a] reasoned explanation" for "disregarding facts and circumstances that underlay or were engendered by the prior policy"); *State Farm,* 463 U.S. at 43 (failure to address important aspects of the problem renders an agency decision arbitrary and capricious).

The RIA accompanying EPA's ACE rule entirely fails to model the potential for emissions increases and associated threats to air quality, public health, environmental values, and Class I visibility from the proposed NSR changes, as pointed out in the separate comment document filed today on the RIA.[265] Specific to the NSR Proposal, while the RIA includes modelled scenarios, EPA admits these are merely "illustrative,"[266] offering only a very limited perspective on the emissions increases that could occur under a limited application of EPA's proposed NSR changes. The RIA does not properly analyze even the limited application of the NSR changes to the HRI projects the Agency asserts are the BSER for its section 111(d) proposal, nor does it offer *any* analysis of the much larger and more air quality and public health damaging impacts of its actual proposal.[267]

EPA's analysis, even with respect to the limited application of the proposed NSR changes to the section 111(d) guideline effort, is woefully inadequate. EPA models "three policy scenarios modeling heat rate improvements (HRI) at coal-fired EGUs, and provides "CPP" and "No CPP" cases (with the NSR program unchanged from present requirements) for comparison purposes.[268] EPA analyzes pollution implications from the systemwide application of 2% HRI at $50/kW cost, with no change to NSR (because that level and cost of HRI is presumed not to trigger NSR applicability at present); and two scenarios that include the proposed NSR changes: 4.5% HRI at $50/kW and 4.5% HRI at $100/kW. Examining the RIA's description of the two 4.5% HRI scenarios makes clear that the Agency assumes that the proposed NSR changes will effect a complete exemption from NSR for both.[269] In a response to an Interagency reviewer's comment, the Agency asserts that the scenarios it modelled attempt to "illustrate broad national costs and benefits" of the entire proposal package,[270] not impacts specific to the NSR change,[271]

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[265] *See generally,* Joint Environmental Comments on Regulatory Impact Analysis (Oct. 31, 2018) filed in this docket (discussing, *inter alia,* the serious deficiencies of the work done by EPA to analyze the NSR Proposal).

[266] 83 Fed. Reg. 44,746 (*passim*), RIA at ES-2 and 1-7.

[267] Nor did the Technical Support Document accompanying EPA's 2007 proposal include such analysis. EPA, "Technical Support Document for Prevention of Significant Deterioration And Nonattainment Area New Source Review: Emissions Increase Test for Electric Generating Units" (2007), Docket Id. No. EPA-HQ-OAR-2005-0163-0246.

[268] 83 Fed. Reg. at 44,783/1.

[269] See RIA at 1-13 (assuming no NSR requirements are triggered under either scenario).

[270] Summary of Interagency Working Group Comments on Draft Language under EO 12866 and EO 13563 Interagency Review Subject to Further Policy Review, Comments on U.S. Environmental Protection Agency (EPA) draft final [sic] rule titled, "State Guidelines for Greenhouse Gas Emissions from Existing Electric Generating Units," RIN 2060-AT67, comment 24 Response.

[271] In the preamble to the proposed ACE, EPA makes clear that its intention is that the NSR portion of the ACE rule will be severable for judicial review. 83 Fed. Reg. at 44,783/1. This

however no such results are presented. Furthermore, EPA does not discuss or analyze the impact of either of its 4.5% HRI scenarios *with* the current NSR regulations in place. So, it is impossible to assess the actual emissions difference due to the Proposed NSR changes, for the 4.5% HRI scenarios. This failure to consider an important aspect of the problem renders the Proposal arbitrary and capricious.[272]

EPA asserts that, although it has generator level heat rate information, it *believes* it does not have enough information to evaluate "an individual unit's heat rate improvement potential."[273] But the Agency also acknowledges having fleetwide information about current heat rate, indeed the scenario modelling the Agency does complete is based on precisely that information. That data also can be used to perform a "headroom analysis" of the kind we provided the Agency in October 2008.[274] Under such an analysis the existing coal-fired fleet is assumed to make changes to improve from current heat rate (and therefore, availability) to an 85 percent heat rate, and the corresponding additional air pollution is assessed. That can provide an upper bound for understanding the possible ramifications of an NSR exemption, because if NSR is not triggered, no controls for that incremental pollution would be required. Additionally, the Agency could have assessed (but did not) one or more "illustrative" plants, to confirm what might happen at a typical facility.

EPA's modelling (as inadequate as it is) does show significant increases in air pollution resulting from the ACE HRI scenarios it models, including the creation of the effective exemption from NSR based on its proposed hourly rate test,[275] but entirely fails to assess the impacts of those changes on air quality increments, NAAQS attainment or maintenance, or other Title I requirements. Nor does the Agency assess the broader implications of the effective

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flawed NSR proposal has no record on which to stand, whether severed from the ACE rule or not. Attempting to sever the proposed NSR changes and rest on the current record, in fact, would further illustrate the absolute lack of support EPA has provided for the broad exemption it seeks to create for EGUs.

[272] *State Farm,* 463 U.S. at 43.

[273] EPA Responses to Interagency Comments on Executive Summary of the Regulatory Impacts Analysis (RIA) Received 7/25/2018, RIN 2060-AT67, at 2, Response to Comment 4 (on RIA ES-3).

[274] MSB Energy Associates, "Current Usage Level of Coal-Fired Power Plants and the Proposed New Source Review Rules" (October 21, 2008). That analysis showed the 2007 proposal to have the potential to increase emissions of 1.60 million tons of SO_2, 0.50 million tons of NOx, and 319 million tons of CO_2 from the then existing fleet, with the caveat that the Acid Rain program of Title IV would prevent the full implications of the headroom analysis for SO_2 from being realized. *Id.* at 1-2.

[275] *See infra* Sections D.2. & D.3., showing expected SO_2, NOx, and CO_2 increases as a result of EPA's proposal.

exemption from NSR for *any* EGU modification that does not increase hourly emissions rates. All of these failures to consider important aspects of the problem render EPA's NSR Proposal arbitrary and capricious.[276]

EPA does cite to its 2007 analysis of the addition of an emissions rate-based test to NSR applicability determination, asserting that its 2007 modelling showed that the proposed emissions rate applicability test would not "have an undue impact on local air quality, or … notably increase national SO_2, NOx, PM2.5, VOC, or CO emissions from the power sector."[277] But just as it was then, this statement demonstrably fails to meet minimum standards of rationality. EPA arrived at its conclusion in 2007 by making a series of assumptions in its 2007 modelling, which were simply not based on reality. For example, EPA admitted in 2007 that "it is unlikely that an EGU would increase its efficiency without also increasing its operating and physical capacity. Nonetheless, we designed the IPM [modelled] scenario to assess the impact of efficiency increases on actual emissions. This analysis was only possible through constraining the model such that no increases in operating and physical capacity are allowed."[278] In other words, EPA's 2007 model showed no emissions increases because it was designed to constrain any additional use of the EGU, after the efficiency improvement. As EPA itself admits just pages before in the same 2018 ACE preamble in which the 2007 modelling is put forward,[279] these assumptions do not reflect what will actually happen in the real world. By assuming that EGUs will not increase their availability to the grid following a physical or operational change, EPA's 2007 modelling assures that it will not see any emissions increases as a result of that change. But increasing the ability to sell electricity to the grid is the precise reason why an EGU owner or operator *would* undertake a life extending modification in the first instance.

EPA takes this absurdity a step further, in asserting that if increased efficiency at an EGU did lead to more hours of operation, that "the more hours [an EGU] operates, the more likely it is to install controls. … [and] the more efficiently an EGU operates the more likely it is to install controls, regardless of whether the major NSR applicability test is on an hourly basis or an annual basis."[280] Why does EPA claim EGUs would behave this way? Well, again, because EPA itself designed the IPM run that way – it is simply an assumption built into the modelling.[281] EPA never says *why* it assumes that without a regulatory mandate to do so, a company would invest in emissions controls – an assumption contrary to the basic economics of externalities, contrary to observed reality, and contrary to the understandings that prompted

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[276] *State Farm,* 463 U.S. at 43.

[277] 83 Fed. Reg. 44,781.

[278] 2007 RIA at 5-3.

[279] 83 Fed. Reg. at 44,775/2.

[280] 2007 RIA at 5-4 to 5-5; see also 83 Fed. Reg. at 44,781/3 (same assertion).

[281] 2007 RIA at 5-4 to 5-5; see also 83 Fed. Reg. at 44,781/3 (same assertion).

Congress to impose legal requirements to control air pollution. Given EPA's knowledge[282] that EGU owners and operators have fought all the way to the Supreme Court in efforts to *avoid* installing controls when they made significant efficiency upgrades,[283] EPA's statements are unsupported and unsupportable—and fall far short of reasoned decision making.

Lastly, as the Joint Environmental Comments on the RIA note, the RIA never considers the pollution, health, or cost impacts of obvious alternatives to the proposed weakening of the NSR program. For example, the RIA fails to assess whether, under current NSR regulations, EGU owners might choose to adopt an enforceable limitation preventing emissions increases as a response to the either of the 4.5% HRI scenarios. This obvious compliance option would avoid the harmful pollution increases associated with the "rebound" effect, and avoid NSR related costs. It is arbitrary for EPA not even to have considered this approach, and not to have analyzed the pollution, health, and costs implications of it.

2. EPA's Own Data Project the Proposal Will Result in Multiple States Experiencing *Increases* in SO_2 and NOx Emissions By Significant, Non-*De Minimis* Amounts

EPA's modelled 2% HRI at $50/kW scenario represented a policy case with no revisions to NSR. Both the 4.5% HRI at $50/kW and 4.5% HRI at $100/kW scenarios represented policy cases that assumed the proposed revisions to NSR.[284] All three assume Clean Power Plan repeal. EPA asserted that its two 4.5% modelling scenarios did not include NSR, to illustrate that the exemption "provides owners and operators of existing EGUs greater ability to make efficiency improvements without triggering the provisions of NSR."[285] This is because in the absence of revisions weakening the NSR regulations, significant emissions increases resulting from changes at EGU would trigger review, requiring those emissions increases to be mitigated or controlled and/or offset.

EPA then projected electric utility sector emissions for CO_2, SO_2 and NOx for the three illustrative policy scenarios, relative to two alternative baselines: first, relative to a base case that includes the Clean Power Plan; and then, relative to an alternative base case with No CPP.[286] Unsurprisingly, EPA found national electricity sector emissions increases across the board for CO_2, SO_2 and NOx for all three policy scenarios and the No CPP scenario, relative to the CPP

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[282] *See generally,* AED/OECA Memo (discussing enforcement cases, and *Environmental Defense v. Duke Energy*).

[283] *See supra*, 71-72 (discussion of the Duke Energy case).

[284] 83 Fed. Reg. at 44,783/2-3.

[285] *Id.*

[286] *Id.* at 44,784-785 (Tables 6 & 7).

base case.[287] These total emissions increases occurred in all three years evaluated, 2025, 2030 and 2035.[288]

When projecting electricity sector emissions changes for CO_2, SO_2 and NOx, EPA found national emissions reductions (and in once instance, no change) for the CPP Base Case and three illustrative policy scenarios, relative to the No CPP Alternative Base Case. Unsurprisingly, again, the greatest CO_2, SO_2 and NOx emissions change resulted from comparing the CPP Case to the No CPP Alternative Base Case. These total emissions reductions occurred in all three years evaluated, 2025, 2030 and 2035.[289]

EPA also presented modeling results that showed *statewide* emissions of SO_2 and NOx were *higher* than the CPP Base Case and No CPP Alternative Base Case, when modeling both 4.5% HRI scenarios that assumed the proposed revisions to NSR.[290] These statewide SO_2 and NOx emissions data are located in extensive data files in the docket, reflecting the results of modeling the illustrative policy scenarios using EPA's Integrated Planning Model (IPM).[291]

We then summarized the data from these IPM Run Files in a spreadsheet with individual state emissions projections for SO_2, ozone season NOx and annual NOx (all in thousand tons); for all three policy scenarios, the CPP Base Case and No CPP Alternative Base Case; and for the model years 2021, 2023, 2025, 2030, 2035, 2040, 2045 and 2050.[292] For each policy scenario, individual tabs in the spreadsheet record statewide emissions of SO_2, ozone season NOx and annual NOx (all in thousands tons), Hg (tons), HCl (thousand tons), CO_2 (million short tons), ozone season and annual generation (GWh), and ozone season and annual heat input (TBtu).[293]

Next, three additional tabs in the spreadsheet record statewide emissions of SO_2, ozone season NOx and annual NOx for all 5 EPA IPM Runs. These tabs further summarize statewide emissions for SO_2, ozone season NOx and annual NOx using the following comparisons:

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[287] *Id.,* Table 6.

[288] *Id.*

[289] *Id.*

[290] *See generally* EPA, Regulatory Impact Analysis for Proposed Emission Guidelines for Greenhouse Gas Emissions From Existing Electric Utility Generating Units; Revisions to Emission Guideline Implementing Regulations; Revisions to New Source Review Program, Chapter 4: Estimated Forgone Climate Benefits and Forgone Human Health Co-Benefits & Chapter 8: Appendix—Air Quality Modeling.

[291] *See generally* https://www.epa.gov/airmarkets/analysis-proposed-ace-rule (IPM Run Files).

[292] *See* NRDC, "ACE NSR State Emissions (Updated with CPP)."

[293] *Id.*

1. Total emissions increases or decreases in the modeled years between 2021-2030, comparing the three policy scenarios to the CPP Base Case;
2. Total emissions increases or decreases in the modeled year 2030, comparing the three policy scenarios to the CPP Base Case;
3. Total emissions increases or decreases in the modeled years between 2021-2030, comparing the three policy scenarios to the No CPP Alternative Base Case;
4. Total emissions increases or decreases in the modeled year 2030, comparing the three policy scenarios to the No CPP Alternative Base Case; and
5. Total emissions increases or decreases in the modeled year 2035, comparing the three policy scenarios to the No CPP Alternative Base Case.[294]

For each of these comparisons, total statewide emissions *increases* are color coded in red; total statewide emissions *decreases* are color coded in green, with the numerals preceded by minus ("-") signs. Thus, there are 15 color-coded comparison charts in total, for SO_2, ozone season NOx and annual NOx, collectively.

These spreadsheets and comparison charts show numerous instances in which total, statewide emissions of SO_2, ozone season NOx and annual NOx *increase* annually by significant, non-*de minim*is amounts under the two 4.5% HRI scenarios that include the revisions to NSR. These statewide emissions increases of SO_2, ozone season NOx and annual NOx are reflected in the individual model years analyzed (*e.g.*, 2030 and 2035), as well as over the course of the modeled years 2021-2030.[295] The statewide emissions increases range from the hundreds of tons per year, to thousands of tons per year, to as high as 38,700 tons from 2021-2030. The latter emissions increase for SO_2 occurs in Arkansas, under the 4.5% HRI at $100/kW scenario.

Comparing the two 4.5% policy scenarios with the NSR revisions to the CPP Base Case, the highest annual SO_2 emissions increases are 25,100 tons per year (West Virginia, 2030); the highest NOx ozone season emissions increases are 4,300 tons per year (West Virginia, 2030); and the highest annual NOx emissions increases are 12,100 tons per year (West Virginia, 2030).[296]

Comparing the two 4.5% policy scenarios with the NSR revisions to the No CPP Alternative Base Case, the highest annual SO_2 emissions increases are 4,700 tons per year (Michigan, 2035); the highest NOx ozone season emissions increases are 1,780 tons per year (North Carolina, 2035); and the highest annual NOx emissions increases are 2,400 tons per year (North Carolina, 2035).[297]

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[294] *See* ACE NSR State Emissions (Updated with CPP).

[295] *Id.*

[296] *Id.*

[297] *Id.*

For the two 4.5% policy scenarios with the NSR revisions, some of these statewide emissions increases of NSR-regulated air pollutants are orders of magnitude higher than the respective *de minimis* thresholds for these pollutants (*e.g.*, 40 tons per year, in attainment areas). All emissions increases in the spreadsheets exceed the *de minimis* thresholds. The magnitude of these emissions increases is very likely masked or mitigated by the fact that these are *net* emissions increases, statewide, also reflecting emissions reductions that may be occurring within the same state during the same modeled year. Moreover, in states revealing no statewide, net emissions increases, it may still be the case that individual EGUs increase emissions by non-*de minimis*, significant amounts, evading NSR, but other emissions reductions in the state mitigate those emissions increases. Accordingly, it is highly likely that overall SO_2 and NOx emissions increases are even higher from individual emissions units and sources than reflected in EPA's statewide modeling data. Finally, because NSR is not just a source-specific, but emissions unit-specific permitting program, these statewide emissions increases may result from many non-*de minimis* emissions increases that evade NSR, or from one or more very significant emissions increases that evade review, or from some combination of the two.

The SO_2, and NOx emissions projection data from EPA's own IPM Run Files, coupled with the summary data attached to these comments and the analysis presented here, demonstrate that the proposed NSR revisions are unlawful, arbitrary and capricious and an abuse of discretion. As discussed throughout these comments, the Proposal allows significant, non-*de minimis* emissions increases to evade review, and avoid mitigation or control, air quality and Class I impacts analysis, and offsets in nonattainment areas. EPA's own data demonstrate these statewide emissions increases in multiple states, over the course of many years, in amounts that are hundreds or thousands of tons higher than relevant *de minimis* thresholds. Neither the Proposal nor other material in the administrative record contradicts these data, this analysis, or these conclusions.

EPA has failed to "provide "[a] reasoned explanation" for "disregarding facts and circumstances that underlay or were engendered by the prior policy."[298] EPA may not cure these defects in a final rule but must, instead, re-propose those explanations and analyses prior to finalizing any version of the regulatory amendments in the Proposal.

3. An Independent Head Room and "Illustrative" EGU-Specific Analysis Shows the Potential for Enormous Air Pollution Increases Resulting from EPA's NSR Proposal.

We also commissioned an updated headroom analysis to uncover what the outside level of possible emissions increases could be in terms of annual tonnage emissions if EPA were to finalize this rule. We asked our consultants to analyze the generation and emissions data from 2017 at 233 coal-fired generating plants in the U.S., in order to understand the potential increases

[298] *Encino Motorcars*, 136 S. Ct. at 2126 (citation omitted)) The Proposal fails to address "important aspects of the problem," including the 'maintenance of environmental protections,' prevention of non-*de minimis* emissions increases, protection of increments, and the other public health and air quality concerns discussed in these comments. *See Michigan v. EPA*, 135 S. Ct. at 2707 (citing *State Farm*, 463 U.S. at 43).

to CO_2, SO_2, and NOx emissions that could occur if the coal fleet were utilized at a higher rate.[299] The data enabling the analysis is publicly available, and in the Agency's possession, originating as it does from the EPA's Continuous Emission Monitoring Systems database. That database records unit-level emissions and generation data, and was retrieved by our consultant through the ABB Velocity Suite platform. The 233 coal-fired plants analyzed had an average capacity factor of 58% in 2017. About 5.4% of the total plant capacity had capacity factors greater than 85% while about 4.7% had capacity factors greater than 90%.[300]

The results of the headroom analysis showed that, all else equal, if all of the existing coal-fired power plants in 2017, and running below an 85% capacity factor, were to upgrade in order to reach that level of generation, it would lead to a 54% increase in generation over 2017 levels from these plants. That increased level of generation would emit more than 660 million additional tons of CO_2, more than 660,000 additional tons of SO_2, and more than 490,000 additional tons of NOx, or about 49.3%, 50.4%, and 53.4%, respectively, increases over 2017 emission levels from these facilities. Of the 233 plants analyzed,[301] 206 have the headroom to be able increase SO_2 emissions by more than 100 tons per year, 216 have the headroom to be able increase NOx emissions by more than 100 tons per year.

These results obviously frame a ceiling on the potential for emissions increases – this analysis does not account for other factors that might limit the use of these plants, nor does it include an assessment of the point at which the NSR provisions might be triggered, even under EPA's proposed new hourly emissions rate based applicability test. Nor does it even include the nuance of whether each plant can achieve 85% capacity factor while not increasing its emissions rate using one of EPA's proposed rate increase tests. However, it does provide an assessment of the outside potential for emissions increases from the very broad changes EPA proposes for EGU NSR applicability. Even if actual emissions increases were only a small fraction of these amounts, they would have massive and destructive adverse health and environmental consequences.

To further consider the question of what possible emissions increases could be we also requested our consultants to analyze specifically what might happen to two representative units, under the Proposal. That analysis also shows significant uncontrolled emissions increases could

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[299] NorthBridge, Analysis of Potential Emissions Headroom Under EPA's Proposed New Source Review Triggers, Prepared for Clean Air Task Force (Oct. 29, 2018)("NorthBridge Analysis"); Bruce Phillips, Iain Kaplan & Anjie Liu, NorthBridge Group, Memorandum to Clean Air Task Force: "Current Usage Level of Coal-Fired Power Plants and the Proposed New Source Review Rules (Oct. 17, 2018)("NorthBridge Memo").

[300] NorthBridge Memo at 1.

[301] These 233 coal-fired plants do not include any coal-fired plants retiring in 2018 or by the end of 2019, as reported in the ABB Velocity Suite platform, or any coal-fired plant that has converted to natural gas as its primary fuel, any generating unit with missing generation or emissions data, or any generating unit that does not list coal as its primary fuel that is located at a plant with coal-fired generating units. *Id.* at 1 n.1.

result. Using projections based on the proposed NSR changes for two coal-fired generating units, Avon Lake Unit 9 and Big Stone Unit 1, our consultants found that potential increases in capacity factors and total annual hours of use for those units produced substantial emissions increases of SO_2, NOx, and CO_2 compared to 2017 levels. When the hourly emissions rates are left unchanged for the two representative units, but the units are upgraded such that their capacity factors increase to 85%, Avon Lake Unit 9 would achieve actual annual emissions increases of 14,497 tons of SO_2, 6,927 tons of NOx, and 4,149,523 tons of CO_2. At Big Stone Unit 1, those annual increases of 2017 actuals would be 610 tons of SO_2, 710 tons of NOx, and 1,793,150 tons of CO_2.[302]

In addition to the potential emissions increases due to increased capacity factor (availability) of these units, analyzed against actual emissions from the previous year, when EPA's new emissions rate tests are also factored in, there is more potential for actual tonnage emissions increases over 2017 actual levels. Holding the hourly emissions rate constant under each of the alternatives:

- Under alternative 1, where the hourly heat rate that could not be exceeded would be based on the highest maximum actual hourly emissions rate in pounds per hour in one 365 day period in the last 5 years, the increases at Avon Lake Unit 9 could be as high as 90,050 tons per year of SO_2, 12,450 tons per year of NOx, and 4,510,000 tons per year of CO_2. For Big Stone I those increases could be as high as 29,710 tons per year of SO_2, 23,480 tons per year of NOx, and 1,960,000 tons per year of CO_2.

- Under alternative 2, where the hourly heat rate that could not be exceeded would be based on the highest maximum 1 hour hourly emissions rate in pounds per hour in the last 5 years, the increases at Avon Lake Unit 9 could be as high as 90,140 tons per year of SO_2, 13,120 tons per year of NOx, and 4,320,000 tons per year of CO_2. For Big Stone I those increases could be as high as 32,970 tons per year of SO_2, 21,260 tons per year of NOx, and 1,920,000 tons per year of CO_2.

- Under alternative 3, where the hourly heat rate that could not be exceeded would be based on the maximum achievable hourly emissions rate in pounds per hour during the 5 years before the change, the increases at Avon Lake Unit 9 could be as high as 98,440 tons per year of SO_2, 14,220 tons per year of NOx, and 4,400,000 tons per year of CO_2. For Big Stone I those increases could be as high as 34,460 tons per year of SO_2, 23,560 tons per year of NOx, and 2,000,000 tons per year of CO_2.[303]

This analysis also is "illustrative" of potential outcomes in tons per year from the application of EPA's new NSR applicability test for any EGU modification. They represent annual figures, not

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[302] NorthBridge Analysis.

[303] *Id.*

the full impact of a 30 year life extension, as opposed to a retirement, of an existing coal plant. EPA also does not explore or analyze that dimension of the Proposal, rendering it arbitrary and capricious.[304]

4. EPA Fails To Support Its Purported Rationale for the Proposed NSR Change.

The Proposal briefly discusses a June 13, 2002 New Source Review Report to the President and the following conclusion: "[as] applied to existing power plants and refineries . . . the NSR program has impeded or resulted in the cancellation of projects which would maintain and improve reliability, efficiency and safety of existing energy capacity. Such discouragement results in lost capacity, *as well as lost opportunities to* improve energy efficiency *and reduce air pollution*."[305] What the Proposal fails to note, tellingly, is that the 2002 New Source Review Report to the President did not identify a *single instance* in which the NSR program had impeded or resulted in the cancellation of a project to "reduce air pollution." Today's Proposal and the accompanying docket also do not identify a single, actual example in which the NSR program impeded or resulted in the cancellation of an EGU (or even, non-EGU) project to "reduce air pollution." As EPA well knows, projects that actually "reduce air pollution" do not even trigger NSR under the current regulations, much less require installation of air pollution control devices, so long as the project does not increase annual actual emissions of any regulated air pollutants above the relevant *de minimis* thresholds.

In the Proposal, EPA notes that its earlier CPP Replacement advanced notice of proposed rulemaking ("ANPRM") solicited public input concerning "" [w]hat rule or policy changes or flexibilities can EPA provide as part of the NSR program that would enable EGUs to implement projects required under a CAA section 111(d) plan and not trigger major NSR permitting *while maintaining environmental protections*?"[306] The Proposal then went on to discuss "concerns" raised by "industry representatives."[307] Tellingly, none of the highlighted industry comments, nor EPA's discussion of those comments, would "maintain environmental protections" nor is there even a commitment to 'maintaining environmental protections.' In each case, the quoted industry representatives were seeking to *increase* annual emissions above *de minimis* thresholds, worsen air quality, and avoid 'triggering NSR,' and the accompanying agency review, potential limits on emissions increases, air pollution control devices and emissions offsets that might be the outcome of that review.[308] For none of the discussed concerns did EPA note commitments to 'maintain environmental protections' or avoid significant emissions increases.[309] To the

[304] *State Farm,* 463 U.S. at 43.

[305] 83 Fed. Reg. at 44,777, n. 58 (emphasis added).

[306] 83 Fed. Reg. at 44,776 (citing 82 Fed. Reg. 61,519 (Dec. 28, 2017)(emphasis added).

[307] *Id.*

[308] *Id.*

[309] *Id.*

contrary, the Proposal chose to highlight industry complaints about "expensive new emission control requirements" and "trigger[ing] NSR."[310] There is not *one word* in the Proposal's discussion of industry responses to the ANPRM's solicitation of comments that commits to "maintaining environmental protections."[311]

These passages reinforce that the Proposal is arbitrary, capricious and an abuse of discretion. The Proposal reverses longstanding positions and fails to provide a reasoned explanation for such reversals, above all how the reversal would fail to 'maintain environmental protections' and prevent non-*de minimis* emissions increases.[312] EPA may not cure these defects in a final rule but must, instead, re-propose those explanations and analyses prior to finalizing any version of the regulatory amendments in the Proposal.

The Proposal goes on to exacerbate this arbitrariness, capriciousness and abuse of agency discretion by quietly dropping and contradicting even the notion of "maintaining environmental protection" that the ANPRM at least mentioned:

> EPA recognizes the potential for triggering major NSR permitting when sources undertake HRI projects. EPA further recognizes that the prospect of a protracted permitting process and a possible requirement to install pollution control equipment at the emissions unit can create a disincentive for sources to voluntarily make energy efficiency improvements.[313]

When crediting the industry "concerns" and explaining the rationale for the Proposal, EPA does not even mention or address its professed concern in the ANPRM about 'maintaining environmental protections.'[314] Indeed, this passage in the Proposal makes clear that EPA is *condemning* the "potential for triggering major NSR permitting" and the "possible requirement

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[310] *Id.*

[311] *Id.*

[312] *Encino Motorcars*, 136 S. Ct. at 2125-6 (when reversing a longstanding interpretation, agency must "provide "[a] reasoned explanation" for "disregarding facts and circumstances that underlay or were engendered by the prior policy: an unexplained inconsistency in agency policy is a reason for holding an interpretation to be an arbitrary and capricious change from agency practice."(citation and internal quotation marks and brackets omitted)); *see also Michigan v. EPA*, 135 S. Ct. at 2707 (failing to address "important aspects of the problem" renders an agency decision arbitrary and capricious, citing *State Farm,* 463 U.S. at 43); *Delaware DNR v. EPA,* 785 F.3d at 18 ("Because EPA too cavalierly sidestepped its responsibility to address reasonable alternatives, its action was not rational and must, therefore, be set aside.")(citations omitted).

[313] 83 Fed. Reg. at 44,776-777.

[314] *Compare id.* to 82 Fed. Reg. at 61,519 (cited at 83 Fed. Reg. at 44,776, "[w]hat rule or policy changes or flexibilities can EPA provide as part of the NSR program that would enable EGUs to implement projects required under a CAA section 111(d) plan and not trigger major NSR permitting *while maintaining environmental protections*?")(emphasis added).

to install pollution control equipment."[315] Far from 'maintaining environmental protections' or avoiding non-*de minimis* emissions increases, the Proposal arbitrarily disdains the legal authorities and obligations in the Clean Air Act to protect the environment and air quality through agency reviews, potential limits on emissions increases, air pollution control devices and emissions offsets that might be the outcome of that NSR process.

EPA's disdain for NSR requirements that control or mitigate significant emissions increases, safeguard air quality and protect Americans' health is quite open in the Proposal: "state agencies should not be burdened with having to determine a 'work around' for the NSR program requirements in developing their plans to implement the emission guidelines for affected EGUs."[316] There *is* no "NSR program work around burden" associated with developing emissions guidelines, because neither states nor EPA possess any legal authority to "work around" Clean Air Act requirements: there is no authority in section 111 or other parts of the Clean Air Act to evade NSR program requirements, in order to facilitate development of plans to implement emission guidelines for affected EGUs, or for any other reason.

The Proposal's NSR changes rest on an additional, central arbitrariness that renders the Proposal unlawful and an abuse of discretion. EPA says that "the reality remains that a source that undertakes an HRI project may trigger major NSR under the current NSR applicability test when required to undertake a HRI project as part of a state's 111(d) plan."[317] In this passage and the surrounding discussion, EPA pretends that mere pursuit of an HRI project could automatically or inexorably lead to triggering major NSR under the current NSR applicability test. This is false and wholly unsubstantiated in the Proposal and the accompanying administrative record. There is no evidence or information backing this pretense, nor does EPA even attempt to explain why this would be the case. The Proposal and record contain no evidence that construction of an HRI project itself would increase emissions of regulated air pollutants above *de minimis* levels. Nor do the Proposal and record contain any evidence that operation of an HRI project needed to comply with section 111(d) emissions guidelines *must* increase emissions of regulated air pollutants above *de minimis* levels.

Accordingly, there is a fundamental, irrational, and arbitrary disconnect between EPA's belief and its contention that pursuit of an HRI project could automatically or inexorably lead to triggering major NSR under the current NSR applicability test. The Proposal fails to address "important aspects of the problem"—any evidence or facts supporting the contention that sources could be *compelled* to trigger major NSR under the current NSR applicability test merely as a result of undertaking an HRI project.[318] EPA may not cure these evidentiary defects in a final rule but must, instead, re-propose those explanations and analyses prior to finalizing any version of the regulatory amendments in the Proposal.

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[315] 83 Fed. Reg. at 44,776-777.

[316] 83 Fed. Reg. at 44,777.

[317] *Id*.

[318] *See Michigan v. EPA*, 135 S. Ct. at 2707 (citing *State Farm*, 463 U.S. at 43).

What the Proposal arbitrarily fails to acknowledge is a crucial point that EPA previously has acknowledged: after undertaking an HRI project, it will be a voluntary choice by a facility operator to increase the changed unit's hours of operation in a way that could result in significant emissions increases.[319] Thus, it is *not* the case that section 111(d) emissions guidelines, or the current NSR applicability test, would trigger major NSR as an operation of law. Rather, what "may trigger major NSR under the current NSR applicability test,"[320] is an independent, voluntary *choice* by a facility operator to increase an HRI unit's post-change hours of operation in a way that could increase emissions significantly and trigger major NSR. Any such decision is not a function of the emissions guidelines, themselves. Indeed, any decision by an EGU operator to maintain the unit's same pre-change hours of operation—for a post-change EGU that is now more efficient—will *decrease* (or perhaps, maintain) annual emissions of regulated air pollutants, not increase emissions. It is arbitrary, capricious and an abuse of discretion for EPA to rely upon future voluntary, post-change *choices* by facility operators as any justification for changing the current NSR applicability test—especially where the NSR changes in the Proposal would allow significant emissions increases above *de minimis* emissions thresholds to evade review and potential emissions limits or air pollution control devices.

Accordingly, there is an additional arbitrary and irrational disconnect between EPA's belief and contention that pursuit of an HRI project could automatically or inexorably lead to triggering major NSR under the current NSR applicability test. The Proposal fails to address "important aspects of the problem"—the fact (and EPA's own admissions) that it will be the result of independent, voluntary *choices* by facility operators to increase an HRI unit's post-change hours of operation in a way that could increase emissions significantly that triggers major NSR.[321] EPA may not cure these evidentiary and explanatory defects in a final rule but must, instead, re-propose those explanations and analyses prior to finalizing any version of the regulatory amendments in the Proposal.

The Proposal and accompanying docket do not identify any historic changes at EGUs that would have triggered NSR based on the Proposal's three alternative ways of evaluating whether the hourly rate of emissions of any regulated NSR pollutant has increased. Similarly, industry commenters on EPA's CPP Replacement ANPRM and CPP Repeal Proposal did not identify any historic changes at EGUs that they believe should trigger NSR requirements. We have not identified any industry comments indicating that historic changes by EGUs would have triggered NSR under any of the three alternative hourly emissions rate tests in the Proposal.

Nor did EPA's NSR proposals in 2005 and 2007 identify any historic changes at EGUs that would have triggered NSR for any of those proposals' alternative tests for measuring potential emissions increases based on various maximum hourly emissions rates tests. To our knowledge, commenters on those earlier 2005 and 2007 proposals also did not identify any historic changes at EGUs that would have triggered NSR for any of those proposals' alternative

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[319] 72 Fed. Reg. 26,201, 26,208.

[320] 83 Fed. Reg. at 44,777.

[321] *See Michigan v. EPA*, 135 S. Ct. at 2707 (citing *State Farm,* 463 U.S. at 43).

tests for measuring potential emissions increases based on various maximum hourly emissions rates tests.

The reason for all of this is straightforward: the Proposal presents alternative maximum hourly emissions increase tests for NSR based upon exceeding potential emissions and unit capacity that are never meant to be triggered in the real world. As a practical matter, EPA is proposing a total exemption from NSR for modifications at EGUs.

In the section of the Proposal discussing the "ANPRM Solicitation and Comments Received" concerning NSR, EPA does not *once* address non-*de minimis* emissions increases from EGU modifications that avoid NSR, or concerns over deteriorating air quality, harm to public health, exacerbation of unhealthy air in nonattainment areas or adverse impacts on Class I areas.[322] The Proposal summarized concerns expressed by public interest groups, including the Natural Resources Defense Council, without even mentioning these commenters' concerns over allowing significant emissions increases to evade review, control and offsets and harms to air quality and public health.[323] Instead, the Proposal mentioned and credited industry complaints about "expensive new emission control requirements" and "permitting burdens."[324]

Some industry commenters on EPA's CPP Replacement ANPRM complained about NSR requirements and were forthright in noting actual emissions increases would result from projects that might improve efficiency or heat rate, as a result of the operators' decisions to increase utilization of the units.[325] The National Mining Association submitted comments on EPA's CPP Replacement ANPRM that complements the recognition that it is decisions by EGU operators to increase utilization of more efficient units that causes the units to increase overall emissions significantly.[326] This is correct; efficiency projects may lower emissions, unless unit operators increase utilization sufficiently to increase overall annual emissions significantly, above NSR *de minimis* thresholds. As noted elsewhere in these comments, those emissions increases will result from EGU operators' business decisions, not the requirements of NSR or section 111.

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[322] 83 Fed. Reg. at 44,776.

[323] *Id*.

[324] *Id*.

[325] See, *e.g.*, Comments of DTE Energy, EPA-HQ-OAR-2017-0545-0235 ("risk of NSR enforcement creates disincentives or EGU owners to undertake projects that might improve efficiency or heat rate, but that potentially increases utilization of the unit.").

[326] See, *e.g.*, Comments of the National Mining Association in response to the Advance Notice of Proposed Rulemaking, "State Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units," Docket No. EPA-HQ-OAR-2017-0545-0174 ("NMA does not believe that efficiency projects trigger NSR requirements, as the purpose of efficiency projects is to lower emissions.").

5. EPA Provides No Justification for Exempting So-Called "Efficiency Improvements" That Significantly Increase Pollution.

The Proposal invokes "efficiency" frequently as a concept that would be promoted by EPA's adoption of these exemptions, suggesting that the Proposal is justified on that basis. As used in this manner, however, "efficiency" is a seriously misleading label that EPA is employing generally to mask *higher pollution levels* that would be allowed to result, while escaping clean up, as a result of the proposed loopholes. EPA is using the expression here as code for the following concept: an improved emissions *rate* of pollution per unit of fuel, raw material or output (*e.g.*, lbs/MBtu of SO_2, pounds of NOx per widget). Under existing NSR rules, a facility modification that decreases its pollution *rate* (*i.e.*, becomes more efficient), does not require pollution controls so long as total actual emitted pollution *levels* decrease, are maintained, or even increase by no more than specified levels (*e.g.*, 40 tons per year). This is so, of course, because NSR requires pollution control measures only for activities that *increase pollution levels* above generous threshold levels like 40 tons per year.

In stark contrast, EPA here proposes to weaken the NSR rules to the point of meaninglessness, in order to allow *higher pollution levels* (that may or may not result from improved emission rates) to escape clean-up measures, under the guise of "efficiency." Cloaking this agenda in the garb of efficiency is not only objectionable,[327] it also contradicts numerous prior EPA stances and court decisions on this very issue:

> Virtually every modernization or upgrade project at an existing industrial facility which reduces inputs and lowers unit costs has the concurrent effect of lowering an emissions rate per unit of fuel, raw material or output. Nevertheless, it is clear that these major capital investments in industrial equipment are the very types of projects that Congress intended to address in the new source modification provisions. … Adopting a policy that automatically excludes from NSR any project that, while lowering operating costs or improving performance, coincidentally lowers a unit's emissions rate, would improperly exclude almost all modifications to existing emissions units, including those that are likely to increase utilization and therefore result in overall higher levels of emissions.[328]

> Second, [Puerto Rican Cement Company] argues that [EPA's position] . . . would significantly discourage the Company, and others like it, from installing more efficient machinery that, at any production level, emits significantly less pollution. But we cannot agree. EPA has simply taken account of, and given controlling weight to, a different consideration: the fact that a firm's decision to introduce new, more efficient machinery may lead the firm to decide to *increase the level of production,* with the result that, despite the new machinery, overall

[327] It is objectionable, of course, because efficiency improvements that yield the expected, added benefit of reduced overall pollution levels is what EPA *should* be promoting.

[328] Memorandum from John S. Seitz, Director, EPA OAQPS, to EPA Regional Air Directors, "Pollution Control Projects and New Source Review (NSR) Applicability," (July 1, 1994), at 11.

emissions will increase. Indeed, EPA points out that a firm introducing such machinery can escape [NSR] review simply by promising that it will ensure its actual emissions do not in fact increase (that is, by promising that it will not run the machinery at such a rate as to create an actual increase in emissions levels).[329]

Moreover, virtually any major capital improvement project at an existing source is designed in part to increase efficiency of production, and this will in turn almost always have the collateral effect of reducing emissions per unit of production, even though it may provide an economic incentive to increase total production, with the net result that actual emissions of air pollution to the atmosphere could increase significantly. There is nothing in the statutory terms or structure or in EPA's regulations which suggests that such major changes should be accorded exempt status under the NSR program. To the contrary, major capital investments in industrial equipment, where they could result in an increase in emissions, appear to be precisely the type of change at an existing source that Congress intended should be subject to PSD and nonattainment area NSR permitting. See Prevention of Significant Deterioration and Nonattainment New Source Review; Proposed Rule, 61 Fed. Reg. 38250, 38262 (July 23, 1996) ("NSR Reform" proposed rulemaking). *See also Puerto Rican Cement Co. v. EPA*, 889 F.2d 292, 297-98 (1st Cir. 1989) (modification of emissions unit that decreases emissions per unit of output, but may result in sufficient production increase such that actual emissions will increase, is subject to PSD).[330]

The argument that only changes that increase a unit's emissions rate can trigger the NSR modification provisions has been rejected by two courts of appeals. As noted, see *supra* note 1, in Puerto Rican Cement, the First Circuit rejected a claim that modifications to a cement kiln, which made production more efficient and decreased the hourly emissions rate but could increase the plant's utilization rate, such that actual emissions to the atmosphere might increase, were exempt from PSD. The company argued that the project fell under the PSD regulatory exclusion for changes that result in an "increase in the hours of operation or in the production rate." See 889 F.2d at 298. Similarly, in WEPCO, where the company was making "like-kind" replacements of components to restore the original design capacity of the plant, there was no increase in emissions per unit of output; rather, for PSD purposes, the emissions increase was attributable to increased utilization. The Seventh Circuit rejected the company's reliance on the exclusion for increased hours of operation/rates of production. See 893 F.2d at 916 n. 11.[331]

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[329] *Puerto Rican Cement Co. v. EPA*, 889 F.2d 292, 297-98 (1st Cir. 1989).

[330] Detroit Edison Applicability Determination Detailed Analysis, at 5-6, n.1, Enclosure to Letter from Francis X. Lyons, EPA Regional Administrator, to Henry Nickel, Counsel for the Detroit Edison Company (May 23, 2000).

[331] *Id.* at 12, n.9.

For these same reasons, which EPA and federal courts have reaffirmed time and time again, as well as others articulated *supra*, EPA does not have the authority to exempt from NSR significant increases in harmful air pollution that result from marginal improvements in emissions rates, that occur with no increase in emissions per unit of output or that restore the original design capacity of a unit or plant. The obvious point in all these cases is that in these scenarios, the air is getting dirtier by significant amounts, pollution loadings are increasing to surrounding communities, and the statutory purposes of the NSR program call for responsible pollution control measures to mitigate or offset these harmful pollution increases.

In addition, EPA has provided no meaningful data or analysis whatsoever to support its claim in this Proposal that its new approach would remove disincentives to improving the efficiency of air pollution sources. Even if EPA could show that the proposed rule would have that effect, the agency would still need to show that the resulting reductions in air pollution would outweigh the significant air pollution increases that, as these comments demonstrate, the proposed rule would allow.

Even if EPA could show that the proposed rule would lead to an increase in source efficiency so widespread and dramatic as to swamp the air pollution increases resulting directly from the exclusions, the agency still would not be able to show that the new exclusions promote, or even are consistent with, Congressional directives found in the NSR provisions. The first four purposes of the PSD provisions are (1) to protect public health and welfare from any potential adverse effect that EPA believes may reasonably be anticipated to result from air pollution notwithstanding attainment of the NAAQS; (2) to enhance air quality in areas of special natural, recreational, scenic, or historic value; (3) to ensure that economic growth will occur in a manner consistent with the preservation of existing air resources; and (4) to ensure that emissions from any source in any state do not interfere with any other state's plan for preventing significant deterioration of air quality.[332] This language reveals that Congress enacted the PSD provisions out of concern for air quality in each state, in each air shed within each state, and in each "special" area within each air shed, and the welfare (climate) across the country.

Even if improvements in the efficiency of air pollution sources led to an aggregate reduction in the nation's air pollution, the air quality in any individual area easily could get worse. So even if EPA's proposed new exclusions led to an increase in source efficiency so widespread and dramatic as to swamp the collateral air pollution increases, the exclusions would do nothing to ensure that the nationwide improvement in air quality did not come at the expense of degraded air quality in individual states and localities. The proposed exclusions are thus inconsistent with the NSR provisions. Therefore, the reasons EPA offers for proposing the new tests fail to justify them in terms consistent with the portion of the Act to which they apply. This failure renders the proposed rule arbitrary, capricious, and otherwise not in accordance with law.

[332] 42 U.S.C. § 7470(1)-(4).

E. Conclusion: EPA's NSR Proposal is Unlawful, Unsupported by the Record, Arbitrary and Capricious.

The Agency's proposed NSR changes would allow significant increases in air pollution from projects at existing EGUs to avoid triggering NSR or the requirement to put on pollution control. They thus violate the plain language and structure of the statute, and court decisions interpreting that language, requiring the NSR trigger to be based on actual emissions increases.[333] EPA's interpretation of the statute's NSR provisions as permitting the insertion of an hourly rate increase-based step in the NSR applicability determination is simply not a permissible construction of the statute, as shown *supra*. The Agency clearly seeks "to advance its own policy objectives rather than Congress'."[334] The Agency fails to provide reasoned explanation, supported by substantial evidence,[335] and by consideration of reasonable alternatives,[336] for all aspects of the proposed NSR changes, which would reverse some 40 years of Agency practice and regulation. As such the Proposal also is arbitrary and capricious.[337] EPA may not cure these evidentiary defects in a final rule but must, instead, re-propose those explanations and analyses prior to finalizing any version of the regulatory amendments in the Proposal. Finally, while EPA might prefer a different policy scheme, it is nevertheless bound by the statute. Political whim is not adequate justification for undertaking a major shift in policy,[338] and EPA provides precious little more than that in support of the NSR changes it promotes with ACE.

Finally, EPA has utterly failed to explain its proposed abrupt departure from its longstanding rules under which modifications trigger NSR program requirements on the basis of the overall annual increase in pollution tons discharged after the change is made. The United States Supreme Court has enunciated the explanatory burden that must be met should an agency change a previously mandated rule or rescind that rule all together. Specifically, where "an agency [has changed] its course by rescinding a rule, [it] is obligated to supply a reasoned

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[333] *New York I,* 413 F.3d at 39-40; *New York II,* 443 F.3d at 885, 890.

[334] *NRDC v. Reilly,* 976 F.2d 36, 44 (D.C. Cir. 1992) (Silberman, J. concurring), *cited approvingly in Massachusetts v. U.S. DOT,* 93 F.3d 890, 893 (D.C. Cir. 1996).

[335] *See, e.g., Cablevision Systems Corp. v. FCC,* 597 F.3d 1306, 1310 (D.C. Cir. 2010); *Florida Gas Trans. Co. v. FERC,* 604 F.3d 636, 639 (D.C. Cir. 2010); *Ass'n of Data Processing Serv. Orgs. v. Bd. of Governors,* 745 F.2d 677, 683-84 (D.C. Cir. 1984).

[336] *Delaware DNR v. EPA,* 785 F.3d at 18 ("Because EPA too cavalierly sidestepped its responsibility to address reasonable alternatives, its action was not rational and must, therefore, be set aside.")(citations omitted).

[337] *Encino Motorcars*, 136 S. Ct. at 2126; *State Farm,* 463 U.S. at 43.

[338] *NY v. Reilly*, 969 F2d 1147, 1149 (D.C. Cir. 1992); *Hazardous Waste Treatment Council v. EPA,* 886 F.2d 355, 375 (D.C. Cir. 1989).

analysis for the change beyond that which may be required when an agency does not act in the first instance."[339]

To provide an informed decision and to allow proper examination of its decision, "the agency must examine the relevant data and articulate a satisfactory explanation for its actions including a rational connection between the facts found and the choice made."[340] And, as in this case, where an agency has effectively turned its back on previous scientific and policy determinations the "agency must cogently explain why it has exercised its discretion in a given manner," because not to do so may allow, "expertise, the strength of modern government, [to] become a monster which rules with no practical limits on its discretion."[341] EPA has proposed to unleash a monster by leaving the public unprotected from practically unlimited life-extension projects at EGUs that will result in enormous air pollution increases.

EPA has a duty, under the basic rules of administrative law, to adequately justify, on the record, the application of its proposed hourly emissions rate test. And yet – incredibly, in light of the damage that the proposed maximum hourly rate test would cause to public health and welfare -- EPA provides no analysis or even discussion of the following issues or considerations:

1. The Proposal and administrative record contain no agency explanation or even discussion of any facts concerning the exemption for changes that increase annual emissions significantly but not maximum hourly emissions rates, and why the time of these activities would not be a "logical point for owners or operators to install state-of-the-art controls;"[342]

2. The Proposal and administrative record contain no agency explanation or even discussion of any facts concerning the exemption for changes that increase annual emissions significantly but not maximum hourly emissions rates, and what the associated emissions increases would be as a result of this exemption – either generally, or from individual units, facilities, states, or regions, in attainment areas or nonattainment areas;

3. The Proposal and administrative record contain no agency explanation or even discussion of any facts concerning the exemption for changes that increase annual emissions significantly but not maximum hourly emissions rates, and how or why the agency reached its conclusion that these changes need not trigger NSR;

4. The Proposal and administrative record contain no agency explanation or even discussion of any facts concerning the exemption for changes that increase annual emissions

[339] *State Farm*, 463 U.S. at 30.

[340] *Id.* at 31.

[341] *Id.* at 48.

[342] 67 Fed. Reg. 80,290, 80301 (Dec. 31, 2002).

significantly but not maximum hourly emissions rates, and what its impact would be on ensuring cleaner air in nonattainment areas following modifications, as a result of the NSR requirements for LAER and offsets;

5. The Proposal and administrative record contain no agency explanation or even discussion of any facts concerning the exemption for changes that increase annual emissions significantly but not maximum hourly emissions rates, and what the impact of associated emissions increases would be on increment consumption in attainment areas;

6. The Proposal and administrative record contain no agency explanation or even discussion of any facts concerning the exemption for changes that increase annual emissions significantly but not maximum hourly emissions rates, and what the impact of associated emissions increases would be on national parks, wilderness areas, and other class I areas; and

7. The Proposal and administrative record contain no agency explanation or even discussion of any facts concerning the exemption for changes that increase annual emissions significantly but not maximum hourly emissions rates, and its impact on the Congressional objective of requiring grandfathered facilities to meet NSR performance standards upon modification.[343]

The NSR Proposal accompanying ACE cannot lawfully be finalized as proposed, and because its defects are pervasive and fundamental, must be withdrawn.

[343] *Alabama Power*, 636 F.2d 323, at 400 ("The statutory scheme intends to 'grandfather' existing industries; but the provisions concerning modifications indicate that this is not to constitute a perpetual immunity from all standards under the PSD program. If these plants increase pollution, they will generally need a permit.")