

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

New Source Performance Standards )  
for Greenhouse Gas Emissions )  
From New, Modified, and )  
Reconstructed Fossil Fuel-Fired )  
Electric Generating Units; Emission )  
Guidelines for Greenhouse Gas )  
Emissions From Existing Fossil )  
Fuel-Fired Electric Generating )  
Units; and Repeal of the Affordable )  
Clean Energy Rule )

**Docket No. EPA-HQ-OAR-2023-0072**

*Via regulations.gov*  
*August 8, 2023*

We submit these comments regarding recommendations for EPA to reduce the risk of co-pollutant increases on behalf of the Natural Resources Defense Council, a nonprofit organization with decades of legal, technical and policy expertise on energy, environmental, and public health issues.

## **I. EPA Should Use This Opportunity to Strengthen Implementation of Existing Clean Air Act Authority to Reduce the Risk of Co-Pollutant Increases**

While this important GHG rule will reduce emissions of carbon dioxide (CO<sub>2</sub>) and co-pollutants such as sulfur dioxide (SO<sub>2</sub>), it has the potential to result in emission increases of other co-pollutants at units that install control equipment.<sup>1</sup> NRDC recommends that EPA take this opportunity to review its implementation of the Clean Air Act’s modification provisions under the NSPS, PSD, and NSR programs to assure that sources with actual emission increases are subject to the requirements of these protective statutory programs. EPA has ample authority to prevent emission increases in co-pollutants associated with installation of GHG control equipment. Given that those living near power plants are more likely to be low-income communities or communities of color,<sup>2</sup> ensuring that these communities are protected from co-pollutant increases is crucial for EPA to fulfill this administration’s and the agency’s own environmental justice commitments.<sup>3</sup>

As explained in greater depth below, there are a number of options for EPA to strengthen its implementation of the NSR and PSD program and tighten exceptions in order to protect communities from co-pollutant increases. Specifically, NRDC urges EPA to clarify its interpretation of “modification” by:

- requiring representative baseline emissions when evaluating NSR/PSD applicability in order to avoid papering over real-world emission increases; and
- eliminating or narrowing the “demand growth exclusion” that currently allows EGUs to avoid triggering NSR/PSD major modifications for significant increases of co-pollutants.

NRDC also urges EPA to either reconsider or provide further justification for its proposed exemption for certain EGUs from the NSPS definition of modification (proposed 40 C.F.R. § 60.5509a(b)(7)). In addition to these suggestions involving the NSPS, PSD and NSR definitions of “modification,” NRDC also urges EPA to update its alternative control techniques for NO<sub>x</sub> emissions from electric utilities, which have not been revised since 1994.

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<sup>1</sup> The agency’s modeling as of the date of proposal—which did not include the proposed limits on existing gas—shows “the proposed rules will lead certain EGUs to decrease emissions, while others increase emissions, in the four snapshot years analyzed...” EPA, RIA, at 6-13. As many as 50 percent of Americans are “predicted to experience worsening ozone concentrations,” *id.* at 6-14, and as many as 25 percent of Americans may experience worsening PM<sub>2.5</sub> concentrations, under the main proposal. *Id.*, at 6-13 to 6-14.

<sup>2</sup> EPA, EJ Screening Report for the CPP (2015) (showing a higher percentage of low-income communities and communities of color living within 3 miles of power plants than the national average), <https://19january2017snapshot.epa.gov/sites/production/files/2016-04/documents/ejscreencpp.pdf>.

<sup>3</sup> *See, e.g.*, Executive Order 14008: Tackling the Climate Crisis at Home and Abroad, 86 Fed. Reg. 7,619 (Jan. 27, 2021) (directing EPA to “assess whether underserved communities and their members face systemic barriers in accessing benefits and opportunities available pursuant to EPA’s policies and programs”); Email from Michael S. Regan, Administrator, EPA, to all EPA employees (Apr. 7, 2021) (issuing a notice to all EPA offices to “take immediate and affirmative steps to incorporate environmental justice considerations into their work, including assessing impacts to pollution-burdened, underserved, and Tribal communities in regulatory development processes and considering regulatory options to maximize benefits to these communities”); EPA, E.O. 13985 Equity Action Plan (April 2022), [https://www.epa.gov/system/files/documents/2022-04/epa\\_equityactionplan\\_april2022\\_508.pdf](https://www.epa.gov/system/files/documents/2022-04/epa_equityactionplan_april2022_508.pdf).

## II. EPA Should Strengthen the Regulatory Definitions of “Modification”

Clean Air Act section 111(a)(4) defines the term “modification” to mean “any physical change in, or change in the method of operation of, a stationary source which increases the amount of any air pollutant emitted by such source or which results in the emission of any air pollutant not previously emitted.”<sup>4</sup> The 1977 amendments to the Clean Air Act extended this definition of “modification” from the NSPS program to apply as well to the nonattainment and prevention of significant deterioration (“PSD”) preconstruction permitting programs (collectively known as “new source review” or “NSR”). As the Supreme Court observed:

NSPS, however, did too little to “achiev[e] the ambitious goals of the 1970 Amendments,” R. Belden, *Clean Air Act 7* (2001) (hereinafter Belden), and the Clean Air Act Amendments of 1977, 91 Stat. 685, included the PSD provisions, which aimed at giving added protection to air quality in certain parts of the country “notwithstanding attainment and maintenance of” the NAAQS. 42 U.S.C. §7470(1). The 1977 amendments required a PSD permit before a “major emitting facility” could be “constructed” in an area covered by the scheme. §7475(a). As originally enacted, PSD applied only to newly constructed sources, but soon a technical amendment added the following subparagraph: “The term ‘construction’ when used in connection with any source or facility, includes the modification (as defined in [S]ection 111(a)) of any source or facility.” §14(a)(54), 91 Stat. 1402, 42 U. S. C. §7479(2)(C); see also *New York v. EPA*, 413 F. 3d 3, 13 (CAD 2005). In other words, the “construction” requiring a PSD permit under the statute was made to include (though it was not limited to) a “modification” as defined in the statutory NSPS provisions.<sup>5</sup>

EPA recognizes that the retrofit of an EGU with CCS or for hydrogen co-firing may increase oxides of nitrogen (NO<sub>x</sub>) and possibly fine particle (PM<sub>2.5</sub>) emissions and trigger new source review – most often under the PSD program. Where PSD preconstruction review is triggered, sources must apply the Best Available Control Technology (BACT) for all pollutants subject to regulation. BACT can mitigate potential NO<sub>x</sub> and PM<sub>2.5</sub> emissions increases:

For units not otherwise required to have [selective catalytic reduction to control NO<sub>x</sub>] an increase in utilization from a CO<sub>2</sub> capture retrofit could result in increased NO<sub>x</sub> emissions at the source that, depending on the quantity of the emissions increase, may trigger major NSR permitting requirements. Under this scenario, the permitting authority may determine that the NSR permit requires the installation of SCR for those units, based on applying the requirements of major NSR.<sup>6</sup>

The proposal also notes that owner/operators can avoid NSR by agreeing to a legal limit that keeps increases in NO<sub>x</sub> or other pollutants below the amount that triggers review:

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<sup>4</sup> 42 U.S.C. § 7411(a)(4).

<sup>5</sup> *Environmental Defense v. Duke Energy Corp.*, 549 U.S. 561, 567 (2007) (footnote omitted).

<sup>6</sup> 88 Fed. Reg. at 33350.

“Alternatively, a State could, as part of its State plan, develop enforceable conditions for a source expected to trigger major NSR that would effectively limit the unit’s ability to increase its emissions in amounts that would trigger major NSR.”<sup>7</sup>

As these passages recognize, however, it is uncertain whether major NSR permitting will be triggered. This is not simply “depending on the quantity of the emissions increase”: the size of EGUs and their baseline emissions mean even minor increases in utilization at uncontrolled or poorly controlled units will increase annual emissions by more than the typical “major modification” significance thresholds of 40 or 25 tons per year. Rather, current PSD and NSR regulations for electric utilities contain provisions that enable EGU operators to escape air pollution controls, air quality analysis, and offsets (in nonattainment areas), even when there are emissions increases in the real world that exceed these significance levels, including by hundreds or even thousands of tons per year.

The preamble to the proposal does contain a section devoted to implications of the proposals for the NSR program,<sup>8</sup> but that section mainly discusses section 111(b) and 111(d) implications for GHG emissions under nonattainment NSR, PSD and minor NSR.<sup>9</sup> There is little discussion of the implications of the proposal for increases in *co-pollutants* and no new policies or proposals to account for these increases under the NSR programs. The results of the co-pollutant analysis that EPA undertook when crafting the proposal, discussed in chapters 4 and 6 of the accompanying Regulatory Impacts Analysis (RIA), indicate compellingly that EPA should develop stronger NSR policies, guidance and even regulations to mitigate or prevent the potential increases in co-pollutants.

#### A. Ensure baseline emissions for EGUs reflect the real world

The PSD and nonattainment NSR preconstruction permitting programs require the calculation of “baseline emissions” before a physical or operational change at an EGU, in order to compare emissions before a change to projected actual emissions after a change and determine if a physical or operational change would result in a significant increase in emissions. This is called a “major modification.”<sup>10</sup> Since at least the 2002 EPA rulemaking under the George W. Bush administration that weakened the PSD and NSR permitting programs, the “baseline actual emissions for [EGUs] is the average rate, in tons per year, at which that unit actually emitted the pollutant during a 2-year (consecutive 24-month) period within the 5-year period immediately preceding when the owner or operator begins actual construction.”<sup>11</sup>

The problem with this approach from the perspective of public health, air quality, and projected emissions increases is that EGU operators will always select the highest polluting consecutive 24-month period during the preceding 5 years. They will do this even if – indeed, *because* – those calculated regulatory “baseline emissions” are higher than the actual emissions more recently preceding a physical or operational change, and even if they are *less* representative

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<sup>7</sup> *Id.*

<sup>8</sup> *See generally*, section XIII.A, 88 Fed. Reg. 33406–08.

<sup>9</sup> *Id.*, at 33407–408.

<sup>10</sup> *See, e.g.*, 67 Fed. Reg. 80186, 80188 (Dec. 31, 2002).

<sup>11</sup> *Id.* at 80189. Though even under that administration, EPA “retain[ed] the option that allows the use of a different time period if the reviewing authority determines it is more representative of normal source operation.” *Id.*

of normal source operation than a more recent period. Since the utilization of many of these EGUs typically has been declining in recent years, this means the current regulation gives operators the benefit of an emissions baseline that is no longer representative of reality. EGU operators are comparing emissions before a change to projected actual emissions after a change, relying on very high, unrepresentative “baseline emissions.” As a result, it may appear on paper that a physical or operational change will *not* result in a significant increase in emissions, but *in the real world*, emissions after the change may increase by *hundreds or even thousands of tons per year*. With no emissions increase on paper, EGU operators would not need to install air pollution controls, conduct air quality analyses, secure offsets (in nonattainment areas), or even apply for permits, at all.

We urge EPA to re-examine the application and non-application of PSD and NSR at EGUs under current regulations, in light of the potential impact on co-pollutants of some compliance choices under the proposed GHG rule. EPA should consider requiring EGU operators to select “baseline emissions” from the consecutive 24 months preceding a change, unless a source can show another 24-month period during the 4 years preceding the change is more representative of normal source operation. The current PSD and NSR rules for EGUs make emissions “representative of normal source operation” an optional path that source operators can avoid, to the detriment of public health and air quality. This is especially true for EGUs that remain uncontrolled or poorly controlled, over *45 years* after Congress added the statutory PSD and NSR modification provisions to the Clean Air Act.

B. Remove the harmful PSD & NSR regulatory “demand growth exclusion” available to electric utility operators

The agency’s PSD and NSR regulations contain a harmful rollback dating to the first George W. Bush administration term, whose sole function is to allow significant emissions rate increases to occur from modifications at major sources and evade modern air pollution controls, air quality impact analyses in attainment areas, and pollution offsets in nonattainment areas. EPA should remove this harmful “demand growth exclusion” from the PSD/NSR regulations that govern electric utilities.

EPA’s PSD/NSR regulations require operators making post-change emissions projections to exclude: “that portion of the unit’s emissions following the project that an existing unit could have accommodated during the consecutive 24-month period used to establish baseline actual emissions under paragraph (a)(1)(xxxv) of this section and that are also unrelated to the particular project, including any increased utilization due to product demand growth.”<sup>12</sup>

The rules were written to exclude from post-change emissions projections by electric utility operators for emissions that are attributable to “any increased utilization due to the rate of electricity demand growth for the utility system as a whole,” *i.e.*, as if the increased emissions were unrelated to the physical or operational change.

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<sup>12</sup> 40 C.F.R. § 51.165(a)(1)(xxviii)(B)(3), accord §§ 51.166(b)(40)(ii)(c), 52.21(b)(41)(ii)(c), 51.165(a)(1)(v)(C)(9)(xxi)(B), 51.166(b)(2)(iii)(k)(32)(ii), 52.21(b)(2)(iii)(k)(33)(ii).

In a 1998 Notice, EPA severely criticized the “demand growth exclusion” for electric utilities, proposed to discontinue it, and concluded that it should not be extended to non-utilities.<sup>13</sup> EPA recognized that emissions units at production facilities *exist* to meet market demand. The agency cataloged multiple problems with the exclusion and why it undermines the modification provision in Clean Air Act section 111(a)(4).<sup>14</sup> EPA recognized then, correctly, that the exclusion was a “departure from longstanding practice,” and that it was “not appropriate and should not be continued, both as a general matter and especially in view of recent developments in the electric power sector.”<sup>15</sup> EPA “seriously question[ed] whether market demand should ever be viewed as a significant factor ... since in a market economy, all changes in utilization—and hence, emissions—might be characterized as a response to market demand.”<sup>16</sup> The 1998 proposal was not promulgated. But it was the correct assessment and it proposed the correct remedy.

To reflect its greater commitment to public health, air quality and community protections under this administration, EPA should repeal the demand growth exclusions available to electric utilities under PSD and NSR regulations. All the deficiencies and hazards recounted by EPA in the 1998 notice remain true today; indeed, the record for the GHG proposal identifies ways in which increased utilization at fossil fuel-fired power plants in response to the proposal could increase criteria air pollutants regulated under PSD/NSR, as well as hazardous air pollutants.

In its 2005 *New York v. EPA* decision,<sup>17</sup> the D.C. Circuit upheld the harmful demand growth exclusion as a permissible interpretation of the Act, but did not hold that the exclusion was compelled by the Act or even represented its best reading. The court held that “EPA adequately explained its reasons for extending the demand growth exclusion to all industries so long as the growth is unrelated to the change....”<sup>18</sup> Importantly, however, nothing in the opinion suggests that the demand growth exclusion is *compelled* by the Act.

Accordingly, EPA has authority to eliminate the demand growth exclusion in favor of other, better interpretations of the statute—for example, the one that governed the regulations for non-utilities prior to 2002, and for electric utilities prior to 1992: no demand growth exclusion.

Compliance choices under the GHG proposal could lead to physical and operational changes at electric utilities that cause or may cause significant emissions rate increases for some regulated air pollutants. There is an unacceptable (and unjustified) risk under current PSD and NSR regulations that electric utility operators may try to argue that emissions increases that follow physical or operational changes taken to meet the proposal are “unrelated” to those changes. To prevent that harmful outcome, and the resulting increases in regulated air pollutants that would escape pollution controls (and offsets in nonattainment areas), EPA should open a rulemaking to repeal the ‘demand growth exclusion’ for electric utilities.

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<sup>13</sup> 63 Fed. Reg. at 39860-61.

<sup>14</sup> *See generally id.* (“no plausible distinction between emissions increases due solely to demand growth as an independent factor and those changes at a source that respond to, or create new, demand growth which then result in increased capacity utilization”; “demand growth exclusion would ignore the realities of a deregulated electric power sector;” exclusion problematic because “self-implementing,” “self-policing,” and undefined).

<sup>15</sup> 63 Fed. Reg. at 39860.

<sup>16</sup> *Id.*

<sup>17</sup> 413 F.3d 3 (D.C. Cir. 2005) [hereinafter “*New York I*”]

<sup>18</sup> *Id.* at 33.

Finally, and at the very least, EPA should make clear that electric utilities may *not* exclude any emissions increases that follow compliance with the current proposal by pretending that those increases stem from ‘unrelated demand growth.’ That is, for purposes of determining NSPS, PSD, and NSR applicability, EPA should make clear that when electric utilities undertake ‘any physical or operational changes’ to respond to and comply with the final GHG rule or emission guideline, any projected emissions increases occurring at each such source are caused by those physical or operational changes. The so-called ‘demand growth exclusion’ should be simply not available to exclude and ignore emissions increase that result from increased utilization at electric utilities. This is because that increased utilization is due to load shifting following the new regulations, *not* “increased utilization due to the rate of electricity demand growth for the utility system as a whole.”

When upholding the harmful ‘demand growth exclusion,’ the *New York I* court focused on EPA’s examples of the rare and unusual circumstances that might justify calling emissions increases ‘unrelated to physical or operational changes,’ that is, stemming solely from demand growth, such as “skyrocketing demand because the product becomes a fad; mishaps at a factory, causing production increases at remaining supplier sources; decrease in raw material prices; opening of new markets; and improved economic conditions.”<sup>19</sup> None of these examples are even plausibly similar to the increased power plant utilization and increased emissions that may occur due to compliance choices under this rule.

It is very important that in the preamble to the final rule EPA should address these concerns and the unintended consequence of invoking and misapplying the ‘demand growth exclusion’ to exclude and ignore emissions increases related to physical or operation changes. These should be considered “major modifications” under PSD and NSR.

### **III. Further Justification is Required for EPA’s Proposed NSPS Modification Exemption**

The EPA proposal provides an exemption “from the requirements of this subpart” for a certain type of “modification” that occurs at EGUs that are steam generating units or IGCC units:

(b) You are not subject to the requirements of this subpart if your affected EGU meets any of the conditions specified in paragraphs (b)(1) through (9) of this section.

...

(7) Your EGU is a steam generating unit or IGCC that undergoes a modification resulting in an hourly increase in CO<sub>2</sub> emissions (mass per hour) of 10 percent or less (2 significant figures). Modified units that are not subject to the requirements of this subpart pursuant to this subsection continue to be existing units under section 111 with respect to CO<sub>2</sub> emissions standards.<sup>20</sup>

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<sup>19</sup> *New York I*, 413 F.3d at 32 (citing EPA, Reconsideration Technical Support Document at 18-19).

<sup>20</sup> Proposed Subpart TTTTa Regulatory Text, Docket ID EPA-HQ-OAR-2023-0072-0004 (proposed § 60.5509a(b)(7)).

This proposed language contradicts plain statutory text. And to the extent that EPA may be able to depart from the Clean Air Act's plain language at all, the proposal and the accompanying administrative record lack any demonstration that would support any such departure.

In *New York II*,<sup>21</sup> the D.C. Circuit Court of Appeals interpreted the statutory term "modification" – the same term is used in the NSPS, PSD and NSDR programs: "Consistent with *Alabama Power Co. v. Costle*, 636 F.2d 323 (D.C.Cir.1979), which recognized EPA's discretion to exempt from NSR 'some emission increases on grounds of *de minimis* or administrative necessity,' EPA has for over two decades defined the [routine maintenance, repair, or replacement] exclusion as limited to '*de minimis* circumstances.'"<sup>22</sup>

While that decision addressed NSR modifications, the court's interpretation applies equally to NSPS modifications because the controlling statutory language is identical and carries a plain meaning ("any physical change in, or change in the method of operation of, a stationary source which increases the amount of any air pollutant emitted by such source").

In *Alabama Power*, the D.C. Circuit recognized that "the term 'modification' [in section 111(a)(4)] is nowhere limited to physical changes exceeding a certain magnitude."<sup>23</sup> The *Alabama Power* court held, however, that EPA could exempt some emissions increases from PSD review on *de minimis* grounds.<sup>24</sup> As the Court made clear, the burden of justifying any such *de minimis* 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.<sup>25</sup>

Implementing this 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)."<sup>26</sup> While this approach focused on "the cumulative effect on increment consumption of multiple sources in an area" under the Act's PSD program,<sup>27</sup> EPA has the same obligation to make a record-based showing before labeling any

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<sup>21</sup> *New York v. EPA*, 443 F.3d 880 (D.C. Cir. 2005) [hereinafter "*New York II*"].

<sup>22</sup> *New York II*, 443 F.3d at 884 (citations omitted).

<sup>23</sup> *Alabama Power Co. v. Costle*, 636 F.2d 323, 400 (D.C.Cir. 1979).

<sup>24</sup> *Id.* ("[I]mplementation 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.").

<sup>25</sup> *Id.* at 360-61 (emphasis added).

<sup>26</sup> 45 Fed. Reg. 52676, 52707 (Aug. 7, 1980).

<sup>27</sup> See 45 Fed. Reg. 52676, 52707 (Aug. 7, 1980); see also U.S. EPA, Impact of Proposed and Alternative De Minimis Levels for Criteria Pollutants 7 EPA-450/2-80-20 (June 1980) ("*De Minimis* Impact Study")



GHG or co-pollutant levels *de minimis* under the NSPS regulations that are the subject of this proposal. That is, EPA may have authority to exempt some emissions increases from the NSPS program's "modification" provision only "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."<sup>28</sup>

This rule's proposed exemption at 40 C.F.R. § 60.5509a(b)(7) violates the plain language of 42 U.S.C. § 7411(a)(4), which defines an NSPS "modification" as "*any* physical change in, or change in the method of operation of, a stationary source which increases the amount of any air pollutant emitted by such source or which results in the emission of any air pollutant not previously emitted."<sup>29</sup>As the *New York II* court noted:

Because Congress used the word "any," EPA must apply NSR whenever a source conducts an emission-increasing activity that fits within one of the ordinary meanings of "physical change,"... [and] it is hardly "farfetched," for Congress to have intended NSR to apply to any type of physical change that increases emissions. In this context, there is no reason the usual tools of statutory construction should not apply and hence no reason why "any" should not mean "any." Indeed, EPA's interpretation would produce a "strange," if not an "indeterminate," result: a law intended to limit increases in air pollution would allow sources operating below applicable emission limits to increase significantly the pollution they emit without government review.<sup>30</sup>

Again, the *New York II* court's interpretation of section 111(a)(4) applies equally to NSPS modifications because the controlling statutory language is identical and carries the same plain meaning recognized by the *New York I* court. Indeed, the *New York II* court's recognition of the "plain" and "expansive" language in section 111(a)(4) serves the purposes of the NSPS program as well as the NSR program at issue in that decision. That is because the statutory language is concerned with *emissions increases*:

In contrast, the petitioners' approach, by adopting an expansive reading of the phrase "any physical change," gives natural effect to all the words used by Congress and reflects both their common meanings and Congress's purpose in enacting the 1970 and 1977 amendments. *See New York I*, 413 F.3d at 11-13; *WEPCo*, 893 F.2d at 909. To improve pollution control programs in a manner consistent with the balance struck by Congress in 1977 between "the economic

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(record-based showing undertaken by EPA that involved an extensive modeling effort using data from 37 existing sources in a real airshed – Dayton, Ohio; this study led EPA 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." *See generally De Minimis* Impact Study).

<sup>28</sup> *Alabama Power*, 636 F.2d at 360-61 (emphasis added).

<sup>29</sup> 42 U.S.C. § 7411(a)(4) (emphasis added); *Cf.*, *New York II*, 443 F.3d at 884 ("[R]ead naturally, the word 'any' has an expansive meaning, that is, 'one or some indiscriminately of whatever kind,' and... courts must give effect to each word of a statute[.]" (cleaned up).

<sup>30</sup> *New York II*, 443 F.3d at 885-86 (cleaned up).

interest in permitting capital improvements to continue and the environmental interest in improving air quality,” *Chevron*, 467 U.S. at 851, 104 S.Ct. 2778, Congress defined the phrase “physical change” in terms of increases in emissions. After using the word “any” to indicate that “physical change” covered all such activities, and was not left to agency interpretation, Congress limited the scope of “any physical change” to changes that “increase [ ] the amount of any air pollutant emitted by such source or which result [ ] in the emission of any air pollutant not previously emitted.” 42 U.S.C. § 7411(a)(4). Thus, only physical changes that do not result in emission increases are excused from NSR.<sup>31</sup>

The same conclusion holds true for NSPS modifications: **only physical changes that do not result in emission increases are excused from NSPS.**

The proposal fails to justify its proposed exemption at 40 C.F.R. § 60.5509a(b)(7). The proposal offers no showing that the increases proposed to be excused are *de minimis* – that “the burdens of regulation yield a gain of trivial or no value.” Rather, covering such increases serves the “regulatory function” of section 111(a)(4). Controlling those emissions “provide[s] benefits, in the sense of furthering the regulatory objectives.”<sup>32</sup> Finally, the proposal fails to include any record-based demonstration that might support any exemption on *de minimis* grounds, as the agency did when it established *de minimis* emissions increase significance thresholds under the PSD program in 1980.<sup>33</sup> These failures mean that EPA also has denied the public any opportunity to comment on any claimed *de minimis* exemption and the record-based demonstration that would be required to support and justify such an exemption.

Addressing the content of the proposed exemption at 40 C.F.R. § 60.5509a(b)(7) — “a modification resulting in an hourly increase in CO<sub>2</sub> emissions (mass per hour) of 10 percent or less (2 significant figures)”: there is no detail on the baseline from which the increase is to be calculated. In addition to making any *de minimis* showing on the record to justify any exemption, the final rule should specify the baseline. To capture emissions units where any CCS energy penalty results in an increase in emissions at a given load, EPA should establish the relevant baseline(s) based on a load-weighted hourly emissions rate calculation, for the two years preceding the proposal. Alternatively, EPA could establish the increase test based on the hourly rate of emissions per MWh, rather than on a mass basis, as the proposal presently does.

#### **IV. EPA Should Update Alternative Control Techniques for NO<sub>x</sub> Emissions From Electric Utilities**

Clean Air Act section 183(c) provides that:

the Administrator shall issue technical documents which identify alternative controls for all categories of stationary sources of volatile organic compounds and oxides of nitrogen which emit, or have the potential to emit 25 tons per year or

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<sup>31</sup> *New York II*, 443 at F.3d. at 887.

<sup>32</sup> *Alabama Power*, 636 F.2d at 360-61.

<sup>33</sup> See 45 Fed. Reg. at 52707; see generally *De Minimis Impact Study*, *supra*.

more of such air pollutant. The Administrator shall revise and update such documents as the Administrator determines necessary.<sup>34</sup>

As far back as 1994, EPA identified fossil fuel-fired utility boilers — coal-, methane gas-, and oil-fired- — “as a category of stationary sources that emit more than 25 tons of nitrogen oxides (NO<sub>x</sub>) per year.”<sup>35</sup> Unfortunately, EPA has never revised and updated the NO<sub>x</sub> ACT Document for electric utility boilers since 1994, despite clear Congressional authorization to do so; accordingly, the document remains woefully outdated.<sup>36</sup> EPA has updated ACT guidance for other industries since issuance of the original guidance.<sup>37</sup>

The failure to update the NO<sub>x</sub> ACT Document for fossil fuel-fired utility boilers means, among other things, that NO<sub>x</sub> Reasonably Available Control Technology for such boilers in ozone nonattainment is badly outdated, lagging far behind not just “reasonably available” control technology for such boilers, but behind existing emissions limitations, currently accepted cost-effectiveness criteria, and widespread air pollution control practices among electric utility operations. EPA wrote in 2006, referring back to its 1994 NO<sub>x</sub> RACT guidance, that “[f]or NO<sub>x</sub> RACT for stationary source categories, other than wall and tangentially fired electric utility boilers, EPA guidelines in 1994 indicate States should consider in their RACT determinations technologies that achieve 30-50 percent reduction within a cost range of \$160-1300 per ton of NO<sub>x</sub> removed.”<sup>38</sup>

NRDC urges EPA to commit to update the ACT document to define NO<sub>x</sub> RACT at electric utilities as continuous operation of air pollution control equipment installed for NO<sub>x</sub> emissions, such as SCR and SNCR, when an electric utility boiler is operating. Currently such equipment is operated only intermittently at many such sources. There can be no rational argument that continuous operations are not ‘reasonably available,’ or cost-effective. In 2023 and beyond, it is simply not defensible for installed air pollution control devices to be considered ‘not reasonably available’ and the incremental costs for catalysts and continuous operation considered unreasonable. What *is* unreasonable is allowing RACT control reduction expectations and ‘costs per ton of NO<sub>x</sub> removed’ to languish for decades behind the more effective and widespread practices among EGU operators.

These actions are especially appropriate because the potential emission increases are attributable to compliance choices that may be made under the proposed rule – to wit, the potential use of CCS or hydrogen to comply with the proposed GHG emission limits and the potential increase in operation of units in subcategories that EPA has decided to subject to weaker or no GHG limits.

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<sup>34</sup> 42 U.S.C. § 7511b(c).

<sup>35</sup> U.S. EPA, Alternative Control Techniques Document -- NO<sub>x</sub> Emissions from Utility Boilers, at 1-1 (March, 1994) [hereinafter “NO<sub>x</sub> ACT Document”], [https://www3.epa.gov/airquality/ctg\\_act/199403\\_nox\\_epa453\\_r-94-023\\_utility\\_boilers.pdf](https://www3.epa.gov/airquality/ctg_act/199403_nox_epa453_r-94-023_utility_boilers.pdf).

<sup>36</sup> See also William T. Harnett, U.S. EPA, “RACT Qs & As – Reasonably Available Control Technology (RACT): Questions and Answers” (May 18, 2006) [hereinafter “RACT Q&A”], at 15, [https://www.epa.gov/sites/default/files/2016-08/documents/ract\\_and\\_nsps\\_1dec1988.pdf](https://www.epa.gov/sites/default/files/2016-08/documents/ract_and_nsps_1dec1988.pdf).

<sup>37</sup> See, e.g., NO<sub>x</sub> Emissions from Stationary Internal Combustion Engines (EPA-453/R-93-032), July 1993 – [Updated September 2000].

<sup>38</sup> RACT Q&A, *supra*, at 2.

EPA's proposal will result in significant overall benefits to human health due to expected reductions in CO<sub>2</sub> and SO<sub>x</sub>, but we urge EPA to consider the potential for localized increases of co-pollutant emissions in fence-line communities. EPA has within its Clean Air Act arsenal the authority to ensure that any potential co-pollutant increases are controlled under PSD and nonattainment NSR—we simply urge EPA to use that authority.

Respectfully submitted,

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