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November 27, 2020

Mr. John Ungvarsky
Air Planning Office (AIR–2)
EPA Region IX
75 Hawthorne Street
San Francisco, CA 94105

Re: Docket ID No. EPA–R09–OAR–2019–0709

Dear Mr. Ungvarsky:

On behalf of the Center for Biological Diversity, Air Law for All, Ltd. submits the following comments to Docket No. EPA–R09–OAR–2019–0709 in opposition to EPA's proposed action, "Approval of Air Quality Implementation Plans; California; Eastern Kern; 8-Hour Ozone Nonattainment Area Requirements," 85 FR 68268 (Oct. 28, 2020).

I. INTRODUCTION

The Center for Biological Diversity's mission is to ensure the preservation, protection, and restoration of biodiversity, native species, ecosystems, public lands and waters, and public health through science, policy, and environmental law. Based on the understanding that the health and vigor of human societies and the integrity and wildness of the natural environment are closely linked, the Center for Biological Diversity is working to secure a future for animals and plants hovering on the brink of extinction, for the ecosystems they need to survive, and for a healthy, livable future for all of us.

II. EPA MUST DISAPPROVE THE RFP PLAN

EPA proposes to approve portions of three submittals (the "Plan") as meeting the reasonable further progress ("RFP") requirements for the Eastern Kern Serious 2008 ozone nonattainment area. For Serious areas, the Plan must meet both the general RFP requirements in section 172(c)(2) that are tied to attainment of the ozone standards and the specific RFP requirements in section 182(c)(2)(B) for reductions in emissions of VOCs from baseline emissions. EPA has not proposed to approve an attainment

demonstration and control strategy for the Eastern Kern nonattainment area, so there is no basis to conclude that the Plan meets the general RFP requirements in section 172(c)(2). There is also no basis to conclude that the Plan meets the requirements for VOC emission reductions, as it allows relies on substitute reductions in emissions of NOx that have not been shown to meet the criteria of section 182(c)(2)(C). The Plan must be disapproved for RPF requirements.

A. Statutory and Regulatory Background for RFP

Subpart 1 of Part D of Title I of the Act provides the general requirements for attainment plans, including the general requirement in section 172(c)(2) for attainment plans to require RFP.[1] RFP in turn is defined in section 171 as:

> [S]uch annual incremental reductions in emissions of the relevant air pollutant as are required by [Part D] 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.[2]

Subpart 2 provides specific requirements for ozone nonattainment areas. Marginal areas are exempted from the general requirement for an attainment demonstration and have no specific RFP requirement;[3] accordingly EPA rules do not require an RFP plan for these areas.[4]

For Moderate ozone areas, specific RFP requirements are provided in section 182(b)(1)(A)(i), which states in relevant part:

> By no later than 3 years after November 15, 1990, the State shall submit a revision to the applicable implementation plan to provide for volatile organic compound emission reductions, within 6 years after November 15, 1990, of at least 15 percent from baseline emissions, accounting for any growth in emissions after 1990.[5]

Serious areas must meet all requirements applicable to Moderate areas.[6] In addition, section 182(c)(2)(B) requires, for areas classified Serious and above, a demonstration that the plan will achieve 3% VOC reductions per year from the starting point ("baseline emissions"), except in two limited circumstances. The first—which does not apply here—is where the state can demonstrate all technically feasible measures have been implemented in the nonattainment area.[7]

Second, section 182(c)(2)(C) allows for a combination in reductions of VOC and NOx emissions in lieu of 3% VOC reductions per year if the plan revision contains:

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[1] 42 U.S.C. § 7502(c)(2).
[2] *Id.* § 7501(1).
[3] *Id.* § 7511a(a).
[4] *E.g.*, 40 C.F.R. § 51.1110(a)(1).
[5] 42 U.S.C. § 7511a(b)(1)(A)(i).
[6] *Id.* § 7511a(c).
[7] *Id.* § 7511a(c)(2)(B).

> a demonstration to the satisfaction of the Administrator that the applicable implementation plan, as revised, provides for reductions of emissions of VOC's and oxides of nitrogen (calculated according to the creditability provisions of [sections 182(b)(1)(C) and 182(b)(1)(D)]), that would result in a reduction in ozone concentrations at least equivalent to that which would result from the amount of VOC emission reductions required under [section 182(c)(2)(B)].[8]

The Moderate area provision, section 182(b)(1)(A)(i), was, like the rest of subpart 2 of part D, title I, added to the Act in the Clean Air Act Amendments of 1990.[9] In the context of post-1990 implementation rules for revised ozone standards, EPA has interpreted this provision three times:

1. The "Phase 2 Rule" for the 1997 ozone standards;[10]
2. The "SIP Requirements Rule" for the 2008 ozone standards;[11] and
3. The "SIP Requirements Rule" for the 2015 ozone standards.[12]

1. EPA's "Phase 2" Rule

In its proposal for the "Phase 2" rule for implementation of the 1997 ozone standards, EPA noted that the plain language of section 182(b)(1)(A)(i) did not allow for substitution of NOx emission reductions for VOC emission reductions.[13] EPA stated:

> Currently, for many areas of the country, particularly in the Eastern U.S. outside major metropolitan areas, there is a greater need for NOx reductions rather than VOC reductions.[14]

EPA accordingly proposed an option for Moderate ozone areas that had already met the section 182(b)(1)(A)(i) requirement (referred to by EPA as the initial "rate-of-progress" or "ROP" requirement) for the previous 1-hour ozone standards to instead "be covered under the generic RFP requirements of subpart 1" of part D, title I.[15]

For areas that had not previously met the initial ROP requirement,

> section 172(c)(2) also applies, requiring areas to meet RFP generally. Therefore, a [M]oderate area would also have to provide any additional emissions reductions—VOC and/or NOx—needed to provide for attainment by the area's attainment date.[16]

For areas that had previously met the initial ROP requirement, only the general RFP requirement in section 172(c)(2) would apply. According to EPA, this more general

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[8] *Id.* § 7511a(c)(2)(C).
[9] Pub. L. 101-549, § 103; 104 Stat. 2428.
[10] 68 FR 32802 (June 2, 2003) (proposal); 70 FR 71612 (Nov. 29, 2005) (final).
[11] 78 FR 34178 (June 6, 2013) (proposal); 80 FR 12264 (Mar. 6, 2015) (final).
[12] 81 FR 81276 (Nov. 17, 2016) (proposal); 83 FR 62988 (Dec. 6, 2018) (final).
[13] 68 FR at 32833.
[14] *Id.*
[15] *Id.*
[16] *Id.* at 32834.

provision (as compared to section 182(b)(1)(A)(i)) would allow for use of NOx emission reductions in lieu of VOC emission reductions.[17]

EPA further proposed to subdivide areas that had already met the initial ROP requirement into three cases, depending on the length of time between designation and the attainment date. Except for those areas with an attainment date 3 years or less after designation, RFP would at a minimum require the emissions reductions necessary to attain by the attainment date.[18]

In the final "Phase 2" rule,[19] EPA modified this proposal to subdivide the areas into two cases, depending on whether the attainment date was beyond 5 years after designation.[20] In both cases, RFP would at a minimum consist of emission reductions necessary to reach attainment.[21] If the attainment date was past the 5-year mark, the plan would have also meet a 15 percent VOC reduction requirement, with the option to substitute NOx reductions for VOC reductions.[22]

In the preamble for the Phase 2 rule, EPA summarized the proposal as allowing NOx substitution "consistent with EPA's NOx substitution policy,"[23] as provided in EPA's "NOx Substitution Guidance."[24] However, EPA did not incorporate this guidance into the Code of Federal Regulations. Instead, in the final Phase 2 rule EPA required NOx substitutions to simply "meet the criteria in section 182(c)(2)(C) of the Act."[25] EPA's NOx Substitution Guidance recommends a procedure—an irredeemably flawed procedure, as it turns out—to address the requirement in section 182(c)(2)(C) to demonstrate that substitute NOx emission reductions achieve equivalent reductions in ozone concentrations.

EPA's Phase 2 rule was upheld with respect to the decision to apply subpart 1 to Moderate areas that had already met the initial ROP requirement. It was not challenged with respect to the details of the implementation, such as the reference to section 182(c)(2)(C).[26]

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[17] 68 FR at 32835.
[18] *See id.*
[19] 70 FR 71612 (Nov. 29, 2005).
[20] *Id.* at 71643.
[21] *Id.*; *see also* "Response to Comments Document," EPA-HQ-OAR-2003-0079-0992, at 22-23 (Nov. 9, 2005). The response to comments document is attached to this comment letter.
[22] 70 FR at 71643.
[23] *Id.* at 71642.
[24] "NOx Substitution Guidance," Office of Air Quality Planning and Standards (Dec. 1993), *available at* https://www3.epa.gov/ttn/naaqs/aqmguide/collection/cp2_old/19931201_oaqps_nox_substitution_guidance.pdf. This guidance memorandum is attached to these comments. It is also included in EPA's compilation, "NOx Policy Documents for the Clean Air Act of 1990," EPA-452/R-96-005, Office of Air Quality Planning and Standards (Mar. 1996), which is attached, in three parts, to these comments.
[25] 70 FR at 71701; 40 C.F.R. § 51.911(b)(2)(ii)(B).
[26] *See NRDC v. EPA*, 571 F.3d 1245, 1261-63 (D.C. Cir 2009).

2. EPA's Rule for the 2008 Ozone Standards

EPA proposed to similarly allow NOx substitution in its "SIP Requirements Rule" for implementation of the 2008 ozone standards.[27] As one reason for this, EPA stated:

> [O]ur understanding of the effects of reductions of VOC and NOx on ambient ozone levels has greatly improved since the 1990 CAA Amendments were enacted, and there are technical tools more readily available to help states predict the combination of VOC and/or NOx that will be most effective in reducing ozone in a particular area. In many areas we now know that NOx reductions will have a far greater effect than VOC reductions on reducing ambient ozone concentrations.[28]

EPA thus proposed, for areas that had met the initial ROP requirement (referred to in this rule as the "15 percent RFP plan requirement for VOC in section 182(b)(1)") that the requirements of section 172(c)(2) would instead apply.[29] As with the Phase 2 Rule, this would allow for NOx substitution. In an "Appendix C" to the preamble for the proposed rule, EPA provided a procedure that EPA stated would "properly account for the non-creditable emissions reductions when calculating RFP targets … consistent with the requirements of sections 182(b)(1)(C) and (D) and 182(c)(2)(B)."[30] The procedure stated that NOx substitution would "follow[] EPA's NOx Substitution Guidance."[31]

In the final "SIP Requirements Rule,"[32] EPA finalized this general approach.[33] EPA stated that it was consistent with the approach in the Phase 2 Rule, and reiterated the reason given in its proposal for allowing NOx substitution:

> [O]ur understanding of the effects of reductions of VOC and NOX on ambient ozone levels and the technical tools to help predict what combinations of reductions of ozone precursors will be most effective for ozone reduction in any area have improved. Since the purpose of the RFP provisions in CAA sections 172 and 182 is to foster the achievement of reasonable further progress toward attainment, we believe that it makes the most sense to allow states to credit toward the RFP requirement those reductions that an area most needs to reach attainment.[34]

The preamble to the final rule does not mention the NOx Substitution Guidance, but the response to comments indicates that EPA intended to continue its use for "section 182(c)(2)(C) equivalency demonstration requirements."[35] EPA also referenced a memorandum issued in 1994 regarding a section 182(c)(2)(C) demonstration in the

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[27] 78 FR at 34188.
[28] *Id.*
[29] *Id.* at 34189.
[30] *Id.* at 34229.
[31] *Id.* at 34230.
[32] 80 FR 12264 (Mar. 6, 2015).
[33] *Id.* at 12276.
[34] *Id.*
[35] "Response to Comments on Implementation of the 2008 National Ambient Air Quality Standards for Ozone: State Implementation Plan Requirements," EPA-HQ-OAR-2010-0885-0191 at 53 (Feb. 13, 2015). This document is attached to this comment.

absence of an attainment demonstration.[36] However, EPA did not incorporate either guidance memorandum into the Code of Federal Regulations; instead, as with the Phase 2 Rule, EPA simply required NOx substitution to meet the criteria in section 182(c)(2)(C) of the Act.[37]

While the Phase 2 Rule, consistent with the definition of RFP in section 171(1), explicitly tied its RFP requirements to attainment as well as specific VOC emission reductions,[38] the SIP Requirements Rule simply states: "the area is subject to the RFP requirements under CAA section 172(c)(2) *and* shall submit a SIP revision that" meets the specific VOC emission reduction requirement.[39] Given the intent of the SIP Requirements Rule to continue the approach used in the Phase 2 Rule, the use of the conjunctive "and," and the genesis of these RFP requirements from section 172(c)(2) instead of section 182(b)(1), this rule must be taken to mean that the area must meet the basic RFP requirement for incremental emission reductions that ensure attainment, *as well as* the specific VOC emission reduction requirement.[40]

B. The RFP Plan Does Not Satisfy RFP Requirements Because It Does Not Ensure Attainment

Under both the Phase 2 Rule and the SIP Requirements Rule, all Moderate areas must, in addition to any specific VOC (or equivalent NOx) emission reductions, meet the general requirements for RFP in section 172(c)(2). The same conclusion follows for Serious areas from the logic and the text of the rules.

As explained in the Phase 2 Rule, Moderate areas, even those with a specific VOC emission reduction requirement (the ROP requirement) must also meet the general RFP requirement in subpart 1 for incremental emission reductions that ensure attainment. By the same logic, the general RFP requirement in subpart 1 applies equally to Serious areas, in addition to the specific VOC emission reduction requirement. The general RFP requirement in section 172(c)(2) goes hand-in-hand with the requirement to demonstrate attainment by the applicable attainment date. For Moderate areas, this requirement is in section 172(c)(1), while for Serious areas the attainment demonstration requirement (along with a requirement for photochemical grid modeling or equivalent method) is in section 182(c)(2)(A).

The regulatory text for the SIP Requirements Rule, which applies directly here, makes this clear: For areas "classified as Moderate or higher," which includes Serious areas, "the area is subject to the RFP requirements under CAA section 172(c)(2)."[41] For areas "classified as Serious or higher, the area is *also* subject to RFP under CAA section

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[36] *Id.* (discussing "Clarification of Policy for NOx Substitution," Memorandum from John S. Seitz, Director, Office of Air Quality Planning and Standards (Aug. 5, 1994) ("Clarification Memorandum"), *available at* https://archive.epa.gov/ttn/ozone/web/pdf/clarisub.pdf). This guidance memorandum is attached to these comments. It is also included in EPA's compilation, "NOx Policy Documents for the Clean Air Act of 1990," EPA-452/R-96-005, Office of Air Quality Planning and Standards (Mar. 1996), which is attached, in three parts, to these comments.
[37] 80 FR at 12316.
[38] *See* 40 C.F.R. § 51.910(b)(2)(i), (ii)(C).
[39] 40 C.F.R. § 51.1110(a)(2)(i).
[40] 42 U.S.C. § 7501(1) (definition of RFP).
[41] 40 C.F.R. § 51.1110(a)(2)(i).

182(c)(2)(B)."[42] Thus, the section 182(c)(2)(B) requirements are in addition to the general requirements under section 172(c)(2).

In this respect, it should be noted that the proposal to approve the Plan treats the specific VOC emission reduction requirement (with potential NOx substitution) for Moderate areas that have previously otherwise met the ROP requirement as a one-time requirement, in the same way that EPA treats the ROP requirement.[43] However, the general attainment-related requirement for RFP in section 172(c)(2) cannot logically be treated as a one-time requirement, because the related requirement to demonstrate attainment recurs for every area when it is reclassified.

Thus, an RFP plan for a Serious area must meet the general requirement of annual incremental emission reductions as necessary to ensure attainment. But EPA has not approved the attainment demonstration for the Eastern Kern Serious area and does not propose to approve it in this action.[44] Thus, EPA has no basis in this action to conclude that the submitted incremental emissions reductions in the Plan would ensure attainment, and therefore cannot approve them as meeting the general RFP requirements in section 172(c)(2). It is entirely possible, in the absence of an approved attainment demonstration and control strategy, that the VOC and NOx reductions needed to attain the 2008 ozone standards will exceed the reductions needed to meet the specific requirements in section 182(c)(2)(B).

There is another, simple way to see that EPA cannot approve the Plan for RFP requirements without an approved attainment demonstration and control strategy. EPA notes that the RFP targets depend on the 2020 future year emissions inventory, with the control measures applied.[45] The future year emissions inventory is a component of the attainment demonstration, and the control strategy is tied to the attainment demonstration. Although EPA states that the future year emissions inventory was derived using a proper methodology, and the emission reductions from the control measures were properly subtracted,[46] that is beside the point if the control strategy is not sufficient to bring the area into attainment. The adequacy of the control strategy can only be judged by EPA reviewing the attainment plan and going through public notice-and-comment. Thus, the RFP "targets" cannot be severed from the attainment demonstration and control strategy and independently approved. This confirms the point made above: the Plan must satisfy the general attainment-related RFP requirements in section 172(c)(2).

[42] *Id.* § 51.1110(a)(2)(ii) (emphasis added).
[43] *See* 85 FR at 68275 tbl. 3 (one time application of VOC emission reduction requirement for 6-year period from baseline).
[44] *See id.* at 68268.
[45] *Id.* at 68276.
[46] *Id.*

EPA here has not proposed to approve the attainment demonstration and the control strategy. EPA thus has no basis for its proposed approval of the Plan with respect to RFP requirements. Instead, it must be disapproved.[47]

C. NOx Substitution in the Plan Does Not Meet the Requirements of Section 182(c)(2)(C)

For the Eastern Kern Serious area, the Plan must demonstrate that it will achieve 3% annual reductions in VOC emissions from the baseline until the attainment date.[48] There are two off-ramps from this requirement. First, lesser reductions are acceptable if the Plan shows it "includes all measures that can feasibly be implemented in the area, in light of technological achievability."[49] That is not the case here.

Second, under section 182(c)(2)(C), the Plan can use a combination in reductions of VOC and NOx emissions if the plan contains:

> a demonstration to the satisfaction of the Administrator that the applicable implementation plan, as revised, provides for reductions of emissions of VOC's and oxides of nitrogen (calculated according to the creditability provisions of [sections 182(b)(1)(C) and 182(b)(1)(D)]), that would result in a reduction in ozone concentrations at least equivalent to that which would result from the amount of VOC emission reductions required under [section 182(c)(2)(B)].[50]

Here, as a result of the July 20, 2018 Moderate area attainment date for the area, the voluntary reclassification as Serious, and the July 20, 2021 Serious area attainment date, the period for the 3% VOC emission reduction per annum consists of the three years 2018, 2019, and 2020.[51] This gives a total of 9% VOC emission reductions. Table 3 in the notice shows the proposed NOx substitution, which is on a percentage basis.[52]

In addition, the area still must meet pending Moderate area RFP requirements for areas that have previously met the initial ROP requirement. This consists of VOC emission reductions for the six-year period following the baseline year, in this case 2011.[53] Under the SIP Requirements Rule, NOx substitution is allowed if it "meet[s] the criteria in CAA section 182(c)(2)(C)."[54] Section 182(c)(2)(B) on its face does not apply to Moderate areas, so EPA's rule must be read to mean that NOx substitutions for Moderate areas must be shown to "result in a reduction in ozone concentrations at least equivalent to that which would result from" the default VOC reductions required under the SIP

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[47] To the extent that EPA was proposing to approve the future year projected emissions reductions from the control strategy, that proposal also cannot be finalized in the absence of an approved attainment demonstration and control strategy.
[48] 42 U.S.C. § 7511a(c)(2)(B)(i).
[49] *Id.* § 7511a(c)(2)(B)(ii).
[50] *Id.* § 7511a(c)(2)(C).
[51] 85 FR at 68269.
[52] *Id.* at 68275-76 tbl. 3.
[53] 40 C.F.R. § 51.1110(a)(2)(i).
[54] *Id.* § 51.1110(a)(2)(i)(C).

Requirements Rule. Table 3 in the notice also shows proposed NOx substitution for the Moderate VOC emission reductions; it is again on a percentage basis.[55]

1. EPA's Notice Entirely Fails to Discuss the Equivalence Demonstration Required by Section 182(c)(2)(C)

EPA's notice is devoid of any discussion of the equivalence demonstration that is required under section 182(c)(2)(C) for NOx substitution. The 2017 and 2018 submittals also do not explain why the NOx substitution results in equivalent ozone concentrations. All that can be gleaned is that VOC emission reductions are substituted for by NOx emission reductions on a percentage basis.

One could infer from the discussions in EPA's rules for implementation of ozone standards and the substitution here on a percentage basis that EPA's NOx Substitution Guidance may have been used. However, even assuming for the sake of argument that EPA intended to adopt the policies set forth in the guidance, EPA has not satisfied requirements for adequate notice under the APA. The guidance memoranda are non-binding. Thus, the notice for EPA's action must indicate whether EPA intends to adopt the positions set forth in the guidance.[56] EPA did not do so here. Perhaps EPA–as it should–has abandoned the justifications given in the memoranda, but nonetheless thinks–as it should not–that the addition of the percentages is nonetheless legitimate for some other reasons.

2. Equivalence of VOC and NOx Emission Reductions

"Equivalence" in section 182(c)(2)(C) must be understood in the context of the science of ozone formation, Congress' approach to that science in the 1990 Amendments, and EPA's approach to that science in other contexts.

a) "The Relative Roles of VOC and NOx in Ozone Formation"[57]

The key to the chemistry of ozone formation is the "hydroxl radical," denoted OH.[58] The hydroxyl radical is very reactive, and VOCs and NOx compete to react with it. "At a high ratio of VOC to NOx concentrations, [the hydroxyl radical] will react mainly with VOCs; at a low ratio the NOx reaction can predominate."[59]

As a result of this competition for the hydroxl radical,

> [a]t a given level of VOC, there exists a NOx concentration at which a maximum amount of ozone is produced, an optimum VOC:NOx ratio. For ratios less than this optimum ratio, NOx increases lead to ozone decreases;

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[55] 85 FR at 68275-76 tbl. 3.
[56] *See U.S. Magnesium LLC v. U.S. EPA*, 690 F.3d 1157, 1168 (10th Cir. 2012).
[57] John H. Seinfeld & Spyros N. Pandis, ATMOSPHERIC CHEMISTRY AND PHYSICS: FROM AIR POLLUTION TO CLIMATE CHANGE 238 (Wiley Interscience, 2d. ed. 2006).
[58] *Id.*
[59] *Id.*

> conversely, for ratios larger than this optimum ratio, NOx increases lead to ozone increases.[60]

When NOx levels are above this "optimum"[61] ratio, then the situation is described as "NOx saturated."[62] In this case a reduction in NOx levels can lead to increases in ozone levels, due to the reduction in competition by NOx for the hydroxyl radical. On the other hand, if NOx levels are below the "optimum," the situation is described as "NOx limited"; this raises the possibility that VOC reductions (at least up to the point that the optimum ratio is restored) will have little effect on ozone levels.[63]

Due to complexity of the issue, "ozone response to precursor can vary greatly with each area."[64]

> Application of grid-based air quality models to various cities and regions shows that the relative effectiveness of controls of volatile organic compounds (VOCs) and oxides of nitrogen (NOx) in ozone abatement varies widely ..... These cities share an ozone problem, but differ widely in the relative contributions of anthropogenic VOCs and NOx and biogenic emissions. As a result, the optimal set of controls relying on VOCs, NOx, or most likely, reductions of both, will vary from one place to the next.[65]

In response to recent, identical comments, EPA states that it "in general" agrees with this description of ozone formation.[66]

b) Congress' Treatment of Ozone Precursors in the 1990 Amendments

First, section 185B (added in the 1990 Amendments) required EPA in conjunction with the National Academy of Sciences to "conduct a study on the role of ozone precursors in tropospheric ozone formation and control."[67]

> The study shall examine the roles of NOx and VOC emission reductions, the extent to which NOx reductions may contribute (or be counterproductive) to achievement of attainment in different nonattainment areas, the sensitivity of ozone to the control of NOx, the availability and extent of controls for NOx, the role of biogenic VOC emissions, and the basic information required for air quality models.

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[60] *Id.* at 236.
[61] Again, "optimum" here is used in the sense of a maximum amount of ozone formed for a given level of VOC, not in the sense of an "optimum" for public health and welfare.
[62] *Id* at 238.
[63] *Id.*
[64] Office of Air Quality Planning and Standards, "The Role of Ozone Precursors in Tropospheric Ozone Formation and Control: A Report to Congress," EPA-454/R-93-024, at 2-2 (July 1993) (report to Congress mandated by section 185B, 42 U.S.C. § 7511f). This report is attached to these comments.
[65] *Id.* at 2-4 (quoting National Research Council, National Academy of Sciences, RETHINKING THE OZONE PROBLEM IN URBAN AND REGIONAL AIR POLLUTION (National Academies Press, 1991)).
[66] 85 FR 57714, 57717 (Sept. 16, 2020).
[67] 42 U.S.C. § 7511f.

Thus, Congress was aware that NOx reductions might be counterproductive, and that ozone concentrations might vary in sensitivity to NOx reductions, and directed EPA to study these issues.

Second, section 182(f) requires the provisions for major stationary sources of VOCs to also apply to major stationary sources of NOx, except in three instances:

1. "when the Administrator determines (when the Administrator approves a plan or plan revision) that net air quality benefits are greater in the absence of reductions of oxides of nitrogen from the sources concerned."[68]
2. for ozone nonattainment areas not in an ozone transport region, when EPA "determines (when the Administrator approves a plan or plan revision) that additional reductions of oxides of nitrogen would not contribute to attainment of the national ambient air quality standard for ozone in the area";[69] or
3. for ozone nonattainment areas in an ozone transport region, when EPA "determines (when the Administrator approves a plan or plan revision) that additional reductions of oxides of nitrogen would not produce net ozone air quality benefits in such region."[70]

Thus, Congress anticipated the scenario mentioned above, where NOx decreases may actually increase ozone concentrations or at least not help to reduce ozone concentrations.

Third, section 182(c)(2)(C) itself directs EPA to

> issue guidance concerning the conditions under which NOx control may be substituted for VOC control or may be combined with VOC control in order to maximize the reduction in ozone air pollution. In accord with such guidance, a lesser percentage of VOCs may be accepted as an adequate demonstration for purposes of this subsection.[71]

This again shows Congress in the 1990 Amendments was aware of the issue of the relative roles of NOx and VOC in ozone formation and provided for that issue. In response to recent, identical comments EPA states that it agrees with this characterization.[72]

c) EPA's Approach to Ozone Precursors in Other Contexts

One context in which the relative effectiveness of VOC and NOx controls is critical is interpollutant offset trading under the nonattainment new source review ("NSR") program. Under the nonattainment NSR program, which applies in nonattainment areas such as Eastern Kern, a new major stationary source or a major modification of an existing major stationary source must obtain offsets for its increased emissions of the

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[68] *Id.* § 7511a(f)(1).
[69] *Id.* § 7511a(f)(1)(A).
[70] *Id.* § 7511a(f)(1)(B).
[71] *Id.* § 7511a(c)(2)(C). As explained below, *see infra* section II.C.2.a(3), the guidance at issue here is not the guidance Congress required.
[72] 85 FR at 57717.

relevant pollutants. In the case of an ozone nonattainment area such as Eastern Kern, the relevant pollutants are VOCs and NOx.

Sources may obtain these offsetting reductions from surplus emission reductions at other sources, for example, from a permanent shutdown of another source.

For an ozone nonattainment area, the question naturally arises: can NOx emission reductions be used to offset VOC emission increases, and vice versa? EPA's rules allow for this if an appropriate demonstration is made. EPA has issued guidance on the demonstration.[73] The guidance addresses two scenarios:

- A demonstration for a particular source; and
- A demonstration for a particular area.

For a particular new major stationary source or major modification, EPA expects photochemical grid modeling of three scenarios:

- A baseline scenario without the new source or modification;
- A post-construction scenario, without the offsetting credits; and
- A scenario including the credited offsets.[74]

Using these results, an interpollutant trading ratio of NOx and VOC is developed. For example, the modeling may demonstrate that a reduction of 10 tons per day ("tpd") of credited NOx reductions may offset an increase of 2 tpd of VOC from the construction of the new or modified source, resulting in a NOx:VOC trading ratio of 5:1.75 The trading ratio should be quality assured and its appropriateness should be evaluated using emission inventory and ambient air quality data.

"[E]mission sensitivities typically vary across an area," so the approach for an area is somewhat different.[76] It

> involves modeling multiple hypothetical sources with varying emission rates and stack release characteristics typical of sources in the area or region. These sources would need to be located in different parts of the area to account for differences in sensitivities that may be possible when considering air quality impacts of sources located in different parts of the area.[77]

The second context is demonstrations under section 182(f). As described above, under section 182(f), in ozone nonattainment areas, major stationary sources of NOx are subject to the same requirements as major stationary sources of VOCs, unless the state

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[73] EPA-454/R-18-004, "Technical Guidance for Demonstration of Inter-Precursor Trading (IPT) for Ozone in the Nonattainment New Source Review Program," Office of Air Quality Planning and Standards (May 2018), *available at* https://www.epa.gov/sites/production/files/2019-02/documents/ipt2018.pdf. A copy of this technical guidance, in two parts, is attached to these comments.
[74] *Id.* at 6-8.
[75] As explained above, this ratio may vary depending on the relative overall levels of NOx and VOC and the particular characteristics of the area; it may also vary due to the particular characteristics of the new or modified source and the offsetting source, such as location and stack height.
[76] *Id.* at 8-9.
[77] *Id.* at 9.

can make one of three demonstrations. In 1993, EPA issued guidance regarding these demonstrations.[78] In each case, EPA recommended modeling of at least two scenarios (e.g. NOx control versus no NOx control). EPA updated the section 182(f) guidance in 2005; it continues to recommend photochemical grid modeling for the relevant scenarios.[79]

The common thread across these contexts is that multiple scenarios must be analyzed using photochemical grid modeling. This is inevitably the outcome due to the complex relationship of VOC and NOx in ozone formation.

However, the submittal for the Eastern Kern nonattainment area does not use a photochemical grid model to determine if the substitute NOx emission reductions result in equivalent ozone reductions. This unexplained inconsistency is *per se* arbitrary and capricious.

In response to recent, identical comments, EPA states that the comments "misunderstand[] the purpose of and requirements for NOx substitution under [section] 182(c)(2)(B) relative to these other examples," due to the non-binding nature of the recommendations in the guidance memoranda.[80] However, EPA itself misunderstands the thrust of the comments. While guidance memoranda are non-binding, an action that does not follow their recommendations must necessarily provide an explanation for the discrepancy. The failure to provide an explanation for an action that is inconsistent with non-binding recommendations is *per se* arbitrary and capricious, as noted in the comments.

Furthermore, EPA in its response did not identify any functional difference between the examples cited and section 182(c)(2)(C). Thus, EPA has conceded that a failure to use photochemical grid modeling to show equivalency under section 182(c)(2)(C) must be explained. The proposed action gives no explanation for this inconsistency and is therefore arbitrary and capricious.

3. The Submittal Does Not Demonstrate that the Equivalency Criterion for NOx Substitution in Section 182(c)(2)(C) is Met

As discussed above, neither the submittal nor EPA's notice explain why the combination of NOx and VOC emission decreases results in equivalent ozone concetrations. For the sake of argument, assume that EPA intended to rely on the procedure in the NOx

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[78] Memorandum from John S. Seitz, Director, Office of Air Quality Planning and Standards, "Guideline for Determining the Applicability of Nitrogen Oxide Requirements under Section 182(f)" (Dec. 16, 1993), *available at* https://archive.epa.gov/ttn/ozone/web/pdf/sec182f.pdf. A copy of this memorandum is attached to these comments. It is also included in EPA's compilation, "NOx Policy Documents for the Clean Air Act of 1990," EPA-452/R-96-005, Office of Air Quality Planning and Standards (Mar. 1996), which is attached, in three parts, to these comments.

[79] Memorandum from Stephen D. Page, Director, Office of Air Quality Planning and Standards, "Guidance on Limiting Nitrogen Oxides (NOx) Requirements Related to 8-Hour Ozone Implementation" (Jan. 14 2005), *available at* https://www3.epa.gov/ttn/naaqs/aqmguide/collection/cp2/20050114_page_guidance_8-hr_ozone_nox_exemptions.pdf. A copy of this memorandum is attached to these comments.

[80] 85 FR at 57718.

Substitution guidance. That procedure, however, does nothing to demonstrate equivalency. Instead, it's a bookkeeping gimmick that allows states to evade the requirement to show equivalency.

Even assuming the NOx Substitution Guidance gave a legitimate procedure—and it does not—the submittal here fails to meet EPA's prerequisites for use of the procedure. So even on EPA's own terms the RFP plan must be disapproved.

a) EPA's NOx Substitution Guidance Is Fatally Flawed

Typically, a guidance memorandum for SIPs gives States EPA's recommendations on how to implement the Act. EPA's NOx Substitution Guidance instead gives recommendations on how to evade the Act. It recommends a procedure that fails to demonstrate any equivalence between VOC and NOx reductions, relies on incorrect policy assumptions, and gives legal justifications that are without merit.

(1) The Guidance Recommendations Do Nothing To Demonstrate Equivalency

In summary, the guidance gives the following procedure:

1. Establish the control strategy (i.e. VOC and NOx reductions) and demonstrate using photochemical grid modeling that the control strategy will attain the standards by the applicable attainment date.
2. For interim years, use "*any mix* of annual reductions in VOC and NOx" so long as it is:
    a. "a logical step toward implementing" the control strategy; and
    b. "results in a combined annual VOC and NOx reduction of 3% per year."[81]

Thus, under the guidance, states need not use a photochemical grid model to determine the ozone reductions from 3% per annum VOC reductions, and need not use a photochemical grid model to examine the substitute NOx reductions for equivalency. Immediately, this approach is inconsistent with EPA's recommended approaches for section 182(f) and nonattainment NSR interpollutant offset trading, which expect photochemical grid models will be used for the relevant scenarios.

The guidance's permission to use "any mix of annual reductions in VOC and NOx" is self-refuting: the complex nature of ozone formation (as explained above) ensures that various mixes will actually result in various ozone levels. This contradicts the requirement in section 182(c)(2)(C) for equivalent ozone reductions.

Consistency with the control strategy does nothing at all to address this point. Simply put, the control strategy and attainment demonstration establish a single data point: this particular combination of VOC and NOx reductions results in this particular amount of ozone reductions. A single data point is insufficient to establish an appropriate ratio for substituting NOx for VOC; it's like claiming that a single point defines a line. For example, it could be the case that the VOC reductions alone are

[81] NOx Substitution Guidance at 9 (emphasis added).

sufficient to attain the standards and the NOx reductions are ineffective, but the state chose to take credit for some NOx reductions in the attainment demonstration modeling. That is why EPA expects photochemical grid modeling of multiple scenarios for nonattainment NSR offset trading and for section 182(f).[82]

Furthermore, the control strategy is the result of state choices regarding which sources to regulate. "So long as the national standards are met, the State may select whatever mix of control devices it desires, and industries with particular economic or technological problems may seek special treatment in the plan itself."[83] Thus, the selected VOC and NOx controls may depend not just on what emission reductions are most effective in reducing ozone concentrations, but on other factors, such as politics. Thus, there is no rational basis to conclude that the control strategy establishes optimum emission reductions.

In fact, this raises the specter that, under EPA's guidance, a state could game the VOC and NOx reductions to achieve favorable NOx substitution. This is particularly problematic in a NOx-saturated situation, where substitute NOx reductions may not achieve any ozone reductions, but may be readily available in the form of emissions reductions from, for example, turnover in mobile sources or the shutdown of coal fired power plants which closed because they were uneconomical to continue to operate.

(2) The Policy Arguments in the Guidance Are Without Merit

The guidance provides three excuses for not requiring states to develop a specific trading ratio (or "exchange rate") between VOC and NOx emissions:

- The strong likelihood that optimum "exchange" rates vary from year to year and across a geographic area as an area's emissions distribution and atmospheric chemistry change over time.
- Uncertainty in modeling analyses, particularly when attempting to ascertain responses from small percentage perturbations in emissions; and
- Resource limitations associated with modeling specific control measures during interim years before attainment dates.[84]

All are without merit.

EPA also offers a justification for using percentage bases for the calculation (i.e. adding the VOC and NOx reduction percentages).[85] It too is without merit.

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[82] Thus, it is entirely nonsensical for EPA to state: "The modeling performed for demonstration of attainment basically establishes the relationship between emission reductions—either of VOC, NOx, or both—and ozone reductions." 70 FR 25688, 25696 (May 13, 2005).
[83] *Union Electric Co. v. EPA*, 427 U.S. 246, 266 (1976) (citing *Train v. NRDC*, 421 U.S. 60, 79 (1975)).
[84] NOx Substitution Guidance at 4.
[85] *Id.*

(a) Variation in Emissions and Atmospheric Chemistry Is Not an Excuse

EPA cites as a justification: "[t]he strong likelihood that optimum 'exchange' rates vary from year to year and across a geographic area as an area's emissions distribution and atmospheric chemistry change over time."

This justification relies in part on a strawman: a proper 182(c)(2)(C) demonstration need not–and if EPA's justification has any merit, should not–establish a single exchange rate (or trading ratio) that applies across the area and across each year. The demonstration can include emission inventories for interim years and use them for photochemical grid modeling of the 3% VOC per annum scenario and the substitute NOx reduction scenario.

And if the justification is true, it applies with much greater force to EPA's recommendations; indeed, it refutes EPA's recommended approach. If optimum exchange rates vary from year to year and across an area, then the simplistic bookkeeping procedure cannot possibly account for those variations. On the other hand, proper photochemical grid modeling can.

(b) Uncertainty Is Not an Excuse

EPA cites as a justification "[u]ncertainty in modeling analyses, particularly when attempting to ascertain responses from small percentage perturbations in emissions." But, regardless of uncertainty, EPA expects photochemical grid modeling of the relevant scenarios for nonattainment NSR and section 182(f) waivers. This unexplained inconsistency is arbitrary and capricious.

And uncertainty in modeling is not an excuse to use a completely unjustified approach for the demonstration. If it is true that modeling uncertainty means equivalency cannot reasonably be demonstrated, then NOx substitution is simply not available until EPA improves modeling tools.

EPA itself explains modeling uncertainty as follows:

> a. The formulation and application of air quality models are accompanied by several sources of uncertainty. "Irreducible" uncertainty stems from the "unknown" conditions, which may not be explicitly accounted for in the model (*e.g.,* the turbulent velocity field). Thus, there are likely to be deviations from the observed concentrations in individual events due to variations in the unknown conditions. "Reducible" uncertainties are caused by: (1) Uncertainties in the "known" input conditions (*e.g.,* emission characteristics and meteorological data); (2) errors in the measured concentrations; and (3) inadequate model physics and formulation.
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> b. Evaluations of model accuracy *should focus on the reducible uncertainty associated with physics and the formulation of the model.* The accuracy of the model is normally determined by an evaluation procedure which involves the comparison of model concentration estimates with measured air quality data. The

> statement of model accuracy is based on statistical tests or performance measures such as bias, error, correlation, etc.[86]

Thus, irreducible uncertainty is not an excuse for failure to do photochemical grid modeling; it's just the nature of the beast. Reducible uncertainty can be addressed, and is addressed, in the applications of photochemical grid modeling that EPA recommends for analysis of NOx emission reductions in the nonattainment NSR offset and section 182(f) waiver contexts.

(c) Resource Limitations Are Not an Excuse

As a third justification, the guidance cites "[r]esource limitations associated with modeling specific control measures during interim years before attainment dates."

This argument is, like all others in the guidance, without merit. First, that a state may not have the time, personnel, or resources to take advantage of an *option* is not a reason to allow an arbitrary use of that option.[87] If the state cannot demonstrate equivalent ozone reductions, for whatever reason–time, personnel, resources, or simple lack of scientific and technical support–then the state has not met the standard required for the option and cannot make use of it. And there is nothing in the record to suggest that resource constraints apply to the California Air Resources Board, an agency in a large and relatively wealthy state.

Second, even if there was merit in 1993 to the argument that photochemical grid modeling was too resource-intensive—and EPA's contemporaneous 1993 guidance on section 182(f) (which it should be noted is also an *option*) contradicts this—there no longer is any merit. In 1993, the cost of purchasing computer power equivalent to a 2010 Apple iPad 2 was approximately half a million U.S. dollars.[88]

In the SIP Requirements Rule, EPA itself contradicts this excuse in its justification for allowing NOx substitution for Moderate areas that have met the initial ROP requirement:

> [O]ur understanding of the effects of reductions of VOC and NOx on ambient ozone levels and the technical tools to help predict what combinations of

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[86] 40 C.F.R. part 51, App'x W, 2.1.1 (citations omitted) (emphasis added).

[87] For every SIP submittal, the state must demonstrate it has adequate personnel and resources to implement it. *See* 42 U.S.C. § 7410(a)(2)(E)(i). EPA previously determined that California has adequate resources and personnel to implement the 2008 ozone NAAQS. 81 FR 18766 (Apr. 1, 2016). This requirement applies equally to attainment plans such as the one here. 42 U.S.C. § 7502(c)(7) (requiring compliance with the applicable requirements of section 110(a)(2)(a)). This reinforces the point that if a state does not have the resources to take advantage of an option, then that option is not available. EPA may argue that it interprets the infrastructure requirements of section 110(a)(2) to not cover nonattainment SIPs. Even if this were a valid interpretation—which it is not—section 110(a)(2)(E)(i) would still require a state to have adequate resources to implement its whole air program. EPA makes no attempt to bifurcate air programs into nonattainment and attainment implementation when doing its analysis of section 110(a)(2)(E) submittals and so cannot now, retroactively, claim that it does.

[88] "The Cost of Computing Power Equal to an iPad2," The Hamilton Project, *available at* https://www.hamiltonproject.org/charts/cost_of_computing_power_equal_to_an_ipad2 (last visited Oct. 26, 2020).

> reductions of ozone precursors will be most effective for ozone reduction in any area have improved.[89]

The NOx Substitution Guidance procedure does not use any improved technical tools. Instead, it's an accounting procedure that could've been employed prior to the invention of the computer (or for that matter, the abacus). Use of it is contrary to the justification for NOx substitution in the SIP Requirements Rule; that's arbitrary and capricious.

Elsewhere in the SIP Requirements Rule, EPA required attainment demonstrations for Moderate areas to be based on "a photochemical grid model or any other analytical method determined by the Administrator, in the Administrator's discretion, to be at least as effective,"[90] even though the statute only explicitly requires this for areas classified Serious and above.[91] EPA explained that this was reasonable because "photochemical modeling is generally available and reasonable to employ." In the SIP Requirements Rule for the 2012 standards, EPA reiterated this reasoning:

> Since photochemical modeling is the most scientifically rigorous technique to determine NO_X and/or VOC emissions reductions needed to show attainment of the NAAQS and is readily available, we are requiring photochemical modeling (or another analytical method determined to be at least as effective) for all attainment demonstrations (including Moderate areas). We continue to believe that photochemical modeling is the most technically credible method of estimating future year ozone concentrations based on projected VOC and NO_X precursor emissions.[92]

Thus, EPA itself acknowledges that the resource justification in the NOx Substitution Guidance is without merit.

EPA may object that there would be additional effort in creating the emission inventory for each year to demonstrate equivalency, but EPA could perhaps reasonably allow for linear interpolation between the three-year milestones. In other words, photochemical grid modeling of the required annual VOC reductions and the substitute NOx reductions would only be necessary at the three-year intervals, for which states must already develop emission inventories to demonstrate RFP. If the substitute NOx reductions over the three-year interval achieved the same ozone reductions as 9% VOC reductions, then EPA could reasonably conclude that the NOx reductions would achieve equivalent ozone reductions to 3% VOC reduction on an annual basis. This conclusion could be bolstered by showing that the NOx reductions are generally linear on an annual basis. In any case, it is absurd for EPA to suggest that a state taking advantage of a compliance

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[89] 80 FR at 12276.
[90] 40 C.F.R. § 51.1108(c). It would be laughable for EPA to argue that the procedure in the NOx Substitution Guidance is "at least as effective" as photochemical grid modeling in predicting ozone concentrations.
[91] 42 U.S.C. § 7511a(c)(2)(A).
[92] 83 FR at 63004.

option should not have to perform any additional effort to demonstrate that the option is viable.

Third, as discussed above EPA expects states to do sensitivity modeling for other optional interpollutant trading. And EPA in the same year, 1993, issued a guidance memorandum for section 182(f) recommending modeling of several scenarios in order to take advantage of the option to demonstrate that NOx sources should be relieved of obligations. It is arbitrary and capricious for EPA to inconsistently let states off the hook in this instance.

(d) EPA's Argument for Percentage Bases Is Without Merit

As noted above, trading ratios for nonattainment NSR offsets are developed on a mass basis: for example, the demonstration may show that 10 tpd of NOx reductions are equivalent to 2 tpd of VOC reductions, resulting in a 5:1 ratio.

Here, the guidance states it uses a percentage basis to "avoid 'absurd' calculations."

> Substitution of NOx reductions for VOC on a ton for ton basis could yield calculated NOx reduction requirements which exceed the available NOx inventory in cases where the base VOC inventory greatly exceeds the NOx inventory. To illustrate, a 50% VOC reduction is analogous to a 100% NOx reduction assuming the VOC inventory is twice the NOx inventory and substitution is based on mass rather than percentage equivalency.

First, there is nothing 'absurd' about an *optional* compliance method not being available when the facts demonstrate the option is not warranted.

Second, the potential for this supposed absurdity only exists due to EPA's strawman regarding a single trading ratio. In the illustration given, the area may be NOx limited or NOx saturated; photochemical grid modeling of multiple scenarios is necessary to determine what, if any, NOx substitute reductions can be allowed. If the base VOC inventory greatly exceeds the base NOx inventory, the area is likely NOx-limited and photochemical grid modeling can show what NOx reductions are necessary, but no matter what those NOx reductions are not going to exceed the available inventory. The only potential case for a NOx-limited area in which full substitute NOx reductions are not available to the state is when NOx emission sources outside the state's jurisdiction contribute to ozone formation. But in that case full NOx substitution is simply not available, because the science does not support it.

Third, the guidance does nothing to explain why its recommended use of percentages is arithmetically legitimate. Percentages are not typically additive. For example, Michael Jordan had a career shooting percentage of 49.7%;[93] LeBron James has a current career shooting percentage of 50.4%.[94] That does not mean that combined they shot 100.1%. In the absence of any explanation of why it is legitimate to add percentages, we are left

[93] https://www.basketball-reference.com/players/j/jordami01.html (last visited Oct. 24, 2020).
[94] https://www.basketball-reference.com/players/j/jamesle01.html (last visited Oct. 24, 2020).

to wonder whether EPA thinks two basketball players can make more than 100% of their shooting attempts even though one player cannot.

EPA may object that this analogy is too simple. Perhaps so, as after all the ultimate objective is equivalent reductions in ozone concentrations. In basketball, the ultimate objective is to win games. If a manager told a coach that she could substitute any player for LeBron James (in total or in part) so long as the team would win an equivalent number of games, that coach would have an extremely high burden to justify a substitution. For example, merely saying the replacement player has the same career shooting percentage as LeBron James would not suffice, in view of the complex interactions between players on a team and the various ways in which they can contribute to wins.[95] So it is with the NOx Substitution Guidance: simple percentage substitution gives no technical basis for determining equivalent reductions in ozone concentrations.

Finally, the guidance states that the percentage basis is consistent with the percentage reduction requirement in section 182(c)(2)(B). This argument is without merit. The percentage-based VOC reduction requirement in section 182(c)(2)(B) exists to address the wide variety of nonattainment areas in a way that a mass-based reduction requirement would not. A statutory mass-based requirement would not have the same effect in a large metropolitan area as it would in a smaller ozone nonattainment area. However, once current VOC emissions are inventoried, as is necessary under the Act, it is trivial arithmetic to convert a percentage of VOC emissions into a mass equivalent that could be used in a trading ratio. EPA's use of percentages for NOx emissions is not consistent with the statute simply because VOC emissions are specified as a percentage; instead it is a means to avoid the statute's requirement for a technical demonstration of equivalency. And, as mentioned above one does not ordinarily add two percentages to arrive at an overall percentage. EPA must explain why this particular addition of percentages is legitimate.

(3) The Legal Arguments in the Guidance Are Without Merit

One would ordinarily expect EPA guidance on a technical demonstration to require little to no legal justification, and the relatively straightforward language of section 182(c)(2)(C) should create no exception. That EPA felt compelled to provide a legal justification at all is an indication that the guidance is problematic.

In particular, Section 4 of the guidance purports to give a "legal rationale underlying the interpretation of 'equivalency' and the linkage between the RFP and NOx substitution provisions within the Act."[96]

However, it immediately gets off on the wrong foot:

> "Equivalency" is not defined strictly in the context of, "What specified level of NOx reductions, compared to VOC, results in equivalent ozone reductions."

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[95] In view of Congress' decided preference for VOC emission reductions, the comparison with LeBron James is apt.

[96] NOx Substitution Guidance at 7.

> Instead, any combination of VOC and NOx reductions is "equivalent" so long as the reductions are consistent with those identified as necessary to attain the NAAQS in the modeling demonstration and provide for steady progress in leading to the emission reductions identified as necessary to attain the NAAQS by the specified attainment year.[97]

This argument fails at step 1 of the *Chevron* analysis. Congress cannot have possibly meant by "equivalent ozone reductions" anything other than "these NOx reductions result in the same ozone reductions as 3% per annum VOC reductions." The word "equivalent" is defined as "equal in value, measure, force, effect, significance, etc.," which precisely fits the mandated meaning just given.[98]

The guidance dodges this by stating "equivalent" is defined by consistency with the control strategy and attainment demonstration and provision for steady progress toward attainment. That is false. The requirement for a demonstration that the control strategy attains the standards is an entirely separate requirement from the 3% per annum VOC reductions required under section 182(c)(2)(B). Equivalency cannot be defined by an independent and separate requirement. The effect of doing so robs equivalency of any independent meaning; it becomes subsumed under the requirements for the control strategy and attainment demonstration.[99]

To see this, consider a hypothetical revision to section 182(c)(2)(C), shown in redline-strikeout, that retains the word "equivalent" but eliminates the reference to "reductions in ozone concentrations":

> The revision may contain, in lieu of the demonstration required under subparagraph (B), a demonstration to the satisfaction of the Administrator that the applicable implementation plan, as revised, provides for reductions of emissions of VOC's and oxides of nitrogen (calculated according to the creditability provisions of subsection (b)(1)(C) and (D) of this section), that ~~would result in a reduction in ozone concentrations~~ are at least equivalent to ~~that which would result from~~ the amount of VOC emission reductions required under subparagraph (B).

In this case, EPA's interpretation *might* be permissible (there would still be the issue of why it is rational to use percentages for equivalency), but this shows that EPA's interpretation fails to give any meaning to the requirement for equivalency *in reductions*

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[97] *Id.*

[98] In a 2005 action, EPA quotes a similar definition but fails to draw any conclusion, let alone the obvious one, from it. 70 FR at 25695 n. 12. In that action, EPA generally repeats the invalid policy and legal arguments from the NOx Substitution Guidance, but also tosses in a claim that section 182(g), which allows EPA to waive a milestone demonstration for a milestone date that falls on the attainment date, somehow supports its interpretation. *Id.* at 26696. Unsurprisingly, that is also without merit: the reason for the waiver is that EPA must determine at the attainment date whether the area attained the standard. 42 U.S.C. § 7511(b)(2). If the area attained, RFP requirements are beside the point; if not new planning obligations apply.

[99] *Cf. North Carolina v. EPA,* 531 F.3d 896, 908-911 (D.C. Cir. 2008).

of ozone concentrations. "All the policy reasons in the world cannot justify reading a substantive provision out of a statute."[100]

For Serious area, the 3% per annum VOC reduction requirement in section 182(c)(2)(B) *is in addition to* the general RFP requirement in section 172(c)(2) for steady progress towards attainment.[101] This reflects Congress' considered judgment that for ozone areas, the general requirements in subpart 1 for an attainment demonstration and RFP failed to bring areas into attainment,[102] and VOC reductions (or equivalent NOx reductions) must additionally be mandated. But EPA's guidance impermissibly nullifies this requirement.

Next, the guidance states that section 182(c)(2)(C)

> could be interpreted to mean that the amount of NOx reductions appropriate for substitution purposes is an amount, which, when compared to predicted VOC reductions, results in the same reductions in ozone concentrations that the VOC reductions would achieve in that area. However, such an interpretation could result in a demonstration showing that very small NOx reductions provide an adequate substitute for large VOC reductions. This is because under some conditions substantial VOC reductions produce only small–even insignificant–reductions in ozone concentrations. EPA believes Congress would not have intended States to meet the Act's progress requirements with emissions reductions that would produce only minimal improvement in ozone concentrations.

These arguments are also without merit. First, the objection that the demonstration might allow very small NOx reductions to substitute for large VOC reductions applies with greater force to EPA's interpretation. For example, if the aggregate NOx emissions in the inventory on a mass basis is small relative to the aggregate VOC emissions, then use of percentages results precisely in the scenario EPA claims should not be allowed. And, if against all odds EPA's recommended procedure did result in a scientifically and technically legitimate trading ratio, then precisely the same thing would happen under both approaches.

Second, as shown above, Congress in the 1990 Amendments was well aware of the possibility that EPA claims Congress cannot have intended. Finally, EPA hypocritically claims the proper approach is illegitimate because it might produce only minimal improvement in ozone concentrations. But EPA's approach suffers from the exact same objection, and with greater force: it might (and almost certainly will in a NOx-saturated situation) produce only minimal improvements in ozone concentrations. And furthermore, as the "progress requirements" for Serious areas include both sections 172(c)(2) and 182(c)(2)(C), under the proper approach in a NOx-limited area (the scenario EPA claims to be concerned about) section 172(c)(2) RFP ensures the required progress in ozone reductions.

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[100] *North Carolina*, 531 F.3d at 910.
[101] *See supra*, section II.B.
[102] *See NRDC v. EPA*, 777 F.3d 456, 460 (D.C. Cir. 2014).

Next, EPA notes that the second sentence of section 182(c)(2)(C), which states that EPA must "issue guidance concerning the conditions under which NOx control may be substituted for VOC control or may be combined with VOC control in order to maximize the reduction in ozone air pollution." That guidance is not this guidance. EPA's NOx Substitution Guidance does nothing to set forth the technical circumstances regarding how to substitute or combine NOx controls "in order to maximize the reduction in ozone air pollution." Instead, it gives states a way to evade photochemical grid modeling that actually might show what the reductions in ozone concentrations would be. Thus, the next sentence, which allows for lesser levels of VOC reductions, is irrelevant because it only applies when a state follows EPA's nonexistent guidance.

Next, EPA states that section 182(c)(2)(C) "confers on the Agency the discretion to select, for purposes of equivalent reductions, a percentage of NOx emission reductions which is reasonably calculated to achieve both the ozone reduction and attainment progress goals intended by Congress." This repeats an earlier, mistaken argument: Congress specified VOC reductions *in addition to* the requirement for attainment and *in addition to* general RFP requirements. The requirements are independent; thus the NOx reductions that are adequate to attain the standards may not be, and often are not, adequate to meet the substitution requirements.

EPA then states: "Nothing in the Act or in the legislative history directly addresses the case where NOx reductions that are substituted for VOC reductions, and which meet the plain grammatical meaning of 'equivalency,' nonetheless result in insignificant ozone reductions." First, this is typical[103] EPA misdirection: to invent a supposed gap in the statute despite clear statutory language. The plain meaning of "equivalency" addresses the case. The language is not ambiguous merely because it does not expressly forbid each and every scenario that its plain language forecloses.[104]

Second, the legislative history shows Congress was fully aware of this possibility: Section 185B was enacted in the 1990 Amendments along with all the Part D, subpart 2 ozone requirements. As explained above, section 185B required EPA to study the relative roles of VOC and NOx in ozone formation and consider scenarios in which NOx control would or would not be effective.

Finally, EPA's purported concerns about "insignificant ozone reductions" appear to be crocodile tears: EPA's NOx substitution guidance gives states a way to evade assessing the ozone reductions from NOx substitution, and the same objection in any case applies to EPA's procedure. In fact, EPA's conflation of equivalency with the requirements for an attainment demonstration necessarily means that EPA's procedure will achieve no ozone reductions whatsoever above and beyond the control strategy. Recall that Congress enacted the 1990 Amendments in the face of EPA's repeated approval of attainment demonstrations that ultimately failed; in particular the reclassification system created by Congress in the 1990 Amendments reflects Congress' expectation that

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[103] For another example, *see infra* section III.A.2 (discussing EPA's bogus gap in section 172(c)(9)).

[104] *See NRDC v. EPA*, 749 F.3d 1055, 1064 (D.C. Cir. 2014) (to "*presume* a delegation of power absent an express *withholding* of such power is plainly out of keeping with *Chevron*").

attainment demonstrations *will* fail. That is why Congress required VOC reductions *in addition to* an attainment demonstration.

Congress's determination in the 1990 Amendments to limit EPA's discretion has been explained by the D.C. Circuit Court of Appeals:

> In 1979, EPA promulgated primary and secondary NAAQS for ozone with a limit of 0.12 parts per million (ppm)—known as the "one-hour" standards, because they measured average ozone levels over one-hour periods. The Clean Air Act as amended in 1977 required states to achieve compliance with the one-hour ozone NAAQS by December 31, 1987. The statute afforded EPA and the states broad discretion as to the means of compliance. That discretionary approach ultimately accomplished little to reduce the dangers of key contaminants. For instance, according to congressional testimony, the number of regions violating the one-hour ozone NAAQS actually increased between August 1987 and February 1989.[105]
>
> After nearly a decade of debate, Congress amended the Clean Air Act in 1990 to abandon the discretion-filled approach of two decades prior in favor of more comprehensive regulation of ozone and five other pollutants. The amendments moved the prior, discretionary approach to Subpart 1 of Part D of Subchapter I, where it continued to apply as a default matter to pollutants not specifically addressed in the amended portions of the Act. Congress enacted Subpart 2 to govern ozone.[106]

Specifically, in Subpart 2, Congress determined that VOC reductions were necessary, *in addition to* the requirements for attainment that existed under the 1977 version of the Act, and that NOx reductions should only be substituted if there was an adequate technical justification.

It must be asked: Suppose a state were to ignore EPA's recommendations and give a technically justified demonstration, using photochemical grid modeling, showing equivalency. Does EPA suppose it could disapprove that submittal, due to the supposed potential for "insignificant ozone reductions"? EPA has in essence already answered this question by, in one action, jettisoning the NOx Substitution Guidance and instead relying on a technical demonstration submitted as part of the attainment plan in order to approve the NOx substitutions in the plan.[107]

Finally, EPA states that the 3% per annum VOC reductions in section 182(c)(2)(B) is "additional evidence that Congress was concerned with getting more than minimal reductions in ozone concentrations through substitution." However, if a proper equivalency demonstration, using photochemical grid modeling, shows that NOx substitutions are equivalent even though they result in minimal ozone reductions, then the 3% per annum VOC reductions also resulted in minimal ozone reductions, because

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[105] *NRDC v. EPA*, 777 F.3d 456, 460 (D.C. Cir. 2014) (citations and quotations omitted).
[106] *Id.*; *see also S. Coast Air Quality Mgmt. Dist. v. EPA*, 472 F.3d 882, 886 (D.C. Cir. 2006); *Whitman v. Am. Trucking Ass'ns, Inc.*, 531 U.S. 457, 484-85 (2001).
[107] *See* 85 FR at 57717-78.

the NOx substitute reductions must result in the same amount of ozone reduction as the 3% per annum VOC reductions.

For these reasons, the policy and legal arguments in the NOx Substitution Guidance are utterly without merit. And EPA's recommended procedure lacks any technical basis for demonstrating equivalency; it is no more than a bookkeeping gimmick.

b) The Submittal Does Not Even Meet EPA's Recommended Prerequisites for Use of the Bookkeeping Gimmick

The first step of the recommended procedure in the NOx Substitution Guidance is to establish a control strategy and demonstrate that it attains the ozone standards by the attainment date.[108] That has not happened here: while the state submitted an attainment demonstration and control strategy, EPA did not propose to act on it, and it cannot be presumed to be valid.

So, the submittal fails at the first step of the recommended procedure. It is therefore unable to carry out the second step, in which the NOx and VOC reductions should be "a logical step toward implementing" the control strategy.[109] Thus, even EPA's sad fig leaf—consistency with the control strategy supposedly demonstrating equivalency—is not available here. While the NOx Substitution Guidance is non-binding, any departure from it must be explained. EPA has not done so here.

EPA's Clarification Memorandum was intended to address NOx substitution "[i]n the absence of a complete modeled attainment demonstration."[110] The prerequisites for use of the NOx Substitution Guidance procedure in that case are:

> 1. The NOx reasonably available control technology (RACT) regulations should be adopted and submitted to the EPA by the State seeking to substitute NOx for VOC to meet ROP requirements; EPA will have to approve the NOx RACT rules no later than the date of approval of the ROP plan featuring NOx substitution.
>
> 2. At least one of the two following conditions should be met: (a) modeling of at least one episode should have been completed with photochemical grid modeling which shows that NOx reductions are useful in reducing ozone concentrations; or (b) a regional modeling analysis supporting use of NOx controls to reduce ozone within the area under consideration for use of NOx substitution should be available.[111]

For the first prerequisite, EPA does not identify any previous approval of NOx RACT regulations and does not propose to approve them here. The first prerequisite is not met.

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[108] NOx Substitution Guidance at 9.
[109] *Id.*
[110] Clarification Memorandum at 2.
[111] *Id.* at 2-3.

For the second prerequisite, EPA points to no modeling showing NOx reductions are effective or supporting use of NOx controls. The second prerequisite is not met.

In addition, the prerequisites under the Clarification Memorandum fail to establish that the NOx Substitution Guidance procedure will result in equivalent reductions in ozone concentrations. At most, they establish that NOx reductions have some benefit, but that is not enough for equivalency.

As a result, the submittal does not even meet EPA's own recommendations for use of the bookkeeping gimmick. And EPA offers no explanation for this departure. EPA must disapprove the use of NOx substitution.

D. If EPA Abandons the NOx Substitution Guidance, EPA Must Re-Propose Its Action

EPA may attempt to rescue its proposed approval by relying on, instead of the invalid justifications in the NOx Substitution Guidance, other technical information. If EPA does so, EPA must re-propose its action. In any case, the available information in the submittal is insufficient to support the proposed NOx substitution.

1. The Act Requires a Demonstration of Equivalence Throughout the Nonattainment Area

Section 182(c)(2)(C) requires the Plan to demonstrate that NOx substitution "would result in a reduction in *ozone concentrations* at least equivalent to that which would result from the amount of VOC emission reductions required" under section 182(c)(2)(B). The plural "ozone concentrations" shows that a demonstration of equivalence at, for example, a single monitoring site would be contrary to the Act. Congress thus intended the equivalence requirement to apply throughout the nonattainment area.

It is not only the plain language of Section 182(c)(2)(C) which prohibits showing equivalence at a single monitoring site. First, reduction of NOx at the cost of lesser reductions in VOCs can lead to other monitoring sites in NOx-saturated areas increasing their ozone levels due to the NOx disbenefit effect.[112] Even if this effect is not enough to cause the monitoring sites in a NOx-saturated area to violate the 2008 ozone standards, approval of substitution would still be arbitrary for at least two reasons. One is that the 2015 ozone NAAQS is more protective. If the NOx substitution caused additional violations, or even interfered with resolving violations of the 2015 ozone NAAQS at monitoring sites in NOx-saturated areas, section 110(l)[113] would prohibit EPA from approving this NOx substitution.

[112] See the discussion of ozone formation above. The potential for NOx disbenefit highlights the need for a rigorous equivalence analysis.
[113] 42 U.S.C. § 7410(l).

Second, there is no safe level of ozone.[114] Approving NOx substitution that lowers the ozone levels at the highest design value monitoring site (or a smaller region within the nonattainment area) while increasing ozone at other monitoring sites would result in additional injury to public health and welfare near those monitoring sites. EPA should not be making ozone worse for people and ecosystems. A "rob Peter to pay Paul" approach is simply not acceptable.

2. The Evidence in the Plan Is Insufficient to Support NOx Substitution

In its only discussion of the effectiveness of NOx reductions, the Plan analyzes the "weekend effect" at a single ozone monitoring site, the Mojave site, for the period 2000-2015.[115] It finds that the site is NOx-limited. The Plan also makes general observations about the relative distance and magnitude of biogenic VOC emissions and anthropogenic NOx emissions through 2015. This is insufficient to determine that NOx substitution will result in equivalent reductions in ozone concentrations throughout the nonattainment area.

Emissions in California have changed significantly since 2015. Sources like natural gas power plants, which emit large amounts of NOx and relatively little VOCs, are being replaced by zero emissions electric generating units like wind and solar. Thus, data from 2015 is not reliable to determine whether the entire Eastern Kern nonattainment area is NOx-limited. EPA must consider this change in emissions over time to reach a rational conclusion. While the overall emissions trends are shown in Table 3 of the notice, that does not mean that the emissions trends will be equally distributed across the region.[116]

Furthermore, qualitative evidence such as this is insufficient to determine that reductions in ozone concentrations will be "equivalent," as required by section 182(c)(2)(C). The term "equivalent" means "equal in force or amount" or "equal in value."[117] The determination that NOx reductions are "equivalent" therefore requires a quantitative, not a qualitative, analysis, as can be done through photochemical grid modeling. A qualitative analysis leaves open the possibility that the NOx reductions will be large enough to change the characteristics of the area.

3. An Equivalence Demonstration Should Be as Rigorous as an Attainment Demonstration

For ozone nonattainment areas classified Moderate and above, the state must demonstrate that the "control strategy," the set of measures that the state selects to

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[114] *See, e.g.*, *Clean Wisconsin v. EPA*, 964 F.3d 1145, 1158 (D.C. Cir. 2020).
[115] "2017 Ozone Attainment Plan For 2008 Federal 75 ppb 8-Hour Ozone Standard," Eastern Kern Air Pollution Control District at H-22 to -23 (July 17, 2017).
[116] This is another reason why photochemical grid modeling of the relevant scenarios to demonstrate equivalence at each monitoring site is the most rational approach.
[117] WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY 769 (1961, 56th printing 2020).

attempt to bring the area into attainment,[118] will actually do so. The state must use photochemical modeling or another equally rigorous technique.[119]

As described by EPA in another, recent proposal:

> Air quality modeling is performed using meteorology and emissions from a base year, and the predicted concentrations from this base case modeling are compared to air quality monitoring data from that year to evaluate model performance. Once the model performance is determined to be acceptable, future year emissions are simulated with the model. The relative (or percent) change in modeled concentration due to future emissions reductions provides a relative response factor (RRF). Each monitoring site's RRF is applied to its monitored base year design value to provide the future design value for comparison to the NAAQS.[120]

An identical approach can easily be followed for section 182(c)(2)(C). The state would create projected emissions inventories at each milestone year assuming 3% VOC emission reductions per annum. The same modeling would yield individualized relative response factors at each monitoring site. These factors can be compared with the modeled relative response factors for the control strategy.

Alternatively, the demonstration could use photochemical grid modeling to generate isopleths at each monitoring site. These may show the site is NOx-limited. In combination with conservative assumptions about the amount of NOx substitution that can be allowed, this could provide an adequate demonstration with a degree of rigor commensurate with an attainment demonstration. EPA has endorsed this approach in a previous action.[121]

While section 182(c)(2)(C), unlike section 182(c)(2)(A) for the attainment demonstration, does not explicitly require photochemical grid modeling (or equally effective method), that does not make section 182(c)(2)(C) less important and only worthy of an inferior demonstration. If anything, sections 182(c)(2)(B) and (C) in tandem are more important: Congress added these ozone-specific provisions after years of failure by EPA and states to address ozone pollution under the general requirements for attainment demonstrations in subpart 1.[122] If EPA does have some rationale, whatever it may be, for accepting an inferior demonstration for equivalence, EPA must re-propose its action so that the public can comment on it. In any event, it would be arbitrary to EPA to ignore the entire nonattainment area except the Mojave monitor in evaluating NOx substitution.

E. Conclusion

The Plan does not demonstrate attainment and therefore the emission reductions have not been shown to mee the requirements of section 172(c)(2). There is insufficient

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[118] *See* 40 C.F.R. § 51.100 (definition of "control strategy").
[119] 40 C.F.R. § 51.1108(c).
[120] 85 FR 68509, 68519 (Oct. 29, 2020).
[121] 85 FR 57714, 57717 (Sept. 16, 2020).
[122] *See, e.g., NRDC v. EPA*, 777 F.3d 456, 460 (D.C. Cir. 2014).

technical basis in the Plan to find that NOx substitution meets the criteria in section 182(c)(2)(C); the relevant guidance memoranda do not apply and in any case offer faulty technical, policy, and legal justifications for their recommendations. EPA must disapprove the Plan for RFP requirements.

III. EPA MUST DISAPPROVE THE MOTOR VEHICLE EMISSION BUDGETS

As explained above, EPA must disapprove the Plan for RFP requirements. And EPA has not proposed to approve it with respect to the attainment demonstration and control strategy. As a result, EPA must also disapprove the submitted motor vehicle emission budgets ("MVEBs").

Section 176(c)(1) of the Act contains the general requirements for "conformity" of Federal actions, including actions such as highway projects that receive Federal funding. Federal actions must not (among other things) "delay timely attainment of any standard or any required interim emission reductions or other milestones in any area."[123]

Section 176(c)(2) contains the requirements for "transportation conformity."[124] In particular,

> no transportation plan or transportation improvement program may be adopted by a metropolitan planning organization[], or be found to be in conformity by a metropolitan planning organization until a final determination has been made that emissions expected from implementation of such plans and programs are consistent with estimates of emissions from motor vehicles and necessary emissions reductions contained in the applicable implementation plan.[125]

A transportation project must either "come from a conforming plan or program,"[126] or have a separate

> demonstrat[ion] that the projected emissions from such project, when considered together with emissions projected for the conforming transportation plans and programs within the nonattainment area, do not cause such plans and programs to exceed the emission reduction projections and schedules assigned to such plans and programs in the applicable implementation plan.[127]

The term "applicable implementation plan" is in turn defined in section 302 as the portions of the implementation plan that have been approved under section 110(k), or promulgated under section 110(c), or promulgated under section 301(d) to implement the relevant requirements of the Act.[128]

In summary, the Act requires determinations that emissions from transportation plans, improvement programs, and projects are consistent with "estimates of emissions from

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[123] 42 U.S.C. § 7506(c)(1)(B)(iii).
[124] 42 U.S.C. § 7506(c)(2).
[125] *Id.* § 7506(c)(2)(A).
[126] *Id.* § 7506(c)(2)(C)(i).
[127] 42 U.S.C. § 7506(c)(2)(D).
[128] *Id.* § 7602(q).

motor vehicles and necessary emission reductions" and do not "exceed the emission reduction projections and schedules" in the SIP. In its 1993 rule for transportation conformity, EPA identified MVEBs as the vehicle for these determinations.[129] "SIP demonstrations of reasonable further progress, attainment, and maintenance contain these emissions estimates and 'necessary emission reductions.'"[130]

> Motor vehicle emissions budgets are the explicit or implicit identification of the motor vehicle-related portions of the projected emission inventory used to demonstrate reasonable further progress milestones, attainment, or maintenance for a particular year specified in the SIP. The motor vehicle emissions budget establishes a cap on emissions which cannot be exceeded by predicted highway and transit vehicle emissions.[131]

MVEBs are correspondingly defined in EPA's transportation conformity rules as:

> that portion of the total allowable emissions defined in the submitted or approved control strategy implementation plan revision or maintenance plan for a certain date for the purpose of meeting reasonable further progress milestones or demonstrating attainment or maintenance of the NAAQS, for any criteria pollutant or its precursors, allocated to highway and transit vehicle use and emissions.[132]

As EPA must disapprove the submitted RFP Plan, EPA cannot determine that the budgets are allowable as a portion of the total allowable emissions to meet RFP. There is no measure of total allowable emissions for RFP in the absence of an approvable RFP plan and therefore no basis for approval of the MVEBs.

The absence of an approved attainment demonstration and control strategy is fatal to EPA's proposed approval of the RFP Plan, and that in turn is fatal to EPA's proposed approval of the MVEBs. But the absence of an approved attainment demonstration and control strategy is also directly fatal to EPA's proposed approval of the MVEBs. Under section 176(c)(1)(B)(iii), a Federal action cannot "delay timely attainment of any standard."[133] Without an approved attainment demonstration and control strategy, which could require VOC and NOx emission reductions beyond those required by section 182(c)(2)(C), there is no way to tell if a transportation plan, improvement program, or project will "delay timely attainment" of the 2008 ozone standards, even if it stays within the proposed MVEBs. Thus, the proposed MVEBs cannot ensure conformity of transportation plans, improvement programs, or projects, and must be disapproved.

This shows the two issues resulting from the absence of an approved attainment demonstration and control strategy—RFP and MVEBs—are intertwined. If the RFP Plan satisfied the general requirements in section 172(c)(2) for incremental emission reductions to ensure attainment—which it does not—then EPA's approach here would

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[129] 58 FR 62188, 62193 (Nov. 24, 1993).
[130] *Id.*
[131] *Id.* at 62194.
[132] 40 C.F.R. § 93.101 (definition of MVEB).
[133] 42 U.S.C. § 7506(c)(1)(B)(iii).

be legitimate. EPA could indeed look at just the RFP Plan when approving the MVEBs, because the RFP Plan in turn would ensure timely attainment. This in turn reinforces the point above that RFP plans must always meet the general RFP requirements in section 172(c)(2).

The origin of the particular budgets used here confirms this connection. While EPA does not identify it, they are derived from the attainment demonstration and control strategy. They rely on a component of the attainment demonstration, the projected attainment year (2020) emissions inventory; specifically, projected on-road mobile source emissions. Thus, the state knows, even though EPA seems to have forgotten, that MVEBs must be consistent with attainment requirements as well as RFP requirements. Because EPA has not approved the attainment demonstration, including the projected attainment year emissions inventory, EPA cannot approve the MVEBs that derive from that inventory.

EPA rules for transportation conformity also confirm the connection between attainment and MVEBs. The term "control strategy implementation plan revision" is defined as the "implementation plan which contains specific strategies for controlling the emissions of and reducing ambient levels of pollutants in order to satisfy CAA requirements for demonstrations of reasonable further progress *and* attainment."[134] For attainment plans (as opposed to maintenance plans), MVEBs are in part defined as "that portion of the total allowable emissions defined in the submitted or approved *control strategy implementation plan revision*."[135] Thus, the MVEBs depend on the control strategy implementation plan revision, which must demonstrate *both* RFP and attainment.

Finally, EPA states that it is performing an "adequacy" determination in parallel with the proposed approval. Any adequacy determination does not matter. The adequacy review checks that the MVEBs are "consistent with" the submitted emissions inventory and with "applicable requirements regarding reasonable further progress [or] attainment"[136] but consistency is just a check that the numbers match; it does not determine whether the submitted plan satisfies all attainment and RFP requirements. As EPA stated in promulgating the adequacy determination process:

> EPA's 45-day adequacy review should not be used to prejudge EPA's ultimate approval or disapproval of the SIP. As stated in the proposal, EPA cannot ensure that a submitted SIP is consistent with RFP, attainment, or maintenance until EPA has completed its formal review process and the SIP has been approved or disapproved through notice-and-comment rulemaking. Although the minimum criteria for adequacy allow EPA to make a cursory review of the submitted motor vehicle emissions budget for conformity purposes, EPA recognizes that other elements must also be in the SIP for it to ultimately be approved. Therefore, a budget that is found adequate in the 45-

[134] 40 C.F.R. § 93.101 (emphasis added).
[135] *Id.* (emphasis added).
[136] 40 C.F.R. § 93.118(e)(4)(iv), (v).

day review period could later be disapproved when reviewed with the entire SIP submittal.[137]

So it is here. The submitted MVEBs must be disapproved.

IV. CONCLUSION

EPA has not approved nor proposed to approve the attainment demonstration for the Eastern Kern ozone nonattainment area. There is therefore no basis to conclude that the RFP Plan ensures the annual incremental emission reductions needed for attainment by the attainment date. Furthermore, the record fails to contain sufficient technical basis for concluding that the NOx substitution in the Plan meets the criteria in section 182(c)(2)(C) of the Act. Instead, the Plan appears to rely on EPA's NOx Substitution Guidance, which is fatally flawed. EPA must disapprove the plan for RFP requirements.

Because the MVEBs rely on assumptions in the Plan with respect to RFP requirements, which must be disapproved, and rely on assumptions in the attainment demonstration, which has not been approved, the MVEBs must be disapproved.

Respectfully,

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[137] 62 FR 43780, 43782 (Aug. 15, 1997).