

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Federal Plan Requirements for Greenhouse)
Gas Emissions From Electric Utility)
Generating Units Constructed on or Before)
January 8, 2014; Model Trading Rules;)
Amendments to Framework Regulations;)
Proposed Rule)
)
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Comments of Sierra Club

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I. Introduction

Sierra Club appreciates the opportunity to submit these comments on EPA's proposed federal plan requirements and model trading rules for the Clean Power Plan, as well as its proposed amendments to the framework regulations under section 111(d) of the Clean Air Act. This rulemaking presents EPA with an important opportunity to safeguard the environmental benefits expected under the Clean Power Plan against potential erosion during its 2022-2030 compliance period. One of the major characteristics of the final Clean Power Plan is its flexibility; the rule affords each state a variety of compliance pathways it may select in developing a state plan, as well as the option to forgo a state plan and allow EPA to issue and administer a federal plan in its place. While this flexibility helps to ensure system reliability and lower compliance costs, it also comes at a price: some compliance pathways achieve greater emission reductions than others, and many states may well choose state plans that do not yield the same quantity of emission reductions that might occur under other plan forms. For example, as we discuss in more detail in these comments, many states are likely to submit plans adopting an existing source-only mass-based approach that essentially permit those states to follow business-as-usual practices through much of (or, in some instances, the entire) compliance period without further emission reduction actions.

However, EPA can secure as much of the final rule's emission reduction potential as possible by selecting certain design features for its federal implementation plan requirements, as well as for its model trading rules (which dictate whether a state plan is presumptively approvable). There are a host of choices EPA will have to make with regard to the design of its federal plan requirements and model trading plans, including (but not limited to) the selection of rate-based or mass-based federal plans, CO₂ allowance allocation schemes, anti-leakage provisions, formulas for awarding emission reduction credits to gas-fired plants, the treatment of coal plant retirements, the architecture of the Clean Energy Incentive Program, and the role that energy efficiency will play under rate-based programs. On these and other issues, we offer recommendations that will help ensure the integrity of state and federal implementation plans and generate significantly greater emission reduction benefits than various other approaches would provide. We strongly urge EPA to incorporate these recommendations into its final rule in order to maximize the benefits of the Clean Power Plan and reduce harmful greenhouse gas emissions produced by our nations' electric sector.

II. General Plan Approaches in the Federal Plan and Model Trading Rule

A. EPA Should Propose and Finalize Federal Plans on a State-By-State Basis Rather Than Committing to a Uniform Approach in this Rulemaking.

In the preamble to the proposed federal plan (“FP”), EPA states that while it plans to finalize two model trading rules—one reflecting a rate-based program and the other a mass-based program—it “intends to finalize a single approach (i.e., either the mass-based or rate-based approach) for every state in which it promulgates a federal plan” and “invite[s] comment on which approach . . . should be selected if we opt to finalize a single approach.” 80 Fed. Reg. at 64,968-69. EPA clarifies, however, that it does not plan to finalize a single plan that is “the” federal plan, but instead will initiate a separate rulemaking and comment process for each state that receives a FP.

EPA should determine which program type to adopt in its federal plans on a state-by-state basis when the time comes to actually develop and issue such plans. This will allow the agency to decide what federal plan to adopt for each state after it actually knows which states will need federal plans and, at least tentatively, what types of plans other states intend to adopt.¹ EPA must also consider in each case whether it can adopt a mass-based plan that is, in fact, equivalent to a BSER-based approach.

The preamble to the final Clean Power Plan places considerable emphasis on the “broad flexibility and choice” that the rule offers to comply, noting that this feature will help to “minimize costs to ratepayers and to ensure the reliability of electricity supply.” 80 Fed. Reg. 64,662, 64,665. Yet by committing at this early time to just one program design for all FPs, EPA would eschew the rule’s inherent flexibility in favor of an unnecessarily rigid stance. The agency should not foreclose any of its FP design options at this time. It is prudent for EPA to defer deciding on a FP approach until the need for a FP is triggered.

The agency asserts that a single plan approach for states receiving FPs is necessary in order to “enhance the consistency of the federal trading program, achieve economies of scale through a single, broad trading program, ensure efficient administration of the program, and simplify compliance planning for affected EGUs.” *Id.* at 64,970. Certainly, larger trading markets offer benefits over smaller ones, but EPA ignores the fact that it cannot control what kind of programs types states that are *not* subject to a FP will select. While the agency may have presumed that the entire group of states developing their own implementation plans will adopt a single plan type, the most recent developments suggest otherwise. While a number of states—such as California and those participating in the Regional Greenhouse Gas Initiative—have indicated expectations of developing mass-based implementation plans, several others

¹ EPA has suggested states should commit to a plan approach by September 2017. EPA will have authority to begin issuing federal plans following any state’s failure to submit a state plan or initial submission by September 2016.

(particularly in the Southeast) have expressed interest in rate-based compliance pathways. If EPA were to commit to a single plan approach for all states receiving FPs, it would force states wishing to pursue the other plan approach into a minimized trading market that would include no states with a FP. This is not to say that EPA must or even should split its FPs up evenly among rate-based and mass-based plans, but rather that the agency cannot know the size and breadth of *either* a national rate-based or mass-based trading market until states have actually submitted their plans. There is therefore no advantage to selecting at this point in time one-program approach for all FPs under the rationale that a single, broad trading market is superior to a smaller program.

It is particularly important that the agency not foreclose rate-based approaches to FPs. First, because the Clean Power Plan's BSER is expressed as a dual-rate standard, the agency should issue a model rate-based FP (corresponding to the model rate-based trading rule), and should certainly not commit at this early stage *not* to issue any FPs that reflect EPA's own designation of BSER. Second, there is strong reason to believe that, in many or most cases, dual-rate programs will achieve greater emission reductions than the corresponding existing source-only mass-based "equivalents." While there are a number of reasons for the disparity, our analysis indicates that the primary reason for the divergence is the "RE adder," discussed in Section IV, which would grant nearly 1.3 billion tons of additional CO₂ to state emission budgets if all states were to adopt existing source-only mass-based programs.²

The relative leniency of the existing-only mass programs is apparent in the fact that nine states—California, Connecticut, Idaho, Maine, New Jersey, Oregon, South Dakota, Virginia, and Washington—have 2012 baseline emission totals that are *lower* than those states' emission budgets in every year of the compliance period. In other words, apart from managing load growth, those states will not have to take any additional action under existing-only mass plans to comply with their Clean Power Plan obligations. Furthermore, another six states have emission budgets in 2030 (the most stringent year of the program) that are less than 10 percent smaller than their 2012 totals. By contrast, not a single state's final 2030 emission goals under a blended rate-based program would be less than the state's 2012 blended rate, and only one state's final rate was less than 10 percent smaller than its 2012 rate.³

We have attached the results of a state-by-state compliance analysis of existing source-only mass plans, dual-rate plans, and blended rate plans using the MJBradley CPP Compliance Tool (see Attachment 1). In this study, we analyzed each state's compliance posture based only on announced fossil-unit retirements and implementation of current renewable portfolio standard ("RPS") requirements. Under existing source-only mass programs, we find 25 states achieving compliance through December 31, 2024 based only on announced retirements and RPS

² For brevity these comments sometimes refer to such plans as "existing-only mass" plans.

³ Although there will be some differences in each state between the emission reductions expected under dual-rate and blended-rate approaches, we cite these figures to illustrate that the RE adder—which only grants additional tons to mass-based programs—significantly weakens the expected emission reductions in mass-based states.

requirements, as well as a net national allowance surplus of 25 million tons. Eighteen of these states satisfy their existing source-only mass targets through 2030 under the selected parameters, although we also see a national allowance deficit of 900 million tons.

For rate-based programs, we see fewer states achieving compliance during these time frames based on the same assumptions and a far larger deficit of ERCs nationwide than the deficit of allowances under existing source-only mass targets.⁴

Table 1: Results of Analysis Using MJ Bradley CPP Compliance Tool

Plan	Year ⁵	Number of Complying States	Nationwide Allowance/ERC Balance ⁶
Mass (existing only)	2024	25	+ 25 million tons
Mass (existing only)	2030	18	-900 million tons
Blended rate	2024	15	-738 million ERCs
Blended rate	2030	10	-4555 million ERCs
Dual rate	2024	17	-402 million ERCs
Dual rate	2030	11	-3501 million ERCs

Furthermore, 2015 emissions from regulated sources nationwide were below existing source-only mass targets through 2025 and, with the additional allowances that could be added and brought forward under the Clean Energy Incentive Program’s matching credits (discussed in Section VI.A below), through 2027.

We cite these data to caution the agency against *excluding* rate-based FPs as an option. The agency must take a state-by-state approach to evaluate whether it can properly address “leakage,” which occurs where mass-based plans incentivize more generation from new fossil fuel-fired sources than would occur under a corresponding dual-rate plan representing the agency’s BSER designation. It must make that decision on the basis of the record when the time comes to actually develop a federal plan. There is no reason for EPA to select or reject any particular approach at this early date without knowing what the resource mixes and other circumstances in states requiring FPs will actually be at the time when it must make the decision.

Because the stringency of the program and the ease of implementation depend on so many state-specific factors, we have no preference in the abstract for rate-based or mass-based plans. Although some stakeholders have expressed concern about the ability of states or EPA to smoothly implement a rate-based trading program, plans of this nature have a number of advantages over mass-based plans:

⁴ Tables showing state-by-state results are provided in Attachment 1.

⁵ CPP compliance periods are several years long. The year in the table reflects the year in which the corresponding allowance/ERC balance was calculated.

⁶ For a rough apples-to-apples comparison between deficit/surplus pools of ERCs and those of CO₂ allowances, one can simply multiply the total number of ERCs in the pool by a tons-based national average of state blended rates in 2024 (0.65 tons CO₂/MWh) and 2030 (0.55 tons CO₂/MWh).

- Unlike existing source-only mass plans, rate-based programs do not encourage sources to shift generation from existing sources to new sources. Thus, there is no need to have complicated provisions to combat leakage, which are necessary under existing source-only mass programs. See Section IV below. The more effective the anti-leakage provisions become, the more an existing source-only mass program begins to resemble a rate-based program.
- It is likely that mass-based plans will not sufficiently incentivize adoption of EE measures and programs, which are essential to achieving lowest-cost compliance from the perspective of rate-payers. Unlike mass-based plans, rate-based plans can provide a direct incentive – in the form of a tradeable ERC – for utilities and other providers to implement more EE.
- Some are concerned that rate-based programs will be much harder to administer. For example, a properly functioning rate-based program will require a state to review applications for ERC eligibility, as well as monitoring and verification reports after eligible projects have generated or saved energy to determine exactly how many ERCs to award each project. However, a mass-based state implementing clean energy set-asides also would have to undertake a parallel and equally rigorous EM&V process to properly allocate clean energy set-asides. Mass-based programs also require development and implementation of a method of auctioning or allocating allowances as an initial matter, which involves administration and rulemaking not required in a rate-based program.

We agree that mass-based plans are easier to understand and have many other advantages as well—and this point is well covered in comments by others—but this does not justify excluding rate-based plans as a FP option

B. Only State Plans that Include the New Source Complement Should be Presumptively Approvable.

As discussed further below, while we urge EPA to retain flexibility for federal plan approaches,⁷ when setting forth a model state plan for mass-based programs – i.e., a *presumptively approvable* plan – EPA should include only a mass-based program with new source complement. In Section IV below we suggest other approaches for addressing leakage that EPA could provide in guidance, use in a federal plan, and approve for use in a state plan, but only the new source complement should be *presumptively* approvable for addressing leakage given the varying circumstances of each state.

III. Allocation and Use of Allowances Under Mass-Based Plans

⁷ As we discuss in detail elsewhere in these comments, under mass-based programs, different states may require different plan provisions to prevent leakage. These provisions will be highly dependent on the emission rates of existing fossil units and the mix of fossil generation at the time EPA develops and promulgates FPs for particular states, so should not be subject to a uniform approach.

A. Allowance Distribution in Mass-Based Plans.

Creating a mass-based trading program requires establishing an approach for the distribution of allowances (“allowance allocation”).⁸ Allowance allocation will have important implications for economic efficiency and distributional impacts of the CPP. Moreover, the methodology that EPA and the states adopt will affect the prices of electricity and the overall cost of the mass-based program. If EPA finalizes a mass-based FP and model trading rule, we urge the agency to select an auction program as the basis for allowance allocation. Among other benefits, the auction approach creates a direct economic incentive to reduce carbon dioxide emissions as much as possible to avoid having to purchase allowances. EPA should prioritize environmental justice communities, workers, and low-income consumers likely to be impacted by the CPP in their decision on how to allocate allowances, and should encourage states to do the same, as explained below. Sierra Club also supports an auction as the best approach to benefit these populations.

1. Allowance Auctions Should be the Preferred Form of Allowance Allocation under the Model Trading Rule

EPA should finalize auctions as the default allocation mechanism under the model trading rule.⁹ States wishing to adopt the model rule that want to change their method of allocation later in the compliance period should only be authorized to do so via a partial state plan revision with a notice-and-comment opportunity for interested stakeholders. Auctions lead to an efficient distribution of allowances; provide immediate price signals in the market; collect any windfall profits that might accrue to generators as a result of free allocation; create equal opportunities for all participants in the allowance market; and provide a source of revenues that can be used to incentivize emissions reductions and distributional ends.¹⁰

EPA should provide comprehensive guidance for states on the key design and implementation considerations under an auction program for CO₂ allowances under the CPP. Below we explain how to design auction programs in a manner that protects rate payers and promotes clean energy expansion and distributional benefits through the revenues obtained from auctions.

Under an auction, the government captures the value of the allowances, which will generate economy-wide (for example, if used to reduce distortionary taxes) or equity benefits (for example, if used to offset electricity price impacts on households), depending on how they are

⁸ 80 Fed. Reg. at 65,015.

⁹ Section 111(d) Implementing Regulations require emission standards under state plans to be based upon either an “allowance system” or allowable rates of emissions. 40 C.F.R. 60.24(b)(1).

¹⁰ EPA, *Tools of the Trade*, Office of Air and Radiation, *A Guide to Designing and Operating a Cap and Trade Program for Pollution Control*, June 2003, at 3-16.

distributed.¹¹ As EPA itself has noted, the methodology for initial allocation of allowances has equity implications.¹² Requiring affected sources to purchase allowances through an auction would have only a modest effect on the asset value of regulated sources.¹³ It would also be fairer because it would give equal opportunities to all regulated sources to access allowances.¹⁴

In addition, the cost of allowances will be reflected on the price of electricity across the board, which would prevent the price disparity that free allocation would create among states.¹⁵ While this could lead to higher prices in regulated states, higher electricity prices do not necessarily translate to higher *bills*. Any price increases resulting from auctioning allowances could be more than offset with clean energy investments (particularly energy efficiency, which will help to decrease electricity bills), and through targeting the use of revenues to directly address electricity price impacts, especially on low-income households.¹⁶ As noted above, states have a lot of leeway to decide the uses of allowance revenues. In order for the program to be successful, however, EPA should provide comprehensive guidance to encourage states to spend the revenues on purposes that will serve to mitigate climate change, abate air pollution, protect consumers, and further environmental and economic justice ends.

Finally, any party that meets certain qualifications (for example, provision of financial security), and not just affected sources, should be allowed to participate in the auctions. RGGI provides a good example.¹⁷ Participants would include clean energy generators, energy efficiency projects, and even non-profit organizations.¹⁸ In the CPP preamble, EPA notes, in describing the mechanics of an allowance tracking system, that any person or organization could apply for a

¹¹ Economists have long argued that auctions are the most efficient form of allowance allocation, in particular where auction revenues are used to reduce distortionary taxes. RFF has estimated that, even assuming that revenues are distributed in the most inefficient way discussed in the economics literature, which is through distribution to households, auctions are substantially less costly than other allocation approaches such as grandfathering or a generation performance standard (i.e., allocating allowances on the basis of recent generation). See Dallas Burtraw et al., *The Effect of Allowance Allocation on the Cost of Carbon Emission Trading*, RFF Discussion Paper 01-30, August 2001.

¹² 80 Fed. Reg. at 65,015; EPA, *Tools of the Trade*, at 3-14.

¹³ Dallas Burtraw et al., *The Effect on Asset Values of the Allocation of Carbon Dioxide Emission Allowances*, RFF Discussion Paper 02-15, at 18.

¹⁴ EPA, *Tools of the Trade*, at 3-17.

¹⁵ Moving from free allocation to an auction will reduce disparities in electricity prices among states, but it will not completely eliminate them because price impacts could also depend on fuel mix. Karen Palmer, *Consumers and Energy Price Effects Associated With the Allocation of Greenhouse Gas Emissions Allowances*, Congressional Testimony Prepared for the U.S. Senate Committee on Energy and Natural Resources, RFF, October 21, 2009, at 4.

¹⁶ Dallas Burtraw et al., *The Effect of Allowance Allocation on the Cost of Carbon Emission Trading*, at 29; Anthony Paul et al., *Compensation for Electricity Consumers under a U.S. CO2 Emissions Cap*, RFF Discussion Paper, 08-25, July 2008, at 10.

¹⁷ RGGI, Fact Sheet: RGGI CO2 Allowance Auctions, available at http://www.rggi.org/docs/Documents/RGGI_Auctions_FactSheet.pdf.

¹⁸ EPA, *Tools of the Trade*, at 3-22.

“general account” in which allowances could be deposited.¹⁹ This should be true for an auction system as well.

a. Allowance Auction Revenues Should Be Used to Reduce Carbon Emissions and Further Environmental and Economic Justice Ends

Auction revenues should be used to expand clean energy and energy efficiency to further reduce CO2 emissions, and to pay the costs of administering the trading program.²⁰ California’s AB32 and RGGI are good examples of mass-based programs that allocate available allowances through auctions that have generated very significant revenue, which has been utilized for investments in renewable energy and energy efficiency.²¹ Revenues could also be used to fund climate adaptation projects.²²

In addition, we believe that a percentage of revenues, determined through a stakeholder process that includes meaningful participation from communities, should be used to achieve environmental and economic justice ends, many of which will also help abate air and climate pollution. Specifically, those revenues could be used to finance targeted investments in energy efficiency, renewable energy, and projects to revitalize environmental justice communities affected by the pollution from the dirtiest plants. Residents of environmental justice communities should be allowed to participate in the decision of which activities to fund.²³ Because EJ communities often cannot fully participate in stakeholder processes due to lack of resources, these revenues should also be used to facilitate their meaningful participation. These revenues can also help address workers’ transition and training, and can be invested in clean energy projects to be carried out by workers residing in the relevant state.

AB32 provides a useful example that EPA could incorporate in guidance on how states can use the revenues of an auction program. EPA should encourage that a percentage of revenues be invested in environmental justice communities and address job creation, leaving to the states and their communities the decision of how to exactly invest those monies. For example, California’s SB535 requires allocating 25 percent of auction revenues to projects that benefit disadvantaged communities, with at least 10 percent to be spent directly in those communities.²⁴

A companion bill, AB 1532, required the California Department of Finance (DOF) to develop a three-year investment plan, in a manner that ensures that the auction revenues facilitate greenhouse gas reductions in the state, foster job creation by promoting emissions reductions

¹⁹ 80 Fed. Reg. at 64,894.

²⁰ EPA, *Tools of the Trade*, at 3-16.

²¹ See, e.g., RGGI, RGGI Benefits, available at https://www.rggi.org/rggi_benefits.

²² Anthony Paul et al., *Compensation for Electricity Consumers under a U.S. CO2 Emissions Cap*, at 10.

²³ Vien Truong, *Addressing Poverty and Pollution, California’s SB 535 Greenhouse Gas Reduction Fund*, 49 Harvard Civil Rights-Civil Liberties L. Rev. 493, 498 (2014).

²⁴ Cal. Health & Safety Code §§ 39710-39723.

projects carried out by California workers and businesses, and direct investments towards the most disadvantaged communities and households in the state. The bill also mandates a public process to determine how to allocate these revenues; specifically, it required CARB to hold at least two public workshops in different regions of the state and one public hearing prior to DOF submitting the investment plan to the California Legislature.²⁵

Finally, EPA should encourage that a percentage of the revenues be used to provide financial assistance to workers affected by the transition away from coal, and for new economy job training or clean energy investments in communities where coal represents a significant part of their economy. The level of funding devoted to this transition fund should be determined through a stakeholder process that includes representatives from labor unions, potentially affected communities, and experts that would aid the EPA and state environmental agencies to assess the potential job losses from implementation of the FP and the model trading rule.

EPA should also encourage states to participate in the POWER Initiative, a multi-agency initiative by the Departments of Commerce and Labor, the Small Business Administration, and the Appalachian Regional Commission, which is awarding competitive grants and planning assistance to communities affected by the transition away from coal.²⁶

2. EPA Should More Narrowly Define the Type of Partial State Plan Revision It Would Accept as a Replacement for the Federal Plan Allocation Provisions.

EPA has proposed that states receiving a mass-based federal plan could opt to submit a partial state plan to address allowance allocation if they meet certain conditions (namely, addressing the potential for leakage and participating in the Clean Energy Incentive Program [“CEIP”]). To the extent that EPA finalizes this proposal, we urge EPA to impose additional conditions on approval of a partial state plan revision for allowance allocation.²⁷ Based on the long experience of Sierra Club advocates working in all 50 states, we are concerned that those states likely to receive FPs are also those that are most likely to take an allocation approach that is intended to placate the state’s polluters, instead of the optimal approach for carbon dioxide reductions, the state’s ratepayers, and the communities most impacted by energy costs or pollution. The limitations we suggest below are intended to ensure that EPA’s permission for FP states to adopt their own allocation approaches appropriately protects these public interests.

²⁵ Cal. Health & Safety Code § 39716.

²⁶ The White House, *Fact Sheet: The Partnerships for Opportunity and Workforce and Economic Revitalization (POWER) Initiative*, available at <https://www.whitehouse.gov/the-press-office/2015/03/27/fact-sheet-partnerships-opportunity-and-workforce-and-economic-revitaliz>

²⁷ 80 Fed. Reg. at 65,027. The option to take control of the allowance distribution is also important for certain Tribes who have expressed interest in CPP implementation but are unable to develop their own tribal implementation plans (TIP) due to legal constraints (such as the Navajo Nation) or a lack of capability to carry out the entirety of the functions to be exercised as part of implementing a TIP. See 42 U.S.C. 7601(D)(2)(C).

As noted above, EPA proposes to allow states receiving FPs adopt their own allocation approaches through a partial state plan revision. That plan revision will be subject to the same notice and comment procedures as any other state plan revision.²⁸ However, EPA should confirm and clarify that a state’s desire to take over the allocation process will not delay or halt implementation of a federal plan. In all cases, even where a state has indicated an interest in submitting a state plan revision, EPA must make good on its stated intent to promptly adopt and implement federal plans for states that have not timely submitted approvable state plans.

EPA proposes that states may only adopt their own allocation schemes if they (1) address leakage appropriately; and (2) establish CEIP set-asides.²⁹ Sierra Club suggests establishing the following limitations:

a. Limitation on How the State Must Address Leakage.

The Clean Power Plan requires states adopting mass-based plans to address the potential for leakage— i.e., the greater shift of generation to new sources not covered by §111(d) than would occur through the implementation of the agency’s selected Best System of Emissions Reduction (a “dual rate” plan). As we explain in Section IV, adopting a complementary cap for new fossil sources would be the simplest and most effective way for state plans to address leakage. Therefore, we urge EPA to allow states to take control of allowance allocation under their FPs only if they adopt the “new source complement” as an additional state plan revision to accompany the federal plan

The Clean Air Act provides that the EPA shall have “*the same authority* ... to prescribe a plan for a State in cases where the State fails to submit a satisfactory plan as [it] would have under section 7410(c) ...”³⁰ Section 110(c)(1) provides that EPA shall promulgate a federal implementation plan after the agency:

“(A) finds that a State has failed to make a required submission or finds that the plan or plan revision submitted by the State does not satisfy the minimum criteria established under subsection (k)(1)(A) of this section, or (B) disapproves a State implementation plan submission in whole or in part, unless the State corrects the deficiency, and the Administrator approves the plan or plan revision, before the Administrator promulgates such Federal implementation plan.”³¹

Although there is no case law interpreting EPA’s FP authority under Section 111(d), federal court decisions interpreting the scope of federal implementation plans under Section 110 of the

²⁸ 80 Fed. Reg. at 65,027.

²⁹ 80 Fed. Reg. at 65,027.

³⁰ 42 U.S.C. 7411(d)(2)(A) (emphasis added).

³¹ 42 U.S.C. 7410(c)(1).

Act support the proposition that the agency has the same authority to regulate affected sources under the FP as the states have under their SIPs. In promulgating a FP, courts have reasoned that EPA “stands in the shoes of the defaulting State, and all of the rights and duties that would otherwise fall to the State accrue instead to EPA.”³²

EPA’s authority to issue and implement FPs gives the agency the ability to condition state control of allowance allocation in a FP on adopting the new source complement. Because the Clean Air Act provides EPA with broad authority to issue a FP in cases where states fail to submit a satisfactory plan, if a state does not submit a satisfactory plan, it abdicates its prerogative to make detailed choices about the type of plan it adopts. If the state nonetheless decides it wants to implement a part of that FP, EPA can approve the state’s request to do so, but is within its authority to impose conditions on that approval.

While this proposed limitation would narrow the options for how a state can address leakage originally set forth in the CPP, it is permissible for EPA to take this approach in the context of delegating allowance allocation to states that have received a FP. We do not believe this approach makes the FP more “stringent” than the emission guidelines issued for states under the CPP, but even if it did, that would be within EPA’s authority. In interpreting Section 110, for example, courts have reasoned that, like SIPs and tribal implementation plans, EPA’s FP may be more stringent than the national standards.

“[W]e note there is no requirement that a gap-filling federal plan can be only as strict as necessary to meet national air standards. The Clean Air Act and the [Tribal Authority Rule] certainly do not include such a mandate. States, and presumably tribes, may surpass national air standards as long as their plans satisfy all of the minimal Clean Air Act requirements. *See Union Elec. Co.*, 427 U.S. at 263–65, 96 S. Ct. 2518 (holding that the EPA cannot disapprove a state plan solely because it imposes stricter limits than the national air standards or is economically or technologically infeasible). *We have found no authority saying that we can prevent the agency to which we owe substantial deference from implementing the same type of superior plan.*”³³

b. Limitation on Allowance Allocation Method.

Second, EPA should condition state control of allowance allocation on the requirement that states conduct auctions and spend the revenues in a manner that fulfills the purposes of the Clean Air Act and the CPP. This is consistent with EPA’s rationale for allowing states to maintain control of allowance distributions – that it would allow states to design the specific allocation

³² *Central Ariz. Water Conservation Dist. v. EPA*, 990 F.2d 1531, 1541 (9th Cir. 1993); *see also South Terminal Corp. v. EPA*, 504 F.2d 646, 668 (1st Cir. 1974) (“[t]he statutory scheme would be unworkable were it read as giving to EPA, when promulgating an implementation plan for a state, less than those necessary measures allowed by Congress to a state to accomplish federal clean air goals.”).

³³ *Ariz. Public Service Co. v. EPA*, 562 F.3d 1116, 1130 (10th Cir. 2009) (emphasis added).

methodology based on their own goals and characteristics, and that states have more flexibility to define their allocation approaches than does EPA, in particular as it concerns auctions.³⁴ A state can also design the allocation mechanism with the purpose of addressing specific priorities, such as protecting low-income consumers or supporting local industries, whereas EPA is more limited in this respect.³⁵

While the Clean Air Act authorizes EPA to allocate allowances through auctions under the FP,³⁶ under federal law the agency may not have authority to invest the revenues in CPP-related purposes, in light of statutory provisions under the Miscellaneous Receipts Act that require agencies “receiving money for the Government from any source [to] deposit the money in the Treasury.”³⁷ As discussed above, EPA may still condition approving delegation of the allocation approach to a state receiving a FP on the state’s commitment to an auction approach to allocation, and to spending the revenues to further the Clean Air Act’s primary purpose of encouraging air pollution prevention by states, as further detailed below.³⁸ In its findings and declaration of the Act’s purposes, Congress provided “that air pollution prevention (that is, the reduction or elimination, *through any measures*, of the amount of pollutants produced or created at the source) and air pollution control at its source is the primary responsibility of States and local governments.”³⁹ Spending some of the revenues in RE and EE, for example, would help reduce the amount of carbon pollution emitted by affected sources, and would thus fulfil the purposes of the CPP. (It would also lower bills for ratepayers, as discussed elsewhere.)

If, on the other hand, states want maximum flexibility to allocate allowances under a mass-based program, and they do not favor an auction program, the Clean Air Act gives them the option to prepare their own SIPs.

3. EPA Should Establish a Partial Auction Program Under the FP

The Clean Air Act expressly authorizes EPA to allocate allowances through auctions in a FP issued under the CPP. The Clean Air Act’s definition of “federal implementation plan” explicitly includes the possibility of establishing trading programs, including auctions, as a method for allowance allocation under those programs. This definition applies to FPs issued by EPA under both Sections 110 and 111 of the Clean Air Act.⁴⁰ The statute provides that:

³⁴ 80 Fed. Reg. at 65,012.

³⁵ 80 Fed. Reg. at 65,027.

³⁶ 80 Fed. Reg. at 65,018, fn. 97.

³⁷ 31 U.S.C. § 3302(b).

³⁸ 42 U.S.C. § 7401(c).

³⁹ 42 U.S.C. § 7401(a)(3) (emphasis added).

⁴⁰ Section 111(d) directs EPA to issue regulations that establish a state implementation process similar to the one applicable to the adoption of SIPs for criteria air pollutants under Section 110. The Act further provides that the EPA has the same authority to prescribe a plan for a state that fails to submit a satisfactory plan as the agency would have with respect to Section 110 SIPs. 42 U.S.C. 7411(d).

“The term “Federal implementation plan” means a plan (or portion thereof) promulgated by the Administrator to fill all or a portion of a gap or otherwise correct all or a portion of an inadequacy in a State implementation plan, and which includes enforceable emission limitations or other control measures, means or techniques (*including economic incentives, such as marketable permits or auctions of emissions allowances*), and provides for attainment of the relevant national ambient air quality standard.”⁴¹

While several industry stakeholders have raised concerns about auction programs, we urge the agency to establish at least a modest auction under the FP for the primary purpose of establishing a market price for carbon dioxide (and possibly other ends, provided that the agency obtains a legal opinion from the U.S. General Accounting Office (GAO) regarding the use of revenues, as further explained below).

Under the Acid Rain Program, EPA holds or sponsors annual auctions of allowances for a small portion of the allowances that would have been allocated to existing sources in order to provide new units with a source of allowances beyond those purchased from existing units.⁴² In the early stages of the Acid Rain Program, this modest auction program (run by the Chicago Board of Trade) helped provide allowance price information, and is widely credited with helping create an allowance market.⁴³ As explained above, auctions are the only way to truly achieve price discovery, and thus EPA (or a third party charged with this task by the agency) should auction a proportion of the allowances that correspond to each of the states that would receive a FIP. If EPA follows this recommendation, in the FP the agency should, at the outset, provide a set-aside of allowances from the state budgets exclusively for their auction. EPA should not follow the Acid Rain Program model, where a portion of the allowances that would initially correspond to the affected sources under a free allocation mechanism was auctioned to provide a public source of allowances to other sources. Our recommended approach would help to avoid any claim that the auction revenues should be returned to the affected sources entitled to the free allocation in the first place.

With respect to the revenues obtained from allowance auctions, in the preamble to the proposed FP EPA states that it believes that, if legally authorized to conduct auctions under the FP, the revenues received must be deposited in the U.S. Treasury.⁴⁴ While the agency unquestionably has authority to conduct auctions as part of FPs under Section 111(d) of the Clean Air Act, in the absence of a Clean Air Act provision on the contrary,⁴⁵ there is a question

⁴¹ 42 U.S.C. 7602(y) (emphasis added).

⁴² EPA, SO₂ Allowance Auctions, available at <http://www.epa.gov/airmarkets/so2-allowance-auctions>.

⁴³ Comments of Dallas Burtraw, *Understanding Allowance Allocation Options Under the Clean Power Plan*, Bipartisan Policy Center Event, January 11, 2016.

⁴⁴ 80 Fed. Reg. at 65,018.

⁴⁵ Under the Clean Air Act, there is a single statutory provision referring expressly to the Miscellaneous Receipts Act. This provision deals with penalties for excess emissions of SO₂ or NO_x under Sections

as to whether the Miscellaneous Receipts Act would apply to the revenues from such an auction.⁴⁶ We recommend EPA seek a legal opinion from the GAO as to whether, if EPA ran a partial auction program of allowances that are set aside exclusively for auction (not entitled to any form of free allocation) on behalf of the state that receives a FP, the agency would be required to deposit the revenues in the Treasury's General Fund. Should the GAO determine that these revenues must be deposited to the Treasury, we believe that the agency should still auction a portion of allowances to signal a price on carbon under the Clean Power Plan.

4. The FP and Model Rule Should Specify that Allowances Are Not Property Rights

While allowances are freely tradable under a cap-and-trade program, trading programs should address certain property rights-related issues as a matter of program design. In the proposed regulatory language, EPA has proposed a provision to the effect that allowances do not constitute property rights.⁴⁷ Its rationale is to address any potential takings claims if EPA or the state reduce or change the number of allowances or the method for their allocation at a later date, as affected sources might claim that they are entitled to compensation based on the value of lost allowances they were entitled to receive under the final rules. We urge the agency to finalize this provision as proposed, both in the FP and model trading rule. This provision is consistent with statutory and regulatory provisions other trading programs. Title IV⁴⁸ and the RGGI Model Rule⁴⁹ (and regulations implementing the program in the RGGI members),⁵⁰ for example, expressly provide that allowances do not constitute property rights.

5. EPA Should Not Finalize Free Allocation Approaches Based on Historical Information

Free allocation to regulated sources on the basis of historical information is aimed at compensating affected sources for the cost of a cap-and-trade program; however, researchers have documented that generators will still pass the cost of compliance on to consumers. Therefore it is consumers, not generators, who suffer the adverse impacts of any increased

7651b, 7651c, 7651d, 7651e, 7651f or 7651h of the Act, and requires penalty payments paid to EPA to be deposited in the U.S. Treasury pursuant to the Miscellaneous Receipts Act. 42 U.S.C.A. § 7651j. This is a very different situation from the one we are envisioning here, where the revenues would be used by the states (not EPA) to help implement the emission standards set forth in the FP and further the purposes of the Act.

⁴⁶ See *U.S. Government Accountability Office, Principles of Federal Appropriations Law*, Third Edition, Vol. 2, Chapter 6-Availability of Appropriation: Amount, Part E-Augmentation of Appropriations, March 2015.

⁴⁷ Proposed § 62.16220, 80 Fed. Reg. at 65,062.

⁴⁸ EPA, *Tools of the Trade*, at 3-23.

⁴⁹ RGGI, Model Rule, CO2 Budget Trading Program, Section 1.5(c)(9).

⁵⁰ See, e.g., 6 NYCRR § 242-1.5(c)(9).

costs that result from the policy through higher electricity prices.⁵¹ If EPA decides to finalize a free allocation method that is based on historic (as opposed to current) generation, the Clean Power Plan policy overall would create disparities in electricity price impacts between states where prices are determined by the cost of service (regulated states) and states where electricity prices are regulated by the market (deregulated states). In regulated states, where utilities are only allowed to recover the costs of service actually incurred (plus a reasonable rate of return), the retail price of electricity would not reflect the value of the free allowances obtained by the affected source. But in deregulated states, the value of emissions allowances used to produce electricity will be reflected in the electricity prices, even if the allowances were received for free.⁵² Generators would add the market price of allowances into their bids, which would raise prices for consumers, resulting in windfall profits to generators.

In addition, while under many cap-and-trade programs (including Clean Air Act programs such as Title IV's Acid Rain Program),⁵³ EPA has distributed allowances for free,⁵⁴ current CO₂ emissions trading programs allocate the great majority of available allowances through auctions. RGGI, AB32, and the current phase of the EU Emissions Trading Scheme allocate allowances in this way.⁵⁵ These programs work very well and have resulted in emissions reductions, clean energy expansion, and billions of dollars in revenues.⁵⁶ Today there is no justification for creating trading programs solely on the basis of free allocation of allowances on the basis of historical information to gain acceptance by the regulated entities. As described above, we instead urge EPA to encourage auctions as the preferred form of allocation under the model trading rule, and to also implement a modest auction program under the FP (coupled with direct allocation to affected units based on recent generation, as explained below), in order to help achieve price discovery.

⁵¹ Anthony Paul et al., *Compensation for Electricity Consumers under a U.S. CO₂ Emissions Cap*, at 3. RFF has estimated that the impacts for consumers under a cap-and-trade program may be approximately eight times higher than the impacts on generators. *Id.* at 4.

⁵² Anthony Paul et al., *Compensation for Electricity Consumers under a U.S. CO₂ Emissions Cap*, at 6; Karen Palmer, *Consumers and Energy Price Effects Associated With the Allocation of Greenhouse Gas Emissions Allowances*, at 3.

⁵³ The Acid Rain Program was enacted at a time that the entire country was "regulated," so that there was no concern about windfall profits. Comments of Dallas Burtraw, *Understanding Allowance Allocation Options Under the Clean Power Plan*, Bipartisan Policy Center Event, January 11, 2016.

⁵⁴ Title IV's Acid Rain Program provides for free, permanent allocation of allowances based on a combination of heat input and an emission rate. EPA, *Tools of the Trade*, at 3-15.

⁵⁵ See, e.g., CARB, *Allowance Allocation; Regional Greenhouse Gas Initiative (RGGI), CO₂ Auctions*, available at https://www.rggi.org/market/co2_auctions. Analyses of the impact of free allocation to power companies under the European Trading Scheme showed that sources passed through between 60 and 100 percent of the CO₂ costs to consumers. This led European policy makers to revise the program in favor of an auction methodology. See Jos Sijm et al., *CO₂ Cost Pass Through and Windfall Profits in the Power Sector*, *Climate Policy*, Vol. 6, Issue 1, pp. 49-72, May 2006.

⁵⁶ See, e.g., Paul Hibbard et al., *The Economic Impacts of the Regional Greenhouse Gas Initiative on Nine Northeast and Mid-Atlantic States, Review of RGGI's Second Three Year Compliance*, Analysis Group, July, 2015.

6. EPA Should Provide Guidance on Allocation of Allowances to Load-Serving Entities or Local Distribution Companies

EPA has requested comment on an alternative allowance distribution whereby allowances are allocated to load-serving entities (which are, for most customers, the same as the local distribution company).⁵⁷ Below we offer information on key design aspects of such a mechanism. We support this allocation approach for its potential to benefit consumers in states where the public utility commission (PUC) regulatory structure would ensure that the benefit of the allowances would flow to electricity customers, and not serve as a windfall for polluters. However, because we are uncertain whether that would be the result in every state, and this approach has not yet been widely tested, we cannot yet support including it as a one-size-fits all model for all states. Instead, EPA should provide states with comprehensive guidance, so that states with appropriate regulatory structures and strong consumer benefit protections have enough information to incorporate this type of allocation into their SIPs. EPA should approve plans that include this type of allocation on a state-by-state basis, rather than including it as a presumptively approvable form of allocation under the model trading rule.

This type of allowance allocation is meant to ensure that consumers receive the value of the allowances in order to offset any potential increases in electricity prices from the implementation of the program in the near term. Experts believe that such an allocation would prevent the disparities in electricity prices between regulated and deregulated states that free allocation would create. Most importantly, allocation to distribution companies would, if properly regulated, enable consumers, rather than shareholders, to receive the value of the allowances sold to the generators.⁵⁸

Specifically, states would allocate allowances to local distribution companies.⁵⁹ Distribution companies would sell those allowances to the affected sources that require them to cover their emissions to demonstrate compliance, preferably, through auction mechanisms or, alternatively, through direct sale. Local distribution companies are in most states subject to

⁵⁷ 80 Fed. Reg. at 65,018, EPA, Office of Air and Radiation, *Allowance Allocation Proposed Rule Technical Support Document*, Memorandum, at 9-10, August 2015.

⁵⁸ EPA has estimated that electricity bills will slightly increase by 2020, but they will decrease by 2025 and beyond. See EPA, *Regulatory Impact Analysis for the Clean Power Plan Final Rule*, at 3-40. In addition, we note that prior to EPA's issuance of the Clean Power Plan, the Clean Air Task Force (CATF) modeled the effects of a trading program for compliance under Section 111(d), which included allocation to distribution companies. The results of the modeled scenario showed that this type of allocation mitigated nearly all of the estimated electricity price impacts. See Conrad Schneider, *Power Switch: An Effective, Affordable Approach for Reducing Carbon Pollution from Existing Fossil-Fueled Power Plants*, CATF, February 2014.

⁵⁹ For most customers, the local distribution companies are the same as the load-serving entities, unless a customer is purchasing electricity from an entity other than his/her local utility (in which case that load serving entity is a competitive supplier). Karen Palmer et al., *Allowance Allocation in a CO₂ Emissions Cap-and-Trade Program for the Electricity Sector in California*, Discussion Paper, 09-41, October 2009, at 3.

price regulation by public utility commissions (PUCs) and provide a public service in both regulated and deregulated states. Thus, the theory is that they can be required to return the value of any emissions allowances they receive for free to the customers they serve. The rationale for this type of allocation is that, since their rates are always regulated, local distribution companies would not be able keep the allowance proceeds for themselves as windfall profits and would need to pass them on to consumers.

In states where distribution companies are also owners of affected sources or where generation is owned by a corporate parent that also owns the local distribution company), distribution companies could also use these allowances for compliance under the CPP. In theory, consumers would benefit even in the case that distribution companies that own affected sources use those allowances for compliance, as those sources would not need to buy allowances to cover their emissions at customers' expense.

This allocation methodology could be full or partial. It could also be temporary, for states that need to offset any impacts to consumers while transitioning to an auction program which, as we discussed below, should be the default allocation option under the model trading rule. It would be up to states and their stakeholders to decide whether this allocation mechanism would be workable and beneficial to consumers.

Stakeholders have discussed this form of allocation in the context of climate change policy for several years. The American Clean Energy and Security Act, also known as the Waxman-Markey bill, envisioned the allocation of emissions allowances to electric and/or gas local distribution companies on behalf of the customers of those utilities.⁶⁰ In addition, AB32 provides a tested example of this type of allocation. California's regulations provide for allocations to electrical distribution utilities, which must consign them at the auctions. The regulations further provide that the proceeds "must be used exclusively for the benefit of retail ratepayers of each such electrical distribution utility, consistent with the goals of AB 32, and may not be used for the benefit of entities or persons other than such ratepayers," and require distribution companies to report on the use of the proceeds from those auctions on an annual basis.⁶¹

SB 1018 and the California PUC require investor-owned utilities to return nearly all the revenues from the sale of these allowances to their industrial, small business, and residential customers.⁶² As for the other distribution companies that receive allowance allocations—publicly-owned utilities and electric cooperatives—their boards decide how to distribute the

⁶⁰ Karen Palmer, *Consumers and Energy Price Effects Associated With the Allocation of Greenhouse Gas Emissions Allowances*, at 4.

⁶¹ 17 Cal. Code of Regs. § 95892(a)-(e).

⁶² Public Utilities Commission of the State of California, Decision Adopting Cap-and-Trade Greenhouse Gas Allowance Revenue Allocation Methodology for the Investor-Owned Electric Utilities, No. 12-12-033, December 20, 2012, available at <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M040/K631/40631611.PDF>

value of the allowances received.⁶³ California regulations provide the total amount of allowances to be allocated to all distribution companies and the percentage of the total allocation to be distributed to each company individually.⁶⁴

The decision on how to states should apportion the allowances among distribution companies would affect consumers differently. Economists have identified several possible criteria for apportionment: First, states could allocate allowances according to the share of the national population within a given distribution company's service territory, which would benefit consumers in the most populous areas; second, they could apportion allowances based on the emissions intensity of the electricity consumed within a distribution company's territory, which will benefit consumers who get their electricity from fossil fuels⁶⁵ and; third, they could apportion allowances based on the share of electricity consumption, which will benefit areas where electricity consumption per capita is higher.⁶⁶ EPA should specify the circumstances in which each of these forms of apportionment are suitable in its guidance to states.

PUCs could direct allowance value directly towards reductions in customers' electric bills or rebates. Refunds, as opposed to direct decreases in electricity bills, will preserve consumers' incentives to save energy. Households with the ability to invest in energy efficiency will do so instead of using their rebate to keep higher levels of consumption, and households that cannot easily reduce their consumption can use their refund to avoid any impact on their standard of living. Specifically for low-income households, the Center on Budget and Policy Priorities has proposed providing these households with direct "energy refunds" to offset the impacts from higher electricity prices. Eligible households (which under this rule should be defined in accordance with our proposed definition of low-income, discussed in Section VI), could receive these benefits through state electronic benefit transfer (EBT) systems, which are debit card systems that states already use to provide food stamps and other forms of assistance.⁶⁷ Sierra Club supports this proposal.

In addition to consumer benefits in their electricity bills, the National Association of Regulatory Utility Commissioners (NARUC) has proposed that PUCs could direct allowance revenues to fund energy efficiency programs under their scope of authority.⁶⁸ In California, for example,

⁶³ Cap-and-Trade Program, *Summary of Vintage 2013 Electrical Distribution Utility Allocated Value Allowance Reports*, at 1-2, available at <http://www.arb.ca.gov/cc/capandtrade/allowanceallocation/edu-v2013-allowance-value-report.pdf>.

⁶⁴ 17 Cal. Code of Regs. § 95870(d).

⁶⁵ Karen Palmer, *Consumers and Energy Price Effects Associated With the Allocation of Greenhouse Gas Emissions Allowances*, at 6.

⁶⁶ Anthony Paul et al., *Compensation for Electricity Consumers under a U.S. CO2 Emissions Cap*, at 14.

⁶⁷ Center on Budget and Policy Priorities, *Policy Basics, Climate Change Legislation and Low-Income Consumers*, available at http://www.cbpp.org/sites/default/files/atoms/files/PolicyBasic_EffectOfCap.pdf.

⁶⁸ National Association of Regulatory Utility Commissioners, *FAQ: Consumer Benefits of Free CO2 Allowances via Regulated Utilities*, available at http://www.naruc.org/Publications/FAQ1_Consumer_Benefits.pdf.

the PUC ordered that almost 85 percent of the allowance value be returned to consumers as a direct rate reduction and a semi-annual “climate dividend” in the form of an on-bill credit against customers’ electric bills. The distribution company customers benefited from these revenues include residential customers, small businesses, and emissions-intensive and trade-exposed industries.⁶⁹

7. If EPA Finalizes an Allocation Mechanism that Distributes Allowances to Affected Sources, It Must Base its Approach on Recent Generation, and Update Allocations on an Annual Basis

If, notwithstanding the advantages of the allocation approaches explained above, EPA selects a mechanism for free allocation directly to affected sources to include in the FP or the model trading rule, we urge the agency not to finalize its proposed historical generation-based approach. EPA has proposed to allocate allowances (excluding the proposed set-asides) to affected sources based on their share of state’s generation, using data from 2010 through 2012 (or 2011-2012, if no 2010 data is available).⁷⁰

EPA believes that this approach makes allocations transparent (vis-à-vis an approach that would rely on future generation projections) because it is based on data already reported by affected sources.⁷¹ While this is true, the country’s energy generation mix has changed since 2010 due to retirement and decreased generation at a large number of coal-fired units, increased generation at NGCCs and the growth of energy production from renewable sources.⁷² There is no justification for favoring those affected sources that produced the most output in 2010-2012, especially given that compliance under the CPP will begin about a decade later. This choice of allocation would result in rewarding owners of affected sources for actions taken long in the past, and existing sources that generated high levels of electricity in later years will deem this allocation method unfair to them. Such an allocation also creates the possibility of price gouging or hoarding by entities that have no present need for allowances.

If EPA opts for a free allocation methodology on the basis of historic information, the agency should allocate allowances to affected sources according to their share of total electricity generation in the prior year rather than 2012 and should update these allocations on an annual basis.⁷³ Allocation to affected sources on the basis of recent generation would ensure that

⁶⁹ California Public Utilities Commission, *CPUC Allocates 85 Percent Of Revenue From Sale Of Utilities’ Greenhouse Gas Allowances To Residential Customers*, available at <http://yubanet.com/california/CPUC-Allocates-85-Percent-Of-Revenue-From-Sale-Of-Utilities-Greenhouse-Gas-Allowances-To-Residential-Customers.php#.VqGZivkrLIW> .

⁷⁰ 80 Fed. Reg. at 65,016.

⁷¹ *Id.*

⁷² Energy Information Administration, *Electricity Data, Net Generation for All Sectors (Annual)*, available at <http://www.eia.gov/electricity/data/browser/> .

⁷³ See Dallas Burtraw, *The Effect of Allowance Allocation on the Cost of Carbon Emission Trading*, at 4.

allowance distribution is based on current generation needs. Importantly, if any allowances from the annual budget are not distributed, EPA (or the states under the model trading rule) should keep those unused allowances in a fund and either retire them, or distribute them only on the basis of generation need, if affected sources prove that additional allowances will be needed to cover their generation and they are unable to purchase them in the market, from other affected sources that over-comply.

The downside of an output-based approach based on updates in short intervals is that it may encourage affected fossil fuel-fired sources to generate more electricity in order to benefit from the output subsidy, but overall generation remains constrained by system demand and recent year output allocation is a fairer alternative to EPA's proposal than would award allocations to units that may not have operated for a decade before Clean Power Plan compliance begins.

Finally, in the preamble, EPA recognizes stakeholders' concerns about the potential for increased emissions in the future for certain facilities, with potential adverse impacts on communities, and explains that the proposed allocation will not affect the distribution of emissions under the program because it is based on past rather than future activity.⁷⁴ This reasoning does not justify EPA's proposed approach. As discussed in Section III.B, EPA and/or the states can address the potential for increased emissions of pollutants with localized impacts through spatial trade or "flow control" restrictions, either in the FP or state SIPs. In addition, under the CPP EPA has committed to assess any adverse impacts from increased co-pollutant emissions during the implementation of the CPP, and to utilize its authority under other Clean Air Act Programs to ensure any adverse impacts are addressed.⁷⁵ As discussed in Section IX, Sierra Club agrees with EPA's proposal to do the same under the FP.

a. EPA Should Not Finalize an Allocation Methodology on the Basis of Historical Emissions

In addition to EPA's proposed allocation approach on the basis of historical generation, the agency has requested comment on an allocation approach based on historical emissions.⁷⁶ EPA should not finalize this option, neither in the FP nor as one of the possible options under the model trading rule. As the agency itself has explained, this allocation methodology will benefit the largest and least efficient sources.⁷⁷

b. Treatment of New Sources

Many environmental groups and states believe that the most effective programs to address climate change cover emissions from new fossil fuel-fired sources, and, in the final CPP EPA has published "new source complements" that set out mass limitations for new and existing

⁷⁴ 80 Fed. Reg. at 65,017.

⁷⁵ 80 Fed. Reg. at 64,918-64,919.

⁷⁶ 80 Fed. Reg. at 65,017.

⁷⁷ EPA, *Tools of the Trade*, at 3-15.

sources.⁷⁸ As discussed above, we urge EPA to include an “existing + new” plan as the model mass-based plan, rather than an existing-only plan.

A plan adopting the new source complement must provide a method for allocating allowances to new sources. If EPA or the states decide to pursue an auction program, then new sources would decide to participate in allowance auctions at the point that they will need them to cover their emissions. Otherwise, for purposes of *initial* allowance allocation, the model trading rule could provide for a set-aside, establishing a percentage of the state budget to cover new coal and gas plants entering the market.⁷⁹ Allowances from that set-aside would only be granted to new sources for the first year that they would require them for compliance. Subsequently, new sources should be required to purchase allowances in the market, from affected sources that do not need them to demonstrate compliance.

B. Use of Allowances

1. Temporal Considerations

a. EPA Should Limit Banking Under the FP and Model Trading Rule

In the preamble, EPA proposes to allow unlimited banking of ERCs or allowances within and between the interim and final compliance periods.⁸⁰ Banking would allow regulated sources to use allowances or ERCs acquired during the early years of the program to demonstrate compliance in later years. Ordinarily, banking programs are designed to aid sources in reducing their compliance costs if the price of allowances in a given year is too high, thus reducing their cost of compliance. In a well-designed program, banking encourages early emissions reductions, but it can also delay or avoid the achievement of emissions reductions in later years.⁸¹ In the final CPP, in response to concerns raised by a number of stakeholders, EPA made extraordinarily significant revisions to delay the implementation of and reduce the stringency of the program, especially in the early years. As we explain in Section IV, we now anticipate quite significant over-compliance in some states, especially with mass-based compliance programs that cover existing sources only.⁸² Because EPA has provided a very conservative glide path in the early years, if banking between compliance periods is permitted the early year “cushion” provided by the agency will undercut and significantly diminish the effectiveness of the CPP in later years. Thus, in the FIP and model trading rule EPA should restrict this corrosive impact by prohibiting affected sources from banking allowances obtained in one compliance period for use in future compliance periods.

⁷⁸ 80 Fed. Reg. at 64,888.

⁷⁹ EPA, *Tools of the Trade*, at 3-16. EPA has established new source set-asides in other Clean Air Act programs. See, e.g., Air Pollution Control – Transport of Emissions of Nitrogen Oxides (NOx) and Sulfur Dioxide (SO₂), 71 Fed. Reg. 25,328, 25,356 (Apr. 28, 2006) (describing set-aside provisions for new sources in the FP for CAIR); Cross State Air Pollution Rule, 76 Fed. Reg. 48,208, 48,290 (describing set-aside provisions for new sources in the CSAPR FIP).

⁸⁰ 80 Fed. Reg. at 65,010, 65,014.

⁸¹ EPA, *Tools of the Trade*, at 3-19.

⁸² This over-compliance would be mitigated if EPA implements our suggestions to address leakage in plans that do not include a new source complement.

Affected sources do not need unlimited banking to comply with the Clean Power Plan cost-effectively and without reliability issues, for several reasons. Reflecting stakeholders' concerns about the "compliance cliff" implied by the computation of state goals under the proposed Clean Power Plan, EPA revised the final rule so that the achievability of the 75 percent capacity factor under building block 2 no longer takes place at the beginning of the interim period; rather, the goal computation reflects a "glide path" of increases in NGCC utilization over the interim compliance period, which is meant to allow sources additional time to complete any infrastructure improvements and coordinate dispatch of existing NGCCs with new deployments of RE.⁸³ EPA also substantially relaxed the mass-based plan targets with the "RE Adder" discussed in Section IV. In doing so, EPA over-corrected the early period compliance obligations in a manner that may interfere with the environmental integrity of the program during the later years if unlimited banking is allowed. 2015 regulated emissions are already less than the national mass targets set by EPA. Additional retirement of aging and uneconomic coal units will generate further surplus allowances in the initial compliance periods. As explained in Section II, detailed analyses by the Sierra Club and others demonstrate that over-compliance with early year mass targets will likely create a large, early year excess of unneeded allowances. Unlimited banking of these excess allowances would thus undercut the integrity of the CPP in later years by allowing their use to eliminate the reductions anticipated during the later stages of compliance under the Clean Power Plan. These later reductions have been shown to be cost-effective and reasonable, and have been determined to be BSER. Industry has identified no clear need to carry over excess allowances in order to diminish CO2 reductions in the later years-- reductions needed to minimize the impacts of climate change.

While we support early emissions reductions, we do not believe that banking is needed to achieve them or that here, where there is an oversupply of early term allowances, banking will result in a reduction in emissions in the early term.

b. EPA Should Not Allow Borrowing Under the FP and Model Trading Rule

EPA is not proposing to allow borrowing allowances for compliance, but the agency is requesting comment on this issue.⁸⁴ Sierra Club supports EPA's proposal not to allow borrowing. Borrowing allows affected sources to bring forward allowances from a future compliance period to meet their obligations in an earlier period.⁸⁵ Like banking, borrowing would also provide affected sources with compliance flexibility. Borrowing, however, would allow an increase in emissions in excess of the target in the years those allowances are sought. In addition, borrowing can create a risk of future non-compliance if a source cannot repay the

⁸³ 80 Fed. Reg. at 64,797-64,798.

⁸⁴ 80 Fed. Reg. at 65,010.

⁸⁵ Tim Profeta and Brigham Daniels, *Design Principles for a Cap and Trade System for Greenhouse Gases*, at 14.

borrowed allowances in the latter stages of the program.⁸⁶ Moreover, as EPA itself has noted, in the context of the Clean Power Plan borrowing raises the risk that, under the rate-based program specifically, sources may not be able to repay those credits because future ERC generation is not guaranteed.⁸⁷

The Sierra Club, other NGOs, numerous states, and other countries recognize that the current CPP is a good first step, but it is not sufficient to fully address the threat of climate change. Accordingly, we have recommended, and expect that EPA and/or Congress will revisit the CPP and its targets long before 2030. If EPA allows borrowing against allowances available late in the program, lowering the targets will become more difficult since debtor sources will argue that they cannot both repay their debt and make the additional progress contemplated by the agency or Congress. Further, the agency may face complicated bankruptcy and debt collection issues that have not been considered or discussed. Is an allowance allocation “debt” dischargeable in bankruptcy? We suspect that there are many opinions on that question as well as the appropriate security and interest rate for borrowed allowances.

2. Spatial Considerations

Because the Clean Power Plan would allow trading between sources in different states (so long as they have the same type of trading program) and using allowances across the country, environmental justice communities are concerned that increases in emissions of pollutants with localized impacts (for example, SO₂ and NO_x) could occur in their communities, as polluting sources in close proximity will be allowed to purchase allowances to demonstrate compliance.

Whether EPA finalizes a method of free allocation or auction, the FIP and the model trading rule must provide that, if unacceptable pollutant concentrations are expected to, or actually occur in a particular area, EPA or the states must delineate zones where the purchase of allowances for compliance purposes is prohibited or limited by an appropriate amount.⁸⁸ These hotspot zones should be defined through the environmental justice analysis (see Section X) as well as through the assessment of co-pollutant impacts that EPA has committed to perform during the compliance period.⁸⁹

Once those areas have been delineated, EPA and the states should impose “flow controls,” which could take different forms depending on the scale of the pollution problem. For example, EPA and the states could plainly forbid the purchase of allowances for compliance purposes. And, analogous to nonattainment area provisions of the CAA, EPA or the states could

⁸⁶ EPA, *Tools of the Trade*, at 3-19.

⁸⁷ 80 Fed. Reg. at 65,010.

⁸⁸ Note that the source could still participate in a trading program. This would encourage over-compliance (reducing emissions of both CO₂ and the associated criteria and hazardous pollutants), that enables the source to sell allowances into the market. Under this approach, the buyer of the allowance helps to subsidize the emission reductions in the affected area.

⁸⁹ 80 Fed. Reg. at 65,051.

also require sources in these zones to maintain a greater number of allowances (for example, 2 instead of 1) per ton of emissions. The latter option would not prohibit trading, but would make it more expensive for these affected sources to trade allowances, which would provide them with an incentive to reduce their emissions onsite rather than purchasing allowances for compliance.⁹⁰

IV. Leakage in Mass-Based Plans

EPA has included in the final Clean Power Plan a requirement that any state implementation plan adopting a mass-based approach include program elements designed to minimize “leakage.” 80 Fed. Reg. at 64,822-23. EPA defines leakage as

the potential for an alternative form of implementation of the BSER (e.g., the rate-based and mass-based state goals) to create a larger incentive for affected EGUs to shift generation to new fossil fuel-fired EGUs relative to what would occur when the implementation of the BSER took the form of standards of performance incorporating the subcategory-specific emission performance rates representing the BSER.

Id. at 64,823. In other words, EPA reiterates that the subcategory-specific emission performance rates (known as the “dual rate” approach) are the BSER, and that the other plan approaches permitted by EPA that take the form of state goals are merely alternatives. EPA further concludes that where those alternatives create a greater incentive for sources to shift more generation to new fossil sources relative to what would occur under the dual rate program, “leakage” occurs. EPA is correct that the incentives to shift generation to new fossil fuel-fired EGUs are greater under mass-based programs compared to under dual rate (or, for that matter, the blended rate) plans, as explained further below.

The simplest and best way to address leakage in the mass-based model rule would be to include the “new source complement” approach as the only presumptively approvable option for states. Incentive-based approaches are much less likely to be effective and much harder to evaluate. Moreover, there is no one-size-fits-all regulation EPA could pose that would be equally effective across all states and mixes of generation types.

For mass-based federal plans, EPA asserts that it lacks legal authority to include a new source complement. 80 Fed. Reg. at *Id.* at 65,019. Yet the agency’s proposed approach to leakage in the proposed federal plan and model rules – an output-based set-aside for existing NGCC units and a modest renewable energy set-aside – is insufficient to minimize leakage as required by the CPP. We recommend below a number of improvements and alternatives to EPA’s approach that should be adopted for the federal plan. EPA should also include these features in its mass-based model trading rule if it declines to include a new source complement in its presumptively

⁹⁰ Kaswan, *Environmental Justice and Domestic Climate Change Policy*, 38 *Envtl. L. Rep. News & Analysis* 10,287, 10,293-94 (May 2008), at 10,306.

approvable model. To summarize, in the absence of a new source complement, we recommend that to minimize leakage EPA should:

- Significantly expand the size of the RE set-aside pool and broaden the eligibility to include EE providers.
- Require RE sources to actually earn set-aside allowances on a megawatt-hour-by-megawatt-hour basis, rather than allocating the entire pool of allowances to RE sources on a pro-rata basis, and either permanently retire from the pool or hold in reserve for future years' RE set-asides any unused allowances.
- Design any final Output Based Allocation (“OBA”) set-aside program with reference to correct and defensible modeling, including consideration of how the set-aside will affect not just NGCC utilization, but RE and EE growth as well. If EPA determines an OBA set-aside is justified, it should award allowances only to units that operate above their 2012 capacity factors. Further, it should allocate those allowances to sources based on their share of total incremental generation from the entire NGCC fleet in a given state.
- As an alternative to the set-aside approach, include in the model rule a “true-up” procedure by which the state would update the size of the pool of mass-based allowances to be issued in a given year based on an updated conversion of the state’s rate-based target to the mass based target. The update would be based on expected generation from regulated sources (i.e., existing fossil generation, new RE, new or uprated nuclear generation, and EE) in a given compliance year and would ensure the equivalency between rate- and mass-based programs.
- Consider encouraging states to include Renewable Portfolio Standards in their state plans as part of an anti-leakage demonstration.

A. Defining the leakage issue.

Rate-based plans (whether dual or blended rate) offer a greater incentive for sources to replace retired or reduced fossil generation with electricity from units that will produce ERCs (namely, incremental RE generation or ramped-up existing NGCC generation⁹¹), in contrast to units that will not produce ERCs (i.e., new fossil-fired generation). In fact, fossil sources in rate-based states *cannot* comply with their emission targets unless they purchase a certain quantity of ERCs,⁹² effectively guaranteeing an increase in RE generation, or EE savings, and/or some amount of re-dispatch from existing coal to existing gas. On the other hand, under mass-based

⁹¹ Although blended rate systems do not actually award gas-shift ERCs to existing NGCCs, they nevertheless provide EGU fleets with a greater incentive than mass-based programs would to shift generation from fossil steam units to existing (as opposed to new) NGCCs, since a shift of this nature would reduce the fleet’s blended rate and thereby help it achieve compliance.

⁹² There is one exception: in the early years of the program, significant numbers of NGCC units will be able to meet their subcategory-specific target simply by operating at their existing emission rates, requiring no additional ERCs. We discuss this more in Section VII below.

plans covering existing sources only, this incentive disappears: emissions from new fossil units are not covered under the program, and sources may find it economically advantageous to shift generation to these units as opposed to new RE or ramped-up generation from existing NGCC plants. EPA is therefore rightly concerned that this phenomenon could “undermine[] the intent of this rule and [its] overall emission reduction goals,” *id.*, and EPA correctly admonishes that “if the form of the standard [e.g., a mass-based existing source only plan] does not address leakage or incents the kinds of generation shifts that we identify as leakage, the states must otherwise address leakage in order to ensure that the standards of performance applied to the affected EGUs are, in the aggregate, at least equivalent with the emission performance rates [i.e., the dual rate], and therefore appropriately reflect the BSER as required by the statute.” 80 Fed. Reg. at 64,823.

EPA’s discussion of the need to avoid leakage is premised on the notion of *equivalence*: under section 111(d), states can choose their own program approaches so long as their plans will yield results that are environmentally equivalent to those expected under EPA’s BSER determination. The agency has made clear that leakage occurs whenever an affected EGU shifts more of its generation to new fossil units (primarily new NGCCs) under a mass-based plan than it would under a corresponding rate-based plan. Under the rate program, each fossil unit can only achieve compliance by acquiring some quantity of ERCs under any operational scenario, thus incentivizing either increased RE generation and/or ramped-up NGCC generation. Thus, a proper anti-leakage test must ensure that any mass-based plan does not incentivize more generation from new NGCC units, and less generation from either incremental RE or existing NGCC, than would its rate-based counterpart. Otherwise, there is no actual equivalence between rate-based and mass-based plans in practice.

For example, suppose a particular state were to adopt a rate-based approach that resulted in 30 million MWh of generation from the state’s fleet of existing NGCCs. If, under the corresponding mass-based program, the state’s existing NGCC fleet were to generate just 20 million MWh from NGCCs, with new NGCC units—which are not subject to regulation under the Clean Power Plan—making up the 10 million MWh difference, this would constitute leakage. Similarly, consider a coal-heavy state that has no existing NGCC units. Under a rate-based program, the state must necessarily invest in new RE to generate ERCs for its coal plants to acquire and use toward compliance, since there are no existing NGCC units in the state that can generate gas-shift ERCs. Under a mass-based program, however, the state could forgo the additional investment in RE and instead replace some of its coal-fired generation with electricity from new NGCC units that are not subject to the program’s emission reduction requirements. This also qualifies as leakage. The anti-leakage measures in either a state implementation plan or a FP must protect against leakage in whatever form it may take, as we discuss below.

B. EPA’s Proposed Solutions to Leakage.

In the preamble to the final Clean Power Plan, EPA discusses a number of anti-leakage options that mass-based states may adopt. *Id.* at 64,887-90. Among these options is a new source complement, which would establish state-enforceable emission limited for new fossil fuel-fired EGUs in any mass-based state that chooses to select one. *Id.* at 64,888-89, 64,834 n. 793. A new source complement would effectively deter leakage, since new fossil units would also be subject to legally binding emission limits and would therefore have no operational advantages over existed sources. The new source complement also has the advantage of providing transparency and certainty as to new source emissions. We therefore strongly urge all mass-based states to adopt the new source complement approach for avoiding leakage. We also urge EPA to include a new source complement (or, alternatively, a true-up procedure of the kind we discuss below) in the model trading rule for states. States may opt not to adopt the new source complement, but if they do, they must include defensible anti-leakage provisions in their plans.

In stepping into the shoes of a state by issuing any mass-based federal plan, EPA will similarly have to address leakage to ensure that the plan creates similar incentives as BSER. However, EPA has taken the position that it lacks authority under section 111(d) to include new source complements in mass-based federal plans. *Id.* at 65,019. The agency therefore proposes a different anti-leakage approach for its federal plans (which it includes in its mass-based model trading rule) on which it now requests comment. The agency's proposal includes two components. First, EPA proposes an "output-based allocation" program, which would set aside a fixed quantity of allowances for a given state that would be awarded during the second and third compliance periods to existing NGCC units based on their generation in the prior compliance period. *Id.* at 65,019-22. Second, EPA proposes to set aside five percent of each state's emissions budget for RE generators, to be awarded to those sources based on their pro-rata share of the state's overall pool of incremental RE generation during each year of a given compliance period. *Id.* at 65,022-25. Generators receiving these allowances could then sell them to emitting sources, effectively receiving a subsidy. The agency proposes to include these two program elements in its mass-based model trading rule and to incorporate them by reference into any mass-based FPs the agency may eventually promulgate. *See id.* at 64,975.

The efficacy of these two programs in combatting leakage will depend heavily on a number of factors, including the size of the set-aside pools in relation to the amount of leakage that is expected, the price of allowances (at least with regard to the RE set-aside), and the relative price of different generating resources during the compliance period. As currently written, EPA's approach does not adequately account for these factors, and below, we provide a strategy that will more effectively address leakage and ensure the environmental integrity of the program.

1. EPA's Output-Based Allocation ("OBA") Proposal

With no anti-leakage provisions in place, new NGCC units under a mass-based system have a practical advantage over existing NGCC units, since the latter must obtain and surrender

emission allowances to the governing authority in order to operate, while the former have no such obligation. The agency proposes to correct this imbalance by setting aside a fixed⁹³ pool of allowances for each state with existing NGCCs. During the second and third compliance periods, units are awarded allowances (valued at 1,030 lbs CO₂/MWh) from this pool for each megawatt-hour above a 50 percent summer month capacity factor that they generated during the prior compliance period. By granting free allowances to NGCCs for a certain percentage of incremental generation, the OBA set-aside program seeks to level the playing field between existing and new NGCCs and thus prevent mass-based states from generating more electricity from new, unregulated NGCCs for this share of their generation than they would under a rate-based scenario.

While an OBA set-aside program of this nature could, in theory, avoid a portion of the potential leakage, there are a number of problems with EPA's approach. First, there is no evidence that the size of each state's set-aside pool is nearly large enough to deter all the excess utilization of new NGCCs that would occur under a mass-based approach. As a number of other groups have discussed in their comments to the agency, it is likely that EPA's set-aside pool is far too small to avoid significant amounts of leakage to new gas generation. Our analysis⁹⁴ indicates that across all states, approximately 77 percent the proposed OBA set-aside allowances would be awarded to NGCC units merely for maintaining generation at 2012 historic levels. This effectively shrinks the allowance pool for incremental generation by more than three-quarters. Furthermore, in its Regulatory Impact Assessment ("RIA") for the Clean Power Plan, the agency conducted IPM modeling runs of mass-based approaches with and without the five percent RE set-aside (which we discuss below), but did not fully model the effects of an OBA set-aside for existing NGCC units.⁹⁵ Nor did EPA model dual-rate scenarios in the RIA, but instead compared only blended-rate and mass-based approaches. In the absence of proper modeling, and in light of other analysis performed since EPA issued the final rule (such as NRDC's IPM modeling), EPA cannot credibly claim that its proposed OBA set-aside is sufficient to deter leakage. The agency

⁹³ The pool is fixed not as a percentage of the state's overall emissions budget, but as an absolute number. For instance, Alabama's annual pool of OBA set-asides is 4,185,496 tons of CO₂. On the whole, the size of the OBA set-aside pool is approximately six percent of the states' emission budgets, but these figures vary dramatically from one state to the next. In some states, the size of the OBA set-aside pool is less than one percent of the total emissions budget, while in others it is over 20 percent of the total budget. Each state's OBA set-aside pool is presented in Table 9 at 80 Fed. Reg. 65,022.

⁹⁴ This analysis is provided at Attachment 2.

⁹⁵ EPA did, however, develop an algorithm that relied on data from the agency's IPM modeling runs for a mass-based compliance scenario to approximate the impact of the proposed OBA program. The modeling script for this algorithm can be found in the docket at EPA-HQ-OAR-2015-0199-0158. This script reports a model output "% change in new NGCC w OBA." This result is not discussed either in the preamble to the final Clean Power Plan or in EPA's *Allowance Allocation Proposed Rule Technical Support Document* (Aug. 2015), available at <http://www.epa.gov/sites/production/files/2015-11/documents/tsd-fp-allowance-allocations.pdf>.

must design any final OBA set-aside program with reference to correct and defensible modeling.

Second, EPA must consider how the OBA set-aside will effect not just NGCC utilization, but RE and EE growth as well. Under rate-based programs, both fossil steam units *and* existing NGCC plants require ERCs generated from RE (and, where permitted, EE) in order to meet their emission limits. The more existing NGCC units operate, the more ERCs they will require from RE or EE resources. The OBA set-aside program presumes that existing NGCC units will operate more than they would in its absence, but EPA has not analyzed or even discussed whether the program would achieve similar levels of RE/EE dispatch as one would see under similar NGCC utilization in a rate-based program. EPA must therefore incorporate this analysis when formulating any OBA set-aside program it finalizes (either in a modeling trading rule or a final FP) and tailor any such program to ensure that similar incentives for EE and RE exist under all approved scenarios. This analysis will show different effects from one state to the next, depending on the emission rates and mix of fossil generation in each state.

Finally, the manner in which EPA proposes to allocate allowances from within the set-aside pool is flawed. The agency has limited OBA set-aside allowances to units that operate above a 50 percent summer month capacity factor, and proposes to award units for all generation above the 50 percent floor. This effectively rewards units that were already operating at high capacity factors while punishing historically lower-generating units, which have the greatest potential to increase their utilization. For instance, whereas an NGCC that increased its capacity factor from 20 percent in 2012 to 45 percent during the first compliance period would receive no allocations under the OBA set-aside program, whereas a unit that dropped from a 90 percent to a 70 percent capacity factor would receive allowances for the 20 percent delta between 50 and 70, despite the fact that it generated less electricity in the first compliance period than in 2012. To rectify this flaw, EPA should award allowances only to units that operate above their 2012 capacity factors and allocate those allowances to sources based on their share of total incremental generation from the entire NGCC fleet in that state.

2. EPA's RE Set-Aside Proposal

The second element of EPA's anti-leakage proposal would set aside five percent of each state's emissions budget to award to RE sources in the state. Because RE is, by definition, zero-emitting, these sources do not need to use these allowances for compliance and can therefore sell them to regulated fossil units. The program therefore functions as a financial incentive to RE units based on generation. The agency proposes to allow RE operators to apply for set-aside allowances prior to each year or compliance period based on their expected generation in that year. The governing authority will then allocate the entire set-aside pool to sources that have applied based on each unit's pro-rate share of incremental generation. *See generally* 80 Fed. Reg. at 65,022-25.

After careful analysis, we have concluded that the RE set-aside proposal in its current form will have very little impact on RE generation and will not avoid leakage to new fossil generators. The program's effectiveness is dependent on the size of the financial incentive it provides to RE generators, which is, in turn, contingent on the value of the allowances those generators will receive under the allocation scheme. In its TSD analyzing the RE set-aside proposal, EPA considered a range of four values for allowances: \$5, 10, 15, and 20 per ton.⁹⁶ EPA concluded that, given a 5 percent set-aside pool, an allowance price between \$10-15 per ton would be sufficient to offset the LCOE differences as EPA analyzed them between onshore wind and advanced NGCC generation; and given a 10 percent set-aside pool, an allowance price of just under \$20 per ton would be sufficient to offset the EPA's reported LCOE differences between solar PV and advanced NGCC. Since EPA has proposed a 5 percent RE set-aside, even at \$20 per ton would only offset half of EPA's reported LCOE difference between those two resources.

Yet observations from economists and analysts, IPM modeling performed by NRDC (discussed in that organization's comments in this docket), and experience from existing carbon trading programs all indicate that the market price of allowances under the CPP will be far lower than EPA's analysis presumes. The most commonly anticipated price range for allowances through 2025 in an existing-only mass-based program are on the order of \$1-2 per ton or even lower. With prices at these levels, a five- or even 10-percent set-aside would have virtually no appreciable impact towards incentivizing additional RE generation. Keeping all other parameters in EPA's analysis constant, an allowance price of \$1 per ton would only add a \$0.25/MWh incentive for incremental RE generation given a 5 percent set-aside pool. As a point of comparison, the Production Tax Credit grants onshore wind generators a subsidy worth \$23 per megawatt-hour (although the value of this subsidy will decline in the coming years).

It is important to note that the cost of wind and solar PV generation varies significantly across the country, and in many areas, these resources are increasingly competitive with fossil-fired generation, reaching grid parity in a growing number of regions. Solar PV in particular continues to decline rapidly in cost, and with the recent extension of the Investment and Production Tax Credits, we expect to see market shares of both wind and solar continue to expand. Nevertheless, EPA's anti-leakage provisions must ensure that mass-based plans do not incentivize a greater shift toward new generation at the expense of RE *than would occur under a rate-based program*. Even where wind and solar PV compete strongly against new NGCC resources, some amount of leakage is still likely to occur, and the tiny financial incentive offered by a 5 percent set-aside at \$1-2 per allowance would do little or nothing to deter that leakage.

For any RE set-aside program to have anywhere close to its necessary effect, EPA must make several changes to its proposal. First, EPA must significantly expand the size of the set-aside pools. One potential option would be for EPA to link the number of allowances in the pools to

the total Building Block 3 potentials. Under this approach, EPA would first determine a given state's anticipated pro-rata share of the total Block 3 RE potential for its region in a specified year, then multiply those values by the state's blended rate for that year to calculate the size of the state's RE set-aside pool for that year. Second, whereas EPA's proposal would always allocate the entire pool of allowances to RE sources on a pro-rata basis, a superior approach would require RE sources to actually earn set-aside allowances on a megawatt-hour-by-megawatt-hour basis. For each incremental megawatt-hour generated, a source would receive an allowance equal to the state's blended rate for that year. If the state's fleet of RE generators fell short of the total allowance pool, those allowances would either be permanently retired from the pool or held in reserve for future years if the state's fleet were to exceed expectations and generate more RE than anticipated – in other words, RE developers would have to “use it or lose it.”

An expanded set-aside pool combined with a “use-it-or-lose-it” requirement would increase the incentive for increased RE generation in a number of ways. First, it would simply enlarge the total value of the subsidy for which the RE fleet as a whole would be eligible. Second, it would encourage each RE source to generate more electricity as an absolute matter, rather than occupy a larger portion of the market vis-à-vis its competitors. Under EPA's approach, if only one RE source were to generate just a single megawatt-hour of incremental electricity in a given compliance year, it would receive the entirety of that state's set-aside pool. By contrast, under our suggested approach, it would receive just one allowance, which we recommended be set at the state's blended rate. Third, by retiring or sequestering unclaimed allowances, our approach would ensure that any failure on the part of RE resources to meet anticipated levels of generation would be offset by a corresponding reduction in the state's total emission budget for affected EGUs. Thus, even if leakage to new sources were to occur, the *additional* emission reductions from existing EGUs, achieved through a shrinking emissions budget, would help ensure overall environmental equivalence of the different program types.

Alternatively, EPA could set the size and allocation of its RE set-aside pool on the basis of what we call the “RE Adder.” We refer here to the additional tons of CO₂ that EPA awarded to mass-based states (amounting to nearly 1.3 billion tons nationwide over the full compliance period) to account for a hypothetical possibility in rate-based programs where states in regions with excess RE potential built out the full amount of their Build Block 3 capacity, well beyond the amount needed to ensure compliance with the rule's targets. Under the agency's reasoning, RE generators in these states could then introduce large amounts of additional ERCs into the market and thus actually enable *more* fossil generation, rather than displace it. The RE Adder calculates how many additional tons would be emitted if this scenario were to play out to the full extent, then awards those extra tons to mass-based states without requiring that the excess RE in question actually be generated (which would necessarily have to occur under the rate-based hypothetical). By sequestering or retiring unclaimed allowances from the RE set-aside pool, our proposal would help ensure that the excess megawatt-hours assumed for the purpose of the RE Adder in mass-based states actually be generated.

While we believe that our approach to RE set-asides would deter significantly more leakage to new sources than EPA's program, we emphasize that the relationship between existing fossil generation, incremental RE, ramped-up existing NGCC dispatch, and new NGCC generation is different for each state and changes over time. As discussed earlier, we live in a rapidly changing energy environment, and the relative costs of resources today may be very different in future years. Therefore, for any state receiving a FP, EPA must conduct a series of comprehensive modeling runs that represent a *range* of representative inputs in order to determine whether a proposed mass-based FP would, in fact, produce environmentally equivalent results to a corresponding rate-based program. Notably, in the modeling runs the agency performed for the Clean Power Plan's RIA, it relied on a number of problematic inputs, including the amount of exogenously-entered EE—nearly 350 million avoided MWh in 2030 under *all* compliance scenarios—as well as prices for coal and natural gas that are at odds with today's prices and many market forecasts⁹⁷. The value of emission allowances under the Clean Power Plan (and, thus, the effectiveness of any set-aside program for RE) will be highly sensitive to the fossil fuel prices in future years. EPA must therefore conduct a sensitivity analysis to determine the range of future fossil prices over which its proposed anti-leakage provisions will actually achieve their intended effect. This is especially critical in light of the fact that, as noted above, the agency did not model a dual-rate compliance program, nor did it model the results of the output-based allocation scheme. The agency must correct these shortcomings in future analyses of the efficacy of leakage provisions for mass-based programs, including, but not limited to, any such programs that may be implemented pursuant to a FP.

If the agency determines from its modeling that the anti-leakage provisions in a prospective mass-based FP—or, indeed, any other aspect of the plan—will not produce results that are

⁹⁷ The Energy Information Administration's ("EIA") forecasts are in large part constrained by that agency's internal policies, including (for instance) one that required EIA to ignore the possibility of a legislative extension of the Production and Investment Tax Credits—which, in fact, recently occurred—as well as other trends. This often leads to EIA market projections that significantly miss the mark. Furthermore, many key factors influencing energy markets, such as events that define future gas prices, are simply not knowable several years in advance. However, even with full knowledge of the growth in non-conventional natural gas development, EIA has consistently overestimated natural gas prices in its medium-term (five-year) forecasts, while at the same time underestimating coal prices. See, e.g., AEO2005 through AEO2010 forecasts relative to actual natural gas and coal prices for EGUs (Tables 7a, 7b, 11a, and 11b) in EIA, *Annual Energy Outlook Retrospective Review: Evaluation of 2014 and Prior Reference Case Projections* (Mar. 2015), available at <http://www.eia.gov/forecasts/aeo/retrospective/pdf/retrospective.pdf>. For example, AEO 2008 projected that natural gas prices in 2012 would be \$7.26/MMBtu, while actual gas prices that year were \$3.54/MMBtu. That same projection forecasted coal prices of \$1.99/MMBtu, while actual coal prices that year were \$2.38/MMBtu. (Each figure represents nominal dollars.) While EPA's modeling assumes natural gas prices for 2020 in the \$6/MMBtu range, numerous other forecasts are substantially lower. See, e.g., Knoema, *Natural Gas Prices: Long Term Forecast to 2020 | Data and Charts*, <http://knoema.com/ncszer/natural-gas-prices-long-term-forecast-to-2020-data-and-charts> (last visited Jan. 18, 2015).

environmentally equivalent or superior to a corresponding rate-based plan, EPA must instead develop a rate-based FP for that state. Indeed, the Clean Power Plan would require it, since an implementation plan that fell short of the agency’s BSER would not meet the standards of section 111(d). For this reason, it is particularly crucial that EPA avoid selecting a mass-based approach as the uniform program type for all FPs. Instead, EPA must develop FPs on a state-by-state basis, and must only adopt mass-based FPs that can be shown through modeling to be environmentally equivalent to their rate-based counterparts. By the same token, EPA should conduct a detailed analysis of each existing source-only mass-based implementation plan submitted by a state for approval. If any state plan cannot demonstrate equivalence to its corresponding rate-based program through modeling, EPA should not grant approval and should instigate a rate-based FP if the state declines to amend its program. Alternatively, a state can adopt a mass-based plan that includes a new source complement, which we strongly recommend for all mass-based states. By limiting emissions from new fossil generation as well as from existing sources, this approach would avoid leakage problems and render additional modeling unnecessary.

Lastly, the agency should remain open to including EE companies among those eligible for RE set-aside allowances. In particular, the agency should allocate some percentage of the RE set-aside pool to companies that install EE programs in low-income communities. To the extent that EPA can identify RE projects benefiting low-income areas—particularly distributed generation—the agency should also allocate some RE set-aside allowances to those entities as well.⁹⁸

C. Other Alternatives to Address Leakage.

1. The RPS Option

Another tool for addressing leakage could be state renewable portfolio standards (“RPSs”). As discussed above, leakage to new fossil sources under existing source-only mass-based plans can result in less generation from RE sources, from existing gas plants, or both of these sources in comparison to the generation mix that would occur under a rate-based program. By mandating a fixed quantity of RE generation that is equal to or greater than the amount expected under a rate-based program, a legally enforceable RPS incorporated into a mass-based program can be deemed to satisfy the Clean Power Plan’s anti-leakage provisions with respect to RE. Qualifying RPSs should be required to satisfy appropriate requirements with regard to both the percentage of RE mandated and the types of resources that may be considered RE. In many or perhaps most cases, a reasonably aggressive RPS will also ensure against leakage from existing gas to new gas sources, but this is not guaranteed. Therefore, a states selecting an RPS approach as its anti-leakage strategy should still be required to make a showing that its program will not permit leakage from existing gas to new gas units. In addition, during the development process for each FP, EPA should work with stakeholders and state authorities to consider whether an appropriate RPS is the preferable option for avoiding leakage.

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⁹⁸ See Section VI.A proposing a definition of renewable energy projects that would qualify as benefiting low-income communities.

Strong and enforceable RPSs have many advantages of the approaches discussed above: they are simpler, more transparent, and guarantee a certain percentage of RE generation years in advance. In addition, a proper RPS may obviate the need for comprehensive modeling discussed above, as well as the need for revisions, added incentives, and other options should other kinds of anti-leakage measures prove ineffective. EPA should therefore designate the RPS option as an adequate anti-leakage measure, provided that any state selecting this approach demonstrate that its RPS (or some other component of its plan) will sufficiently avoid leakage from existing NGCC to new NGCC units.

2. The True-Up Option

Sierra Club has long advocated the benefit of a “true-up” procedure for converting rate-based goals into mass-based targets. This mechanism, which we explain below, ensures that mass-based targets properly correspond to rate-based targets in light of generation shifts that may occur, and entail regular adjustments in a state’s total allowance cap based on changes in the state’s pool of regulated generation. Because the true-up procedure actually changes mass-based targets, EPA may need to formally amend the Clean Power Plan to allow for this mechanism in a federal plan. We urge the agency to open a notice-and-comment rulemaking permitting a true-up in any FP as soon as possible. States may include true-ups in their own plans without an amendment to the rule (subject to any state-specific limitations), and EPA should encourage eligible states to do so if they do not include a new-source complement in their mass-based programs.

The true-up relies upon the straightforward, mathematically linear relationship between rate and mass: a state’s rate-based goal times its expected generation from regulated sources (i.e., existing fossil generation, new RE, new or uprated nuclear generation, and EE) in a given compliance year represents the size of the state’s mass-based target. Under a true-up procedure, the governing authority (EPA under a FP, a state under a SIP) simply repeats this calculation for each compliance year⁹⁹ to ensure that rate- and mass-based goals bear the same relationship in practice that they did when the agency performed the initial calculations. Because the state’s rate-based goals are pre-determined by EPA, the mass-based goals will vary depending upon the amount of regulated generation in a state. If the state’s sum total of regulated generation remains constant (as is assumed under EPA’s goal-setting formula for BSER), its mass-based targets will decline directly in proportion to the rate-based goals. If, on the other hand, regulated generation increases decreases the state’s mass-based target should reflect those changes. The true-up is simply a method to ensure the equivalence of mass-based and rate-based targets.¹⁰⁰

⁹⁹ Or each year in which allowances are auctioned or allocated, if that is not annually.

¹⁰⁰ As noted below, we acknowledge that permitting this approach may require additional rulemaking.

More specifically, the true-up is a tool that can deter leakage. To the extent that a state sees a greater shift to new fossil generation under a mass-based program, the state's sum total of regulated generation would decrease correspondingly. Therefore, through the true-up calculation, the state's overall emissions budget would decrease. This would either deter that additional shift to new sources in the first place, or, if it actually occurs, offset it by constraining generation from existing sources. In either case, the true-up ensures environmental equivalence between the different program types. Moreover, the true-up ensures that mass-based states are not penalized by overly stringent targets if they see their electricity demand outstrip expectations due to economic growth. Under this scenario, the governing authority will determine during the true-up that regulated generation has increased, and will upwardly adjust the mass target accordingly. Finally, the true-up can ensure that in any mass-based state, the additional tons from the RE adder are only awarded to the state if, and to the extent that, the hypothetical RE actually ends up being built and generating electricity. If the excess RE anticipated under the RE adder scenario is not actually constructed in a mass-based state, the true-up should remove the additional allowances offered to that state under the Adder, or should award them directly in proportion to however much excess RE is actually built.

We urge EPA to include provisions implementing this true-up procedure in the model trading rules for state mass-based plans. States can choose not to adopt it, but in the absence of the true-up or a new source complement, mass-based states should be required to include strong anti-leakage provisions in their implementation plans that adhere to the principles discussed above. We also strongly encourage EPA to incorporate a true-up procedure into future iterations of the Clean Power Plan, so that the agency itself performs a true-up calculation for each state after every compliance year, adjusting the state's subsequent year's goal accordingly. As noted above, because this procedure would officially change state targets, EPA may need to open an additional notice-and-comment rulemaking. The agency should undertake this process as soon as possible, although the first true-up should not occur until closer to the compliance period actually begins. The agency should then conduct annual true-up calculations in the years that follow.

V. Coal-Fired Power Plant Retirements

A. The Federal Plan and Model Rules Should Facilitate Coal-Burning Power Plant Retirements as a Compliance Pathway.

EPA should include in the model rules options for incentivizing or requiring coal plant retirements as a Clean Power Plan compliance measure, and should leave open the possibility of a unit-specific retirement approach in states that receive a federal plan. In both the federal plan and model rules, the agency should, at a minimum, avoid creating perverse incentives for plants that would otherwise retire to continue operating.

Coal plant retirements not only benefit the stability of the climate by eliminating carbon dioxide emissions, they also result in enormous benefits for public health locally and across state lines by eliminating soot and fine particulates, sulfur dioxide, nitrogen oxides, mercury, acid gases, and other air pollution that causes disease and death.¹⁰¹ Wastewater from coal-fired power plants pollutes surface and ground water. Deposition of mercury from air to water causes lakes to be unfishable. Coal-burning creates toxic solid waste in the form of coal ash that can devastate whole communities when containments break or can slowly poison drinking water supplies. Coal mining, particularly mountain top removal mining, causes a whole host of devastating environmental and human harms. All of these environmental and human impacts that occur at each phase of coal's life cycle are ameliorated when coal plants retire.

The environmental benefits of retiring a coal-fired power plant rather than continuing to operate at a low level go beyond the incremental benefits of reducing generation down to zero. For example, power plant efficiencies decline sharply at low load levels, thus creating more CO₂ per unit of electrical output. Heightened competition from natural gas and renewable resources have led many coal-fired units to transition from baseload to intermittent operation. Such intermittent operation compromises coal plant efficiency and, as a result, economic viability. In response, plant operators are often finding it more profitable to retire aging coal plants.¹⁰² Further, by retiring instead of continuing to operate a low level, sources can avoid potentially costly retrofits to address other environmental regulations with upcoming compliance dates. For example, by fully eliminating wastewater by retiring, sources can avoid retrofits that would be needed to address EPA's Effluent Limitation Guidelines if the source kept operating. Where capacity markets exist, keeping a marginal plant running rather than retiring it can also suppress capacity prices that new market entrants – including renewable energy producers – can earn, thereby tamping down the economic incentive for those cleaner resources to come on line.

Hundreds of coal units are already retiring due to several factors unrelated to the Clean Power Plan—including lower natural gas prices, increased competition from renewable wind and solar resources, and the higher operating and maintenance costs of an aging coal fleet—and are retiring without the dire consequences that were once predicted.¹⁰³

¹⁰¹ See Rachel Cleetus et al., Union of Concerned Scientists, *Ripe for Retirement: The Case for Closing America's Costliest Coal Plants* (Nov. 2012), at 9, available at http://www.ucsusa.org/sites/default/files/legacy/assets/documents/clean_energy/Ripe-for-Retirement-Full-Report.pdf.

¹⁰² See Schlissel Decl. ¶¶ 32-38; Anya Litvak, *What happens when coal plants move from leaders to followers?*, *Pittsburg Post-Gazette* (Nov. 24, 2015), available at <http://powersource.post-gazette.com/powersource/consumers-powersource/2015/11/24/What-happens-when-coal-plants-move-from-leaders-to-followers-baseload-cycling/stories/201511240007>.

¹⁰³ See Sanzillo Decl. ¶¶ 7-31; Tierney Decl. ¶¶ 67-73; Burtraw Decl. ¶¶ 8-15; Schlissel Decl. ¶¶ 10-63 included as Attachment 4; Rábago Decl. ¶¶ 10- 12, 15, included as Attachment 5. Joint Addendum:

Experience shows that coal retirements encourage investments in clean energy and can result in new jobs and lower energy bills. For example, in February 2014, the Public Service Company of Oklahoma (PSO) reached an agreement with EPA to retire two units at the coal-fired Northeastern Station in order to comply with the regional haze rule. The company committed to retiring one unit in 2016, and adding environmental controls to a second unit that would then retire in 2026.¹⁰⁴ The agreement saved the company and its customers \$650 million in additional near-term costs, and came shortly after PSO signed contracts to add nearly 600 MW of Oklahoma wind energy by 2016. PSO initially sought long-term purchases of up to 200 MW of new wind energy resources, but decided to contract for an additional 400 MW due to the low cost of wind. These wind contracts are expected to lower customer costs by an estimated \$53 million in the first year, with annual savings growing over the 20-year length of the contracts.¹⁰⁵

As another example, in April 2011, the Tennessee Valley Authority (TVA) agreed to permanently retire 18 of its coal-burning units, totaling 2,700 MW, and clean up or retire an additional 2,800 MW of coal-fired energy over the next decade. As part of the agreement, TVA agreed to invest \$350 million in energy efficiency programs, clean-energy technology, and other environmental programs. To replace electricity demand once fueled by coal, TVA is expanding energy efficiency programs and its renewable energy portfolio, while creating clean-energy jobs for local communities in the process.¹⁰⁶

In June 2011, CPS Energy announced that it would retire the 871 MW J.T. Deely coal plant by 2018, about 15 years earlier than planned. CPS Energy committed to transferring workers to other positions within the utility, assuring no jobs would be lost due to the plant's retirement. Additionally, clean-energy and energy-conservation companies are scaling up and creating more clean energy jobs to help meet electricity demand once the Deely plant is retired.¹⁰⁷

Exhibits in Support of Movant Resp't-Intervenors' Responses in Opp'n to Mot. for Stay, *West Virginia v. EPA*, Case No. 15-1363 and Consolidated Cases, Doc. No. 1587530 (D.C. Cir. Dec. 8, 2015).

¹⁰⁴ Paul Monies, *Agency approves PSO plan for regional haze*, NewsOK, Feb. 10, 2014, available at <http://newsok.com/article/3932305>.

¹⁰⁵ *PSO Wind Contracts Win Approval*, PSO Press Release, Feb. 4, 2014, available at <https://www.psoklahoma.com/info/news/viewRelease.aspx?releaseID=1518>;

EPA Withdraws Federal Plan, Approves State of Oklahoma Environmental Compliance Plan for PSO, PSO Press Release, Feb. 10, 2014, available at <https://www.psoklahoma.com/info/news/viewRelease.aspx?releaseID=1526>.

¹⁰⁶ *Tennessee Valley Authority Coal Plant Closures*, Sierra Club Fact Sheet, available at https://content.sierraclub.org/creative-archive/sites/content.sierraclub.org/creative-archive/files/pdfs/100_247_TVAPlantClosures_FactSht_02_low.pdf; Tennessee Valley Authority Clean Air Act Settlement, U.S. EPA, available at <http://www.epa.gov/enforcement/tennessee-valley-authority-clean-air-act-settlement> (last accessed Jan. 19, 2016).

¹⁰⁷ *San Antonio, Texas: A New Energy Economy*, Sierra Club Fact Sheet, available at https://content.sierraclub.org/creative-archive/sites/content.sierraclub.org/creative-archive/files/pdfs/100_247_DeelyLonestar_FactSht_01_low.pdf.

Coal units accounted for most retirements in 2015, while nearly all new utility-scale capacity (of 1 MW or greater) consisted of natural gas, wind, and solar units. On average, natural gas combined-cycle units operated at a higher capacity in 2015 than in the previous two years, while the average capacity factor for coal-fired generators declined. During this time, wholesale electricity prices declined significantly - down 27-37% on a monthly average basis for on-peak hours nationwide, when compared to 2014.¹⁰⁸

Sierra Club shares concerns about the economic impacts of plant retirements on workers employed by those plants, and on communities currently dependent on these facilities for tax revenues. The recommendations below aim to encourage earlier certainty about coal plant retirements so that individuals, companies, and local governments can better prepare themselves for the transition. Earlier certainty about retirements will also allow grid operators ample time to study whether resource capacity or local reliability problems may result and, if so, to implement timely solutions.

1. EPA Should Avoid Propping Up Uneconomic Coal-Fired Power Plants By Providing Free Allowances Based on Historic Generation.

EPA proposes in the mass based federal plan and model trading rule to allocate allowances based on an affected EGU's historical generation in one fixed year (2012). EPA proposes that if a source does not operate for two years in a row, the source would receive allowances for two years and any further remaining years in the compliance period. At the end of that compliance period, that source would stop receiving allowances.¹⁰⁹ This approach is intended to avoid a situation where a plant continues operating at a low level of generation, rather than retiring, so it can continue receiving its full slate of allowances, which it could then sell or use for compliance for other affected sources under the same ownership. EPA's proposal might mitigate the perverse incentive that would exist if a source immediately became ineligible for allowances upon retirement and is preferable to the alternative of continuing to issue the allowances to retired plants in perpetuity. However, it does not get to the root of the problem, which is EPA's allocation methodology.

A better solution would be to require sources to purchase allowances, rather than allocating them for free -- an approach that Sierra Club and many other stakeholders strongly urge. This would better align the option to retire with the source's economic incentives. When a source is not receiving a free allocation simply for continuing to operate, there is no regulatory incentive

¹⁰⁸ *Wholesale power prices decrease across the country in 2015*, Today in Energy, U.S. Energy Information Administration, Jan. 11, 2016.

¹⁰⁹ EPA proposes that the allowances that had been issued to the retired plant would be transferred to an RE set-aside. We recommend those allowances simply be retired so that they are taken out of the system and the climate benefits of the retirement can be realized. Transferring the allowances to RE providers would just transfer the pollution from the retired plant elsewhere.

to continue to do so. Instead, sources can save money through retiring as they will not have to purchase allowances to cover their emissions of carbon dioxide.

Sierra Club's "true-up" proposal to periodically update the statewide mass cap based on sources' recent generation, or lack thereof, also works to remove this perverse incentive in the absence of an auction. See Section IV.

One advantage of a rate-based system is that there are no allowance allocations that create a perverse incentive for uneconomic plants to keep operating. If retirement is less expensive than purchasing or earning ERCs, retirement will occur.

2. The Alternative Compliance Pathway Proposed By EPA for Retiring Plants Must be Reworked to Avoid Creating a Windfall for Old, Obsolete Plants While Weakening the CPP.

To realize the many environmental and public health benefits of coal plant retirements, and to provide for early transition planning for economically vulnerable plants, EPA should ensure that both states and EPA (where it is issuing a plan for a state) have the option, and a clear procedural pathway, to provide incentives for coal-fired power plants to choose retirement as a preferred compliance approach.

While EPA's proposed Alternative Compliance Pathway, discussed at 60 Fed. Reg. 64980 and the Alternative Compliance Pathway TSD, might be reworked to provide an appropriately narrow retirement incentive (discussed below), Sierra Club opposes the alternative as proposed.

EPA proposes that the Alternative Compliance Pathway could be used with either a rate or mass-based plan. In a mass-based plan, a source that makes an enforceable commitment to retire by December 31, 2029 would opt-out of the state's allowance trading program. In exchange, the plant would receive a numeric unit-level emission limit for the interim compliance period (2022-29) that would be equivalent to the allowances it would have received during those eight years. As a result, the plant would be allowed to emit CO₂ at higher levels in the early years of the interim period than it would under the CPP's standard approach, which has allowance caps for each of three shorter compliance periods within the interim compliance period. Allowances that would have been given to the retiring plants are subtracted from state's mass goal, ensuring that the total CO₂ emitted by the states' affected sources remains the same as it would without the Alternative Compliance Pathway. All other affected EGUs would comply by holding allowances equal to their emissions during each compliance period, and would not be subject to a specific, numeric unit-level emission limit. To participate in the opt-out program, sources must provide notification that they intend to do so by March 1, 2020 and have enforceable commitments to retire in place by March 1, 2021. EPA proposes this option for sources in states receiving the federal plan but also expects it would be an option for states creating their own plans.

As proposed, there is a high risk that the alternative would simply reward a large number of retirements that would have occurred anyway and result in substantially more CO2 emissions during the early years of the CPP's implementation. Indeed, there are already significant number of units covered under the program whose operators have announced retirement dates that will occur prior to 2030. As noted above, the program allows more CO2 emissions in the early part of the compliance period than under the CPP as finalized because sources could emit their full allotment of CO2 pollution for 2022-29 in the early years. Climate change science tells us that early reductions are critical to avoid the worst effects of global warming. EPA should not condone an approach that could significantly erode these near-term reductions.¹¹⁰

In addition, the current proposal may reward units that would be likely to retire anyway if they had to hold or purchase enough allowances to cover their carbon dioxide emissions – if that is the case, it would weaken the stringency of the CPP's first and second compliance periods without a corresponding environmental benefit of a beyond-business-as-usual retirement in the later years. And if EPA or states adopt Sierra Club and others' recommendation to implement an auction approach, this opt-out could actually delay the decision to retire by some marginal plants by eliminating the need to purchase allowances.

EPA's intent in developing this pathway was to provide additional flexibility for sources to comply with the CPP's emissions standards. There is more than ample flexibility in the rule without this alternative compliance pathway, however.

Accordingly, we suggest repurposing the framework to create a narrow incentive for coal retirements that would not be likely to occur without this incentive. This would help achieve the goal of early certainty and transition planning for coal plant retirements, and allow states that have a policy preference for securing the many co-benefits of coal plant retirements over other compliance options the ability to provide a retirement incentive.

With the following limitations on the program – and with these limitations only – Sierra Club could support an alternative compliance pathway. With these limitations, the incentive could achieve real and significant environmental benefits in the later years of the program from retirements that would offset the potential for increased in CO2 in the early years. An incentive for an early commitment to retire also aids in planning for worker and community transition and for addressing any reliability concerns before retirement occurs. We urge the following limitations on any alternative compliance pathway to accommodate retirements:

- (1) To be eligible for the opt-out, sources must commit to a retirement date no later than December 31, 2024 to correspond with the United States' commitment at the Paris climate change talk.

¹¹⁰ EPA has not presented any analysis or modeling to evaluate how many plants might take advantage of this alternative compliance pathway or how their emissions profiles under the CPP might change as a result.

- (2) Only sources that would not be at the end of their useful life (50 years) by the end of 2024 (or by 2029 if EPA keeps the retirement date in the current proposal) should be eligible.
- (3) Only sources that did not make an enforceable retirement commitment prior to the date of the final CPP (August 3, 2015) should be eligible.
- (4) In states that regulate electric generators as public utilities, the source's owner must demonstrate that it does not intend to replace the energy production of the retiring source with a carbon-polluting source or sources not regulated under CAA section 111(d) or the new source complement, for example by pointing to its Integrated Resource Plan.
- (5) A source planning to "mothball" a unit would not be eligible; rather the source would need to commit to relinquishing its operating permit by the date above.

EPA requests comment on whether the alternative compliance pathway should be available only for small units. If EPA implements the above suggested improvements, it would be appropriate to make the alternative compliance pathway available for any size of unit. If EPA does not implement the above improvements, we would oppose the alternative for any size units, but limiting it to small units would be preferable to allowing any size unit to opt out of the allowance system.

The EPA also requests comment on a version of this approach where the owner or operator of an affected EGU that chooses this alternative pathway (thereby committing to a firm retirement date) could choose to increase its unit-level emission limit by purchasing allowances and surrendering the allowances to the agency. Sierra Club does not object to this approach – subject to the limitations above – because the plants selling those allowances would need to correspondingly reduce their emissions.

In a rate-based plan, the alternative compliance pathway would work essentially the same way,¹¹¹ and Sierra Club would urge the same limitations on eligibility as above if EPA proceeds with finalizing the alternative. As EPA has defined the program, a unit that commits to retire is taken out of the ERC-trading program and given a mass-based limit. The mass-based limit is proposed to be the 2012 generation for the unit multiplied by the corresponding rate-based standard for the unit in the compliance period. That amount of CO₂ is then multiplied by years in the compliance period. Rather than using 2012 as the baseline generation, Sierra Club recommends using a more recent year that would be more reflective of the plants' expected generation between 2022 and 2025.

¹¹¹ The incentive to "opt out" would be weaker in a rate-based program because in a dual rate program an individual unit that is planning to retire someday can already operate as much as it wants in the early years – it just has to buy enough ERCs to cover its generation. And it can plan for that retirement by buying ERCs when they are the cheapest.

EPA should also consider other possibilities by which states or EPA could offer retirement incentives in either a mass- or rate-based system without weakening the stringency of the rule. One possibility would be that in a mass auction system, states could set aside a small pot of free allowances for plants that provide early notification of a commitment to retire in the following compliance period. This could offset some of the capacity payments plants that receive those payments would be giving up by retiring, without changing the timing or amount of total allowances for CO₂ pollution.

3. EPA should provide a model for states that want to incorporate enforceable retirement commitments as part of the state implementation plan, without disrupting CPP implementation for other affected EGUs or creating oversupply of allowances.

Whether or not EPA chooses to incorporate coal plant retirements into any of the federal plans it issues, EPA should provide a model for states that want to incorporate enforceable retirement commitments into their state implementation plans, or at a minimum clarify that this is an option under the CPP's final regulatory language. The model approach should not disrupt CPP implementation for other affected EGUs, nor create an oversupply of allowances.

EPA should clarify that, even apart from the alternative compliance pathway discussed above, states can identify plants that are announced or expected to retire, or others, and include a federally enforceable emission standard of zero tons CO₂ for that source(s) as of the year of retirement(s) instead of including it within the allowance trading program. Including a unit-specific standard of zero for particular sources, while keeping all other sources within an allowance trading program fits within the concept of an emissions standards plan as set forth by EPA in the CPP,¹¹² and would not need to involve a state measures approach. This approach can mathematically assure the state's compliance so long as the allowances issued to non-retiring plants remain under the state's cap when added to the tons of CO₂ permitted from the retiring plant during the compliance period. As such, a state adopting this approach would not need to provide a projection of carbon dioxide reductions or include corrective measures or a backstop in this type of state plan, as required for plans that do not mathematically assure compliance. See § 60.5745(a)(5)(iii) ("If a plan establishes mass-based emission standards for affected EGUs that cumulatively do not exceed the State's EPA-specified mass CO₂ emission goal, then no additional demonstration is required beyond inclusion of the emission standards in the plan.").

In the proposed model rule, EPA defines the CO₂ emission standard in a mass-based plan as the requirement that a source must hold allowances equal to tons CO₂ emitted each compliance period. See § 62.16220 (c)(1)(i) (proposed). EPA should clarify that states can carve out

¹¹² In setting out the requirements for an emissions standards plan, EPA states that "[a]llowance systems are an acceptable form of emission standards under this subpart," but does not require that all sources within a state be subject to the allowance system. See § 60.5740 (a)(2).

individual units from this provision and assign them unit-specific CO₂ emission limits as described above for the purpose of creating an enforceable retirement commitment. EPA should provide model language for doing so in an optional section 62.16220(c)(1)(i)(a).

A unit-specific retirement approach would also be possible, and somewhat simpler, in a rate-based system. A state could assign a 0 lb/MWh to a particular plant upon the retirement date to which the source has committed. To ensure CPP compliance without having to adopt corrective measures or project the fleet of affected EGU's carbon dioxide emission rates into the future— i.e., in order to mathematically assure compliance – the state could either assign all other sources the subcategory-specific rate for fossil steam or combustion turbines as appropriate, or assign all other sources the state's blended rate. EPA should clarify when it finalizes the model rules that this is a permissible approach.

4. EPA should provide a model for addressing over-lenience of mass target where EPA did not take into account previously announced retirements or likely retirements in converting from the rate-based standard.

As noted above, many plants EPA had assumed would continue operating when converting its rate targets to statewide mass goals have announced retirement or will likely retire before the compliance period begins. This is one factor resulting in mass-based targets that we expect to be more lenient than rate-based targets and could lead to a very low value for carbon dioxide allowances. Sierra Club's "true up" proposal, discussed in Section IV, aims to address this likely oversupply of allowances due to already planned or very likely retirements.

VI. Clean Energy Issues¹¹³

A. EPA Should Implement the Clean Energy Incentive Program to Focus on Projects Benefiting Low-Income and Other Vulnerable Communities, and Avoid Providing Matching Credits to Projects that Would Be Developed Regardless of the Incentive.

Sierra Club submitted comments on the Clean Energy Incentive Program to docket EPA-HQ-OAR-2015-0734 in response to a number of detailed questions posed by EPA. These comments are also relevant to the federal plan because EPA has proposed that states receiving a federal plan would automatically participate in the CEIP. EPA has also included the CEIP in the proposed model trading rules for states. Our recommendations for implementation of the CEIP program in either context are summarized below for EPA's convenience. We also attach our December 15, 2015 comments in their entirety, with several redline changes where we have made minor revisions to our positions or provided further information. As explained in more detail in the December 15, 2015 comments, Sierra Club makes the following key recommendations.

¹¹³ Several other sections also directly address RE and EE, including Section IV on minimizing leakage.

Sierra Club’s recommendations for the CEIP program aim to ensure that the overall stringency of the CPP remains intact, which will in turn ensure that the incentive has value for needy projects. To achieve these goals we urge EPA to (1) focus the program on projects benefiting low-income communities and those disproportionately impacted by air pollution; and (2) avoid providing matching credits to projects that would be developed regardless of the incentive. EPA has recognized that these two objectives are related: “[I]ncluding an incentive to develop projects that benefit low-income communities will increase the likelihood of investments being made that would not have been made otherwise.” See 80 Fed. Reg. at 64,831. Specifically, Sierra Club recommends the following key provisions.

a. *“Low-income” definition.* As described in more detail in Attachment 3 (Dec. 15 Comments), Sierra Club recommends a definition of “low-income” that is as inclusive or more inclusive than that used in other regulatory contexts. We also recommend establishing “opportunity areas” for CEIP investment where there are communities overburdened by pollution. These areas would receive similar treatment as low-income communities under the CEIP.

In the context of renewable energy resources, the definition of a “low-income” RE project should encompass RE that is either 1) installed on-site at a residence (or residences, in the case of multifamily housing) that houses one or more low-income individual or household; or 2) a community shared solar project or similar program, including one sponsored by a not-for-profit institution such as a faith house, school, hospital, or municipal institution that is providing electricity savings, credits or other benefits to low-income individuals or households. A project also might be considered to benefit a low-income community if 3) the developer commits to a certain level of hiring from the local community, for both construction and maintenance, or if the land is leased from a public entity, including a Tribe, that agrees to distribute or use lease payments or royalties for the benefit of low-income communities. Project developers should undertake full consultation with the community on siting, as is generally required by state and local laws.

b. *EPA should include or encourage supplemental eligibility criteria for wind and solar projects that do not benefit low-income individuals or households.* To obtain matching credits:

i. The project must be located in or provide power to a state that, as of the date of its final SIP submittal, has not already met its 2022-2024 rate-based (assuming a blended-rate approach) or mass-based interim step goal.

ii. The project must be “surplus” or “additional” to business-as-usual; demonstrated by showing that project is not required to meet a state RPS goal or other requirement by a deadline prior to 2021 and the project could not be financed without the added value afforded by the CEIP.

c. *EPA should divide the pool of matching credits between low-income projects, whether they are energy efficiency or renewable energy projects, and other renewable projects, with the first category (low-income) receiving at least 75% of the matching credits.*

d. *Rather than allocating the pool of matching credits among states, EPA should award matching credits from each of the two pools above directly to projects that have been awarded early action credits at the state level, on a first-come, first-serve basis.* This is the same approach EPA would need to take where it implements the CEIP for states receiving a federal plan and resolves a number of challenges in implementing the CEIP, as described further in our December 15, 2015 comments.

e. *EPA should encourage states to distribute early action credits for energy generated or saved from eligible projects between the time of submission of the final state plan and December 31, 2019. However, EPA should maintain its proposal that matching credits be issued only for energy generated or saved in 2020-21.* Some commenters have expressed concern that the current structure of the CEIP could cause some project developers to delay projects until 2020 that they would otherwise commence earlier in order to be eligible for CEIP incentives. The above proposal would provide an incentive for developers to get projects online as soon as possible after the completion of a state plan, but would not dilute the stringency of the CPP targets. (The states' early action allowances are borrowed from the compliance period such that the overall amount of CO₂ does not increase.) This option is already available to states under the general early action provisions for mass-based plans, but EPA should clarify this option and provide model language for implementing it. For example, EPA notes, "States can further incentivize energy efficiency under mass-based approaches by allocating emission allowances for energy efficiency activities, including activities that occur prior to 2022."

Sierra Club made many other specific suggestions in response to EPA's questions, which can be found in Attachment 3 hereto. In addition to these earlier recommendations, Sierra Club notes that it disagrees with EPA's approach to automatically include every federal plan state in the CEIP. We recommend that EPA make this decision on a state-by-state basis. The public would have an opportunity to comment on the choice in the context of EPA's proposed action on the federal plan for a given state.

Sierra Club deferred responding to EPA's question of how it should account for ERCs (measured in MWh) issued out of the 300 million ton matching fund. There are two issues related to how EPA converts tons to MWh. One is how EPA calculates how the tons-based matching fund is drawn down as it issues ERCs to states (or directly to projects, as recommended by Sierra Club). The other is the rate at which EPA and states will award allowances to MWhs of clean energy eligible under the CEIP. The conversion rate should be consistent between these two contexts to avoid confusion and for fairness.

We recommend using the state average emissions rate for affected EGUs to convert from MWh to CO₂ emissions reductions. In particular, we recommend that the 2019 state average emission rates be used for the 2020-2021 time period covered by the CEIP. This value should

become available and known in 2020, and can be provided by the state environmental agency based on data it collects from owners of EGUs in the state. For planning purposes, low-income energy efficiency program administrators (and others) could estimate this value based on historical or projected state average emissions rates. But the CO2 allowances granted for CEIP activities would be based on a state's actual average emissions rate in 2019 in order to maximize accuracy in this conversion from MWh saved (or generated by renewable energy technologies) to avoided CO2 emissions.

This would be close enough in time to the date of the award of allowances to accurately reflect the average avoided emissions. (The rate would not precisely reflect the avoided emissions of any one particular project, but, as EPA determined in finalizing the CPP, achieving that level of accuracy would be very time and resource intensive and could discourage participation in the program .)

With the passage of the PTC/ITC, what we believe is the most compelling rationale for the CEIP, preventing the collapse of wind and solar energy in the period leading up to 2020, is no longer valid. The basic structure of the CEIP includes two troublesome features: (1) borrowing allowances from the future (discussed elsewhere in these comments) and (2) further weakening the BSER, by "minting" 300 million allowances. Note that, as explained elsewhere, if there is full implementation of the CEIP, 2015 regulated electric sector emissions are below the national existing source only mass targets through 2027. This rulemaking cannot be limited to the pre-August, 2015, record. EPA must now consider the fact that the PTC/ITC have been extended in this rule which substantially increases the number of BAU RE projects that might apply for and receive CEIP credits under EPA's proposal. In our earlier comment, we observed that EPA should take steps to ensure "additionality", i.e., that BAU RE projects should not get CEIP allowances and today underscore the necessity for this policy.

B. EPA Should Improve Incentives for Energy Efficiency in the Federal Plan and Model Rules While Ensuring Stringent Evaluation Monitoring and Verification (EM&V).

EPA proposes that in federal plan states, unlike states with their own plans, energy savings achieved through demand-side energy efficiency (EE) would not be eligible for Emission Rate Credits in a rate-based plan. Nor does EPA plan to adopt an (EE) set-aside or other method of providing an explicit credit for energy efficiency in mass-based plans. EPA seeks public comment on both these issues.

1. EPA Should Permit EE to Earn ERCs in the Federal Plan.

Sierra Club urges EPA to allow EE to earn ERCs in any rate-based federal plan. While Sierra Club shares EPA's concern that resources earning ERCs must undergo rigorous EM&V, and understands that administering that process for EE would place an additional administrative burden on EPA, we believe that EPA should prioritize assuring maximum deployment of EE for CPP compliance. As many others have noted in commenting on the proposed Clean Power Plan

and in this docket, EE is the lowest cost resource to reduce carbon dioxide emissions and is severely underutilized in many states. Despite this cost advantage, which in turn benefits ratepayers, EE may not be automatically adopted as part of a source's compliance pathway for several reasons described below.

Demand-side EE saves energy and thereby can reduce demand for generation from affected EGUs. Lower levels of generation result in lower carbon dioxide emissions, but they do not result in a lower carbon dioxide emission rate. Thus, in a rate-based system, without the possibility of earning ERCs through energy savings, there is neither a direct compliance incentive nor a direct economic incentive to undertake EE.

Further, despite EE being the lowest cost resource and best option to reduce ratepayer bills, other considerations have typically led utilities and other parties that could implement energy efficiency projects to invest very little in EE without significant prodding by policymakers. As explained by American Council for an Energy Efficient Economy (ACEEE) and other commenters, generators generally have a disincentive for energy efficiency as it lowers sales. Further, those that implement energy efficiency would have no compliance obligation under the CPP (industrial users, commercial building owners, distribution utilities, builders, developers, etc.), so those parties cannot be counted on to implement additional EE without the possibility of earning ERCs.

Sierra Club participates in state Public Utility Commission dockets nationwide related to both energy efficiency and broader resource planning. Our advocates and experts regularly observe the problem of chronic underinvestment in energy efficiency by utilities and others. In Oklahoma, for instance, Oklahoma Gas and Electric's environmental compliance plan to address its obligations under the Regional Haze Rule proposed to replace the capacity of retiring coal units with new gas plants and zero new energy efficiency. This was despite the fact that additional EE investments would have been a much less expensive way to supply resource needs. Similarly, in Florida, where utilities succeeded in rolling back the state's EE measures, utilities are proposing the more expensive and environmentally damaging option of 11 GW of new gas generation to meet resource needs. If EE does not contribute to a source's compliance pathway by earning ERCs, the CPP will provide no further incentive in rate-based plan states to change this type of behavior.

There are several responses to EPA's concern that administering ERCs for EE will be overly complex compared to simply reviewing the metered MWh from solar and wind projects. See 80 Fed. Reg. at 64994. As discussed further below, Sierra Club supports ensuring a rigorous EM&V program to assure that only legitimate MWh savings earn ERCs. Without careful oversight, an oversupply of ERCs, which are not based on actual energy savings but result from opaque assumptions and calculations, could emerge. The desire to avoid carefully overseeing EE EM&V should not be a reason to exclude EE from rate-based federal plans, however.

First, EPA is already planning to administer the CEIP for federal plans, which includes low-income EE. Accordingly, EPA will need to have staff or outside contractors trained to conduct

reviews of claimed EE savings for the purpose of awarding allowances or ERCs through the CEIP, regardless of whether EE earns ERCs under federal rate-based plans. Thus, it should not be burdensome to add review of ERC applications for EE from states with rate-based federal plans (if any).

Second, EPA could allow federal plan states an “opt-in” to a federal plan EE program. If the state wants to provide EE as an additional resource by which affected sources and others could earn ERCs, the state would need to submit a plan revision setting for a commitment to administer the EM&V process. The risk that these states would not be as vigilant as EPA or a non-federal plan state is mitigated by the many provisions for open and transparent administration of the ERC process and for independent third-party verification of estimated energy savings. So long as EPA retains these provisions, and includes a robust and transparent procedure for certifying independent verifiers to ensure they do not have a conflict of interest, this “opt-in” program would be an alternative to EPA overseeing the issuance of ERCs for EE in federal plan states – a preferable one to excluding EE from the federal plan completely. See also Comments of the Natural Resources Defense Council, submitted to this docket.

In sum, without the ability to earn ERCs for implementing demand-side EE, regulated sources in rate based states will lack the compliance incentive needed to make EE investments. EE is too important a resource for EPA to exclude it from the rate-based federal plan based on concerns about workload. Moreover, the workload concern is likely overstated and could be addressed by creative solutions.

2. EPA Should Facilitate Incentives for EE in Mass-Based Plans.

In Section IV above, we recommend treating EE and RE the same for purposes of an RE set-aside aimed at addressing leakage. This approach would create a more explicit incentive for investment of EE in the mass-based plan and help address the misalignment of incentives discussed above.

3. EPA Should Retain a Stringent Approach to EM&V for EE in the Final Model Rules.

Sierra Club urges EPA to retain a rigorous set of EM&V procedures for EE savings awarded ERCs or allowances, and to include those procedures in the model rule. No state plan that intends to award ERCs or allowances to EE in any context should be “presumptively approvable” without including detailed best practices for EM&V. EPA requests comments on how much detail should be included in the model rule as opposed to guidance. If EPA makes the model plan less detailed than the guidance, EPA should assure that doing so does not weaken the requirements for a presumptively approvable plan. It is especially important that measures ensuring transparency of the process and rigorous verification of savings by certified and conflict-of-interest-free third-parties are included in the model rule itself. Although EPA comments that states may submit EM&V measures that are “functionally equivalent” to those EPA presents in the model rule and still have them “presumptively approv[ed]”, see 80 Fed. Reg. at 65002,

Sierra Club urges that EPA limit presumptive approvability to the exact measures finalized in the model rules. “Functionally equivalent” is a term that is arbitrarily vague and open to much interpretation. EPA has discretion to approve departures from practices set forth in the model rules (so long as they are not finalized in the CPP’s regulatory language) but does not need to make them presumptively approvable. Moreover, doing so would short-circuit the public participation process for the state plan by discouraging comment on EM&V measures that the state concludes are “functionally equivalent.”

Although maintaining a more stringent EM&V program will require more resources from project proponents and the entities reviewing ERC or set-aside applications than would a less stringent program, EPA was cognizant of the need to balance costs and stringency and should maintain the proposed level of stringency when it finalizes the model rule. While many existing state EM&V programs for EE may be less stringent than the best practices set forth by EPA, the state programs have only in rare cases been used for purposes of an environmental compliance program. Many are used primarily for general understanding or broad evaluation or program design and are not tied to any environmental or economic consequence. The context of the CPP – a carbon dioxide reduction program– is different and requires an especially robust approach. Without stringent requirements and vigorous enforcement of ERC issuance, parties could claim credit for purportedly saving energy through EE programs when the reduction in demand credited truly resulted from other factors and would have happened anyway. This could result in a glut of sham ERCs, which in turn would decrease generators’ need to reduce their CO₂ emissions to comply, and generally devalue ERCs in a trading system. Thus, there is a direct relationship between the accuracy of accounting of EE energy savings ensured by EM&V practices and CO₂ allowed to be emitted under a rate-based plan. This is also the case for mass-based plans where allowances may be issued from an EE set-aside on a “use-it-or-lose-it” basis (as Sierra Club recommends [see other sections/confirm]), rather than issuing all allowances permitted under the cap. Likewise, if ERCs or allowances are devalued, those parties that legitimately earn them are receiving less of a benefit and will be discouraged from participating.

A stringent EM&V approach is also justified by the fact that EPA did not consider EE as one of the building blocks in determining the Best System of Emissions Reduction (“BSER”), but still allows sources to use EE as a compliance measure. In departing from the “symmetry principle” recommended in Sierra Club’s and others’ comments on the proposed CPP, EPA has included EE as an additional measure for flexibility and cost savings for regulated sources. In exchange, states and sources should be willing to adopt best practices to ensure that credited EE savings are real.

Some stakeholders may be concerned that if EPA sets forth too stringent an EM&V program in the model rules, this will result in decreased interest in participating in ERC or set-aside programs for EE and a lower level of deployment of EE resources, especially by not-for-profit or public entities. However, if ERCs/allowances are awarded only for truly incremental MWhs of savings established through EPA’s proposed procedures, they are likely to retain a higher value than they would if EM&V standards were looser (i.e., because fewer ERCs will be issued). It is possible that the increased value of ERCs would offset or even outweigh any incremental cost

for project developers of stricter EM&V procedures. Further, there are many independent contractors available that could undertake EM&V work for parties that lack in-house expertise. As a result of ratepayer-funded EE programs in many states, “a profession of highly trained and experienced energy program evaluators has developed.” To address the cost concerns of not-for-profit or community organizations, it is possible that fee arrangements could be worked out such that the entity would not need to provide funding for such work until after ERCs are awarded and sold. Accordingly, while Sierra Club supports maximum deployment of EE, including among not-for-profit and community organizations, EPA does not need to relax the stringency of its EM&V procedures in order for these entities to take advantage of incentives provided by the CPP, and such relaxation would undermine the purpose of such incentives.

Sierra Club also supports EPA intent to include a narrow set of presumptively approvable EM&V approaches that do not match every state’s current approach. There is currently a huge disparity among state approaches that would result in varied stringency of the CPP targets from state-to-state if allowed to be used for CPP purposes. One study observed, “the situation might be regarded as a ‘mess’.” And states are not for the most part currently using best practices that would ensure that the ERC or other EE-crediting processes are not gamed by regulated sources. For example, a 2012 ACEEE survey of all states with active utility ratepayer-funded EE programs found that in 36% of the responding states, utilities were responsible for their own EM&V, apparently without outside verification. Such self-verification by the regulated party is not rational or appropriate. The majority of states (52%) also had only informal opportunities for public comment. In a surprising 44% of states responding, the rules and procedures for evaluation were not spelled out in writing anywhere. As EPA has already recognized, there is clearly a need for a more standardized approach if EE is to be credited in the CPP. The model rules provide an excellent opportunity to ensure that the states adopt more uniform and equally stringent approaches. Since EPA is not requiring a single approach, it will need to continue to evaluate whether the energy savings calculated from each approach are consistent with each other as they are applied across states.

Sierra Club is not providing detailed input on the specifics of EPA’s proposed EM&V guidance at this time, but supports the recommendations for improvements made by the Environmental Defense Fund and Natural Resources Defense Council.

Sierra Club further supports EPA’s intention to encourage states to include in their plan a description of how states will ensure that workers installing demand side EE and RE projects, or other measures intended to reduce CO2 emissions, as well as workers who perform the EM&V of demand side EE and existing EGU performance will be certified by a third-party entity meeting certain defined criteria. See 80 Fed. Reg. at 65008.

C. Crediting Distributed Generation in the Federal Plan and Model Rules.

Sierra Club strongly supports the proposed Federal Plan’s clear indication that distributed generation can contribute to CPP compliance. Now that EPA has included projections of distributed generation growth in its calculation of BSER, it is critical that these resources be able

to count towards compliance where their output can be accurately measured and verified. EPA's proposals for how to measure and report that output reflect the diversity of distributed generation types, but some clarification is needed on the proposed EM&V requirements for these resources.

In the section on renewable energy EM&V, EPA proposes to allow inverter-based readings of generation of customer-sited systems, rather than requiring revenue quality metering on all such systems. 80 Fed. Reg. at 65,004. We strongly support this decision, as revenue quality meters would add significantly to the costs of a customer-sited system, out of proportion to the additional accuracy benefits. Inverter readings have long been widely used for utility billing purposes and are sufficiently reliable for CPP compliance purposes. However, other portions of the proposed Federal Plan, Model Trading Rules, and CEIP are inconsistent with these EM&V requirements. For instance, EPA has proposed to limit the issuance of ERCs under the Federal Plan to renewable energy resources “that are measured by a revenue quality meter.” *Id.* at 64,989-90. This requirement undermines EPA’s clear intention to allow customer-sited generation to be measured using inverters rather than revenue quality meters. EPA should ensure that all incentives offered for renewable energy reflect its decision to allow for inverter-based reporting by customer-sited renewable generation.

Sierra Club also supports the option for renewable generators under 10 kW to report output using capacity-based estimates. 80 Fed. Reg. at 65,004. Due to the small size of these systems and the fact that many are net-metered and therefore lack existing means to measure total generation, reliable estimation of the output is far more efficient from an administrative perspective than obtaining output data for each system. EPA asks whether a particular software or algorithm should be specified in the final model rule. We do not think it would be beneficial to specify estimating software, as this would exclude new entrants to the field. However, it would be helpful for EPA to provide guidance on an acceptable algorithm to estimate generation. When correctly applied, this algorithm would generate presumptively valid results, but distributed generation system owners should be allowed to use alternative methods, so long as the results can be verified using spot metering at a statistically valid sampling of sites.

Sierra Club also supports EPA’s recommendation to account for the avoided transmission and distribution losses associated with distributed generation. Because distributed generation is sited close to load, the losses associated with transporting power over great distances are avoided. EPA proposes that avoided T&D system losses for distributed generation can be calculated consistent with the methodology for demand side energy efficiency. In that context, EPA states that the presumptively approvable approach for a T&D adder is to use the “smaller of 6% or the calculated statewide annual average T&D loss rate.” *Id.* at 65,006-07. Sierra Club recommends that EPA allow a different approach to determining T&D system losses for distributed generation, which accounts for the fact that much of the generation from rooftop solar systems occurs during peak load periods. Line losses are greater during heavy load periods due to increased resistance on the lines; these losses are also greater when ambient

temperatures are higher as is often the case at the time of peak solar production.¹¹⁴ We therefore recommend that EPA allow and offer guidance on the use of marginal, rather than average, line losses for distributed generation.

Finally, the model rule proposes to allow aggregation, for reporting purposes, where each renewable energy unit is uniquely identified, the nameplate capacity of each unit is less than 150 kW, the aggregated units collectively have less than 1 MW capacity, the units located in the same state, use the same technology, and generation data are based on the same metering technology or estimation technique. We would encourage EPA to increase the cap for the overall aggregated unit to at least 5 MW to allow for greater administrative efficiency in reporting.

VII. Emission Rate Credits Generated by Natural Gas Combined Cycle Units in Rate-Based Plans

Under EPA's proposed rate-based FP and model rule, NGCC units can generate two classes of ERCs. First, NGCCs can generate gas-shift ERCs (or GS-ERCs), which reflect emission reductions that are achieved by replacing coal-fired generation with increased generation from existing NGCCs, 80 Fed. Reg. at 64,991-94. Units that generate GS-ERCs can then sell those credits to fossil steam units, which can use them to achieve compliance. Second, under EPA's proposal, NGCCs with emission rates below the applicable standard in a given year can generate what we call "overperformance" ERCs, which represent the delta between the applicable standard and the EGU's superior performance. NGCC units that generate these can sell them either to other NGCC facilities or to fossil steam EGUs. In theory, EPA's proposal would also allow fossil steam EGUs that outperform the applicable standard to generate overperformance ERCs. In practice, however, no existing fossil steam units (with the exception of the handful of IGCC units that now exist) will be able to emit below the applicable Clean Power Plan standards unless they install carbon capture technology and sequester their CO₂.

As we discuss below, we approve of EPA's proposed design of GS-ERCs with one major exception: the agency must award these credits to NGCCs *only* for their *actual* incremental generation. EPA's current proposal would grant fractional¹¹⁵ GS-ERCs to *all* megawatt-hours generated by NGCCs on the basis of a potential or theoretical amount of incremental generation. This approach is misguided for the reasons we provide in these comments. As for overperformance ERCs, the agency must only award these credits to NGCC units that improve upon their *own* 2012 baseline emission rate through heat rate improvements. As currently designed, EPA's program would award millions of overperformance ERCs for NGCC units

¹¹⁴ See Interstate Renewable Energy Council, Inc., *A Regulator's Guidebook: Calculating the Benefits and Costs of Distributed Solar Generation* (Oct. 2013), at 23.

¹¹⁵ Instead of awarding one full ERC for incremental NGCC generation, EPA proposes to award a fractional ERC for all NGCC generation. While the total number of ERCs awarded may (or may not) be the same, the incentive for incremental generation is substantially different under these alternatives.

operating at “business as usual” (BAU) rates. This approach dilutes the efficacy of the rule, which should only credit *additive* environmental benefits, not BAU conditions.

A. EPA’s Model FP Must Only Award GS-ERCs for Actual Incremental Generation at NGCC Units.

Under EPA’s proposal, GS-ERCs are designed to reflect the Block 2 emission reductions that sources can achieve by replacing generation from fossil steam units with NGCC generation. The Clean Power Plan’s goal-setting formula assumes that NGCC units will increase generation above their 2012 baseline levels and thereby displace fossil steam generation, with a utilization ceiling at 75 percent of the NGCC fleet’s summer month capacity. GS-ERCs are the mechanism by which this displacement is accounted for during compliance. As such, GS-ERCs should embody two principles: first, they must account for the environmental benefit of operating a specific NGCC unit instead of a coal-fired plant; and second, they must only be awarded to generation from each NGCC unit that is incremental to that EGU’s 2012 baseline generation.

EPA’s proposal correctly accounts for the first of these two principles. As the agency explains, each GS-ERC is not worth the full amount of an ERC generated by renewable EGU (which, by definition, emits zero carbon dioxide), but is reduced to reflect the actual environmental benefit from operating an NGCC unit instead of a coal plant. Each GS-ERC must therefore incorporate the fractional difference between the emission rate of the NGCC producing the GS-ERC and the nationally applicable fossil steam standard for the particular compliance year in question, which every fossil steam unit must achieve. EPA’s GS-ERC formula expresses this fractional difference through a “GS-ERC Emission Factor,” which is calculated according to the following formula:

$$\text{GS-ERC Emission Factor} = 1 - \frac{\text{NGCC Emission Rate}}{\text{Steam Standard}}$$

80 Fed. Reg. at 64,992. For instance, in 2025, the applicable fossil steam standard is 1,546 lbs CO₂/MWh. If an NGCC (“Unit X”) generates one MWh at a rate of 815 lbs CO₂/MWh, the GS-ERC Emission Factor will be $1 - (815/1,546) = 0.47$. EPA would therefore multiply the number of MWhs that Unit X generated by .47 to account for the environmental benefit that is achieved by displacing a fossil steam unit with generation from that NGCC.

However, EPA’s proposal falls short on the second principle: each GS-ERC must only be awarded to *incremental* generation from NGCCs. If the nation’s fleet of EGUs were to operate at the same (or lower) utilization levels as 2012, there would be no additional displacement of fossil steam units by those plants and therefore no environmental benefits. And yet, under EPA’s proposal, even if there were no increase at all in generation from existing NGCC sources in 2022 (for example), EPA’s procedure would award 81 million GS-ERCs in that year alone

across all states if each were to adopt a dual-rate program.¹¹⁶ In light of this fact, the most obvious and straightforward way to properly credit incremental NGCC generation would be simply to award GS-ERCs to each NGCC only for megawatt-hours generated in excess of the unit's 2012 baseline total. For instance, if Unit X generated 3 million MWh in 2012, in 2025, it would receive .47 ERCs for every MWh it generated above 3 million, but none for any MWhs up to 3 million. Assuming the unit generated 3,100,000 MWhs in 2025, Unit X would therefore be awarded 47,000 tradeable ERCs ($47,000 = 100,000 * .47$).¹¹⁷

Comment [ES2]: Andres – footnote is incomplete.

Yet EPA has proposed to award GS-ERCs to *all* MWhs generated by each existing NGCC unit, regardless of whether the unit in question has exceeded its 2012 baseline or not. EPA achieves this by calculating a nationwide “Incremental Generation Factor,” or IGF, for each compliance period. This fractional figure represents the percentage of generation from the NGCC fleet that *would be* incremental if the fleet operated at its maximum Block 2 utilization in a given compliance period. It then awards GS-ERCs for *all* of the generation from each NGCC, calculating each GS-ERC by multiplying the unit's total generation by both the IGF for the applicable compliance period and the unit's GS-ERC Emission Factor. To return to our illustrative example, the IGF for 2025 (which falls under the second compliance period) is .32. Under EPA's formula, if Unit X generated 3,100,000 MW, it would be awarded 466,240 tradeable ERCs ($466,240 = 3,100,000 * .47 * .32$), nearly ten times more than if actual incremental generation only were credited. If Unit X generated 3 million megawatt-hours—meaning it supplied no incremental generation above its 2012 baseline—it would generate 451,200 ERCs under EPA's formula—451,200 more ERCs than it deserves.

The flaw in EPA's approach are abundantly clear: it will provide at least some quantity of GS-ERCs for NGCC generation that does not actually displace fossil steam generation unless every single NGCC unit in the country operates at the full level of utilization assumed under Building Block 2. In other words, it will provide credit for environmental benefits that do not actually occur. While EPA was certainly reasonable in its goal-setting exercise to assume that the nation's NGCC fleet *could* operate at the maximum Block 2 levels in each period, there is no basis at all to assume that fleet necessarily *will* do so. Especially given the rapid increase in renewable generation, the falling costs of those resources, and the recent extension of the Investment Tax Credit and Production Tax Credit, there is ample reason to conclude that operators will rely primarily on renewable generation to achieve compliance with their Clean Power Plan obligations rather than coal-to-gas redispatch. Accordingly, since operators will very likely choose not to ramp their NGCC units up to the full Block 2 utilization levels, there is no reason to provide a windfall to those generators in the form of unearned GS-ERCs.

¹¹⁶ Our calculation of this figure is provided in Attachment 6.

¹¹⁷ As discussed below, our recommended approach would also require the governing authority to consider whether the existing NGCC fleet *as a whole* generated incremental MWh and to adjust its calculations accordingly.

EPA is rightly concerned that load-shifting *within* the existing NGCC fleet may permit units to generate “incremental GS-ERCs” even as overall existing gas-fired generation remains flat or declines. However, in response to this concern, EPA should not allow issuance of fractional GS-ERCs based on the overall or BAU generation by existing units, or even on the basis of incremental generation at existing units considered in isolation. Rather, EPA should provide GS-ERCs only where overall state (or regional) NGCC generation increases, and then only to units that actually increase generation. This could be accomplished on a pro-rata basis based on that unit’s share of the overall incremental NGCC generation within the state (or region).

For example, suppose that in 2025, Unit X generated 100,000 MWh above its 2012 baseline, but, on balance, the NGCC fleet in its state did not generate any electricity above the aggregate 2012 baseline for NGCC units in that state. In this case, Unit X would not receive any GS-ERCs, since the fleet as a whole did not offer redispatch opportunities to fossil steam EGUs. Suppose, however, that the fleet generated 1,000,000 incremental MWh on a net basis above its 2012 totals, with some units producing more (e.g., +2,000,000 MWh in the aggregate) and some less (e.g., -1,000,000 MWh in the aggregate) than their 2012 totals. In this case, Unit X would receive GS-ERCs in proportion to its own share of the net incremental generation. To calculate this, the governing authority takes aggregated incremental MWh from all the units that generated above their 2012 baselines (2,000,000 MWh in this case) and determine Unit X’s contribution to that pool (100,000 MWh/2,000,000 MWh = .05). The governing authority would then multiply this fraction by the NGCC fleet’s *net* incremental generation (.05 * 1,000,000 MWh = 50,000 MWh) and by the unit’s GS-ERC Emission Factor (.47 for Unit X) to calculate the total number of GS-ERCs to award that unit (50,000 * .47 = 23,500 ERCs).

The agency can therefore offer a much more accurate system of GS-ERC accounting than the one it has proposed by adopting the approach we recommend. Unlike the agency’s proposed method, which is nearly certain to award more GS-ERCs than are merited, our system will ensure that only incremental MWhs from NGCC units will generate GS-ERCs, better preserving the environmental integrity of the program. The agency is clearly aware of the potential benefits of our approach, as it makes note of it in the preamble to the proposed FP and requests comment on whether it should adopt such a policy in its final rule. *See* Fed. Reg. at 64,994.¹¹⁸ We therefore strongly urge EPA to abandon the system in its proposal and instead adopt our approach to ensure that GS-ERCs are awarded only to *actual* incremental generation from NGCC units, taking into account both the individual unit’s generation and the electricity produced by the state’s (or region’s) NGCC fleet as a whole.

¹¹⁸ (“Specifically, the EPA solicits comment on NGCC units generating GS-ERCs once a threshold of electric generation for the year is exceeded. This threshold is based on 2012 as a baseline and any NGCC generation beyond this threshold would be considered incremental generation.”).

VIII. EPA Must Only Award Overcompliance ERCs to an NGCC if, and To the Extent That, the Unit Improves Upon Its 2012 Baseline Emission Rate.

EPA proposes to award ERCs for EGUs (either fossil steam or NGCC) that emit CO₂ at a rate that is below the Clean Power Plan’s applicable standard for that subcategory of plant in a given compliance year. The formula for these “overcompliance ERCs” is as follows:

$$\text{ERCs} = \frac{(\text{EGU standard} - \text{EGU operating rate})}{\text{EGU standard}} * \text{EGU generation}$$

Id. at 64,991. For instance, suppose once again that the hypothetical NGCC Unit X discussed above were to generate 3,100,000 MWh in 2025 at a rate of 815 lb/lb CO₂/MWh. Because the nationally applicable NGCC standard for that year is 836 lbs CO₂/MWh, Unit X would generate 77,871 ERCs based on overcompliance with the standard ($77,871 = (836-815)/836 * 3,100,000$), which it could then sell either to another NGCC unit or to a fossil steam EGU. A fossil steam EGU could also generate overcompliance ERCs in theory, but it is unlikely that any fossil steam units will actually achieve emission rates below the applicable standard in a given year.

While overcompliance ERCs for NGCC units may appear sensible at first glance, they would reward existing generation at BAU emission rates and thereby weaken the environmental benefits of the Clean Power Plan in practice. In its goal-setting exercise, EPA calculated regional emission rates for each plant category in each compliance year, then selected each year’s least stringent regional rate to represent the national standard for that year. For the years 2022 through 2026, ERCOT—which hosted just 13 percent of the nation’s NGCC generation in 2012—represents the limiting region, setting the NGCC rate for all units across the country. As a result, there will be a great many NGCC units in the Eastern and Western regions in the early years of the program that will outperform the national NGCC standard without having to make any additional changes. In other words, a BAU scenario will result in millions of additional ERCs that less efficient coal or gas plants will then be able to purchase for use toward compliance. Our calculations indicate that, in 2022 alone, nearly 31.5 million ERCs would be awarded to NGCC units in rate-based states for operating at their historic emission rates, largely concentrated in a handful of gas-heavy states such as Florida (where we expect that NGCC units will be awarded some 6.4 million ERCs based on BAU performance), California (4.3 million ERCs), Georgia (2.3 million ERCs), Alabama (2.3 million ERCs), Mississippi (2 million ERCs), and Connecticut (1.5 million ERCs).

To award NGCCs these overcompliance ERCs based on BAU performance would violate the principle of additionality: section 111 regulations should drive *further* emission reduction, not award units based on past behavior. It is for this reason that the agency does not allow ERCs for existing RE units except to the extent that those resources generate additional electricity above

and beyond their 2012 baseline. Similarly, the agency recognizes that only incremental NGCC generation should produce GS-ERCs (although, as noted above, EPA's method to account for incremental NGCC generation is flawed). By contrast, EPA's scheme for overcompliance ERCs would award credits to certain units merely for operating as they always have. This would allow less efficient plants to buy those credits that would not otherwise have existed, weakening the rule's environmental benefits.

EPA must maintain a consistent principle of additionality across all resources. Accordingly, the agency should only grant overcompliance ERCs to an affected EGU if, and only if, the unit emits at a rate that is below *both* the applicable standard *and* that same unit's baseline emission rate in 2012 (via heat rate improvements, for instance). In this latter case, the award of overcompliance ERCs should reflect the delta not between the unit's current emission rate and the applicable standard, but between the unit's current emission rate and its baseline rate. Hence, if illustrative NGCC Unit X had emitted 830 lbs CO₂/MWh as its baseline rate in 2012, its 2025 performance (3,100,000 MWh at 815 lbs CO₂/MWh) would yield 56,024 ERCs (56,024 = (830-815)/830 * 3,100,000). If, however, Unit X had operated at 815 lbs CO₂/MWh in the 2012 baseline year, it would receive no overcompliance ERCs in 2025. This approach would award sources that actually improve upon their baseline performance while ensuring that BAU activity receives no additional credit for BAU generation. It would thereby safeguard the rule's environmental benefits against the built-in erosion evident in EPA's scheme, and we strongly urge the agency to abandon its proposed design for overcompliance ERCs in favor of our recommended approach.

IX. Biomass

A. EPA Should Exclude Biomass from the Federal Plan

Sierra Club supports EPA's proposal to exclude biomass from the list of resources that qualify for compliance under the FP. The proposed FP provides that "[a]ll categories of resources other than on-shore utility scale wind, utility scale solar photovoltaics, concentrated solar power, geothermal power, nuclear energy, or utility scale hydropower, and all provisions of this subpart relating to such resources, are not available or applicable in States where this subpart has been promulgated as a federal plan pursuant to section 111(d)(2) of the Act."¹¹⁹ We agree with the agency that biomass should not qualify for ERCs if EPA finalizes a rate-based FP, and it should not be eligible for set-asides if EPA finalizes a mass-based FP, for the reasons explained below.

B. Biomass Should Not Be Allowed to Generate ERCs or RE Set-Asides under the Model Trading Rule

¹¹⁹ Proposed § 62.16435, 80 Fed. Reg. at 65,093.

Biomass plants should not be eligible to generate ERCs or qualify for RE set-asides unless they meet the requirements applicable to ERCs under the CPP. At the EGU, burning biomass generates more CO₂ emissions than even coal combustion. A 2011 analysis by the Partnership for Policy Integrity found that wood combustion generates 213 lbs CO₂/MMBtu, compared to 205.3 lbs CO₂/MMBtu for bituminous coal.¹²⁰ Utility-scale biomass boilers are also only about 25 percent efficient, which is lower than either average coal or gas boilers.¹²¹ Likewise, co-firing of biomass with coal decreases a facility's overall efficiency.¹²² Therefore, when considering only carbon emissions at the stack, biomass is far from zero emitting. For these same reasons, EPA should not finalized a list of preapproved "qualified" biomass fuels.¹²³

Under the final CPP, most types of biomass (in particular woody biomass) cannot meet the requirements to generate ERCs. The regulations require that an ERC "must represent one MWh of actual energy generated or saved *with zero associated CO₂ emissions*."¹²⁴ In the preamble, EPA also describes an ERC as "a tradable compliance unit representing one MWh of electric generation (or reduced electricity use) *with zero associated CO₂ emissions*."¹²⁵ Because standalone biomass plants and fossil fuel-fired plants that co-fire biomass will have emissions that are greater than zero, those facilities should not be allowed to generate ERCs or be eligible for RE set-asides.

EPA has incorporated this same requirement in its proposed FP and model trading rule, proposing to require that an ERC represent "one whole MWh of actual energy generated or saved *with zero associated carbon dioxide emissions*."¹²⁶ EPA should finalize this provision in the final model trading rule and the FP, in order to ensure consistency with the final CPP.

The claims made in favor of biomass as a zero-carbon resource depend on the life-cycle carbon balance of biomass combustion, namely that the growing of biomass materials sequesters carbon from the atmosphere, rendering it a carbon-neutral fuel. However, it would be inconsistent with the overall framework of the Clean Power Plan for EPA to account for the life-cycle carbon emissions of biomass-derived fuels. The agency has not looked at the life-cycle carbon impacts of other fuels, but rather only at the stack emissions from coal- and gas-fired units. If EPA were to allow biomass to be treated as zero-carbon on the basis of a life-cycle analysis, that would amount to a backdoor carbon offset scheme.¹²⁷ EPA would then also have to factor in the life-cycle carbon impacts of coal and gas production. In addition, given that

¹²⁰ Partnership for Policy Integrity ("PFPI"), *Carbon Emissions from burning biomass for energy*, <http://www.pfpi.net/carbon-emissions>.

¹²¹ *Id.*

¹²² See Elec. Power Research Inst., *Biomass Cofiring Update 2002: Final Report*, No. 1004319 (July 2003).

¹²³ 80 Fed. Reg. at 64,995.

¹²⁴ 40 C.F.R. § 60.5790 (emphasis added).

¹²⁵ 80 Fed. Reg. at 64,834 (emphasis added).

¹²⁶ 80 Fed. Reg. at 65,092 (emphasis added).

¹²⁷ See PFPI, *The Role of Biomass Energy in EPA's Greenhouse Gas Rule* (July 1, 2014), available at <http://pfpi.net/wp-content/uploads/2014/08/PFPI-GHG-rule-writeup-August-7.pdf>

forest regrowth takes decades, it is unlikely that carbon emissions from biomass will be offset within the timeframe of the Clean Power Plan.

Biomass combustion was also characterized as an offset scheme in the concurrence by Judge Brett Kavanaugh of the D.C. Circuit. In *Center for Biological Diversity v. EPA*, 722 F.3d 401 (D.C. Cir. 2013), which vacated EPA’s attempt to exempt biogenic CO₂ emissions from regulation under the Prevention of Significant Deterioration and Title V programs of the Clean Air Act. Judge Kavanaugh wrote in a concurrence that EPA decided not to apply PSD and Title V to biomass-burning facilities:

“because it thinks that regrowth of plant life—and the resulting recapture of carbon dioxide—might ‘offset’ emissions of biogenic carbon dioxide. But the statute forecloses that kind of ‘offsetting’ approach because the statute measures emissions from stationary sources that ‘emit’ (or have the potential to emit) air pollutants.”

722 F.3d at 413-14 (Kavanaugh, J., concurring)

Consistent with Judge Kavanaugh’s concurrence in *CBD v. EPA*, the final CPP prohibits the use of offsets as a compliance measure, by precluding issuance of ERCs to “[m]easures that reduce CO₂ emissions outside the electric power sector, including GHG offset projects representing emission reductions that occur in the forestry and agriculture sectors”¹²⁸ The proposed FP and model trading rule reiterates this provision,¹²⁹ and we ask EPA to finalize it in this context as well.

C. EPA Should Not Allow Waste Incineration for Compliance Under the Federal Plan and Model Trading Rule

The proposed FP and model trading rule would allow waste-to-energy (only the biogenic portion) to generate ERCs for compliance under the CPP.¹³⁰ EPA should not allow waste-to-energy for compliance under the FP and model trading rule. Burning municipal waste is the most carbon intensive form of energy generation, producing over twice the amount of CO₂ per unit of energy than coal plants.¹³¹ The Global Alliance for Incinerator Alternatives has warned that burning waste-derived fuel is not only worse for climate than coal, but it also creates disproportionate impacts by exposing communities to mercury and other toxic pollution.¹³² In allowing only the biogenic portion of municipal waste to qualify for compliance under the final

¹²⁸ 40 C.F.R. § 60.5800.

¹²⁹ Proposed § 62.16435, 80 Fed. Reg. at 65,094.

¹³⁰ 80 Fed. Reg. at 65,093, § 62.16435.

¹³¹ EPA eGRID 2010 Emissions Data for U.S. Electric Power Plants, available at www.energyjustice.net/egrid.

¹³² EJ Groups Raise Concerns Over ESPS Memo Allowing Waste-Derived Fuel, InsideEPA, May 1, 2015, available at <http://www.no-burn.org/downloads/EJ%20Groups%20Raise%20Concern%20Over%20ESPS%20Memo.pdf>.

CPP, EPA acknowledges that these sources are not carbon-neutral, and therefore, state plans seeking to include biogenic waste must consider their characteristics and climate benefits. EPA will review the appropriateness and basis for states' determination to include these measures, and not all of them will be approvable.¹³³ Because EPA would need a state-by-state evaluation to make this determination, the agency should not include this compliance measure as a presumptively approvable option under the model trading rule.

Incinerators are among the most expensive forms of energy generation in the U.S. Often costing upwards of half a billion dollars to build, many incinerators have also required hundreds of millions of additional dollars spent on upgrades for the latest pollution control technologies. A great number of these facilities are sited in communities of color and low-income communities. Incentivizing any form of fossil fuel-based combustion, whether from coal, gas, trash, or biomass, raises serious concerns about increased public health impacts, especially in these communities already overburdened by such industrial pollution. The FIP and the model trading rule must exclude all combustion at municipal solid waste incinerators (including the biogenic portion, in particular because in practice it would be difficult to separate biogenic from non-biogenic waste) from compliance, in order to prevent adverse health consequences and the resulting economic burdens for the communities of color and low-income communities living near such facilities.

X. Community and Environmental Justice Considerations

In the preamble to the proposed FP, EPA has committed to ensure that there is no disproportionate adverse impact on minority, low-income, and tribal communities as a result of CPP implementation.¹³⁴ To this end, EPA has conducted a proximity analysis for the proposed FP using its environmental justice screening tool "EJSCREEN," which summarizes demographic data on the communities located within a 3-mile radius of the affected sources. As the agency itself recognizes, using EJSCREEN requires expertise that some community groups may lack.¹³⁵ EPA's proximity analysis for the FP reiterates that a higher percentage of minority and low-income communities live near power plants when compared to national averages.¹³⁶ EPA hopes that communities will use this analysis as they engage with the agency throughout this rule making.

We commend EPA for providing this information as a starting point in understanding how emissions from regulated sources affect the communities located around those plants. The proximity analysis, however, is difficult to interpret; thus, some communities may not take the most advantage of it as they participate in the stakeholder process. In addition, there are other steps EPA can take to produce a full-fledged environmental justice analysis that would allow

¹³³ 40 C.F.R. § 60.5800.

¹³⁴ 80 Fed. Reg. at 65,049.

¹³⁵ 80 Fed. Reg. at 65,049.

¹³⁶ U.S. EPA, EJ Screening Report for the Clean Power Plan 2015, available at <http://www.epa.gov/airquality/cppcommunity/ejscreencpp.pdf>

EPA to fully address any disproportionate impacts on minority and low-income communities as part of FP design, in furtherance of the agency's obligations under Executive Order 12898. Below we provide suggestions to improve this analysis. Further, EPA should draft model regulations that would implement EPA's recommendations in the preamble to the final Clean Power Plan for addressing environmental justice considerations in the state planning and implementation process.

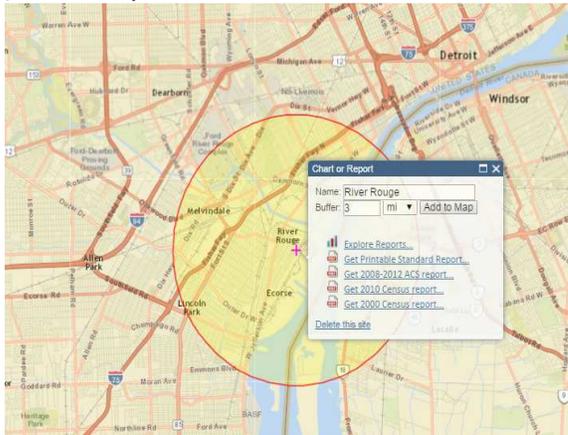
A. EPA Should Take Additional Steps to Improve and Expand its Environmental Justice Analysis

EJSCREEN is a powerful environmental justice mapping and screening tool that provides demographic and environmental information for a selected geographic area. The tool combines environmental and demographic indicators into "EJ indexes" to identify potential exposure and susceptibility to air and water pollution and other environmental risks in a selected location. The tool summarizes information in percentiles, allowing users to compare environmental information for a selected geographic area to that of the state, EPA region, or the country. We commend EPA for using this tool to provide community stakeholders with useful information to engage in the stakeholder process, but ask that EPA undertake the following additional actions:

(a) Produce a guidance document for the proximity analysis. While EJSCREEN can help communities to better understand the demographic and environmental make up of their communities, the actual proximity analysis that EPA published is hard to interpret because it does not contain a guidance document or "key." For example, using the proximity analysis on its own, the reader does not fully understand the relevance of the environmental information displayed in percentiles (the EJ indexes) and how this information interacts with the Census' minority and low-income data. Currently, in order to understand the proximity analysis the reader has to consult the technical documentation for EJSCREEN, which is difficult to understand given the complexity of the screening tool and is not tailored to proximity analysis in the CPP.

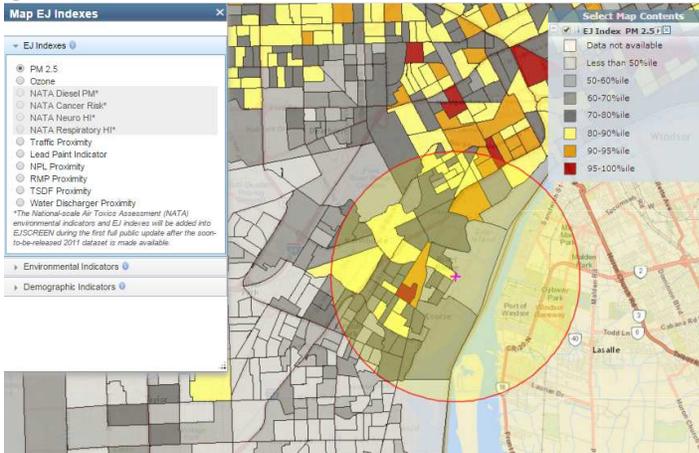
EPA should thus release a guidance document that: (1) describes how to use EJSCREEN specifically in the context of the Clean Power Plan; i.e. how to run EJSCREEN to generate reports of demographic and environmental information within 3 miles of each covered power plant (see Figures 1 to 3, for an example of the process that EPA should describe in writing and graphically); and (2) explains the data displayed in the report, in particular how to interpret the EJ Indexes, with specific examples (in addition to the overall conclusions in the report) that illustrate how to begin the identification of power plants that would raise EJ concerns; for example, if there are large population numbers located around the plants and the PM2.5 and ozone levels in that area are worse than the rest of the state. While EPA shows the study area totals in comparison to state averages, EPA does not display these for each individual study area. EPA should display percentiles in comparison to the rest of the state, not just the United States, as the report currently does. As seen in Figure 3, an EJSCREEN report can generate EJ Index percentiles using a specific radius for the state, EPA region, and the United States.

Fig. 1 – EJSCREEN Snapshot of Mapping the 3-Mile Radius around River Rouge, Michigan (42.270523,-83.124699)



Source: EJSCREEN

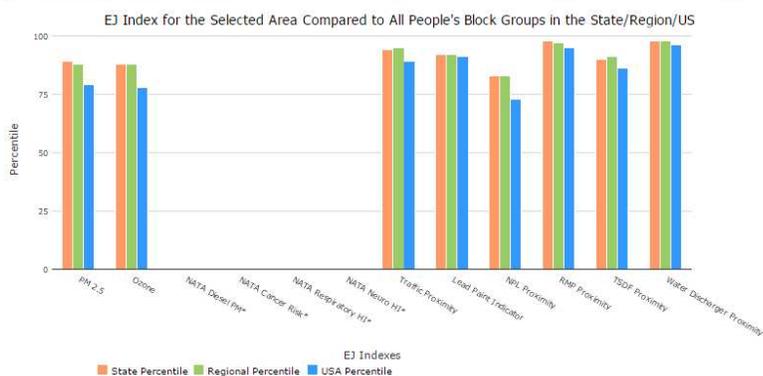
Fig. 2 – EJSCREEN Snapshot of Mapping EJ Indexes Within a 3-Mile Radius From River Rouge, Michigan



Source: EJSCREEN

Fig. 3 – EJSCREEN Report for 3-Mile Ring Centered at River Rouge (42.270523,-83.124699), Michigan, EPA Region 5, Approximate Population: 64,333

Selected Variables	Percentile in State	Percentile in EPA Region	Percentile in USA
EJ Indexes			
EJ Index for Particulate Matter (PM 2.5)	89	88	79
EJ Index for Ozone	88	88	78
EJ Index for NATA Diesel PM*	N/A	N/A	N/A
EJ Index for NATA Air Toxics Cancer Risk*	N/A	N/A	N/A
EJ Index for NATA Respiratory Hazard Index*	N/A	N/A	N/A
EJ Index for NATA Neurological Hazard Index*	N/A	N/A	N/A
EJ Index for Traffic Proximity and Volume	94	95	89
EJ Index for Lead Paint Indicator	92	92	91
EJ Index for NPL Proximity	83	83	73
EJ Index for RMP Proximity	98	97	95
EJ Index for TSDF Proximity	90	91	86
EJ Index for Water Discharger Proximity	98	98	96



Source:

EJSCREEN

(2) Develop a process for modeling co-pollutant emissions for plants of special concern. EPA's proximity analysis is not sufficient because, as EPA itself notes, the impacts of power plant emissions are not limited to a 3-mile radius; emissions from these plants can affect populations many miles away. Even though carbon dioxide is a global pollutant with no localized impacts, communities are concerned about the potential for conventional air pollution hotspots associated with the increased use of certain coal plants and natural gas plants that could take place during the implementation of the Clean Power Plan. Therefore, EPA (in federal plan states) and states (in implementing their state plans) should conduct a robust stakeholder process in environmental justice communities to learn from them which affected EGUs in the state are of special concern. If EPA determines through this process that there are one or more affected EGUs beyond a 3-mile radius that is of particular concern to the communities, it should evaluate whether the plant has increased its emissions of co-pollutants since implementation of the Clean Power Plan, and if so, conduct air dispersion modeling to determine the statewide air quality impacts of the pollutant that has increased. The modeling results should be evaluated with geographic information systems (GIS) software to identify the populations affected by the pollution from those plants beyond the 3-mile radius.

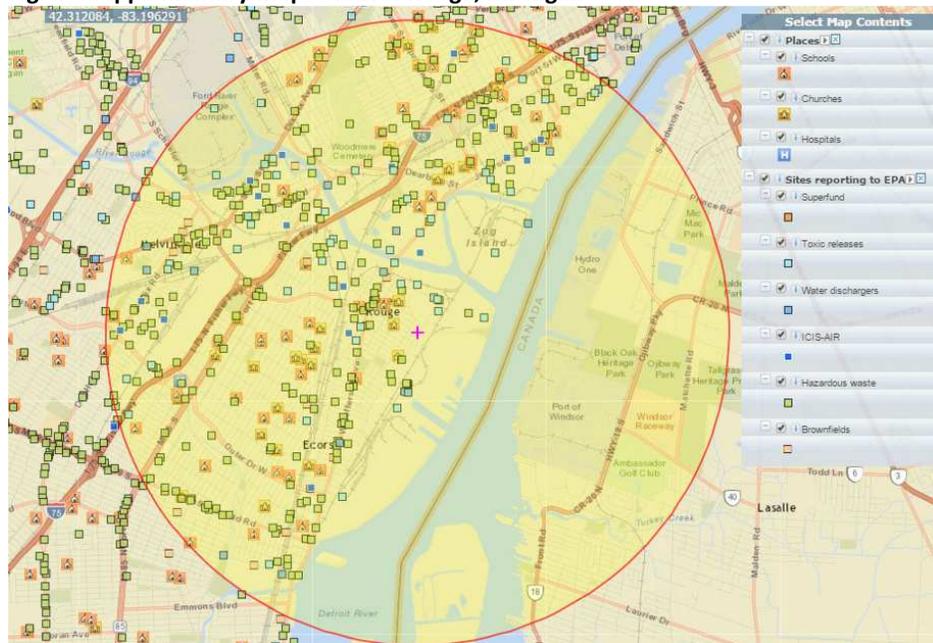
(3) Identify the potential for cumulative impacts. Third, community and environmental justice groups have long advocated for EPA to consider cumulative impacts of other pollution sources, which the Clean Power Plan does not address.¹³⁷ Many affected sources are located in the

¹³⁷ We reiterate that, in a separate rulemaking, EPA should issue a cumulative impacts standard that fully recognizes the existence of these effects on minority and low income communities, providing

same areas where other large industrial facilities are sited, and many of these facilities contribute to non-attainment of other Clean Air Act standards.

Recently, EPA revised its EJSCREEN tool to incorporate a “supplementary maps feature,” which provides additional information on environmental concerns and sources of air and water pollution derived from EPA databases on hazardous waste, water discharges, toxic releases, brownfields, and impaired streams and water bodies. (See Figure 4). EJSCREEN also provides information on the location of schools, churches, and hospitals within a designated radius. Albeit not a quantitative assessment of actual cumulative impacts, as part of its screening EPA should use this feature of EJSCREEN to prepare maps of environmental concerns, plus schools, churches, and hospitals within the 3-mile radius for each of the power plants studied in its proximity analysis, so the agency and communities have a visual picture of potential environmental hazards that may require further analysis. EPA should pay special attention to waste incinerator facilities. As discussed in Section IX, burning waste-derived fuel is not only worse for climate than coal, but it also creates disproportionate impacts by exposing communities to mercury and other toxic pollution.

Fig. 4 – Supplementary Maps of River Rouge, Michigan



Source: EJSCREEN

guidance to states, or any other obligated entity under its rules, to identify and address cumulative impacts in all their programs, policies, and activities.

This graph depicts “sites” reporting to EPA. The green squares represent hazardous waste sites; the dark blue squares represent sources of air emissions; the blue squares are water dischargers; the light blue squares are toxic releases; the light orange squares are brownfields; and the dark orange squares are Superfund sites. The graph also depicts “places,” with appropriate symbols to distinguish them from the “sites”: schools (in orange), churches (in yellow), and hospitals (in blue).

In addition, with respect to the modeling of co-pollutant emissions discussed above, EPA (under the FP) and the states (under the model trading rules) should aim to model co-pollutant emissions from these facilities (at least the largest ones) together with the emissions from the coal and gas plants identified through the process under suggestion (2) above in order to gain an understanding of cumulative impacts, and the agency should set (or work with state agencies to set) appropriate emission standards under the CPP and other Clean Air Act rules, as applicable.

B. EPA and the States Using the Model Trading Rule Should Incorporate the Results of their Environmental Justice Analyses in their Plans

As explained above, communities are concerned about the potential harmful effects associated with the increased use of coal plants and natural gas plants that could take place during the implementation of the rule. The results of the expanded proximity analysis (as suggested above) and co-pollutant modeling results should be used by EPA and the states to design FPs and SIPs that truly incorporate environmental justice concerns. Dirty fossil-fuel power plants that affect the health of communities must not be allowed to increase their utilization.

In addition, as EPA well knows, EJ organizations and their communities are extremely concerned about trading because of the potential for co-pollutant hotspots that could adversely affect their communities. Relying on EPA’s own cap-and-trade manual, in Section IX we suggest EPA and the states to address this concern through spatial trade restrictions, by delineating zones with unacceptable pollution concentrations and forbidding the affected sources that are causing those emissions to purchase allowances that permit them to continue polluting. The model trading rule (which, as discussed in Section IX, should provide for auctions as the default allocation mechanism) should require states to use a portion of auction revenues to finance investments in renewable energy and demand-side energy efficiency for those communities most affected by fossil fuel pollution. Even if the analysis concluded that no adverse co-pollutant impacts would occur (as the co-benefits of the implementation of the CPP are substantial),¹³⁸ the environmental justice analysis is critical to identify potential adverse impacts as well as to ensure that the communities that have been historically most affected by fossil fuel pollution receive the benefits of the rule in terms of improved air quality and the expansion of economic opportunities.

¹³⁸ EPA, *Regulatory Impact Analysis for the Clean Power Plan Final Rule*, at ES-10 – ES-19.

C. EPA Must Include Enforceable Deadlines for Completion of Its Proposed Assessment of Local Air Quality Impacts During Implementation

In the preamble to the proposed FP, EPA states that it will conduct an assessment of any localized emissions increases that may result from plan implementation and to mitigate any adverse impacts on overburdened communities.¹³⁹ We commend EPA for committing to this perform this assessment (as the agency also did under the final CPP), in furtherance of the agency’s obligations under Executive Order 12898. However, we also request EPA to finalize enforceable deadlines for completion of this proposed assessment(s) of local air quality impacts under the FP. EPA should commit to reviewing localized impacts annually and to consider broader impacts, as described above, prior to the end of each compliance period demonstration, in time to adjust implementation for the following compliance period.

D. EPA Must Continue to Ensure Meaningful Involvement of Communities in this Rule Making

As indicated in the proposed FP, EPA has hosted community workshops on the proposed FP and model trading rules for minority, low-income, and tribal communities in several cities around the country.¹⁴⁰ EPA regional offices have also conducted outreach meetings to communities. The purpose has been to provide training to communities on how the rulemaking process works as well as information they need to actively engage with EPA throughout the comment period.¹⁴¹ EPA is also working with other federal agencies to ensure that communities have information on available federal resources, in particular to increase access to renewable energy and energy efficiency. We commend EPA for arranging these targeted sessions and providing information in its community webpage, and urge the agency to continue to provide these communities with opportunities for meaningful involvement in the rule making process, and to actively seek their input in the development of a comprehensive environmental justice analysis of the FP and SIPs under the model trading rule. EPA should work with CPP implementing agencies to ensure that they are “meaningfully” engaging communities in the CPP stakeholder process.

In addition, we would like to offer the following feedback on these community workshops and meetings:

Workshop/Hearing Logistics

- The location of workshops must be easily accessible to the majority of members of the relevant communities;
- The meeting times should accommodate community members who work full-time jobs;

¹³⁹ 80 Fed. Reg. at 65,051.

¹⁴⁰ EPA, Clean Power Plan Outreach Summary, available at <http://www.epa.gov/cleanpowerplan/clean-power-plan-outreach-summary>.

¹⁴¹ 80 Fed. Reg. at 65,049-65,050.

- Outreach and communications about the subject matter of workshops or hearings (e.g. the substance of the FP and the CEIP) should be done well in advance, to give community members time to learn and prepare;
- Public hearings should take place after teleconference, so community members can ask questions on the phone and are better informed in preparation for the hearings:
- EPA must enable better communication channels with tribal communities about the consultations being done with tribal governments (who not always represent the interests of their communities);

Substance of Workshops

- Community workshops should focus on the key aspects of the FP and model trading rule and emphasize the environmental and economic justice provisions in these rules, so communities learn how they can benefit from the CPP and why their participation is so important;
- EPA must provide more specific guidance (both to states and communities) on how to prepare an EJ analysis and on key questions the agency is taking comment on (for example, how to define “low income” under the CEIP);
- EPA must continue to provide communities training on EJSCREEN;
- EPA should also provide training on how to access publicly available emissions and air quality monitoring data that sources and states are already reporting to EPA under other CAA programs;
- In addition to environmental justice, the workshops *must* address economic justice issues, in particular quality careers in clean energy and workers’ transition.

E. EPA Should Specify that States that Receive Funding From EPA to Develop their SIPs, including their EJ Analyses, Are Subject to Title VI of the Civil Rights Act

In response to many environmental justice groups’ request to EPA to ensure compliance with Title VI of the Civil Rights Act by states that receive funding from the agency to develop their SIPs, in the final CPP EPA encouraged anyone who believes that any of the federal non-discrimination laws has been violated by any recipient of EPA funds to file an administrative complaint with EPA’s Office of Civil Rights (OCR). EPA should reiterate this requirement in finalizing the federal plan and model trading rules.¹⁴²

XI. Economic Justice¹⁴³

¹⁴² EPA is currently taking comment on its rulemaking to amend Title VI regulations with regard to compliance information, post-award compliance reviews, and complaint investigations. Once this comment period ends, we urge the agency to finalize this rule expeditiously, to strengthen EPA’s ability to ensure that recipients of federal assistance comply with Title VI and other non-discrimination statutes. EPA, *Non-Discrimination in Programs or Activities Receiving Federal Assistance from the Environmental Protection Agency*, Proposed Rule, 80 Fed. Reg. 77,284 (Dec. 14, 2015).

¹⁴³ See also Section III.

A. EPA Should Provide Guidance on Workforce and Contractor Standards to Ensure Full Achievement of CO2 Emissions Reductions

EPA has asked for comment on whether the FP should encourage affected sources to ask for a demonstration that the work undertaken pursuant to a FP is performed by a proficient workforce. In order to accomplish this, the agency suggests that workers that perform RE, EE, and other CO2 emission reduction-related measures should be certified either by an apprenticeship program registered with the U.S. Department of Labor (DOL), a state apprenticeship program approved by the DOL, a skill certification aligned with the Department of Energy (DOE) Better Building Workforce Guidelines, or other skill certification validated by a third party accrediting body.¹⁴⁴ EPA has also asked for comment on worker certification requirements specifically as part of the rate-based model trading rule, proposing to encourage states to include in their plan a description of how they will ensure that the skills of workers who install EE and RE projects, or other measures to reduce CO2 emissions, will be certified by a third party that develops certification programs based on consensus-based standards, such as the certification and apprenticeship programs mentioned above.¹⁴⁵

Sierra Club strongly supports this proposal, which reflects that EPA recognizes that a well-trained workforce is necessary to achieve the country's clean energy potential. This recognition does not yet exist, or is in nascent stages in many places in the country. Therefore, regulatory drivers are needed to incentivize a good, efficient labor workforce whose skills will contribute substantially to the implementation of clean energy measures that translate into real emissions reductions. In addition to worker certification standards, there are other workforce and contractor standards that states (under their SIPs) and affected sources (under the FP) should be encouraged to implement to help ensure that states reach their clean energy goals. The Clean Power Plan provides an excellent opportunity to incentivize these standards.

We urge the agency to work with the DOL and the DOE to provide comprehensive guidance to states on skill certifications which, as EPA indicates, will help substantiate the authenticity of emissions reductions from clean energy measures.¹⁴⁶ Because there is no "gold standard" for workers' certification, we offer the agency some suggestions to ensure that states and affected sources choose apprenticeship programs that train workers to properly install, operate, and maintain clean energy projects that translate into CO2 emissions reductions. We also suggest that EPA especially encourage DOL or DOE-approved multiyear apprenticeship programs that graduate at least 50 percent of their students.

For state apprenticeship programs, EPA should encourage state air agencies to work with the relevant labor agencies, as well as energy and workforce experts beyond these agencies, to make any revisions to the training curriculum (e.g. to add any necessary skills that are currently

¹⁴⁴ 80 Fed. Reg. at 64,982.

¹⁴⁵ 80 Fed. Reg. at 65,008.

¹⁴⁶ *Id.*

not being taught), as are needed to ensure that workers acquire the necessary skills to perform the clean energy jobs that will be created under the Clean Power Plan.¹⁴⁷ With respect to private sector apprenticeship programs in particular, EPA should consult with DOL and DOE, as well as energy and workforce experts beyond these agencies, so the agency can provide general guidelines to states on the criteria that these programs should meet in order to achieve approval from DOL and DOE, while directly connecting these criteria to how workers that have been certified under those programs have performed projects that have resulted in emissions reductions.

EPA should also encourage states and affected sources to demand other workforce standards, such as prevailing wage, for work performed with revenues from allowance revenues. California's AB32 provides a good example, whereby the revenues from auctions are used on a variety of projects (for example, affordable housing projects), and the spending of this public money triggers minimum wage requirements.¹⁴⁸

In addition, EPA should encourage states and affected sources to adopt responsible contractor pre-qualification requirements. Experts have documented that reliance on standards for participating contractors contributes to promoting work quality because those projects attract high-performing contractors instead of lower performing contractors. High-performing contractors in fact believe that their ability to participate in these projects is undermined by lack of good standards.¹⁴⁹

Finally, states should also develop a system to verify and enforce these skills standards and contractor qualification requirements.¹⁵⁰ EPA should strongly encourage states to adopt these standards under the Clean Power Plan, which will create good quality careers and greater emissions reductions due to clean energy measures. Researchers have documented that stringent standards, including prevailing wages, responsible contractor policies, and apprenticeship requirements are critical to emissions reductions,¹⁵¹ and they do not lead to higher costs when compared to those projects that lack these standards.¹⁵²

¹⁴⁷ See, e.g., Donald Vial Center on Employment in the Green Economy, U.C. Berkeley, *Workforce Issues and Energy Efficiency Programs: A Plan for California's Utilities* (May 2014), at 13.

¹⁴⁸ U.C. Berkeley Center for Labor Research and Education, *Addressing the Employment Impacts of AB 32, California's Global Warming Solutions Act* (February 2009), available at http://laborcenter.berkeley.edu/pdf/2009/AB32_policy_brief09.pdf.

¹⁴⁹ Donald Vial Center on Employment in the Green Economy, *Workforce Issues and Energy Efficiency Programs: A Plan for California's Utilities*, at 133, 136.

¹⁵⁰ *Id.*, at 131 – 132.

¹⁵¹ *Id.*, at 13. See also, Donald Vial Center on Employment in the Green Economy, *Environmental and Economic Benefits of Building Solar in California: Quality Careers – Cleaner Lives*, (November 10, 2014), at 10, 13, available at <http://irle.berkeley.edu/vial/publications/building-solar-ca14.pdf>.

¹⁵² Donald Vial Center on Employment in the Green Economy, *Workforce Issues and Energy Efficiency Programs: A Plan for California's Utilities*, at 5-6. For example, with respect to compliance with building codes, experts have found that lack of knowledge from designers, builders, and construction workers regarding implementation of building codes is one of the causes of poor compliance and thus to higher

In addition, we strongly emphasize that, in developing the policies needed to create good quality careers in clean energy, states and affected sources should extend labor opportunities to workers in disadvantaged communities. Many of the clean energy jobs that the CPP will create can provide living wages and define pathways to good quality careers that will help further emissions reductions.¹⁵³ For this reason, it is extremely important that states prepare the EJ analysis discussed below. In addition, as discussed below, the CEIP matching program EPA has created under the CPP should favor low-income EE projects. To the extent that those projects are being built in environmental justice communities, states should ensure that those emission reduction measures are coupled with job opportunities for workers in those same communities. EPA should encourage and, working with DOL and DOE, should provide guidance to the states around local or targeted hire provisions as a way to ensure that these opportunities reach environmental justice communities.

Specifically with respect to EM&V of demand-side energy efficiency projects, in a rate-based plan EPA should definitely encourage states to adopt workforce standards as part of the EM&V process. With respect to a mass-based program, many stakeholders have claimed that one of the advantages of this system is that, because sources are only required to hold allowances equal to their emissions to comply with the establish cap, EM&V is not required to comply with this type of standard. Contrary to these views, in many cases EM&V will be required in mass-based programs, in order to implement clean energy set-asides. The standards we discuss above should be incorporated into EM&V requirements, as discussed in Section VI above. Strong EM&V requirements support strong worker standards, because if we measure actual savings instead of relying on modeling results, low-quality work will not get counted. This will not only provide a high-road environment for workers; it will also result in higher energy savings by increasing the proportion of measures properly installed and maintained, while reducing costs to rate payers, customers, and contractors from any problems that could arise from low-quality work performance (call backs, etc.)¹⁵⁴

XII. Federal Plans for Areas of Indian Country

1. EPA Must Finalize its “Necessary or Appropriate” Finding to Establish a FP for Areas of Indian Country

compliance costs. In particular, they have documented lack of knowledge from builders and contractors on the most recent codes, construction workers that install projects incorrectly, and builders and tradespeople that do not recognize incorrect installations. Williams, Allison, et al., *The Cost of Enforcing Building Energy Codes: Phase 1*, Lawrence Berkeley National Laboratory (April 2013), available at <http://eetd.lbl.gov/publications/the-cost-of-enforcing-building-energy-codes-phase-1>

¹⁵³ Donald Vial Center on Employment in the Green Economy, *Workforce Issues and Energy Efficiency Programs: A Plan for California’s Utilities*, at 2-3.

¹⁵⁴ *Id.* at 13, 26.

In the FP preamble, EPA proposes a finding that it is “necessary or appropriate” to establish a FP for each of the three areas of Indian country that have affected sources.¹⁵⁵ We strongly urge EPA to finalize its proposed finding. EPA has indicated that no tribe has yet expressed a clear intent to apply for “treatment as state” (TAS) approval to develop and submit a tribal implementation plan (TIP) to EPA.¹⁵⁶ This finding is not optional—the Clean Air Act *requires* the agency to issue a FP for areas of Indian Country where tribes do not submit SIPs or EPA disapproves the plans submitted.

Section 301(d)(4) of the Act provides that if EPA “determines that the treatment of Indian tribes as identical to States is inappropriate or administratively infeasible,” EPA will provide “other means by which the Administrator will directly administer such provisions so as to achieve the appropriate purpose.”¹⁵⁷ Under this provision, if a tribe does not seek TAS approval to implement an air quality program, EPA must administer the program for the area of Indian country. This applies to the development and submission of implementation plans.

Section 49.11 of the Tribal Authority Rule (TAR) expressly provides EPA’s obligation to “promulgate without unreasonable delay such Federal implementation plan provisions as are necessary or appropriate to protect air quality, consistent with the provisions of sections 304(a) and 301(d)(4), if a tribe does not submit a tribal implementation plan ... or does not receive approval of a submitted tribal implementation plan.”¹⁵⁸ EPA has previously issued federal plans for areas of Indian country.¹⁵⁹

In the TAR, EPA also confirmed that the “necessary or appropriate” language does not confer the agency discretion to avoid promulgating a FIP. In describing section 49.11, EPA explained that it “provides that the Agency will promulgate a FIP to protect tribal air quality within a reasonable time if tribal efforts do not result in adoption and approval of tribal plans or programs. Thus, EPA will continue to be subject to the basic requirement to issue a FIP for affected tribal areas within some reasonable time.”¹⁶⁰

2. EPA Should Set The Same Deadlines for Developing TIPs as the Agency has Established for States to Submit SIPs Under the Clean Power Plan

¹⁵⁵ 80 Fed. Reg. at 65,033.

¹⁵⁶ *Id.*

¹⁵⁷ 42 U.S.C. § 7601(d)(4).

¹⁵⁸ 40 C.F.R. § 49.11.

¹⁵⁹ *See, e.g., Source-Specific Federal Implementation Plan for Four Corners Power Plant; Navajo Nation*, 72 Fed. Reg. 25,698 (May 7, 2007); *Source-Specific Federal Implementation Plan for Navajo Generating Station; Navajo Nation*, 75 Fed. Reg. 10,174 (Mar. 5, 2010).

¹⁶⁰ 63 Fed. Reg. at 7265.

Under the TAR, treatment as state applies to all provisions of the Clean Air Act, except those set forth in section 49.4 of the regulations. Section 49.4 includes, among other provisions for which it is not appropriate to treat tribes as states, plan submittal and implementation deadlines under sections 110(a)(1), 172(a)(2), 182, 187, 189, and 191 of the Act.¹⁶¹ Section 49.4 of the regulations, however, does not include section 111 or the state plan submission deadlines under Section 111(d)'s Implementing Regulations.¹⁶²

In the proposed TAR, EPA reasoned that it would be inappropriate to subject tribes to the same program submittal deadlines required of states because plan submittal deadlines were based on a long history of implementation of Clean Air Act programs by states since the 1970 Amendments. In contrast, tribal authority for implementation of air programs was first addressed in the 1990 Amendments, so that tribes were in early states of developing air planning program efforts.¹⁶³ Thus, in the final TAR, EPA concluded that there is no date certain for submittal requirements for tribes under the Act, and also included federal plans, because these would be keyed to plan submission deadlines and disapprovals.¹⁶⁴

EPA further specified, however, that the inclusion of the federal plan obligation in section 49.4 of the TAR, did not relieve the agency "of its general obligation under the CAA to ensure the protection of air quality throughout the nation, including throughout Indian country."¹⁶⁵ Accordingly, as described above, the TAR provides that the agency will promulgate a federal implementation plan "without unreasonable delay," if a tribe does not submit an implementation plan or EPA disapproves its plan.¹⁶⁶ EPA's reasoning for excluding state plan, and also federal plan submission deadlines under the NAAQS program, as explained in the proposed TAR twenty years ago, should not apply to this proposal. We ask EPA to establish FP deadlines that are consistent with those set forth under the Clean Power Plan.

XIII. Permitting, Enforcement, and Compliance Demonstration Issues

EPA asks for comment on a number of permitting, enforcement, and compliance demonstration issues. We address several of the key issues below.

A. Streamlining NSR procedures for affected EGUs would be unlawful and unnecessary.

¹⁶¹ 40 C.F.R. § 49.4(a).

¹⁶² 40 C.F.R. § 60.23.

¹⁶³ 59 Fed. Reg. at 43,965.

¹⁶⁴ 63 Fed. Reg. at 7265.

¹⁶⁵ *Id.*

¹⁶⁶ 40 C.F.R. § 49.11.

In the proposed rule, EPA observes that measures affected EGUs implement to comply with the FP are unlikely to trigger New Source Review (“NSR”) permitting requirements. 80 Fed. Reg. at 64,985. The agency nonetheless invites comment on “potential scenarios in which affected EGUs, particularly small entities, could be subject to the requirements of the NSR program as a result of taking compliance measures under the federal plan, and any ideas for harmonizing or streamlining the permitting process for such sources that are consistent with judicial precedent.” *Id.* EPA need not take steps to streamline the NSR program for affected EGUs, and doing so would be contrary to the Clean Air Act.

Moreover, EPA cannot lawfully or rationally include in the FP “streamlined” permitting provisions that effectively exempt sources from any otherwise-applicable NSR requirements. The Act does not authorize such exemptions, even when the plan’s purpose is to reduce emissions. *See* 42 U.S.C. §§ 7475, 7479, 7502(c)(5); *New York v. EPA*, 413 F.3d 3, 41-42 (D.C. Cir. 2005) (holding that the CAA does not permit EPA to exclude a class of activities from being a “modification” that would trigger NSR). Any affected EGUs that trigger NSR must adopt pollution controls satisfying BACT or LAER and meet the other NSR requirements to achieve the NSR program’s objectives.

Nor is there any appropriate Federal interest in streamlining the NSR permitting process. The NSR provisions of the Act wisely and appropriately require sources to upgrade pollution controls at existing units if those units are modified in a way that increases annual emissions. The only projects that are likely to increase annual emissions, and thereby trigger the obligation under NSR provisions to install modern controls, are those projects that reduce forced outages that are endemic in the aging U.S fleet. Many of these projects also extend the useful life of existing units. There is no valid public policy interest in artificially extending the “grandfathering” of existing units that was provided by Congress in 1970 under the expectation that existing units would soon retire and no longer emit at unnecessarily high levels.

Nothing in the CAA prevents owners of older, grandfathered units from upgrading and improving the performance of those units, provided the owners (1) install modern pollution controls or (2) accept enforceable permit conditions that limit annual emissions to levels emitted in recent years of operation. The particular path that operators of affected EGUs may take to comply with CAA section 111(d) obligations and other requirements of Federal and State law is their decision – not a Federal or State decision. However, truncating the NSR permitting process for such sources would conflict with one of the fundamental features of the Clean Air Act, the end to grandfathered status when plant modifications increase annual emissions.

B. Incorporating FP requirements into Title V permits via “minor modifications” would be unlawful and arbitrary.

In the proposed rule, EPA suggests that “any changes that may be required to an operating permit with respect to a trading program under the federal plan may be made using the minor

permit modification procedures of the title V rules.” 80 Fed. Reg. at 64,984. That includes the initial changes needed to the title V permit “to establish the applicability of the trading program to the source, specify the covered units, and to include other permit terms that may be needed for implementation, including the general approach for monitoring and reporting,” and also “any subsequent changes to permit terms that may be needed with respect to the trading program, although we expect such changes to be infrequent.” *Id.* at 64,984-85.

Because emissions trading programs carry an inherent risk that sources impacting already burdened communities may increase their emissions, it is important that the public have an opportunity to influence how the proposed FP treats individual EGUs.

Also of concern is the proposed rule’s suggestion that any subsequent changes to a Title V permit that a source wishes to make to accommodate its preferred strategy for complying with the FP would also be treated as minor modifications. EPA has not explained what sorts of changes it anticipates would be made under these circumstances, and why the provisions of the Title V regulations governing permit modifications do not provide sufficient flexibility. In our experience, some states have used the Title V minor modification process to insulate even significant permit changes from review and comment by the public and EPA.¹⁶⁷ Thus, EPA would have to be very explicit as to what types of changes it proposes to treat as minor modifications, provide a lawful and reasoned justification therefor, and provide the public notice and comment on that proposal, before it can authorize such modifications as “minor” by rule: The agency has failed to do so here.

C. Applying a penalty for insufficient allowances or ERCs is an important complement to CAA enforcement.

EPA has proposed that, when required to demonstrate compliance, if an affected EGU holds an amount of allowances or ERCs insufficient to comply with its emission performance standard, EPA will impose a two-for-one penalty on the source’s obligation to make up the deficit. 80 Fed. Reg. at 65,010, 65,031. This penalty would be in addition to other enforcement actions which EPA or other parties (including private citizens) may initiate under sections 113 or 304 of the CAA. *Id.*

The proposed two-for-one penalty is an important step to ensure a fair market for allowances and ERCs. In the absence of such a measure, affected EGUs would be free to speculate that allowance or ERC prices would fall after the compliance date, and delay purchasing the number needed to comply. Such EGUs would reap a windfall if prices did indeed fall after the

¹⁶⁷ For example, the public has no right to petition EPA to object to any “minor revision” of a Texas Title V permit. 30 TEX. ADMIN. CODE § 122.360(a). Luminant Generation Corp. (which owns a number of affected EGUs) took advantage of this “minor revision” procedure to change monitoring and reporting requirements in a Title V permit and argued in Court that those changes also changed its compliance obligations with respect to its particulate matter emissions limit.

compliance date and gain an unfair competitive advantage over sources that achieve compliance in a timely manner as required under the Clean Power Plan.

However, EPA should also provide for the collection of a three-for-one allowance or ERC penalty on an affected EGU's deficit when circumstances require it. Such a penalty may be necessary, for example, to protect against large swings in allowance or ERC prices that could occur around the date of compliance demonstrations.¹⁶⁸ If allowance or ERC prices spike in the run-up to a compliance date, even a requirement to provide double the number of allowances or ERCs may be insufficient to dissuade affected EGUs from speculative violations. Collection of triple the amount of allowances or ERCs may also be appropriate for sources that fall outside the normal distribution of allowance or ERC holdings – e.g., sources that miss their allowance or ERC requirement by 10 percent or more. Such large compliance deficits may indicate bad faith or a plan by the source to seize an economic advantage through non-compliance.

Finally, it is crucial that the FP retain the applicability of other CAA enforcement provisions, in addition to providing for the collection of additional allowances and ERCs. EPA cannot waive its enforcement authority, or the public's. Section 110 of the CAA, which serves as the model for implementation plans under section 111, requires that plans must include "enforceable emission limitations." 42 U.S.C. § 7410(a)(2)(A). A FP provision that automatically exempted affected EGUs from the CAA's enforcement provisions by allowing an EGU to "catch up" with a missed emission performance obligation would prevent the applicable emission limits from serving as enforceable emission limitations. Just as EPA cannot exempt sources from complying with emission limits, neither could it effectively postpone compliance obligations indefinitely by allowing remedial measures to substitute for achieving the emission performance required under the Clean Power Plan.

D. Adopting intervening compliance requirements will help to ensure compliance and moderate fluctuations in allowance or ERC prices.

EPA has requested comment on its proposal to evaluate compliance only at the conclusion of each multi-year compliance period, and not to implement intervening compliance requirements. 80 Fed. Reg. at 65,013-14. As the proposed rule notes, existing emissions trading programs, including the RGGI and the CARB Cap and Trade Program, use such intervening requirements to supplement their multi-year compliance obligations. *Id.* For

¹⁶⁸ See Pew Center of Global Climate Change, *Congressional Policy Brief: Containing the Costs of Climate Policy* at 8 (Fall 2008), available at <http://www.c2es.org/docUploads/Costs.pdf> (explaining that multi-year compliance periods have the disadvantage that "firms can put off taking action, leading to "a scenario where large numbers of buyers are in the market for allowances at the same time, perhaps right as the compliance deadline looms. The result could be a rather large temporary spike in the price of allowances.")

example, the CARB program requires sources to hold allowances covering a percentage of the source's emissions over the previous year. *Id.* at 65,014.¹⁶⁹

Including an annual compliance requirement – even if it only covers a portion of the affected EGUs emissions, as with the CARB and RGGI programs – is crucial to ensuring that sources remain on track and that the implementation plan is working as anticipated. The failure to achieve compliance in the early years of a plan may indicate structural problems with the plan that could render compliance with the state goals impossible. Moreover, a three-year compliance period increases the magnitude of potential defaults. Adopting intervening requirements would also help to ensure price stability in the allowance market, which otherwise might see larger swings in prices if sources have no requirement to obtain allowances until the close of a compliance period.¹⁷⁰

Intervening compliance requirements are also needed because of the long lag time EPA has proposed between the end of the compliance period and the date when sources must demonstrate compliance over that period – ten months, in the case of a rate-based approach. *See* 80 Fed. Reg. at 65,113 (proposed definition of “ERC transfer deadline”). Although it may be reasonable to allow affected EGUs an interval after the close of the compliance period to secure allowances or ERCs, this amplifies the need for an earlier demonstration that affected EGUs are on the path to compliance. Even under the proposed mass-based FP, the first compliance demonstration for affected EGUs would not be required until May 1, 2025. *See* 80 Fed. Reg. at 65,085 (proposed definition of “allowance transfer deadline”). That is an extremely long wait – three and a half years following the beginning of the program – for the first evidence that the FP is working as anticipated.

The FP needs to reflect the lessons learned in prior emission trading programs, and adopt a requirement to annually measure EGUs' progress towards compliance. As the South Coast Air Quality Management District has explained,

One of the primary lessons learned in [the NOx RECLAIM program] was that many businesses did not act rationally or plan ahead. If a facility waits until the end of the 3-

¹⁶⁹ As the proposed rule explains, the CARB program evaluates compliance “on 30 percent of each source's previous year's emissions every year, and evaluate compliance for the remainder of emissions every 3 years.” 80 Fed. Reg. at 65,014. Similarly, the RGGI program requires sources to “hold allowances to cover 50 percent of emissions for the first two calendar years of each 3-year compliance period; at the end of each 3-year compliance period sources must hold allowances to cover 100 percent of emissions for the period and allowances already deducted for the intervening requirement are subtracted from the 3-year obligation.” *Id.* at 65,013-14.

¹⁷⁰ Todd Schatzki, et al., Analysis Group, *Next Steps for California Climate Policy II: Moving Ahead under Uncertain Circumstances* (Apr. 2010) at 8, available at http://www.arb.ca.gov/cc/capandtrade/meetings/121409/additionalcomments/stavins_100428.pdf (recommending that sources regulated under CARB's Cap and Trade Program be required to surrender allowances for each year's emissions on a rolling basis, to “smooth demand in allowance markets by avoiding potential surges in demand” when sources must surrender allowances).

year compliance period and assumes they can buy compliance instruments, they may not be available or be at high prices. This does not leave any time for the facility to react and make changes. . . .¹⁷¹

If EPA believes these lessons are somehow inapplicable to the FP, it must explain the agency's reasons for that conclusion in the final rule.

E. An administrative appeals process must be open to citizen petitioners.

EPA must ensure that its proposed administrative appeals process is accessible to parties that may be affected by decisions EPA makes in implementing a FP. EPA proposes that the procedures in 40 C.F.R. Part 78 would be used to adjudicate disputes that may arise during implementation of a FP, noting that the "persons eligible to file such appeals would be designated representatives as defined in this proposed rule and other 'interested persons' as defined in part 78." 80 Fed. Reg. 64,986. In turn, Part 78 defines "interested persons" to include—

- (i) Any person who submitted comments, or testified at a public hearing, pursuant to an opportunity for comment provided by the Administrator as part of the process of making such decision;
- (ii) Who submitted objections pursuant to an opportunity for objections provided by the Administrator as part of the process of making such decision; or
- (iii) Who submitted, to the Administrator and in a format prescribed by the Administrator, his or her name, service address, telephone number, and facsimile number and identified such decision in order to be placed on a list of persons interested in such decision

40 C.F.R. § 78.2(a)(2). As an initial matter, EPA should replace the requirement for a facsimile number with an email address. Furthermore, although this language is a workable starting point, the scope of item (iii) needs to be clarified.

In the proposed rule, EPA identifies, for both rate-based and mass-based FPs, lists of the types of decisions which would be appealable under Part 78. 80 Fed. Reg. at 64,986. Many of the listed decisions would originate in interactions between EPA and a private party and result in a decision of which the public may not have advance notice. As a result, the public may be excluded from appealing these decisions pursuant to EPA's current proposal. To ensure the public has access to the administrative appeal process, EPA must provide the public the opportunity submit their contact information to EPA, in the case of the FP, or to the state regulatory agency in the case of the model trading rules, and be placed on the list of interested

¹⁷¹ South Coast Air Quality Management District Comments on the Preliminary Draft Regulation for a California Cap-and-Trade Program (Jan 11, 2010) at 3-4, *available at* http://www.arb.ca.gov/lists/dec-14-pdr-ws/28-goldstein-cap-trade_1-11-10__2_.pdf.

persons with respect to each of the categories of decisions covered by the administrative appeal provisions. In addition, EPA should allow a person to indicate an interest in all decisions implementing a FP in a state in order to preserve the person's right to appeal the decisions. This approach would help to avoid confusion about whether a listed party had indicated an interest in the specific type of decision they seek to appeal.

F. EPA Should Not Permit the Model Trading Rules as Proposed to Serve as a Model Backstop for State Measures Plans.

EPA proposes to allow states to adopt the model trading rules as the “backstop” to a “state measures” plan – i.e., federally enforceable emissions standards for affected EGUs that would apply if the state's plan falls off the glidepath for anticipated CO₂ reductions, or if the state does not meet designated programmatic milestones during the interim period.¹⁷² 80 Fed. Reg. at 64,975-76. Although the model rules may meet some of the requirements of a federally enforceable backstop as defined in the Clean Power Plan, the concept of a “backstop” itself is contrary to the Clean Air Act. It is well-settled that a SIP cannot rely on emission reductions that are not part of the SIP, *Committee for a Better Arvin v. EPA*, 786 F.3d 1169, 1175 (9th Cir. 2015), and that EPA cannot approve a SIP that puts off until tomorrow what the Clean Air Act requires today. *Sierra Club v. EPA*, 356 F.3d 296, 303 (D.C. Cir. 2004).

Even accepting the concept of a backstop, relying on the model trading rules as the backstop leaves the task of complying with Clean Power Plan requirements incomplete. As the proposed rule points out, any states using the model trading rules as a backstop will need to supplement the trading rules with additional provisions needed to make up the shortfall in emissions performance during the prior plan performance period. 80 Fed. Reg. at 64,976. Therefore, the model rules would need to also include a federally enforceable requirement to adjust the backstop measures as necessary to compensate for the shortfall in order to satisfy the requirements for a state measures plan. EPA should not set forth the model trading rules as a model backstop without also including this self-correcting provision.

In addition, if it intends to provide a model backstop, EPA should require a clear deadline for plan submissions to make up the performance shortfall that triggered the backstop, which is currently lacking in the Clean Power Plan. The current regulations say only that the shortfall “must be made up as expeditiously as practicable.” 40 C.F.R. § 60.5785(d); *cf. id.* § 60.5785(c) (requiring that, for plans other than state measures plans, states have 24 months to submit specific corrective measures that make up for any performance shortfall). The failure to include

¹⁷²EPA should generally discourage the adoption of state measures plans requiring such a backstop. The state measures approach established in the emission guidelines equates to adopting a standard of performance that, under some circumstances, never applies. That result is contrary to the Act, as is the failure to ensure that each state plan measure is federally enforceable. 40 C.F.R. §60.5780(a)(5)

a clear deadline applicable to states' submission of specific measures to remedy performance shortfalls only increases the danger that states choosing the state measures plan approach can avoid having to achieve required emission reductions, or at least postpone them for many years. Moreover, because this delay in initiating federally enforceable reductions only adds to the considerable time after the determination that state measures have failed before corrective actions are taken, we again urge EPA to discourage states' adoption of the state measures approach. EPA should, at a minimum, mitigate this problem by requiring a clear deadline, preferably no longer than six months, for states to submit plan revisions to require sources to make up the shortfall that triggered the backstop's implementation.

XIV. Treatment of Modified or Reconstructed Sources

In the preamble to its proposed FIP requirements and model trading rules, EPA takes the position that any existing EGU that becomes subject to a section 111(b) standard upon modification or reconstruction is no longer subject to any state or federal plan requirements under section 111(d) that previously applied to that unit. *See* 80 Fed. Reg. at 65,038-39. EPA reasons that the Clean Air Act is silent as to the continued application of a section 111(d) program to a unit that subsequently becomes subject to section 111(b) standards through modification or reconstruction, and that the agency thus has authority under *Chevron*

U.S.A., Inc. v. NRDC, 467 U.S. 837, 842-844 (1984) to reasonably interpret the statute on that issue. Under this authority, EPA asserted in the preamble to the proposed Clean Power Plan that section 111(d) requirements continue to apply to existing sources even after modification or reconstruction. 79 Fed. Reg. 34,830, 34,903-04 (June 18, 2014). An interpretation that exempts modified and reconstructed sources from section 111(d) plans could erode the integrity of the program and encourage sources to undertake "sham" or unneeded modifications in order to escape the program's requirements. *Id.* at 34,904.

In response to comments it received criticizing its initial position on this issue, EPA has now proposed to change its interpretation so as to exclude modified and reconstructed units from ongoing obligations under a state or federal section 111(d) plan. The agency suggests this interpretation "gives meaning to the definition of 'existing source' in CAA section 111(a)(6) and is consistent with the definition of 'new source' in CAA section 111(a)(2)," and that it "is consistent with the historical treatment of modified and reconstructed sources in the CAA section 111 program." 80 Fed. Reg. at 65,038. In response to concerns regarding sham modifications or erosion of 111(d) program integrity, the agency states that "there will be other ways to minimize disruption to state plans if such a modification or reconstruction were to take place." *Id.*

As EPA has noted, the Clean Air Act is silent on whether section 111(d) requirements continue to apply to sources that modify or reconstruct. We believe the agency's initial interpretation of this question is reasonable and, from a policy standpoint, superior to its subsequent

interpretation. If a source is undisputedly an “existing” source at the time a section 111(d) program is first established and otherwise meets the rule’s applicability provisions, there is nothing in the Clean Air Act to suggest that governing authority must exempt that source from the program’s requirements at any point during the compliance period merely because the source increases its capacity to emit CO₂ (i.e., modifies) or undergoes a reconstruction. Nor is there any logic in this position from a policy standpoint. As noted above, a variable definition of “existing” based on a source’s activities subsequent to initiation of a section 111(d) program can erode the integrity of the program and encourage sources to make unneeded or unnecessary modifications to avoid regulation under a section 111(d) plan. Therefore, we recommend that EPA revert to its earlier interpretation of the statute and specify that existing sources remain subject to section 111(d) requirements even after they modify or reconstruct.

Should EPA retain its new interpretation and exempt modified and reconstructed sources from ongoing section 111(d) obligations, it must require that any state adopting an existing source-only mass-based approach readjust its CO₂ emissions budget any time a source exits the program through modification or reconstruction. Any federal plan adopting an existing source-only mass-based approach must include a similar readjustment process. This will help ensure that the state plan delivers its anticipated environment benefits and prevent other affected sources from receiving a windfall in the form of extra allowances simply due to the fact that an affected EGU has exited the plan. This recommendation follows the same logic as the “true-up” procedure we discuss in Section IV of these comments.

XV. Amendments to the Framework Regulations Governing the Process for Submittal and Approval of State Plans and EPA Actions.

EPA is proposing changes to the framework regulations governing the state plan submission, review, and approval or disapproval process under CAA §111(d). EPA notes that these changes will apply not only to state plans implementing the Clean Power Plan, but all plans issued under §111(d) regulations going forward. We urge EPA not to finalize certain of these changes. Portions of EPA’s proposed and existing process for submittal and approval of state §111(d) plans and for EPA actions thereon are unlawful and arbitrary for reasons discussed below. Among other things, those portions of the proposal are contrary to §111(d)(1)’s requirement that regulations adopted thereunder shall prescribe a procedure similar to that provided under CAA §110, and contrary to EPA’s stated intent to harmonize the planning procedures for §111(d) plans with those under §110 as amended in 1990.

1. Partial Approvals/Disapprovals: The idea of providing for partial approvals and disapprovals is consistent with the 1990 CAA Amendments to section 110 as reflected in §110(k)(3). EPA needs to make clear, however, that it cannot and will not defer or take no action on a portion of the plan when the deadline for EPA approval/disapproval action has expired (or will expire before completion of the deferred action). Section 110 does not allow for such approaches,

and any procedures under §111(d) allowing such approaches would not be similar to those under section 110.

2. Extension of time for plan submission: The current version of 40 C.F.R. §60.27(a), which EPA has left unchanged in the proposed rule text, provides: “The Administrator may, whenever he determines necessary, extend the period for submission of any plan or plan revision or portion thereof.” This provision is not consistent with or similar to the timing provisions of CAA §110 as amended in 1990. Nowhere does §110 give the Administrator unlimited authority to extend plan submittal deadlines whenever the Administrator determines an extension is necessary. Accordingly, EPA’s continuation of the extension authority under 40 C.F.R. §60.27(a) is unlawful and arbitrary. Even if EPA illegally and arbitrarily chooses to retain this extension authority, the agency should at least make clear that it does not apply to the §111(d) plans for source categories such as those covered by Subpart UUUU, where specific limitations are provided on extensions for plan submittals.

3. Conditional Approvals: Although CAA §110(k)(4) authorizes conditional approvals under limited circumstances, EPA’s proposed rule language for conditional approval of §111(d) plans is significantly more expansive than provided under §110(k)(4). Section 110(k)(4) allows conditional approval only based on a commitment by the State to adopt “specific enforceable measures” by a date certain not later than 1 year after the date of approval of the plan revision. EPA’s proposed rule language dramatically expands the grounds for conditional approval to include not just a commitment by the state to adopt specific enforceable measures, but also commitments by the state to “review and revise if appropriate State plans, or otherwise commit to making changes in the State’s plan necessary to meet the requirements of the applicable emission guidelines.” 80 Fed. Reg. at 65060/1. This language allows conditional approval procedures that are simply not similar to those under 110(k)(4), and that in fact flout the very limited authority that Congress intended for such approvals. Section 110(k)(4) simply does not authorize conditional approval for the purpose of allowing the state to generally “review and revise” plans, or otherwise “mak[e] changes” in the plan. The statute limits conditional approval to only those cases where the state has committed to adopt “specific enforceable measures.”

The D.C. Circuit has repeatedly rejected EPA attempts to read §110(k)(4) as allowing conditional approval of a state plan based on vague or general commitments by states to revise the plan. For example, in NRDC v. EPA, 22 F.3d 1125, 1134-35 (D.C. Cir. 1994), the court rejected EPA’s use of conditional approval to permit states to meet SIP submittal deadlines by submitting “committal” plans that contained nothing “more than a mere promise to take appropriate but unidentified measures in the future.” That approach unlawfully turned conditional approval into a “means of circumventing” SIP deadlines.” Likewise, in Sierra Club v. EPA, 356 F.3d 296, 301-304 (D.C. Cir. 2004), the Court rejected EPA’s conditional approval of a plan that failed to identify the specific enforceable measures that would be adopted later. As the Court explained:

[T]he purpose of the conditional approval provision is not to permit *states* more time to *identify* control measures, but rather to give EPA the opportunity to *determine* whether a SIP, “although not approvable in its present form, can be made so *by adopting specific EPA-required changes* within the prescribed conditional period.” NRDC, 22 F.3d at 1134 (emphasis added). As we further explained, “[s]uch a determination cannot reasonably be made unless the conditionally approved submittal contains something more than a mere promise to take appropriate but unidentified measures in the future.” *Id.* And that requires that the States complete the analyses necessary to identify appropriate measures before, rather than after, conditional approval is granted. . . . [T]he agency’s position is that it may grant conditional approval on nothing more than the States’ promise to do next year what the Clean Air Act requires them to have already done... And that amounts to nothing more than the use of §110(k)(4) ‘to postpone SIP deadlines,’ a power that the section does not confer.

356 F.3d at 303-04 (citations omitted).

EPA’s proposed conditional approval provision for §111(d) plans is unlawful for the same reasons stated in the above-cited opinions. Rather than allowing conditional approval only where the state needs time to adopt specific, already-identified enforceable measures, the language in proposed 40 C.F.R. §60.27(i) would unlawfully allow states to put off adoption of adequate plans until long after the specific deadlines for doing so. And as in NRDC, the rule would unlawfully allow conditional approval based on nothing more than “a mere promise to take appropriate but unidentified measures in the future.”

The proposed conditional approval rule is also unlawful because it does not include the one year limit in section 110(k)(4) on the time allowed for state adoption of the specific measures promised in the commitment on which the conditional approval is based. Instead, the proposed rule sets no time limit at all on adoption of the required measures, leaving the setting of a time limit to the discretion of EPA. This deletion of the 1 year time limit makes the procedure anything but similar to the procedure under section 110.

In addition to being unlawful, the proposed conditional approval rule is arbitrary. There is simply no justification for the approach under the proposed rule, whereby EPA could approve deficient plans (including, conceivably, a plan with no real substantive provisions) based on a promise by the state to submit an adequate plan at a date that can be as far into the future as EPA cares to allow. To authorize this sort of delay allows the deadlines for plan submittal to be rendered illusory, and flouts the purposes of section 111. Moreover, EPA has not even attempted to offer a reasoned explanation justifying the approach in the proposed rule or its departure from the requirements of §110(k)(4).

4. Completeness Criteria: EPA indicates that its proposed completeness determination process for §111(d) plans is modeled somewhat on that set forth in 40 C.F.R. §51.103 and Appendix V to 40 CFR part 51. EPA does not explain, however, why it’s proposed §111(d) completeness

criteria exclude the following requirements that appear in the Appendix V criteria. Absent a reasoned explanation, it is arbitrary for EPA to exclude these requirements from the completeness criteria for §111(d) plans:

- a. A requirement in Appendix V §2.1(b) for evidence that the State has adopted the plan “in final form”
- b. A requirement in Appendix V §2.2(c) for quantification of changes in plan allowable emissions from the affected sources and other information on emission changes.
- c. A requirement in Appendix V §2.2(e) for modeling information required to support the proposed revision.
- d. A requirement in Appendix V §2.2(h) for compliance/enforcement strategies.

5. Parallel Processing: Section 110 of the Act contains no provision for parallel processing for state plan submittals. Adoption of such a procedure for §111(d) plans would therefore not comport with the requirement that EPA rules for the §111(d) planning process -specify procedures similar to those provided by §110. Moreover, EPA’s proposed parallel processing rule is arbitrarily vague concerning the deadlines applicable to plans submitted for parallel processing. Rather than explicitly subjecting such plans (and EPA action thereon) to the same deadlines as for fully adopted plans, the proposed rule says that the state must “submit a schedule” for final adoption or issuance of the plan. 80 Fed. Reg. at 65060/1. The rule itself sets no outside limits on such a schedule, nor does it specify deadlines for EPA action on submittals under parallel processing. The problem is compounded by the fact that the deadline for EPA action on plan submittals under §111(d) is, under EPA’s proposed rule, triggered by a completeness finding: a finding that EPA cannot lawfully or rationally make for a plan submittal that has not been finalized or legally adopted (as would be the case for a draft plan that is submitted for parallel processing).

If EPA decides to provide for a parallel processing option, the agency needs to at least specify that deadlines for submittal of complete plans and for EPA action thereon will be the same as for plans that are not parallel –processed. Thus, if a state has not submitted any plan by the deadline for doing so, EPA must make a finding of nonsubmittal no later than 6 months after the due date regardless of whether the state has indicated an intent to submit an unadopted proposed plan for parallel processing. Likewise, if a state has submitted an unadopted proposed plan for parallel processing, EPA must find that submittal incomplete within 60 days of submittal, as it plainly would not meet the criteria EPA has identified to assure that a submittal is complete. EPA cannot lawfully or rationally exempt plans submitted for parallel processing from major portions of the completeness requirements as it has proposed in the draft version of 40 C.F.R. §60.27(g)(4)(iv), 80 Fed. Reg. 65060/1. To so allow would further render the procedure unlawfully dissimilar from that under CAA §110 and turn parallel processing into an unlawful and arbitrary vehicle for delay and circumvention of the deadline for promulgation of a federal plan. EPA is specifically proposing to allow itself to deem a plan

submitted for parallel processing to be complete even though the plan is not legally adopted, is not accompanied by copies of the actual regulations or documents submitted for approval, is not enforceable by the State, has not been subjected to public notice and comment or a public hearing, and does not meet other criteria for completeness as may be specified under the applicable emission guidelines. Id. By EPA's own criteria, these features are necessary to determine that a plan is complete. If a state made a normal (non-parallel processed) plan submission that was missing any of these features, it would plainly not qualify as "complete." It is arbitrary in the extreme for EPA to allow a select category of states to exclude these features and still have their plans deemed complete. Further, such an approach is plainly not similar to that provided under CAA §110. Section 110(k)(1)(A) requires EPA to promulgate completeness criteria specifying "the information necessary to enable the Administrator to determine whether the plan submission complies with the provisions" of the Act. EPA cannot determine whether a §111(d) submission complies with the provisions of the Act unless it includes the information that EPA is allowing plans submitted for parallel processing to exclude.¹⁷³

Further, EPA has failed to provide any rational justification for the above-cited exemptions from completeness requirements. The practical effect of these exemptions is to facilitate delay in submission of a truly complete plan, and thereby allow delay in commencement of the clock for a federal plan. Neither of these results serves a rational or legitimate regulatory purpose, nor are they necessary to allow a parallel processing approach. If states want to submit unadopted, proposed versions of their plans for EPA input, they can avoid triggering the federal plan clock simply by submitting the plans for parallel processing far enough in advance of the deadline for submitting complete plans to facilitate final adoption of the plan by that deadline.

Finally, EPA needs to make clear that the state's submission of a schedule for final adoption of the plan (pursuant to proposed §60.27(g)(4)(ii)) will not act to defer any deadlines under the rule for EPA nonsubmittal findings or for EPA promulgation of a federal plan.

6. Calls for Plan Revision: EPA's proposal for making calls for plan revision (proposed 40 C.F.R. §62.27(j)) is not similar to the comparable provision in CAA §110(k)(5) in one key respect. EPA's proposal purports to allow EPA to – without limitation – adjust any dates applicable under requirements to which the State was subject when it submitted the plan for which the finding of substantial inadequacy was made. In contrast, CAA §110(k)(5) expressly bars EPA from, as part of call for plan revision, adjusting any attainment date under Part D, unless such date has elapsed. A comparable restriction as to §111(d) plans would bar EPA from adjusting any final compliance date under emission guidelines unless that date has elapsed. Such a restriction is essential to make the 111(d) procedures similar to those under §110. Congress plainly meant to prevent calls for plan revision from becoming vehicles for delaying achievement of the ultimate pollution reduction objectives that the plans are required to meet.

¹⁷³ That EPA has adopted a parallel processing exemption from some of its completeness criteria for SIPs does not render an exemption under §111(d) lawful. Illegal and arbitrary action by EPA under one statute does not create a right to adopt another arbitrary and unlawful rule under another statute.

Failure to include the restriction we advocate above would also render the rule arbitrary, as it would allow the deadlines for complying with emission guidelines to be rendered illusory and inconsistent among the different state plans. EPA has offered no reasoned explanation, and none exists, for why it should be allowed to grant unlimited extensions of ultimate compliance deadlines.