

Honorable Regina A. McCarthy
Administrator
U.S. Environmental Protection Agency
1201 Pennsylvania Avenue, N.W.
Washington, DC 20460

November 18, 2014

Re: Proposed Clean Power Plan
U.S. EPA Docket EPA-HQ-OAR-2013-0602
79 FR 34829

Dear Administrator McCarthy:

We are writing to convey our concerns about the adverse job impacts across key energy unions that will result from implementation of the proposed Clean Power Plan. We are offering several recommendations for improvements to the proposed rule that would reduce these job impacts.

Hundreds of thousands of our members are employed in the electric utility, mining, railroad transportation, construction, and boiler and pollution control sectors. We are deeply concerned about the future welfare of these highly-skilled workers, their families and communities. EPA's data show that the proposed rule would cause the closure of as much as 49 Gigawatts of coal-based electric generating capacity by 2020, and lead to a 25% or greater reduction in the amount of coal produced for electric generation in that year.

These losses are in addition to an expected loss of some 50-60 GW of coal-based generating capacity by 2020 as a result of the Mercury and Air Toxics (MATS) rule and other factors. Overall, the U.S. is facing the loss of 126 GW of coal-based generating capacity between 2010 and 2020, more than 10% of the nation's electric generating fleet, and approaching 40% of the nation's coal-fired capacity. This is equivalent to the combined total fossil and renewable generating capacity of the states of Kentucky, Louisiana, Maryland, Massachusetts, Michigan and Missouri.

We estimate that 52,000 direct jobs in the electric utility, mining, and rail sectors will be at risk due to plant closures attributable just to the Clean Power Plan, along with more than 100,000 indirect jobs in affected communities and related industries. These job impacts will occur mainly in relatively poor, rural areas that are least able to afford the loss of high-wage skilled jobs.

These plant closures will adversely impact the reliability of the electric grid. Reduced power supply from retired plants will lead to increased electricity prices, spreading the economic impact to consumers and businesses. The grid will be at increased risk of brownouts and blackouts during peak electric demand periods, endangering the public.

We recognize EPA's authority to regulate greenhouse gases under the Clean Air Act (CAA or Act), but in our view the proposed rule should be limited to "inside-the-fence" emission reductions such as power plant heat rate improvements and other onsite measures, consistent with EPA's interpretation of the term "best system of emission reduction" in setting performance standards in prior EPA rulemakings. Once a level of emission reduction has been determined "inside-the-fence" of power plants, states and utilities should have flexibility in using "outside-the-fence" measures for achieving these reductions.

EPA is relying upon a rarely-used provision of the Clean Air Act, Section 111(d), to effect sweeping changes to the nation's electricity supply and demand infrastructure, extending from the steam boiler to the customer light switch. Yet, based on the agency's data, we estimate that the proposed rule would reduce global emissions of greenhouse gases by about one percent in 2030 – an amount that would have no significant climate effects.

Targets and Timetables Should Be Adjusted

The initial state plan submission timetable EPA has proposed is unrealistic and should be extended to provide states adequate time to prepare state implementation plans (SIPs). Many states require legislative approval of SIPs, a process that can add a year or more to SIP development. An additional two years or more also should be provided for the development of any regional compliance agreements. The Northeast Regional Greenhouse Gas Initiative (RGGI) required six years' of stakeholder deliberations to develop the RGGI Model Rule.

For single-state compliance plans, states should be given two years to submit plans, with the possibility of receiving an additional one-year extension. For multi-state plans, states should be provided three years to prepare plans, with an additional one-year extension if states demonstrate reasonable progress toward a regional agreement.

The interim target and mathematical averaging process for measuring compliance that EPA proposes for 2020-2030 are unworkable, and lead to severe energy market

dislocations and job losses in the early years of the program. We respectfully urge EPA to abandon the interim target approach in favor of a mid-course review process with the states, similar to the mid-course review incorporated in the Regional Haze Rule (64 FR 35714, July 1, 1999) and related guidance on reasonable progress goals. The mid-term 2018 review process that EPA and NHTSA established in the Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards (77 FR 62624, October 15, 2012) provides another relevant precedent. In the alternative, EPA could allow states to set non-binding interim goals.

Experience with the acid rain program, the regional haze program, and similar multi-year emission reduction programs demonstrates that emissions tend to be reduced on a linear glide path consistent with the availability of engineering, financing, and labor resources. The abrupt and painful job and coal market dislocations that EPA projects for 2020 could be mitigated by eliminating the interim target in favor of a mid-course review process or similar mechanism.

EPA'S BUILDING BLOCKS

We have major concerns with the "building block" approach that EPA developed to determine the "best system of emission reduction" (BSER) and your decision to set state-by-state rather than nation-wide, subcategory-specific goals based on fuel and unit type. This approach leads to inequitable results that do not recognize prior state efforts to reduce CO₂ emissions. Some of the highest reduction requirements are imposed on relatively "clean" states with low emission rates, while states with high emission rates receive much smaller reduction goals. To help address these concerns, we urge EPA to use a 2005 baseline for measuring progress toward emission reduction goals.

We are concerned about several aspects of the individual building blocks that EPA has chosen to drive state reduction requirements. We defer to the detailed expert comments you will receive from state and industry sources on technical deficiencies in these building blocks, and will highlight here only a few of our most prominent issues:

Building Block One: Power plant efficiency improvements.

EPA's assumed 4% to 6% efficiency improvement target at existing coal plants is not achievable for several reasons:

- i) Unit operators will have no economic or financial incentive to invest in generating facilities facing reduced electricity demand due to the effects of the rule's natural gas re-dispatch, renewable energy, and energy efficiency building blocks;
- ii) The existing coal fleet is being retrofitted for MATS compliance, which may include investments in efficiency improvements and also may lead to increased heat rates at many units due to the retrofit of scrubbers, sorbent injection, and other technologies;
- iii) The remaining coal fleet after the anticipated 50+ GW of coal unit retirements in 2015-17 will consist mainly of large supercritical units that have little potential for additional efficiency gains.
- iv) Most operators already have sufficient incentives to invest in heat rate improvements; failure to make additional investments is due either to lack of cost-effective improvement opportunities or to barriers imposed by EPA's NSR permitting process.

In addition, we note that EPA's proposed rule for modified and reconstructed power plants would require modified coal-fired power plants to reduce their average emission rates by only 2% at most relative to historic performance. EPA has not explained why it believes that *existing* units - which are more constrained in terms of the actions they can take to reduce emissions - can achieve a 6% improvement while units undertaking significant upgrades during modification can only achieve a 2% improvement.

If EPA insists upon requiring existing coal units to achieve high levels of emission reductions through heat rate improvements, we recommend that EPA relax its NSR applicability regulations to allow for additional output from plants subject to major efficiency modifications such as the replacement of turbines. Investments in plant efficiency would be incentivized if operators were able to increase plant output without becoming subject to onerous NSR permitting requirements. Average emission rates in lbs. CO₂/MWh also would decline.

Building Block Two: Re-dispatch of coal and natural gas combined-cycle units.

EPA's proposal to increase the dispatch of natural gas combined-cycle (NGCC) units up to 70%, with corresponding reductions in the output of coal plants, would require a fundamental revision to the economic dispatch process that is used in both regulated and unregulated states, and would expose consumers and energy-sensitive industries to highly volatile electric prices.

Re-dispatch is one of the principal drivers of the essentially arbitrary pattern of emission reduction targets among states. States with substantial existing NGCC capacity are assigned large reductions based on this capacity, while states without any NGCC units do not receive any re-dispatch reduction requirements. Moreover, EPA has not evaluated the ability of pipeline and transmission systems to manage such a major change in fuel supplies within the rule's short compliance timetable.

We are also concerned that the proposed rule, in concert with other existing and expected environmental regulations, will lead natural gas to become the dominant source of baseload and peak power in many areas of the country. This move away from fuel diversity to a generation portfolio dominated by natural gas could have serious adverse repercussions for energy security and electric reliability.

EPA's position that increasing emissions at NGCC units while reducing them at coal-fired power plants constitutes BSER appears to conflict with the text of the Clean Air Act. The Act contains two definitions of the term "standard of performance," one of which defines the term as "a requirement of *continuous emission reduction*, including any requirement relating to the operation or maintenance of a source to assure continuous emission reduction." See 42 U.S.C. § 7602(l). Therefore, in order to satisfy the plain language of the Act, state performance standards must require *continuous*, or constant, reductions in emissions of CO₂ from all affected sources covered by the standards.

EPA's proposal to require states to set performance standards based on re-dispatch from coal to natural-gas fired units would directly contradict this requirement because it would require NGCC units to *increase* their emissions of CO₂. Thus, EPA's proposal to incorporate re-dispatch into the BSER on which states must base their standards of performance is plainly at odds with the CAA's requirement that performance standards for stationary sources such as NGCCs ensure "continuous emission reduction."

We recommend that the re-dispatch building block be eliminated to reduce the risk of natural gas price volatility and related electric price spikes that this option would entail. Without a diverse electric generation portfolio, sustained cold weather events—such as those experienced in past winters—could lead to natural gas supply disruptions that could compromise the electric system. In addition, the growth in international trade in natural gas facilitated by construction of LNG terminals in the U.S. and other major exporting countries could expose the power industry to significant price shocks or supply disruptions.

Building Block Three: Renewable energy.

EPA's proposal to base BSER in part on regional "best practice" targets that are based on some states' political decisions to adopt renewable portfolio standards (RPS) is arbitrary because it ignores the decisions of dozens of states that have chosen not to adopt such standards. For example, in two of the regional "best practice" areas, the target 2030 level of renewable energy deployment was set by reference to a single state's RPS target. EPA provides no explanation for why it has effectively disregarded the political judgments of the nearly 50% of states *without* RPS programs, while relying on the political judgments of states that have elected to adopt such programs.

EPA's proposal does not evaluate the technical or economic feasibility of achieving the targeted levels of renewable energy deployment in each state. Evaluation of the energy and economic feasibility of implementing each proposed "best system of emission reduction" is a statutory requirement of Section 111 (42 U.S.C. §7411(a)(1)). EPA's failure to evaluate the technical and economic viability of EPA's renewable energy BSER building block is therefore inconsistent with the statute.

EPA's use of regional average renewable energy targets applied to individual states would displace the roles traditionally performed by state legislatures and regulatory agencies. It also conflicts with the Integrated Resource Plan processes that many state public utility commissions utilize for long-term planning of electric supply and demand resources. We question whether Congress ever intended Section 111(d) to enable such a far-reaching expansion of EPA's regulatory authority under the Clean Air Act.

Building Block Four: End-use energy efficiency programs.

The proposed requirement for expansion of end-use energy efficiency programs interferes with state authority to determine the nature and extent (if any) of these

programs. Utilities are already investing billions of dollars annually in energy efficiency programs to avoid construction of new power plants. State legislatures are the appropriate venues for making determinations about the design and goals of energy efficiency programs beyond those already required by state and federal legislation.

Inadequate Reliability Analyses

EPA's reliability analyses, as summarized in the Regulatory Impact Analysis and "Resource Adequacy and Reliability Analysis" Technical Support Document, do not consider potential electricity supply deficits below the 64-subregion level of the IPM model, and assume large-scale reductions in electric demand resulting from the rule's energy efficiency building block. These efficiency-based reductions may not occur either because states choose not to pursue them, or because states are unable to meet these efficiency goals due to economic, technological, or other factors.

The reliability analysis also proceeds from a 2020 "base case that is assumed to be adequate and reliable." EPA Resource Adequacy TSD at 1. EPA further acknowledges that "(w)ithin each model region, IPM assumes that adequate transmission capacity exists to deliver any resources located in, or transferred to, the region." *Id.*, at 2. The TSD also indicates that some 31% of the new generation capacity projected to replace retiring baseload coal units is intermittent wind energy. *Id.*, at 14.

In contrast to EPA's reliability findings, the latest National Electric Reliability Corporation (NERC) Long Term Reliability Assessment (December 2013) projects that many electric supply regions – the Northeast, South Atlantic, Midwest, Great Lakes, Texas, and the Southwest - will fail to meet reference reserve margin levels in 2023. Moreover, the NERC assessment does not account for the additional 49 Gigawatts of coal generation capacity retirements projected for 2020 under the Clean Power Plan. We therefore recommend that EPA conduct additional reliability analyses in consultation with FERC and NERC. These analyses should include alternative sensitivity analyses about how states will employ the building blocks to achieve EPA's emission targets, as well as other strategies available under the rule.

EPA Should Coordinate the Rule with Other Policy Actions

The Clean Power rule is premature in the context of ongoing international negotiations for a "global" climate agreement in Paris in 2015, and the likelihood of

a revised domestic ozone standard potentially requiring retrofits or closures of many fossil-fueled generating units.

The U.S. should not risk higher electricity prices and diminished fuel diversity in the absence of legally binding commitments from major developing nations to pursue meaningful emission reductions over a defined timetable that is not contingent upon the completion of industrial nations' commitments. Any commitments by industrial nations to reduce emissions in advance of major developing nations would increase domestic job losses and accelerate the off-shoring of energy-sensitive industries.

The deadlines of the rule should accommodate the uncertainty associated with the U.N. FCCC negotiations, such as by providing a trigger mechanism in the form of an Executive Order to determine the effective date of the rule following the successful negotiation of a global climate agreement. Adjustment of the rule's deadlines in this manner also would allow for regulatory coordination with a revised ozone standard, which is scheduled to be promulgated in late 2015.

Alternative Inside-the-Fence Approaches

EPA should consider alternative means of setting "inside-the-fence" emission reduction targets, while providing "outside-the-fence" flexibility for meeting compliance targets. Although the statute and EPA's previous interpretations of the term "system of emission reduction" indicate that BSER must be based on inside-the-fence activities, Section 111(d) allows for additional beyond-the-unit flexibility in complying with emission guidelines.

One important provision authorizing such flexibility is Section 111(d)'s cross-reference to the state implementation plan process in section 110, which explicitly authorizes states to employ beyond-the-fence measures to comply with the NAAQS. Another is the Section 111(d) provision authorizing states to take into account, "among other factors, the remaining useful life" of existing sources. These statutory provisions make clear that state compliance flexibility can be considerably broader than EPA's authority to determine BSER and set state guidelines.

EPA is expressly authorized to subcategorize among units by its own regulations. See 40 C.F.R. § 60.22(b)(5). An analysis of the CO₂ emissions characteristics of coal units by coal type could identify groups of "top-performing" units with low emission rates, reflecting specific design, operating, and other engineering aspects of the units. A statistical analysis could determine the average emission rate of a subset of top-performing units, such as the top 75th or 90th percentile. That

measurement, which would represent an emission standard under Section 111(d) that reflects the “best system of emission reduction,” could be applied to all units burning similar coal types (e.g., bituminous/sub-bituminous and lignite) to determine an emission limit applicable to all units in a particular subcategory, with “outside-the-fence” compliance flexibility at states’ discretion. This standard in turn could be converted by states to a CO₂ tonnage reduction goal that could be met using a combination of inside-the-fence or outside-the-fence measures.

Need for Technology Incentives

The U.S. should lead the world in the development of carbon capture and storage (CCS) technology. However, the proposed rule does not provide any incentives for CCS technology deployment. The U.S. is falling behind in CCS development and deployment due to inadequate federal assistance.

The Intergovernmental Panel on Climate Change (IPCC) has recognized that deployment of CCS technology on all fossil-based energy systems is essential if the world is to meet future targets for the stabilization of atmospheric GHG concentrations. EPA should encourage the option to deploy CCS at existing power plants through an incentive mechanism, such as encouraging states to create set-asides, bonus allowances, or comparable programs for the benefit of firms that invest in partial or full CCS. EPA and NHTSA employed a "multiplier" incentive mechanism to encourage the production of electric and hybrid vehicles in their 2012 rule setting light-duty vehicle CAFE and GHG standards for 2017-25 model year vehicles. Similar incentives, such as emissions exemptions, could be established within the rule to encourage the deployment of CCS technologies.

Labor Adjustment Programs Are Essential

The proposed Clean Power Plan is silent about programs and policies to offset the severe employment dislocations that would result from its implementation. This oversight must be remedied by the inclusion of mechanisms within the rule for labor and community adjustment assistance programs, or through federal legislation. Several of the undersigned unions are threatened by the damaging losses to private and union-sponsored health and pension plans that would result from the energy market dislocations inevitably resulting from this rule.

We urge EPA and the Administration to incorporate the changes we have suggested here to help mitigate the near-term adverse job impacts that this rule otherwise will

cause. The recommendations we have offered also would reduce the risks to electric reliability posed by another near-term wave of coal plant shutdowns.

We will welcome your support to ensure that the final rule provides achievable CO₂ performance standards for existing sources that encourage new coal-based technologies while minimizing further premature shutdowns of existing coal-fueled generating capacity and adverse job consequences for our members and their communities.



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