HAL QUINN
President & CEO

December 1, 2014

Ms. Gina McCarthy
Administrator
U.S. Environmental Protection Agency
EPA Docket Center – Mail Code 28221T
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Attn: Docket ID No. EPA-HQ-OAR-2013-0602

RE: Proposed Rule for Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units – 79 Fed. Reg. 34,830 (June 18, 2014).

Dear Administrator McCarthy:

The National Mining Association (NMA) submits the attached comments in response to the Environmental Protections Agency's (EPA) proposed guidelines for greenhouse gas emissions from existing electric utility generating units. This proposal, like the agency's standards for new electric generating units, is another policy purposefully designed to forcibly eliminate lower cost sources of electricity and replace them with more expensive and less reliable sources. As a result, our electric grid will become less diverse, less reliable and extraordinarily more expensive.

NMA is a national trade association whose members include producers of most of the nation's coal, metals, industrial and agricultural minerals; the manufacturers of mining and mineral processing machinery, equipment and supplies; owners and operators of electric generating units; and the engineering and consulting firms, financial institutions and other firms serving the mining industry. NMA's members produce and use electricity as well as supply the products that are essential for finding, producing and delivering all forms of energy essential to our nation's well-being.

This proposal is another in a series of policies that represent a stunning attempt to transform the nation's electric grid. Our electric grid is already close to the edge of breaking in large part due to earlier EPA rules forcing many base load power plants to close. This proposal—best described as the "Costly Power Plan"—will close more power plants and push the electric grid over the edge all at an enormous financial and competitive cost to consumers and businesses.

To begin with, the proposal is unlawful. The proposal rests upon an interpretation of Clean Air Act § 111(d) that does great violence to the text and history of that provision. It reaches well beyond the sources of the emissions the agency seeks to regulate and calls upon other sources of electricity generation—both existing and non-existing—to fill the gaps in electricity generation caused by the proposal. It seeks to bind other non-regulated parties to federally enforceable obligations. Furthermore, it impermissibly intrudes upon state authority by forcing them to reorder long standing institutional relationships about the generation, dispatch, transmission and delivery of our nation's most ubiquitous form of energy—electricity. There is simply no congressional authorization—let alone a clear one—delegating EPA the authority to massively transform the nation's electric grid. In sum, EPA's implausible interpretation of the Clean Air Act falls well beyond the bounds of reasonableness.

Quite apart from the unlawful nature of the proposal, EPA's costly power plan will not work and poses an unacceptable risk to our nation's electricity generation, transmission and delivery system. A growing number of experts, including overseers of the nation's electricity grid, regional power transmission authorities, power plant operators and energy economists are warning that the agency's proposal will degrade grid reliability and produce substantially higher utility and energy costs for all Americans. The North American Electric Reliability Corporation (NERC)—an international regulatory body charged with assessing the adequacy of our electric power system—concluded that implementation of the proposal will prove impossible while damaging the reliability of the nation's electricity supply. According to NERC, the proposal "would increase the use of controlled load shedding and potential for wide-scale, uncontrolled outages." NERC finds these results as inevitable because EPA's plan underestimates the number of power plants that will be closed and overestimates the amount of new power sources and increased energy efficiency expected to offset the power generation lost.

The Southwest Power Pool warns that the proposal will result in cascading outages and voltage collapse in six of the eight states where it operates the electric grid. The Midcontinent Independent System Operator forecasts that the power reserves needed in the fifteen-state region will soon fall below safe margins and only get worse. American Electric Power, one of the nation's largest electric utilities, conducted system planning and performance studies under the proposal. The results: widespread voltage degradation, collapse and cascading outages in its system.

EPA's proposal is based upon a complex web of assumptions—many of them implausible—about future energy demand, dramatic shifts in generation sources, the addition of more intermittent sources for generation and reductions in energy use in 48 states. Each of these assumptions—what EPA ironically calls "building blocks"—rests upon a weak foundation.

- Increase Efficiency at Coal Base Load Power Plants: EPA assumes that coal-fueled plants can achieve a 6 percent heat rate improvement by 2020 through a combination of recommended operation and maintenance practices (4%) and capital investments (2%). The regression analysis used by EPA to assume a 4 percent heat rate improvement lacks sufficient technical data and fails to account for differences in coal rank, boiler type and boiler age, all of which have significant effects on heat rate efficiencies. An analysis by Energy Ventures Analysis (EVA) using an algorithm that incorporates the factors EPA omits shows no incremental heat rate improvements were possible from additional practices. The 2 percent improvement from capital investments rests upon a single 2009 study. However, EPA's reliance upon that study is misplaced. The study did not conclude that all coal plants can improve heat rates—let alone by 2 percent from 2008. At the same time, EPA's UMATS rule issued two years ago requires extensive retrofits of existing plants that will make them less efficient by increasing their parasitic load. Moreover, the present proposal will force many coal plants to run at reduced and sub-optimal levels which in turn will also make them less efficient.

- Re-dispatching from Coal to Natural Gas Power Plants: EPA assumes that natural gas combined cycle (NGCC) power plants can run at a 70 percent capacity factor. There is no technical or economic evidence that these plants can sustain generation at this high level. EVA's analysis found that combined cycle plants will not economically dispatch at an average 70 percent rate. EPA's assumption is derived by using an arbitrary $30/ton CO2 price (tax) as a "reasonable cost" a consumer should pay for fuel switching from lower cost coal generation to higher cost sources. In short, EPA would fundamentally convert the current electric grid from an economic dispatch to a carbon dispatch model. EPA's assumptions also incorrectly use nameplate capacity rather than net capacity (i.e., the amount of output that can be supplied to system load). This egregious error demonstrates a lack of understanding of how electric utilities plan and operate to meet demand and insure reliability. As a result of this mistake, in many states the NGCC plants will have to run at or well above 80 percent capacity which is even more implausible than EPA's 70 percent assumption. Because of this error, EPA's analysis erroneously indicates that 11 states can replace all of their coal generation capacity and replace it with NGCC generation. To make matters worse, EPA's 2012 baseline inventory includes NGCC units that have been either out of service for several years or retired. Finally, EPA acknowledges a serious gap of at

least 10 percent between the amount of natural gas needed to sustain this assumption and the current natural gas pipeline delivery network. In sum, EPA's assumption substantially overstates the amount of NGCC generation that would be available technically or economically to offset the coal generation the proposal will retire or force off the grid.

- Increased Deployment of Intermittent Generation Sources: EPA assumes renewable energy growth of 86 percent from 2020 to 2030, an assumption that far exceeds the agency's own modeling results. The agency's modeling of the least cost strategy shows 325TWh of non-hydro renewable generation by 2030; yet EPA's set state CO_2 rates assuming 525TWh—almost 33 percent more. EPA's assumptions ignore state's economically reasonable resource limitations and the cost effectiveness of each type of renewable source. The growth of renewable generation is also highly dependent upon permitting, financing, transmission access and technical challenges posed by integration of intermittent electricity sources into the grid. There is no indication that EPA has taken those factors into account. And, they are called intermittent sources for a reason—their performance is highly variable seasonally and daily.

- Energy Efficiency: EPA's assumption of 1.5 percent growth in energy efficiency year-over-year lacks any credible basis. To reach that goal, demand-side energy efficiency would have to improve 250 percent nationally over a 10-year period. Such an assumption means that energy efficiency gains outpace electricity demand growth resulting in declining retail electricity sales. In short, EPA assumes negative electricity demand growth which is inconsistent with the U.S. Energy Information Administration forecast as well as other respected demand forecasts. Over time, potential energy savings decline significantly absent some major technological breakthrough. EPA does not identify any breakthrough that would sustain an annual 1.5 percent growth in efficiency and if such breakthroughs are not on the present horizon, they will not be available during the 10-year period for achieving the targets in the proposal. The gap between the agency's efficiency wish and technological reality has significant implications for the cost of the rule. Since most of the lowest cost efficiency measures are already being deployed, the next increment will be more expensive especially in states with the lowest retail power prices.

As each "Building Block" crumbles, it places additional pressure on the remaining ones and takes EPA's plan from the implausible to the impossible. As much as we hear EPA tout the "flexibility" it is providing states, the proposal places them into an energy straightjacket at the outset with each adjustment more painful economically and more risky for system reliability.

EPA compounds the inherent flaws in its assumptions by relying upon a linear emissions planning model that is inadequate to the task of assessing the interaction of electric generation, transmission, distribution nationally or locally. As the Electric Power Research Institute found, EPA's complex web of assumptions is accompanied by an overly simplistic analysis that does not account for what is actually possible in the real world of electricity generation, dispatch and transmission.

The real flexibility states actually need is the freedom to maintain diverse electricity supplies that ensure both reliability and affordability for America's households and businesses. The current diversity in our electricity supplies saves consumers more than $93 billion in lower electricity costs according to a recent study by IHS Energy. It also reduces the variability of monthly utility bills by half. All of those advantages would be more than erased by this proposal.

Two recent studies of the proposal disclose that EPA has once again greatly underestimated the costs of its rules. Energy Ventures Analysis modeled and analyzed the mass based option and found that it would cost $407 billion over a ten-year period. NERA Economic Consulting modeled the rate-based option (EPA's preferred approach) and concluded it would cost $366 to $479 billion over a 15 -year period. These two projections do not include the additional costs of: (1) new transmission investments to access more remote high wind areas and to react to changes in power flows; (2) additional transmission ancillary services to handle greater amounts of variable wind and solar generation; (3) higher gas rates from increasing costs for pipeline compression; and (4) GDP changes triggered by raising energy prices. Under either option, more than 40 states will see double digit increases in electricity prices and 14 or more states will experience increases that exceed 20 percent. In short, there are no low cost options in EPA's costly power plan.

EPA's assurance that the proposal does not pose exorbitant risks and costs inspires little confidence. After all, the agency predicted that its last power plant rule (UMATS) would cause less than 5,000 megawatts of power capacity to close. As it turns out, the agency was off by a factor of 10—at least. The consequences of poorly designed rules were all too real this past winter when cold temperatures brought the cost of electricity above $1,000 per megawatt-hour on spot markets as compared to the average wholesale cost of $42 per megawatt-hour for those regions.

Over 90 percent of the incremental power needed to keep the grid from collapsing last winter was supplied by coal-fueled power plants. Many of those plants will be forced to close by 2015 or 2016 due to EPA's UMATS rule. A study NMA furnished the Federal Energy Regulatory Commission shows that if we experience another cold winter like this past year we can expect that:

- Wholesale power prices would jump 27-55 percent across different regions—no state is spared.
- Businesses and households would pay $35 billion more for natural gas

- A combination of another cold winter followed by a warmer than usual summer would cost consumers $100 billion in higher electricity and natural gas prices.

One would expect that such a risky and costly policy would bring great benefits. Again, one would be disappointed. Most of the lost base load generating capacity caused by this proposal will be replaced by new fossil-fuel capacity that will not be regulated. The combination of emissions from these new "unregulated sources" and increased emissions from existing sources will off-set at least one-third of the reductions EPA projects from existing units in the power sector. In any case, the emission reductions from the power sector under this proposal—as even EPA concedes—will have no material impact on global temperatures.

The proposal is unlawful, unworkable, and costly. It poses unacceptable risks to the public and must be withdrawn.

Sincerely,

Hal Quinn
President & CEO