

## Utility MACT Rule

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On December 16, 2011, EPA finalized its utility MACT rule to reduce emissions of mercury and other hazardous air pollutants (HAPs) from coal-fueled power plants. The EPA rule requires the use of maximum achievable control technology (MACT). Therefore, the rule is often referred to as the “utility MACT rule.” EPA also refers to the same rule as the “mercury and air toxics standards” rule (MATS). The following summarizes a number of key facts about the rule. In most instances, these facts are based on EPA’s own analysis.

**Despite concerns about costs, job losses and electric reliability, the final MACT rule is very similar to the proposal.**

EPA’s fact sheet for the final rule states that the rule is “mostly unchanged from the proposal.”<sup>1</sup> For example, the mercury and hydrogen chloride emission limits for existing coal-fueled power plants are the same as the proposed limits. The final rule allows only 3 years for compliance plus a 1-year extension in certain cases, as did the proposed rule. EPA attempts to provide relief from enforcement for 1 additional year in very limited circumstances.

**MACT is the most expensive rule EPA has ever written for power plants.**

EPA’s analysis projects that the final utility MACT rule will cost \$10 billion annually (2010\$) by 2016, about the same as the proposed rule, which EPA estimated at \$11.4 billion (2010\$) annually. Utility MACT alone is projected to cost 40 percent more than the \$7.1 billion (2010\$) total cost of all Clean Air Act rules EPA has imposed on power plants to date.<sup>2</sup>

**Virtually none of the health benefits claimed by EPA are due to reductions in HAP emissions.**

Mercury is the only HAP for which EPA could quantify any health benefits. EPA estimated the health benefits of reducing mercury at between \$500,000 and \$6 million per year.<sup>3</sup> EPA was

unable to quantify any health benefits from reducing other HAPs.<sup>4</sup> EPA estimates the cost of the final rule at \$9.6 billion (2007\$, not 2010\$) in 2016. This means the cost of the rule exceeds the HAP benefits by factors of 1,600 (best case) to 19,200 to 1 (worst case).

Over 99.99 percent of the \$33 billion to \$89 billion in public health benefits estimated by EPA are “co-benefits” from reductions in fine particles.<sup>5</sup> However, EPA admits that reducing fine particles is “not the primary objective of this rule.”<sup>6</sup> Fine particles have been strictly regulated under other parts of the Clean Air Act (CAA) for 15 years. EPA’s analysis also shows that over 99 percent of the alleged avoided-mortality benefits occur in areas that already comply with EPA’s ambient air quality standard for fine particles.<sup>7</sup> This standard is set by EPA to protect public health with a margin of safety, as required by the CAA. According to EPA, ambient air quality standards are designed to protect “the health of ‘sensitive’ populations such as asthmatics, children, and the elderly.”<sup>8</sup> If EPA believes there are benefits to reducing fine particles to levels below its current standard, the agency can take further action under other provisions of the CAA that were designed by Congress for the explicit purpose of addressing fine particles.<sup>9</sup>

### **The rule does not allow enough time for compliance.**

The final rule allows 3 years for compliance, with a fourth year that can be granted by EPA or a state permitting authority. Despite the fact that utilities have documented that more than 4 years may be needed for installation of baghouses, scrubbers, and other major control projects,<sup>10</sup> EPA’s enforcement policy allowing a fifth year is not workable. For example, even if EPA granted a fifth year, companies could still be subject to Federal and State penalties and to citizen suits for noncompliance.

### **The rule will increase energy prices, destroy jobs, and threaten electric reliability.**

National Economic Research Associates (NERA) analyzed the cumulative impacts of the proposed MACT rule and three other EPA rules – the final Cross-State Air Pollution Rule, the proposed cooling water intake structure rule, and the proposed coal combustion residuals rule.<sup>11</sup> NERA

projected that the four rules could cause double-digit electricity price increases in regions of the U.S. covering all or portions of 30 states, and the rules could cause the net loss of 1.65 million job-years<sup>12</sup> by 2020 (or 183,000 jobs annually, between 2012 and 2020). Also, the increased demand for natural gas could cost consumers over \$8 billion annually. By contrast, EPA did not calculate job losses due to higher energy prices caused by the MACT rule,<sup>13</sup> even though higher energy prices are likely to cause substantial job losses. EPA's analysis simply ignored these job losses.

In addition, numerous officials, including the North American Electric Reliability Corporation (NERC), state public utility commissioners, and grid operators have expressed concerns about the potential threat to electric reliability posed by the utility MACT rule and other EPA rules. NERC stated that, "Existing and proposed environmental regulations in the U.S. may significantly affect bulk power system reliability...."<sup>14</sup>

### **Coal-fueled power plants already have invested almost \$100 billion to reduce emissions.**

Coal-fueled electricity generators have invested as much as \$95 billion through 2010 for emission controls to meet clean air requirements.<sup>15</sup> These investments have reduced emissions of three major air pollutants (sulfur dioxide, nitrogen oxides, and particulate matter) by nearly 90 percent per kilowatt-hour over the period 1970 – 2010.<sup>16</sup> Also, mercury emissions have been reduced by more than 60 percent,<sup>17</sup> and EPA projects that emissions of hydrogen chloride will be reduced by nearly 90 percent below 2005 levels by 2015 even without the utility MACT rule.<sup>18</sup>

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<sup>1</sup> U.S. EPA, "Fact Sheet: Mercury and Air Toxics Standards for Power Plants," December 21, 2011.

<sup>2</sup> U.S. EPA, "The Benefits and Costs of the Clean Air Act from 1990 to 2020" (2011) at Table 3-2 (electric utility direct annual compliance costs increased from an estimated \$1.4 billion (2006\$) in 2000 to \$6.6 billion (2006\$) in 2010.) This is \$7.1 billion in 2010\$. Since 2000, the utility sector has complied with the federal acid rain program enacted in the 1990 Clean Air Act Amendments, EPA's 1998 Ozone Transport Rule reducing nitrogen oxide emissions in 19 eastern states, Phase I of EPA's 2005 Clean Air Interstate Rule requiring further reductions of sulfur dioxide and nitrogen oxide emissions in the eastern U.S. and a variety of other federal and state air and water quality standards.

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<sup>3</sup> U.S. EPA, “National Emission Standards for Hazardous Air Pollutants from Coal- and Oil-fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units,” (December 16, 2011), page 11.

<sup>4</sup> *Ibid.* page 630 (“... we are not able to monetize the benefits from reductions of non-mercury HAP.”)

<sup>5</sup> U.S. EPA, “National Emission Standards for Hazardous Air Pollutants from Coal- and Oil-fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units,” (December 16, 2011), page 11.

<sup>6</sup> *Ibid.* page 9: “The benefits associated with these PM and SO<sub>2</sub> reductions are referred to as co-benefits, as these reduction are not the primary objective of this rule.”

<sup>7</sup> U.S. EPA, “Regulatory Impact Analysis for the Final Mercury and Air Toxics Standards,” December 2011, page 5-102.

<sup>8</sup> U.S. EPA, “National Ambient Air Quality Standards,” <http://www.epa.gov/air/criteria.html>.

<sup>9</sup> EPA plans to propose new fine particle standards in June of this year. See “Declaration of Regina McCarthy,” in *American Farm Bureau Federation, et. al. v. United States Environmental Protection Agency*, Nos. 06-1410 and consolidated cases, United States Court of Appeals for the District of Columbia Circuit, January 17, 2012.

<sup>10</sup> See, for example, Statement of Anthony Topazi, Chief Operating Officer, Southern Company, before the Federal Energy Regulatory Commission, Reliability Technical Conference, Docket No. AD12-1-00.

<sup>11</sup> National Economic Research Associates (NERA), “Potential Impacts of EPA Air, Coal Combustion Residuals, and Cooling Water Regulations,” September 2011. NERA is a global firm that provides economic and financial analysis to government authorities and the private sector.

<sup>12</sup> A job-year is the loss or gain of one job for one year. Job-years are used to sum job losses (or gains) over a multi-year period.

<sup>13</sup> Page 6-11 of U.S. EPA, “Regulatory Impact Analysis for the Final Mercury and Air Toxics Standard,” December 2011.

<sup>14</sup> North American Electric Reliability Corporation, “2011 Long-Term Reliability Assessment,” November 2011.

<sup>15</sup> “Coal-Fired Power Investment in Emission Controls,” Energy Ventures Analysis, Inc., December 2010. These costs cover the period 1970-2010 and are expressed in nominal dollars.

<sup>16</sup> U.S. Energy Information Administration, *Annual Energy Review 2011*, <http://www.eia.gov/aer/txt/ptb0802b.html> and U.S. EPA, *National Air Pollutant Emission Trends, 1970-2011, Fuel Combustion Electric Utilities*, <http://www.epa.gov/ttnchie1/trends/>.

<sup>17</sup> In the absence of emission controls, mercury emissions from coal-fueled power plants would be approximately 75 tons per year ([http://www.epa.gov/hg/control\\_emissions/index.htm](http://www.epa.gov/hg/control_emissions/index.htm)). According to EPA, current (2010) emissions are approximately 29 tons per year (76 Fed. Reg. 25,002 (May 3, 2011)).

<sup>18</sup> PowerPoint presentation: “Reducing Toxic Pollution from Power Plants, EPA’s Proposed National Emissions Standards for Hazardous Air Pollutants for Coal- and Oil-Fired Utilities,” U.S. EPA, May 19, 2011 and “Regulatory Impact Analysis for the Final Mercury and Air Toxics Standards,” December 2011, page 3-10.