

EPA FACT SHEET: Mercury and Air Toxics Standards

CLEAN AIR AND RELIABLE ELECTRICITY

Under the Mercury and Air Toxics Standards (MATS), sources will rely on widely available, proven pollution control technologies to meet nationwide emission limits for toxic air pollutants. EPA and Department of Energy analyses indicate that the vast majority, if not all, sources will be able to meet the rule requirements on time while the country maintains more than enough electricity generating capacity to meet our energy needs. If needed, a broad array of tools is available to utilities, system operators, and State and Federal regulators to address any situations that may affect local electric generating capacity.

THE LIGHTS WILL STAY ON

- For 40 years, we have been able to both implement the Clean Air Act and keep the lights on. MATS will not change that.
- EPA and the Department of Energy (DOE) analyses indicate that there will be more than enough electric generating capacity to meet the nation's needs. EPA's analysis projects that, as a result of MATS, 4.7 gigawatts (GW) will retire out of the more than 1000 GW that make up the nation's electric generating capacity. That's less than one half of one percent. Most of the generating capacity that is projected to retire is decades old and does not have modern pollution controls installed.
- In August 2011, the Congressional Research Service analyzed a number of studies that report alarming impacts on the nation's power supply. The report concluded that the studies were strongly overstated, made "before EPA proposed most of the rules whose impacts they analyze," and are based on "more stringent requirements than EPA proposed in many cases."

MATS PROVIDES A CLEAR PATHWAY TO COMPLIANCE

- The standards in MATS are set based on existing, commercially proven technologies that are widely available and frequently used in this industry, such as electrostatic precipitators, fabric filters (baghouses), flue gas desulfurization (scrubbers), or dry sorbent injection. Almost every coal power plant uses at least one of these technologies.
- MATS provides a number of flexibilities to make compliance easier and less expensive.
- EPA expects most facilities will comply with this rule within the time allotted by the Clean Air Act through a range of strategies including the use of existing emission controls, upgrades to existing emission controls, installation of new pollution controls, and fuel switching.

- Sources have already proven they can complete significant construction projects in the allotted time. EPA’s feasibility analysis shows that the air pollution control retrofits that occurred in the 2008 to 2011 period exceeded what will be required for MATS.
- There is clear evidence that plants have already been planning for both MATS and CSAPR. For example, a single industry engineering firm reported many new pollution control projects in 2011 that have already been planned, permitted, contracted for, and begun construction.
- As part of the commitment to maximize flexibilities under the law, the rule is accompanied by a Presidential Memorandum that directs EPA to use the tools provided in the Clean Air Act to implement the MATS Rule in a cost-effective manner that ensures electric reliability.
- Existing sources generally will have up to 4 years if they need it to comply with MATS.
 - This includes the 3 years provided to all sources by the Clean Air Act. EPA’s analysis continues to demonstrate that, with a reasonable, moderately paced effort from the power sector and supporting industry, this will be sufficient time for most, if not all, sources to comply.
 - Under the Clean Air Act, state permitting authorities can also grant an additional year as needed for technology installation. EPA expects this option to be broadly available.
- As a result, EPA estimates that sources generally will have until early 2016 to comply – one year longer than our analysis indicates is necessary for most sources.
- EPA is also providing a clear pathway for units that are shown to be critical for reliability to obtain a schedule with up to an additional year to achieve compliance. This pathway is described in a separate enforcement policy. The EPA believes there will be few, if any situations, in which this pathway will be needed.
- In the unlikely event that there are other situations where sources cannot come into compliance on a timely basis, consistent with its longstanding historical practice under the Clean Air Act, the EPA will address individual noncompliance circumstances (if there are any) on a case-by-case basis, at the appropriate time, to determine the appropriate response and resolution.
- The rule will be published in the Federal Register several weeks after the December 16 signature, in January or early February 2012.

UTILITIES, SYSTEM OPERATORS, STATE AND FEDERAL REGULATORS WILL CONTINUE TO ADDRESS LOCAL RELIABILITY

A broad array of additional tools beyond the Clean Air Act is also available to utilities, system operators and State and Federal regulators to address local reliability. These tools include:

- Early planning by sources and the relevant planning and regulatory authorities, including integrated resource management and forward auctions.
- Early notification of compliance plans, including any intent to retire units, will allow other market participants to take keys steps such as:
 - Upgrading electricity transmission and natural gas distribution systems.
 - Development of new clean, efficient generating capacity, including centralized generation such as combined cycle natural gas plants and distributed generation such as combined and power. Many sources have already begun these efforts, reporting to the Energy Information Agency that over 40 megawatts (MW) of new capacity is already under construction.
 - Development of new energy efficiency or demand response programs.
- State actions to streamline permitting processes for new clean generation sources.
- Grid operator tools to keep sources operating if necessary to maintain grid reliability.
- In their December 2011 report, the Department of Energy confirmed that a variety of mechanisms exist to address any reliability concerns or other extenuating circumstances on a plant-specific or more local basis, and stated that they are willing to provide technical assistance throughout the process.

FLAWED STUDIES EXAGGERATE RELIABILITY CONCERNS

These flaws include: requiring installation of different and more expensive pollution controls than what EPA proposed or finalized, and assigning all power plant retirements to EPA rules regardless of other important factors.

For example, the North American Electric Reliability Corporation (NERC) November 2011 report overstates the likely impact of EPA's rules by:

- In one case, assuming that EPA's cooling water rule will lead to 100 percent of units installing closed cycle cooling systems. EPA rejected this option in its proposal.
- Failing to incorporate the industry's long demonstrated track record of successfully identifying and responding to needs for new generation, transmission, and demand response measures in a timely manner.

OTHER STUDIES SHOW THE STANDARDS ARE ACHIEVABLE

EPA (December 2011)

EPA projects retirements of less than one half of one percent of the nation's generating capacity (4.7 GW out of over 1,000 total GW). EPA's resource adequacy analysis indicates that these retirements would not impair resource adequacy (a key parameter for reliability planning) in any region of the country.

- EPA analyzed each of 32 subregions in the continental United States and found that the national average for capacity reserve margins under these rules is projected to be roughly 25 percent in 2015 with MATS in place, well above many of these regions' planning targets.

Department of Energy (December 2011)

In November 2011 the Department of Energy issued a report, based on a "stress test" that included significantly more stringent assumptions. This report found that EPA rules to reduce air pollution from power plants "will not create resource adequacy issues"¹ The report also indicates that:

- Assuming prompt action by regulators and generators, the timelines associated with new construction and retrofit installations are generally comparable to EPA's regulatory compliance timelines
- If delays occur and if it is necessary to address localized reliability concerns, the Clean Air Act provides multiple mechanisms to extend these deadlines or bring sources into compliance over time on a plant-specific basis
- Mechanisms exist to address such reliability concerns or other extenuating circumstances on a plant-specific or more local basis, and the Department of Energy is willing to provide technical assistance throughout this process

Additional detail

DOE has recently published a report that looked at resource adequacy in the bulk power system when faced with a stress test which was a regulatory scenario far more stringent than EPA's regulations. For this stress test, in addition to CSAPR and MATS requirements, each uncontrolled electric generator is required to install both a wet flue gas desulfurization (FGD) system and a fabric filter to reduce air toxics emissions. If such installations are not economically justified, this scenario assumes that the plant must retire by 2015. In reality, as discussed previously, power plant owners will have multiple other technology options to comply with the regulations – options that typically cost less than installations of FGDs and fabric filters.

¹ <http://energy.gov/articles/energy-department-releases-study-electricity-system-ahead-proposed-epa-air-quality>

The analysis finds that target reserve margins can be met in all regions, even under these stringent assumptions. Moreover, in every region but one (TRE, the Texas Reliability Entity), no additional new capacity is needed. In Texas, the analysis finds that less than 1 GW of new natural gas capacity would be needed by 2015 beyond the additions already projected to occur in the Reference Case. This analysis also finds that the total amount of new capacity that would be added by 2015 is less than the amount that is already under development.

Congressional Research Service (August 2011)

This report² reviews the “train wreck” claims of industry and declares them to be wildly overstated. The report concluded that industry's claims were made "before EPA proposed most of the rules whose impacts they analyze, " and are based on "more stringent requirements than EPA proposed in many cases." The report also notes:

- There is a substantial amount of excess electric generation capacity at present, leaving the grid in a more resilient position as units respond to the new rules. Underutilized existing capacity can help mitigate reliability concerns.
- The primary impacts of many of the rules will largely be on coal-fired plants more than 40 years old that have not, until now, installed state-of-the-art pollution controls. Many of these plants are inefficient and are being replaced by more efficient combined cycle natural gas plants, a development likely to be encouraged if the price of competing fuel—natural gas—continues to be low, almost regardless of EPA rules.

PJM (August 2011)

The PJM Interconnection regional transmission organization recently issued a report³ concluding that MATS and the Cross-State Rule together do not threaten resource adequacy in the PJM region (all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia). This is particularly significant, given that the PJM region is one of the largest and most heavily dependent on coal-fueled generation in the country.

Additional detail

² James E. McCarthy and Claudia Copeland, Congressional Research Service, August 8, 2011, “EPA’s Regulation of Coal-Fired Power: Is a ‘Train Wreck’ Coming?”

³ PJM Interconnection, August 26, 2011, “Coal Capacity at Risk for Retirement in PJM: Potential Impacts of the Finalized EPA Cross State Air Pollution Rule and Proposed National Emissions Standards for Hazardous Air Pollutants.

Looking at CSAPR and MATS, this report uses a cost of entry analysis to conclude that about 11 GW are at high risk of retiring and another 14 GW are at some risk. Some of these have been announced already. Even with this, PJM, finds that system reliability will not be threatened. The report notes the importance of new cleaner generation including gas and demand response in bolstering reliability in the region.

Bipartisan Policy Center (March 2011)

A Bipartisan Policy Center (BPC) report concludes that “scenarios in which electric system reliability is broadly affected are unlikely to occur.”⁴

Additional detail

This report estimates retirements of between 15 to 18 GW of capacity. It assumed a stricter NO_x requirement by 2018 than EPA has proposed, and was one of the few studies that considered dry sorbent injection (DSI) as an available compliance option but only for smaller plants with low sulfur coal.

⁴ Bipartisan Policy Center, June 13, 2011, “Environmental Regulation and Electric System Reliability.”