

**Testimony of  
Kathleen A. McGinty, Secretary  
Department of Environmental Protection  
on  
Pennsylvania's State-Specific Mercury Emissions Reduction Plan  
before the  
Senate Environmental Resources and Energy Committee  
Harrisburg, PA  
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Chairman White, Chairman Musto and members of the Committee: I appreciate the opportunity to appear before you today to discuss Governor Edward G. Rendell's efforts to protect Pennsylvanians from mercury pollution while enhancing our economic competitiveness.

In earlier appearances before this committee and in working with the state's Environmental Quality Board (EQB), the Rendell administration presented a case for developing a state-specific rule for regulating mercury emissions from new and existing coal-fired power plants in Pennsylvania. That case was based on two overriding concerns: First, the rule developed by the federal government inexplicably and severely disadvantages Pennsylvania coal producers; and second, the federal rule puts residents, especially children, pregnant women and unborn babies, in jeopardy of continued damaging exposure to mercury.

After much outreach, research and engagement over more than half a year, Governor Rendell presented a mercury proposal that both protects and grows the market share for Pennsylvania coal while ensuring vastly greater protections for our residents against this potent neurotoxin.

The issues involved in controlling dangerous mercury pollution are complex, so it is important to address some false information that has been represented to the public and Legislature by opponents of the proposal since the state-specific plan was unveiled in February.

- Utility industry claims that Pennsylvania will achieve an 86-percent reduction in mercury emissions by 2018 under the U.S. Environmental Protection Agency's Clean Air Mercury Rule are overstated. EPA's own data do not support the assertions. The federal agency has been clear that because of banking and trading, mercury reductions will be much smaller and come much later than projected. In fact, nationally EPA projects only a 69 percent decrease, and then that reduction will not be realized until 2026 or later. The nonpartisan Congressional Research Service predicts 70 percent reductions won't happen until 2030 under EPA's rule. By contrast, our state rule will reduce mercury emissions in Pennsylvania by 90 percent by 2015.
- Technology to control mercury emissions from coal-fired power plants is readily available and "relatively inexpensive" compared with the scrubbers that have been required to meet acid rain requirements. According to an official with the U.S. Department of Energy's National Energy Technology Laboratory: "There is existing technology that has already proven to be able to take mercury out. There's a couple of ways you can do it. ... (T)hat technology on a capital costs basis is maybe \$5 to \$7 a kilowatt. A scrubber is closer to \$250 a kilowatt."
- Because of banking and trading provisions in the federal mercury rule, utilities do not have to make emission reductions here in Pennsylvania. Instead, they can pay for upgrades to plants in other states as opposed to investing to clean up our powers plants in Pennsylvania. Not only does the federal rule send energy dollars and construction jobs out of state, but it also makes our commonwealth less competitive by discouraging enhancements to our own energy infrastructure.

To date under the Clean Air Act, Pennsylvania utilities have postponed upgrades and paid for others' upgrades more than the power industry in any other states has done.

- EPA's rule may result in a very real and significant economic dislocation for the state's coal industry. The federal rule sets the toughest standards for Pennsylvania coal and encourages utilities to meet mercury reduction obligations by switching to coal mined in the West. EPA's plan also threatens the viability of Pennsylvania's new waste coal power plants, which produce some of the cheapest, cleanest and most reliable electricity in the country. The federal rule imposes tougher standards on new waste coal facilities than any other type of coal-fired power plant in the nation.
- According to the latest Toxic Release Inventory report, which EPA released April 12, in 2004 Pennsylvania moved from third to second in the total amount of mercury pollution coming from power plants. The commonwealth previously had been third behind Texas and Ohio, respectively. Texas remains first. Pennsylvania also is second behind only Texas in terms of total mercury emissions from all sources.

Pennsylvania is not alone in rejecting the flawed federal rule and developing a state-specific policy that works better for its economy and environment than the mercury reduction standards announced last year by EPA. Because of the toxicological effects that mercury has on humans, wildlife and the environment, other states have announced their intention to do the same.

Just last week, Michigan Governor Jennifer Granholm ordered her state's Department of Environmental Quality to develop a rule requiring utilities to achieve the reductions by 2015. Public comment began March 9 on Georgia's plan to cut mercury by 90 percent between 2012 and 2015. In February, Minnesota Governor Tim Pawlenty said he wanted legislation passed this year to reduce mercury emissions from large coal-fired power plants by 90 percent within the next several years.

This brings to 21 --- including Pennsylvania --- the number of states that have or are about to act on state-specific proposals to reduce mercury emissions from coal-fired electric generating units. Clearly the rejection of the federal rule is widespread and bipartisan. Delaware, Florida, Illinois, Indiana, Montana, New Hampshire, New York, North Carolina, Ohio, Virginia and Washington all have regulatory actions or legislation pending, or are examining proposals that go beyond EPA's rule. Connecticut, Massachusetts, Maryland, New Jersey and Wisconsin have state-specific mercury reduction plans in place.

Pennsylvania's state-specific plan achieves the following:

- Preserves market share for bituminous coal by presuming compliance for electric generating units that burn 100 percent bituminous with advanced air control technologies.
- Enables utilities to meet the state-specific standards without forcing them to use technology beyond what is used to meet other new federal air quality requirements. Mercury-specific controls are not mandated.
- Achieves at least 90 percent mercury reduction by 2015.
- Requires all facilities to meet a mercury emissions cap and prohibits system-wide and interstate mercury emissions trading that would create toxic "hot spots."

At a time when Governor Rendell is working to strengthen Pennsylvania's coal industry, protect miners' jobs and help us to meet environmental goals, EPA is imposing a rule that takes us in the opposite direction and deals a severe blow to our coal economy." Pennsylvania's state-specific plan is designed specifically to overcome the provision in EPA's final mercury rule that disadvantages electric generating units (EGUs) that use bituminous coal. The federal rule requires little or no reductions from units using sub-bituminous coal mined in the West and places the most stringent requirements on coal mined here in Pennsylvania.

Because of the disparities in the final federal emission standards, owners of coal-fired units that generally burn bituminous coal could comply with the final mercury emissions standards simply by switching fuels or burning sub-bituminous coal. The federal rule essentially encourages fuel switching and establishes western sub-bituminous coal as a compliant coal. The result is a very real and significant economic dislocation for the Pennsylvania coal industry.

EPA's plan also threatens the viability of Pennsylvania's new waste coal power plants, which produce some of the cheapest, cleanest and most reliable electricity in the country. Waste coal boilers, using advanced combustion technology, are among the lowest emitters of mercury on a pounds-per-megawatt scale for coal-fired electric generation. The federal rule imposes tougher standards on new waste coal facilities than any other type of coal-fired power plant in the nation.

The Pennsylvania Coal Association (PCA) and United Mine Workers of America (UMWA) joined Governor Rendell in June 2004 to ask EPA to drop plans that disadvantage Pennsylvania coal. Yet, the economic hurdles for Pennsylvania's coal industry remain a part of EPA's final rule. There is no way to explain this prejudicial treatment of bituminous coal --- a feature that actually is contrary to achieving maximum mercury reduction.

Bituminous coal generally contains more mercury than sub-bituminous coal. But it also contains more chlorine, and chlorine enhances the removal efficiency of mercury control technology. So, controlled bituminous coal is "cleaner" with respect to mercury than uncontrolled sub-bituminous coal --- or even controlled sub-bituminous coal, depending on technology type.

EPA's Clean Air Mercury Rule (CAMR) is just a part of new federal air quality regulations. Owners and operators of utilities in Pennsylvania and across the nation are beginning to examine ways to comply with EPA's two-phased Clean Air Interstate Rule (CAIR) to reduce nitrogen oxide and sulfur dioxide emissions. To comply with CAIR, these facilities will have to install selective catalytic reduction (SCR) systems, electrostatic precipitators and wet scrubbers on their coal-fired units. While these technologies are developed to reduce other emissions, they realize significant collateral reductions in mercury.

Pennsylvania's state-specific rule presumes compliance for any existing electric generating unit combusting 100 percent bituminous coal and using the air pollution control technologies mandated by CAIR. Not only does this provision create a preference for cleaner-burning bituminous coal, ensure its share in the marketplace and encourage the Pennsylvania coal industry to grow, but it also enables the owners and operators of electric generating units to realize the co-benefits of mercury reduction through the installation of CAIR-required control technology.

Just as important, Pennsylvania's proposed rule falls exactly in line with the requirements and timelines mandated under the federal rule --- Jan. 1, 2010, for Phase 1 and Jan. 1, 2015, for Phase 2. The operators of the state's electric generating units will be able to comply with both phases of the state's mercury rule by using CAIR control technologies --- they will not have to install new, specialized equipment to reduce mercury.

The Department of Environmental Protection (DEP) does not agree with the utility industry that mercury-specific control technology is not sufficiently demonstrated. In fact, a U.S. Department of Energy official recently acknowledged that technology to control mercury emissions from coal-fired power plants is readily available and "relatively inexpensive" --- as much as 50 times cheaper than equipment needed to control more traditional pollutants, such as sulfur dioxide. As the official noted in an April 14 broadcast on WPSU-TV's "Pennsylvania Inside Out" public affairs program: "There is existing technology that has already proven to be able to take mercury out. There's a couple of ways you can do it. ... (T)hat technology on a capital costs basis is maybe \$5 to \$7 a kilowatt. A scrubber is closer to \$250 a kilowatt."

Nevertheless, nothing in the state-specific proposed rulemaking requires that technology to be adopted. However, if an operator demonstrates that mercury reduction requirements are technologically infeasible, the department may grant an alternative emission standard or schedule to ensure compliance with state and federal emission budgets.

The department also may allocate nontradable allowances to those that petition the department to help them come into compliance. Pennsylvania will hold all of the allowances provided to the state under the federal rule. Additional allowances --- if given --- will be allocated in such a way as to reinforce the preference for bituminous coal, with 100 percent bituminous operators getting first consideration.

Pennsylvania has 36 coal-fired power plants with 78 electric generating units that represent 20,000 megawatts of capacity. These units accounted for approximately three-fourths of the more than 5 tons of mercury emitted into the air from all contamination sources in the commonwealth, ranking us second only to Texas in terms of total mercury emissions. In addition, according to the latest Toxic Release Inventory report, which EPA released April 12, Pennsylvania moved from third to second in the total amount of EGU-specific mercury emissions in 2004. The commonwealth previously had been third behind Texas and Ohio, respectively.

These numbers make a compelling case for a state-specific rule that cuts mercury emissions faster and more substantially than what EPA proposes while protecting coal jobs in Pennsylvania. After Phase 1 of our state-specific program, which ends in 2010, Pennsylvania will achieve about 30 percent greater reductions than the federal mercury rule. After Phase 2 in 2015, Pennsylvania will achieve 39 percent greater reductions than the federal rule. Overall, Pennsylvania's state-specific rule will result in an 80 percent mercury reduction rate by 2010 and a 90 percent reduction by 2015.

Claims that Pennsylvania will achieve an 86 percent reduction in mercury emissions by 2018 under the federal rule are overstated and incorrect. EPA's own data do not support the assertions. The federal agency has been clear that mercury reductions will be much smaller and come much later than projected. As stated in EPA's preamble to its rule: "EPA's modeling projects that mercury emissions would be 31.3 tons in 2010, 27.9 tons in 2015 and 24.3 tons in 2020 --- about a 35 percent reduction in 2010, about a 42 percent reduction in 2015 and about a 50 percent reduction in 2020 from a 1999 baseline of 48 tons."

Other federal offices have come to the same conclusion. The Congressional Research Service, the nonpartisan research arm of the U.S. Congress, noted the overly optimistic projections in an April 15, 2005, report, "Mercury Emissions from Electric Power Plants: An Analysis of EPA's Cap-and-Trade Regulations." EPA's rule calls for coal-fired utilities nationally to reduce mercury emissions by 70 percent by 2018. But the Congressional Research Service said full compliance with the 70-percent reduction "might be delayed until 2030."

Because the federal rule offers banking and trading provisions that allow utilities to buy their way out of cleaning up pollution at Pennsylvania power plants, there is no guarantee that our commonwealth will see

any significant reduction in mercury emissions. Utilities here will not have to make emission reductions under EPA's plan. Instead, they can purchase these reductions from cleaner plants in other states.

This is not the first time Pennsylvania has been confronted with "paper" versus "actual" reductions. For example, total current sulfur dioxide allowances to address acid rain equal 540,000 tons. Pennsylvania facilities emit 1 million tons of sulfur dioxide per year, meaning the commonwealth "imports" about 460,000 sulfur dioxide allowances annually from reductions in other states. EPA forecasts that mercury trading under CAMR will mimic sulfur dioxide trading.

In fact, power companies in Pennsylvania have bought credits and thereby paid for upgrades at plants in other states to a greater extent than power companies in any other state in the union. If we keep paying to upgrade plants in the Midwest, it won't be long before our plants get shut down in favor of their upgraded, better-performing competitors as the power grid increasingly becomes more integrated.

In just the last few years, the grid that serves Pennsylvania now serves all or part of 13 states. We push policies that push upgrades out of state at our peril. Commonwealth ratepayers ultimately would pay the price, as their money would head out of state to upgrade competitor's plants and clean up other state's environments.

Pennsylvania's state-specific rule is able to achieve 90 percent mercury reduction without embracing the federal government's misuse of a cap-and-trade program. Although our commonwealth is a strong proponent of trading and other market mechanisms in the appropriate context, allowing such a program for this highly toxic pollutant compromises the integrity of trading and jeopardizes its legitimate use as an effective tool to achieve cost-effective reductions when used in appropriate situations.

First, the federal Clean Air Act of 1990 expressly prohibits trading for toxics like mercury. In addition, a December 2000 regulatory finding by EPA determined that it is "appropriate and necessary" to regulate mercury emissions from coal- and oil-fired power plants as a hazardous air pollutant.

However, EPA in January 2004 moved to rescind that 2000 regulatory finding, which required the federal agency to set emissions limits for mercury under Section 112 of the federal Clean Air Act based on maximum achievable control technology (MACT), defined as the average of the best-performing 12 percent of sources. EPA's revised finding, which became final in March 2005, cleared the way for the agency to reject technology requirements and put in place a trading program.

Not only is the federal action unlawful --- it has been challenged in federal court by numerous states, including Pennsylvania --- but there is no new science supporting the notion that mercury, recognized by Congress in 1990 and EPA in 2000 to be hazardous, has now been magically and mysteriously transformed into a relatively less toxic chemical. In fact, recent studies indicate the problem is worse than previously thought, both from a public health standpoint and in terms of the amount of mercury already present in the environment.

A report issued by EPA's Inspector General Nikki L. Tinsley indicated that the mercury emission limits in the final mercury rule were pre-selected by EPA management to conform to the Clean Air Interstate Rule and did not represent a valid analysis of all the possible mercury control options. The EPA Inspector General also stated that the development of a standard to reduce mercury emissions from coal-fired power plants was "compromised and, therefore, may not represent the lowest emissions level that could be achieved."

Unlike other air contaminants that disperse broadly, mercury deposits locally and tends to concentrate, creating toxic "hot spots" of contamination.

In February, EPA-funded research showed that nearly 70 percent of the mercury collected at an Ohio River Valley monitoring site originated from nearby coal-burning industrial plants. Conducted over two years in Steubenville, Ohio, the study is the first in which scientists used rain samples and meteorological data to track mercury from smokestacks to monitors. An earlier EPA Office of Water study found local sources within a state commonly contribute more than 50 percent to 80 percent of the mercury deposition.

Earlier this month, Massachusetts reported a 32 percent average decrease in the level of mercury found in a signature freshwater fish, yellow perch, caught in nine lakes in the northeast corner of the state, where a cluster of incinerators is located. The reductions came seven years after the state enacted the nation's toughest mercury emission laws for incinerators. Comparatively, yellow perch from lakes elsewhere in the state recorded a 15 percent drop on average.

Massachusetts officials acknowledged that they were stunned by the dramatic turnaround. Said one official from Massachusetts' DEP: "We weren't expecting to see such drastic reductions in such a short time frame. This is really significant because this is a cumulative toxin --- the thought was it took a long time to get this high in the environment and it was going to take a long time to reverse it."

Other studies have had similar findings. A Florida Everglades study showed that mercury concentrations found in fish and wading birds there dropped by 60 to 70 percent due to local mercury emission reduction efforts. These studies illustrate the point that local emission reduction efforts play a substantial role in improving health, air quality and the environment.

Mercury is a persistent, bio-accumulative neurotoxin that can remain active in the environment for more than 10,000 years. It endangers pregnant women, children, subsistence fishermen and recreational anglers who are most at risk for health effects that include brain and nervous system damage in children and heart and immune system damage for adults. EPA's scientists report that more than one child in six born in the United States could be at risk of having developmental disorders as a result of mercury exposure in the mother's womb.

Accumulation of mercury in aquatic ecosystems has resulted in 45 states, including Pennsylvania, issuing fish consumption advisories. Our commonwealth has advisories for 80 waterways. Mercury pollution damages Pennsylvania's \$1.6 billion recreational fishing industry.

EPA's plan is bad for Pennsylvania --- it is bad for public health and it is bad for our economy. We need to change course to keep our residents safe and our economy strong. The difference is clear: Energy dollars and jobs stay in Pennsylvania and mercury pollution gets removed from Pennsylvania under Governor Rendell's plan. Energy dollars and jobs leave Pennsylvania and mercury pollution persists under the federal rule.

Chairman White, Chairman Musto, members of the committee: I thank you for your time and attention. I'd be happy to answer any questions you have at this time. Thank you.

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