

FACT SHEET

Report of the E-EEAC Review Committee on the Proposed Changes to the Federal Mercury and Air Toxics Standards (MATS)

Overview: In this report, top environmental economists find that an [Environmental Protection Agency \(EPA\) proposal](#) to undermine protections from power plant mercury emissions relies on a cost-benefit analysis that is fatally flawed. They detail how the EPA’s calculations inappropriately fail to account for the fact that reducing mercury pollution provides tens of billions of dollars in health benefits to the American people.

Authors: The [External Environmental Economics Advisory Committee](#) (E-EEAC) is an independent organization dedicated to providing up-to-date, nonpartisan advice on the state of economic science as it relates to EPA programs. It was formed after EPA dissolved its own longstanding Environmental Economics Advisory Committee in 2018. The E-EEAC Review Committee, which prepared this report, includes the following members:

Joseph E. Aldy (Co-chair, Harvard University)
Matthew J. Kotchen (Co-chair, Yale University)
Mary F. Evans (Claremont McKenna College)

Meredith Fowlie (UC Berkeley)
Arik Levinson (Georgetown University)
Karen L. Palmer (Resources for the Future)

Key findings:

The EPA’s cost-benefit analysis does not follow best practices for economic analysis because it omits co-benefits of the MATS Rule.

- “Co-benefits” are benefits the American people gain that are not the main focus of a given rule. In the case of EPA’s rules limiting mercury pollution from power plants – called the Mercury and Air Toxics Standards (MATS) — tens of billions of dollars of benefits come from the associated reduction in particulate matter – tiny pieces of matter less than 2.5 micrometers in size that are hazardous to human health.
- EPA’s [analysis](#) accompanying its 2019 proposal simply repeats the cost and benefit estimates from the 2011 regulatory impact analysis supporting the original 2012 MATS rule, with the exception of zeroing out public health co-benefits. This approach ignores all evidence that has become available since 2011.
- Office of Management and Budget [policies](#) and EPA [guidance](#) say co-benefits should always be considered when analyzing the effects of proposed policies.
- A [2017 OMB report to Congress](#) says that co-benefits from reducing fine particulate matter emissions should be included in assessments of the benefits and costs of regulations, and cites the MATS rule as a specific example.

The EPA cost-benefit analysis also underestimates public health benefits from controlling mercury pollution.

- The proposed rule quantifies only one health benefit: the impact of reducing mercury pollution from power plants on protecting the IQs of children whose families catch and eat freshwater fish.
- It does not consider wider effects from power-plant mercury that bioaccumulates in seafood and is consumed by many more Americans.
- It also fails to account for mercury's harmful effects on the human cardiovascular system, and other studies find that reducing mercury pollution from power plants can generate billions of dollars in additional public health benefits, primarily from avoided heart attacks.

The EPA analysis fails to account for significant power sector changes since 2011.

- EPA's calculations assume about half of the country's electricity is generated by coal plants, as it was in 2011. But by last year, coal's share of electric generation had fallen to about 27%.
- The large decline in coal-fired power generation primarily reflects cheap natural gas, major investments in wind and solar power, and lower-than-expected electricity consumption.
- Using outdated data affects both the cost side and the benefit side of the economic analysis.

Updated benefit-cost analyses could better represent the impacts of the MATS Rule.

- Because power plants actually began complying with MATS in 2016, we have three years of real-world data that could help evaluate the rule's economic impacts. EPA's analysis ignored these data.
- A new retrospective analysis using these data could build on several recent studies to assess the real-world costs, emissions, and monetized benefits of the regulation.
- Looking forward, a new analysis could incorporate the most recent epidemiology and integrated assessment modeling of the public health benefits associated with reducing power plant mercury emissions.
- A new analysis could include the benefits associated with co-pollutant emission reductions, reflecting an updated assessment of how the choice of pollution control technology influences emissions.
- A new analysis would allow the EPA to better account for regional variations in emission reductions when estimating public-health benefits.

Timeline:

2012: EPA promulgates the Mercury and Air Toxics Standards (MATS) to regulate the emissions of mercury and other air toxics at electric power plants, finding the rule-making is “appropriate and necessary.” EPA finds power plants are the largest domestic source of mercury emissions and other emissions that are hazardous to public health and effective emission controls are available. EPA projects costs of \$9.6 billion annually and benefits ranging from \$33 to \$90 billion annually.

2015: Supreme Court rules EPA must consider costs in making an “appropriate and necessary” finding; remands regulatory finding to EPA, but permits implementation to proceed.

2016: Coal- and oil-fired power plants began demonstrating compliance with the MATS.

2016: EPA responds to Supreme Court decision by issuing a Supplemental Cost Finding based on metrics including the rule’s original benefit-cost analysis showing that benefits far exceed the costs. EPA reaffirms “appropriate and necessary” conclusion.

May 2018: EPA dissolves its Environmental Economics Advisory Committee (EEAC), which was part of the agency’s independent science advisory board process for 25 years.

September 2018: A group of environmental economists, some of whom had served on the EEAC, form the External Environmental Economics Advisory Committee (E-EEAC).

February 2019: EPA publishes proposal to weaken the Supplemental Cost Finding for the MATS, finding it is no longer “appropriate and necessary” to regulate hazardous air pollutants (HAPs) from coal- and oil-fired power plants under Section 112 of the Clean Air Act. Accompanying the proposal, EPA publishes a 6-page cost-benefit analysis memo that draws exclusively from the agency’s 2011 regulatory impact analysis for the original 2012 MATS regulation.

December 2019: E-EEAC’s first Review Committee releases its report on the EPA’s Proposed Changes to the MATS rule, which finds that EPA’s proposal to undermine the legal basis for regulating power plant mercury pollution is based on a flawed cost-benefit analysis.