COMMITTEE ON
ENERGY & COMMERCE
CHAIRMAN FRANK PALLONE, JR.

MEMORANDUM

May 17, 2019

To: Subcommittee on Oversight and Investigations Members and Staff

Fr: Committee on Energy and Commerce Staff

Re: "Undermining Mercury Protections: EPA Endangers Human Health and the Environment"

On **Tuesday, May 21, 2019, at 10 a.m. in room 2322 of the Rayburn House Office Building**, the Subcommittee on Oversight and Investigations will hold a hearing entitled, "Undermining Mercury Protections: EPA Endangers Human Health and the Environment." The hearing will examine the recent proposal by the Environmental Protection Agency (EPA) that it is not "appropriate and necessary" to regulate hazardous air pollutants, including mercury, from coal- and oil-fired power plants under the Clean Air Act (CAA), reversing a 2016 EPA determination.

I. BACKGROUND

Mercury is a highly toxic pollutant that is released into the air in significant quantities when fossil fuels are burned.[1] According to EPA, power plants that burn coal to generate electricity are the largest manmade sources of mercury emissions in the United States.[2] Once in the environment, mercury converts into methylmercury, a more toxic form.[3] Concentrations of methylmercury build up in the food chain, causing negative ecological impacts to fish, birds, and mammals.[4] Humans are exposed to methylmercury, which may cause neurotoxic effects especially to children and developing fetuses, primarily through consumption of fish.[5]

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[1] Environmental Protection Agency, *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*, 76 Fed. Reg. 24977, 24977 (May 3, 2011) (proposed rule).

[2] Environmental Protection Agency, Basic Information about Mercury (www.epa.gov/mercury/basic-information-about-mercury).

[3] *See* note 1.

[4] *Id.* at 24983.

[5] *Id.* at 24977-24978.

Children exposed to methylmercury during pregnancy can have deficits in cognitive thinking, memory, attention, language, fine motor skills, and visual spatial skills.[6] Exposure to methylmercury can also result in adverse cardiovascular and genotoxic effects.[7] Fish consumption advisories have been issued across the United States as a result of widespread mercury contamination in waterbodies.[8]

Other hazardous air pollutants released from power plants can also have adverse health impacts. Toxic metals, including arsenic, chromium, and nickel, can cause cancer.[9] Acid gases affect lung function and increase occurrence of asthma, bronchitis, and other chronic respiratory disease, especially in children and the elderly.[10]

In 2013, coal-fired power plants accounted for half of mercury emissions in the United States.[11] Power plants also represent a significant source of domestic pollution from other air toxics, including acid gases (over 75 percent of U.S emissions) and many toxic metals (20-60 percent of U.S. emissions).[12]

Section 112(n) of the CAA provides specific direction for the regulation of toxic air emissions (also known as Hazardous Air Pollutants or HAPs) from power plants.[13] Under section 112, Congress specifically directed EPA to regulate such emissions from power plants if the agency determines that such regulation is what is termed "appropriate and necessary."[14]

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[6] Environmental Protection Agency, Health Effects of Exposure to Mercury (www.epa.gov/mercury/health-effects-exposures-mercury).

[7] Environmental Protection Agency, *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*, 77 Fed. Reg. 9304, 9426 (Feb. 16, 2012) (final rule).

[8] Environmental Protection Agency, Fish and Shellfish Advisories and Safe Eating Guidelines (www.epa.gov/mercury/guidelines-eating-fish-contain-mercury).

[9] Environmental Protection Agency, Mercury and Air Toxics Standards: Healthier Americans (www.epa.gov/mats/healthier-americans).

[10] *Id.*

[11] Environmental Protection Agency, *TRI National Analysis 2013: Releases of Chemicals* (Jan. 2015).

[12] Environmental Protection Agency, Mercury and Air Toxics Standards: Cleaner Power Plants (www.epa.gov/mats/cleaner-power-plants).

[13] 42 U.S.C. § 7412(n).

[14] 42 U.S.C. § 7412(n)(1)(A).

In December 2000, EPA determined that it was indeed "appropriate and necessary" to regulate toxic air emissions from coal- and oil-fired power plants.[15] As a result, EPA added power plants to a list of sources subject to agency regulation.[16] In 2005, EPA reversed course and decided to regulate hazardous emissions from power plants under a different provision of the CAA, section 111.[17] Accordingly, EPA issued a finding that it was not "appropriate and necessary" to regulate power plants under section 112 and removed them from the list of regulated sources.[18] EPA issued a replacement rule under section 111.[19] This rule was later vacated by the U.S. Court of Appeals for the D.C. Circuit.[20]

II. RESULTS OF EPA'S MATS RULE

EPA again revisited the regulation of mercury emissions during the Obama Administration by proposing to reaffirm the "appropriate and necessary" finding from 2000 and set national emissions standards for power plants.[21] EPA finalized this regulation, known as the Mercury and Air Toxics Standards (MATS) on February 16, 2012.[22] Although the MATS rule was quickly subjected to legal challenges, the D.C. Circuit Court of Appeals allowed the rule to be implemented and remain in effect while the challenges were pending.

Industry has complied with the requirements of the rule,[23] and that compliance has resulted in significant reductions in mercury and other air toxics. Recent analysis by EPA indicates that from 2010-2017 emissions of mercury have been reduced 86 percent, and emissions of both acid gases and total Hazardous Air Pollutants have been reduced by 96

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[15] Environmental Protection Agency, *Regulatory Finding on the Emissions of Hazardous Air Pollutants From Electric Utility Steam Generating Units*, 65 Fed. Reg. 79825, 79826 (Dec. 20, 2000) (notice of regulatory finding).

[16] *Id.*

[17] Environmental Protection Agency, *Revision of December 2000 Regulatory Finding on the Emissions of Hazardous Air Pollutants From Electric Utility Steam Generating Units and the Removal of Coal- and Oil-Fired Electric Utility Steam Generating Units From the Section 112(c) List*, 70 Fed. Reg. 15994 (Mar. 29, 2005) (final rule).

[18] *Id.*

[19] Environmental Protection Agency, *Standards of Performance for New and Existing Stationary Sources: Electric Utility Steam Generating Units*, 70 Fed. Reg. 28606 (May 18, 2005) (final rule).

[20] *New Jersey v. Environmental Protection Agency,* 517 F.3d 574 (D.C. Cir. 2008).

[21] *See* note 1 at 24976.

[22] *See* note 7 at 9306.

[23] Edison Electric Institute, *Comments of the Edison Electric Institute: National Emission Standards For Hazardous Air Pollutants: Coal- And Oil-Fired Electric Utility Steam Generating Units — Reconsideration of Supplemental Finding and Residual Risk and Technology Review* (Apr. 17, 2019).

percent.[24]

III. LEGAL CHALLENGES TO MATS

As noted above, once the MATS rule was finalized, various parties challenged the rule in litigation. Ultimately, this litigation reached the Supreme Court in 2015 in *Michigan v. EPA*.[25] Among other issues, parties challenged EPA's decision not to consider the costs to power plants of compliance with the air toxics standards upon determining it was "appropriate and necessary" to regulate those sources.[26] The Supreme Court reversed EPA's 2012 "appropriate and necessary" determination, holding that the agency should have considered costs in making that decision. Following a remand to the D.C. Circuit Court of Appeals, the agency revisited the "appropriate and necessary" finding to address the high Court's ruling. [27]

In response to the Supreme Court's *Michigan v. EPA* decision, EPA issued a supplemental finding in 2016, concluding that its consideration of costs did not change its previous determination that it was "appropriate and necessary" to regulate hazardous air pollutants from power plants.[28] Numerous parties quickly challenged the 2016 supplemental finding. In April 2017, at EPA's request, the court paused the litigation for purposes of giving the Trump Administration time to conduct a review of the 2016 finding.[29]

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[24] Environmental Protection Agency, *National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units—Reconsideration of Supplemental Finding and Residual Risk and Technology Review*, 84 Fed. Reg. 2670, 2689 (Feb. 7, 2019) (proposed rule).

[25] *Michigan v. Environmental Protection Agency*, 135 S.Ct. 2699 (2015).

[26] Congressional Research Service, *EPA Reconsiders Basis for Mercury and Air Toxics Standards* (Jan. 2019) (IF11078).

[27] The D.C. Circuit Court of Appeals allowed the rule to remain in effect while EPA reexamined the "appropriate and necessary" finding. *See* note 24 at 2674.

[28] Environmental Protection Agency, *Supplemental Finding That It Is Appropriate and Necessary To Regulate Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units*, 81 Fed. Reg. 24420 (Apr. 25, 2016). In its supplemental finding, EPA concluded, under its "preferred approach," that the costs of the rule were reasonable when viewed in comparison to the industry's annual revenues and capital expenditures, and the impact of the rule on electricity prices, among other factors. *Id*. at 24424. As an alternative approach, EPA looked to a formal cost-benefit study that had been done in 2011 as part of the regulatory impact analysis associated with the standards themselves, which estimated annual costs of complying with the rule at $9.6 billion and annual benefits of between $37 billion and $90 billion. *Id*. at 24425.

[29] *See* note 24 at 2674.

IV. EPA'S NEW 2018 PROPOSAL

On December 27, 2018, EPA issued a proposal to reverse its 2016 supplemental finding that it is "appropriate and necessary" to regulate hazardous air pollutants from power plants under section 112(n) of the CAA.[30] The proposal is based on the grounds that the agency inadequately considered costs in response to the *Michigan v. EPA* Supreme Court decision.[31] Specifically, EPA asserts that the CAA requires a "more direct comparison of benefits and costs benefits" in determining whether it is appropriate to regulate hazardous air pollutants from power plants.[32] For this comparison, EPA relies on the 2011 regulatory impact analysis accompanying the MATS rule, which estimated certain benefits from reductions in hazardous air pollutants (specifically mercury) to be $4 to $6 million per year, and the costs of implementing MATS to be $7.4 to $9.6 billion annually.[33]

For now, EPA proposes to keep power plants on the section 112 source list and to keep the MATS rule in effect.[34] However, while proposing to keep the rule in effect, EPA also requested public comment on whether it must rescind the rule if it were to adopt and finalize its proposal to withdraw the agency's "appropriate and necessary." finding.[35]

The public comment period for EPA's proposal ended on April 17, 2019.[36] On March 18, 2019, EPA held a public hearing on the proposal.[37] According to Regulations.gov, 495,808 comments and submissions were received as of May 15, 2019.[38] EPA has not yet finalized this proposal.

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[30] *Id.* at 2678.

[31] *Id.* at 2674.

[32] *Id.* at 2675.

[33] *Id.* at 2677.

[34] *Id.* at 2674. EPA also proposes to find, based on the results of a residual risk and technology review required pursuant to the Clean Air Act, that no new changes to MATS are needed. The agency has also received comments on establishing a new subcategory for certain existing sources firing eastern bituminous coal refuse. *Id* at 2670.

[35] *Id.* at 2679.

[36] Environmental Protection Agency, Mercury and Air Toxics Standards: Public Hearing Registration for Proposed Revised Supplemental Finding and Results of the Residual Risk and Technology Review (www.epa.gov/mats/forms/public-hearing-registration-proposed-revised-supplemental-finding-and-results-residual).

[37] *See* note 37.

[38] Regulations.gov, National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units-Reconsideration of Supplemental Finding and Residual Risk and Technology Review (www.regulations.gov/document?D=EPA-HQ-OAR-2018-0794-0001).

V. RESPONSE TO EPA'S PROPOSAL

Critics of EPA's proposal on the MATS rule have raised concerns that revisiting the 2016 supplemental finding is not required by law and that EPA's proposed new cost-benefit analysis would exclude or give insufficient weight to billions of dollars in ancillary benefits of the rule.[39] These types of benefits are often pollution reductions that are not required by the rule but still materialize as a result of compliance with the rule.[40] For example, EPA predicted that technologies installed on power plants to reduce releases of mercury and other air toxics would also reduce pollution from fine particulate matter.[41]

Others concerned with EPA's proposal question the cost and benefit estimates that EPA is proposing to rely on in its new analysis. They assert, for example, that there is new evidence showing that (1) the benefits from mercury reductions are likely to be "orders of magnitude larger" than EPA's previous estimates, which only monetized a small subset of potential direct benefits,[42] and (2) the industry complied with the rule at a substantially lower cost than EPA originally estimated it would cost.[43]

Others have raised concerns that, despite EPA's proposal to keep the rule in effect and maintain power plants on its list of sources to be regulated, outside parties may now bring lawsuits challenging the rule itself.[44] Finally, power generation companies subject to the MATS rule have already spent more than $18 billion to comply with its requirements.[45] Reversing the "appropriate and necessary" finding could jeopardize the billions of dollars in investments industry has already made to comply with the rule and introduce additional regulatory uncertainty to this sector.[46]

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[39] Jurist, *EPA Takes a Toxic Turn by Backing Away from Mercury Regulation* (Feb. 3, 2019).

[40] Brookings Institute, *Examining the EPA's Proposal to Exclude Co-Benefits of Mercury Regulation* (Apr. 1, 2019).

[41] *Id.*

[42] Harvard University Center for Climate, Health, and the Global Environment, Mercury Matters 2018: A Science Brief for Journalists and Policymakers (Dec. 17, 2018).

[43] Declaration of James E. Staudt, Ph.D., CFA, Sept. 24, 2015, White Stallion Energy Center, et al., v. EPA, Case No. 12-1100 (concluding that actual compliance was overestimated in the initial regulatory impact analysis by $7 billion per year) (Exhibit 1 to Memorandum in Opposition of Industry Respondent-Intervenors Calpine Corporation, et al., On Application to Stay or Enjoin the Mercury and Air Toxics Standards Pending a Petition for a Writ of Certiorari (Mar. 2, 2016)) (www.edf.org/sites/default/files/content/industry_respondent-intervenors_response_to_stay_application_-_no_15a-886.pdf).

[44] *New E.P.A. Plan Could Free Coal Plants to Release More Mercury Into the Air*, New York Times (Dec. 28, 2018).

[45] Edison Electric Institute, et al., *Letter to Assistant Administrator Wehrum* (July 10, 2018).

[46] *See* note 23.

VI. WITNESSES

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