

April 16, 2019

Andrew Wheeler
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Comments submitted electronically via <https://www.regulations.gov>

RE: Comments of the California Air Resources Board Responding to the Proposed Rule "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," Docket No. EPA-HQ-OAR-2018-0794

Dear Administrator Wheeler:

The California Air Resources Board (CARB) submits the enclosed comments on the Proposed "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 (Feb. 7, 2019) and 84 Fed. Reg. 6739 (Feb. 28, 2019).

Coal-fired power plants are the dominant stationary source of mercury emissions, among many other pollutants. Mercury is a potent neurotoxin that can impair fetal brain development. After decades of delay, these facilities are finally operating under a nationwide regulatory regime reducing these emissions and cutting down on dangerous particulate pollution simultaneously. Years after the fact, the United States Environmental Protection Agency (U.S. EPA or Agency) is proposing to destabilize this success story. It proposes to determine that these massive pollution sources are actually not appropriate to regulate, on the dubious ground that the Agency should ignore health risks created by mercury emissions as well as the millions of dollars in public health benefits generated by the operation of mercury controls, which reduce a wide range of additional pollutants. U.S. EPA would ignore these benefits, thus setting the stage for backsliding from effective controls and irresponsibly exposing the public to a highly toxic pollutant. In short, the proposal lacks merit and represents a serious dereliction of U.S. EPA's responsibility to protect public health.

Comments from the California Air Resources Board
Docket No. EPA-HQ-OAR-2018-0794
April 16, 2019

We urge U.S. EPA instead to maintain its Supplemental Finding that it is necessary and appropriate to regulate coal- and oil-fired electric utility steam generating units (EGUs) through the Mercury and Air Toxics Standards (MATS). The reasoning supporting the rollback is unsupported, and, if adopted more generally, could weaken public health protections from other sources as well.

U.S. EPA must instead stand upon its existing and well documented determination that it is necessary and appropriate to regulate mercury, the MATS program is operating properly, and reducing a wide range of pollutants, including toxic mercury. We encourage the federal government to maintain consideration of co-benefits in its regulatory analysis as well as pursue a science based, environmental, and economically sound strategy for managing and controlling mercury from this source sector.

Sincerely,

Richard W. Corey
Executive Officer

Enclosure(s): California Air Resources Board Comments Responding to Proposed Rule on "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," Docket No. EPA-HQ-OAR-2018-0794.

California Air Resources Board

**Comments on U.S. Environmental Protection Agency's
Proposed Rule: "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"**

Docket No. EPA-HQ-OAR-2018-0794

The California Air Resources Board (CARB)¹ submits the enclosed comments on the Proposed "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."

The Mercury and Air Toxics Standards (MATS) program is a fundamental public health protection. It addresses mercury emissions from power plants, the largest source of these emissions, and has done so successfully for more than five years. As a necessary consequence of controlling these emissions, MATS controls often also reduce emissions of other dangerous pollutants, including particulate matter. The practical effect of the standards is thus to secure multiple health benefits for the public from a highly toxic substance. Substantial public and private funds have been invested in controls and the system is now operating properly. This culminates a process that has slowly moved forward since the 1990 Clean Air Act Amendments, and is a notable achievement on the part of the United States Environmental Protection Agency (U.S. EPA or Agency).

The Agency has now proposed to reverse its prior supplemental finding that regulation is appropriate for this sector based on its reconsideration of co-benefits in its economic analysis. The so-called "supplemental finding"² (referred to as the "Proposed Finding" below) risks destabilizing the MATS regime because U.S. EPA, while not proposing to delist EGUs or rescind MATS now, is taking comment on whether it has authority to or is required to rescind MATS or delist EGUs. Moreover, the Proposed Finding is rooted in spurious reasoning that could (if adopted broadly) destabilize other federal rules, as U.S. EPA has always considered co-benefits in its economic analysis and if it were to reverse this practice, could result in air protection laws being relaxed or rescinded in their entirety.

¹ The mission of CARB is to protect and promote public health, welfare, and ecological resources of California's population through air quality monitoring and protection. CARB's major goals include safe and clean air for all Californians, reducing the State's toxic air contaminants, and providing leadership and innovating approaches to implement air pollution controls.

² 84 Fed. Reg. 2670 (Feb. 7, 2019); 84 Fed. Reg. 6739 (Feb. 28, 2019).

The Proposed Finding is legally unsupportable. It does not comport with the mandates of section 112 of the Clean Air Act or the scientific evidence that has time and again shown the need to control toxic mercury emissions from EGUs. It is an arbitrary and capricious change in position from prior, well thought out decisions with no valid reason for this change in position, and fails to comply with U.S. EPA's own Executive Orders, its treaty obligations, and most significant, *Michigan v. EPA*, 135 S. Ct. 2699 (2015) (*Michigan*).

U.S. EPA grounds its actions in a misreading of Supreme Court precedent. U.S. EPA's initial determination that regulation was appropriate was challenged in *Michigan v. EPA*, 135 S. Ct. 2699 (2015) (*Michigan*); the finding left in place, but the Court directed U.S. EPA more broadly to consider a range of factors, chiefly including cost. *Michigan's* core premise was that the "appropriateness" of regulation was to be judged on a holistic consideration of costs and benefits to the public. On remand, U.S. EPA extensively complied with the Court's directive when it made the supplemental finding in 2016 that regulating EGUs was necessary and appropriate (2016 Supplemental Finding).³ In that finding, U.S. EPA determined that the utility sector could clearly bear the costs of regulation considered through a range of lenses, that public benefits were substantial, and that the additional benefits from reductions across a range of pollutants that MATS necessarily delivers further justified the rule.

U.S. EPA now departs entirely from *Michigan's* holding. Though the Court instructed the Agency to carefully parse the full benefits and costs of potential regulation, U.S. EPA proposes to ignore entirely a wide range of plainly relevant public benefits – the substantial co-pollutant reductions that occur as a physical consequence of mercury control operations. Moreover, though the Court was clear that it mandated no particular methodology, U.S. EPA insists it must now use an arbitrarily narrow cost-benefit framework that artificially discounts important classes of benefits and artificially inflates the importance of certain costs.

The Proposed Finding will not better adhere to *Michigan*, improve the cost-benefit analyses undergirding MATS, or further the agency's mission to protect public health and the environment. It also will not promote the transition to a cleaner and more efficient U.S. electric power system. Instead, the Proposed Finding is likely to bias regulatory decision-making by failing to consider all relevant factors. U.S. EPA is repeating the error that the Supreme Court corrected by embarking upon a procedurally improper, narrow, and factually unsupported analysis – this time, by simply ignoring obvious benefits (and the costs associated with potentially abandoning controls now in place) at a stark potential cost to public health and regulatory stability.

³ 81 Fed. Reg. 24420-01 (Apr. 25, 2016).

To be sure, U.S. EPA insists that repealing its finding will not immediately increase air pollution. It suggests that MATS will remain in force, even though it is proposing to remove a core premise and taking comment on whether it should rescind MATS. Indeed, as we discuss below, it would be highly improper for U.S. EPA to take any further steps to weaken MATS itself. However, U.S. EPA's proposal at least raises the risk that the Agency will attempt to attack the MATS regime. U.S. EPA's proposal also invites power plants to question whether they must still operate the MATS controls that the Agency would now deem inappropriate, or whether power plants may seek ratepayer recovery for operating MATS controls. The Proposed Finding, in short, at a minimum threatens the pollution regime, sets an arbitrary and illegal example that would undermine other regulations analyzed under the same blinkered approach, and may be a prelude to further risks to the public.

It endangers public health and millions in settled public investments. It harms the industry that has invested in controls. Regulated EGUs have already complied with the standards and, because of this, achieved an 86 percent reduction in mercury pollution, as well as other hazardous air pollutants (HAPs) and particulate matter (PM).⁴ These reductions will not remain without the MATS requirements.

California has a deep interest in advancing clean power and rigorous toxics regulations. In its own regulation of air toxics, CARB relies on many federal standards to protect Californians. We are concerned by any approach that improperly leads to under-protective Clean Air Act regulations and are particularly interested in air toxics controls being rigorous, given our dependence on the federal program.

Rather than taking the risks described above, the Proposed Finding is best abandoned.

CARB recommends U.S. EPA withdraw the Proposed Finding; maintain the current appropriate and necessary finding, the MATS Rule, and the listing of EGUs in their entirety; and continue considering and strengthening co-benefits – which is required for reasoned decision-making.

Background

At the most basic level, given the record in this series of rulemakings, it is absurd to suggest that it is not "appropriate" to control mercury emissions from power plants. Few pollutants pose more immediate neurotoxic dangers. That mercury is controlled via processes that also control other pollutants further demonstrates how sensible it is to control this pollution – before it can poison babies and other vulnerable members

⁴ U.S. EPA, *Electric Utilities Mercury Releases in the 2016 TRI National Analysis* (Jan. 30, 2018), <https://www.epa.gov/trinationalanalysis/electric-utilities-mercury-releases-2016-tri-national-analysis>.

of the public. It is particularly arbitrary for U.S. EPA to *reintroduce* the risk of this pollution years after an effective regime has been put in place to address it.

1. Mercury is a highly toxic hazardous air pollutant

Mercury is a highly toxic, persistent substance that bioaccumulates in the food chain. There are various types of mercury, but methylmercury is the most toxic form. EGUs emit mercury into the air, which deposits onto land and water bodies, and it can change form as it biomagnifies in the aquatic food chain.⁵ It is absorbed through inhalation, ingestion, or dermal contact. Depending on the type of mercury, it “crosses both placental and blood-brain barriers.”⁶ The daily exposure reference dose for methylmercury that is “likely to be without an appreciable risk of deleterious effects during a lifetime” is 0.1 micrograms per kilogram per day.⁷ Mercury exposure is particularly associated with problems with fetal and child brain development.

As U.S. EPA acknowledges, mercury “can present a human health hazard.”⁸ Elemental mercury and methylmercury produce neurotoxicity; inorganic mercury produces immune-mediated kidney toxicity; and methylmercury is a developmental toxicant and likely a germ cell mutagen. Mercury has been found to damage a developing nervous system, which “can impact a child’s ability to think and learn.”⁹ Other systems that may be affected include the respiratory, cardiovascular, gastrointestinal, hematologic, immune, and reproductive systems.”¹⁰

2. Power plants emit mercury and other pollutants known to cause harm to the public health and the environment

Coal- and oil-fired electricity generating units (EGUs) are “any fossil fuel fired combustion unit of more than 25 megawatts that serves a generator that produces electricity for sale.”¹¹ They produce electricity that gets supplied to the national energy grid. There are roughly 1,400 EGUs at over 600 power plants in the United States. Most are over 30 years old and many over 50 years old.¹² EGUs (which we will sometimes refer to as power plants as a short hand) are the largest anthropogenic

⁵ E.g., 65 Fed. Reg. 79825, 79827 (Dec. 20, 2000).

⁶ U.S. EPA, Toxicological Effects of Methylmercury, 3-23 (2000), available at <https://www.epa.gov/mercury/mercury-study-report-congress> (Mercury RTC).

⁷ 77 Fed. Reg. 9304, 9351-52 (Feb. 16, 2012).

⁸ Mercury RTC at ES-7.

⁹ U.S. EPA, Factsheet: Mercury and Air Toxics Standards for Power Plants (2015), <https://www.epa.gov/sites/production/files/2015-11/documents/20111221matssummaryfs.pdf>.

¹⁰ *Id.* at ES-3.

¹¹ 42 U.S.C. § 7412(a)(8).

¹² U.S. EPA, Factsheet, <https://www.epa.gov/sites/production/files/2015-11/documents/20111221matsimpactsfs.pdf>.

source of mercury emissions in the United States.¹³ Mercury can travel hundreds of miles from the location of the source.¹⁴

EGUs are also the largest source of other toxic substances, such as hydrochloric acid (HCl), hydrogen fluoride (HF), and selenium (Se), chromium (Cr), nickel (Ni), and other metals. "In 2005, U.S. EGUs emitted 50 percent of total domestic anthropogenic mercury emissions, 62 percent of total arsenic (As) emissions, 39 percent of total cadmium (Cd) emissions, 22 percent of total Cr emissions, 82 percent of total HCl emissions, 62 percent of total HF emissions, 28 percent of total Ni emissions, and 83 percent of total Se emissions."¹⁵

Effective technologies that control emissions of mercury and other HAPs are available, effective, and feasible.¹⁶ Industry has already mostly installed these controls.¹⁷ Because controls may often require new purchases of sorbent materials (which are injected into flue gases) to operate, there is a continued control cost – which, in many instances, may be borne in part by ratepayers or power plant stockholders. U.S. EPA's MATS program provides a ground for rate recovery in many of these instances, as it is not only legally required, but prudent and reasonable for plant operators to come into compliance with the program.

Notably, technologies which limit mercury and HAP emissions generally also reduce emissions of other pollutants. In essence, filtering some toxics out of waste gas also filters other pollutants out – notably including particulate pollution, which U.S. EPA recognizes is closely linked to heart and lung diseases, among many other disorders. As a result, at no meaningful additional cost, HAP controls necessarily deliver a wide range of public health co-benefits solely through their operation.

3. The Clean Air Act has successfully reduced mercury from EGUs, but these reductions will not continue or remain permanent without regulation

The Clean Air Act structure aims "to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population."¹⁸ Public health is a fundamental goal of the Clean Air Act,

¹³ 65 Fed. Reg. 79825, 79827 (Dec. 20, 2001); 81 Fed. Reg. 24420, 24421 (Apr. 25, 2016).

¹⁴ See 77 Fed. Reg. at 9444.

¹⁵ U.S. EPA, National-Scale Air Toxics Assessment (NATA), (2005), available at <http://www.epa.gov/ttn/atw/nata2005/>.

¹⁶ 65 Fed. Reg. 79825, 79829 (Dec. 20, 2001).

¹⁷ *Ibid.* Some of the controls include: pre-combustion controls (e.g., fuel switching, coal switching, coal cleaning to remove trace metals); combustion modification methods used to control NO_x emissions; flue gas cleaning technologies that can be used to control emissions of criteria pollutants and HAP; scrubbers; nontraditional controls such as demand side management and energy conservation; conversion of coal- and oil-fired units to natural gas firing; and oxidizing agents or sorbents injected into the gas stream.

¹⁸ 42 U.S.C. § 7401(b).

and the Act has been repeatedly amended to strengthen protections.¹⁹ Relevant here, Congress amended the Clean Air Act in 1990 due to dissatisfaction with air pollution control at all levels of government and the necessity of drastic measures to protect public health and welfare. The 1990 amendments reinforced the cooperative federalism structure and expanded the hazardous air pollutant regulatory program.²⁰

Coal- and oil-fired electric generating units (EGUs) receive different treatment under the Clean Air Act. Under section 112(d), before regulation, Congress required three mercury studies:²¹ (1) the Utility Air Toxics Study (Utility RTC),²² which analyzed the hazards to public health reasonably anticipated to occur as a result of EGU emissions; (2) Mercury Study (Mercury RTC),²³ which analyzed the magnitude of U.S. mercury emissions by source, the health and environmental implications of those emissions, and the availability and cost of control technologies; and (3) the National Academy of Sciences (NAS Study)²⁴ on the toxicological effects of methylmercury. U.S. EPA is required to regulate if the studies show regulation is appropriate and necessary.²⁵

The reports overwhelmingly found mercury presented a human health hazard.²⁶ In 2000, U.S. EPA determined that “mercury from coal-fired utilities is the hazardous air pollutant of greatest potential public health concern” and published a “notice of regulatory finding” concluding that it was “appropriate and necessary” to regulate coal- and oil-fired electric utilities under section 112 (“Utility Air Toxics Determination”).²⁷ This finding added EGUs to the list of HAPs and triggered a requirement for U.S. EPA to control air toxics emissions from these sources through regulation.

U.S. EPA initially attempted to create an emissions trading system for mercury, but this was abandoned after litigation. Then, U.S. EPA reaffirmed its appropriateness finding and on March 16, 2011, U.S. EPA proposed the Mercury Air Toxics Standard (MATS) to regulate emissions from new and existing coal- and oil-fired power plants. U.S. EPA

¹⁹ *Nat'l Res. Defense Counsel v. EPA*, 896 F.3d 459, 464 n.4 (D.C. Cir. 2018), citing 42 U.S.C. § 7619(b)(3) (in promulgating regulations relating to air quality monitoring, “the Administrator shall follow the principle that protection of public health is the highest priority.”).

²⁰ See 42 U.S.C. § 7412(d); 2015 Legal Memorandum Accompanying the Proposed Supplemental Finding; *Sierra Club v. EPA*, 353 F.3d 976, 979 (citing Legislative History of the CAA Amendments of 1990).

²¹ 42 U.S.C. § 7412(n)(1).

²² 60 Fed. Reg. 35393 (July 7, 1995); U.S. EPA, Utility Air Toxics Report to Congress (Feb. 24, 1998), available at <https://www3.epa.gov/ttn/atw/combust/utiltox/utilifs.pdf>.

²³ U.S. EPA, Mercury Report to Congress (Dec. 1997), available at <https://www.epa.gov/mercury/mercury-study-report-congress>.

²⁴ National Research Council, Toxicological Effects of Methylmercury, 9 (2000), available at <https://www.epa.gov/mercury/mercury-study-report-congress>.

²⁵ 42 U.S.C. § 7412 (n)(1).

²⁶ Mercury RTC at ES-7.

²⁷ 65 Fed. Reg. 79825 (Dec. 20, 2000).

found in its Regulatory Impact Analysis²⁸ (RIA) that the MATS Rule would yield annual monetized benefits of between \$37 billion and \$90 billion, with a great majority being attributable to co-benefits, and compliance costs of \$9.6 billion.²⁹ U.S. EPA also expected there would be 4,200-11,000 fewer premature adult deaths.³⁰

U.S. EPA conducted additional technical analysis,³¹ assessments,³² and case studies³³ that confirmed mercury and non-mercury HAP emissions from EGUs were still a significant public health hazard and they were by far the largest anthropogenic source.³⁴ U.S. EPA reaffirmed the necessary and appropriate finding again in 2012 and issued the final MATS Rule.³⁵

Since the release of the final MATS Rule, mercury emissions have declined substantially – 86 percent between 2006 and 2016.³⁶ However, EGUs still remain the largest source of emissions nationwide, and U.S. EPA specifically found there were no assurances that previously achieved mercury emissions reductions would be permanent or that further substantial reductions would be likely without federally binding regulations.³⁷

4. U.S. EPA has found it necessary and appropriate to regulate mercury from EGUs time and again

U.S. EPA has made and reinforced its finding that it is necessary and appropriate to regulate EGUs on at least three occasions. The first time was in 2000, after decades of scientific research and data showing the harm from mercury emitted from EGUs.³⁸

²⁸ U.S. EPA, *Regulatory Impact Analysis for the Final Mercury and Air Toxics Standards* (Dec. 2011) EPA-452/R-11-011, available at <https://www3.epa.gov/ttn/ecas/regdata/RIAs/matsriafinal.pdf>.

²⁹ *Id.* at ES.1.

³⁰ *Ibid.*

³¹ U.S. EPA, *National-Scale Assessment of Mercury Risk to Populations with High Consumption of Self-caught Freshwater Fish In Support of the Appropriate and Necessary Finding for Coal- and Oil-Fired Electric Generating Units*, Office of Air Quality Planning and Standards (Nov. 2011), EPA-452/R-11-009, Docket ID. EPA-HQ-OAR-2009-0234-3057.

³² U.S. EPA, *Revised Technical Support Document: National-Scale Assessment of Mercury Risk to Populations with High Consumption of Self-caught Freshwater Fish In Support of the Appropriate and Necessary Finding for Coal- and Oil-Fired Electric Generating Units* (Nov. 2011), Office of Air Quality Planning and Standards, EPA-452/R-11-009, Docket ID No. EPA-HQ-OAR-2009-0234-19913.

³³ U.S. EPA, *Supplement to Non-mercury Case Study Chronic Inhalation Risk Assessment for the Utility MACT Appropriate and Necessary Analysis*, Office of Air Quality Planning and Standards (Nov. 2011), Docket ID No. EPA-HQ-OAR-2009-0234-19912.

³⁴ 81 Fed. Reg. at 24422-23.

³⁵ 77 Fed. Reg. 9304-01 (Feb. 16, 2012).

³⁶ U.S. EPA, *Electric Utilities Mercury Releases in the 2016 TRI National Analysis* (Jan. 30, 2018), <https://www.epa.gov/trinationalanalysis/electric-utilities-mercury-releases-2016-tri-national-analysis>.

³⁷ *Id.* at 9311.

³⁸ 65 Fed. Reg. 79825 (Dec. 20, 2000).

After listing EGUs as a source category subject to regulation under section 112,³⁹ U.S. EPA reaffirmed its appropriate and necessary finding in 2012 after considering additional scientific and public health evidence after litigation on its trading proposal.⁴⁰ In 2016, U.S. EPA reaffirmed its finding once again in response to the *Michigan* case.

This third update resulted from litigation. The Supreme Court of the United States (SCOTUS) instructed U.S. EPA to think broadly about its appropriateness finding, which U.S. EPA did and consequently reaffirmed its finding. Specifically, in *White Stallion Energy Center v. EPA (White Stallion)*,⁴¹ stakeholders challenged U.S. EPA's necessary and appropriate finding as well as the final MATS Rule. The appellate court rejected the claims on the grounds that U.S. EPA acted reasonably. However, it concluded U.S. EPA was not required to consider costs in determining whether to regulate EGUs.

Petitioners requested certiorari from SCOTUS, which agreed to hear the case in *Michigan v. EPA (Michigan)*.⁴² In *Michigan*, the Court found that U.S. EPA failed to take cost into account in making its decision to regulate EGUs, and that the term "appropriate" required the consideration of cost in some form. The Court viewed "appropriate" as a classically broad term, warranting "consideration of all the relevant factors."⁴³ Because U.S. EPA had not considered cost directly, the Court reversed *White Stallion* and remanded the matter for further proceedings. Specifically, the Court directed U.S. EPA to consider *all* relevant costs, which includes the advantages and disadvantages of regulating.

U.S. EPA followed the direction of the Court in *Michigan* and analyzed cost using two different evaluation methods in its 2016 Supplemental Finding.⁴⁴ The first approach involved U.S. EPA evaluation of the historical annual revenues, annual capital expenditures, and impacts on retail electricity prices as well as the cost of the regulation, Congress's concern about the hazardous nature of these pollutants, the substantial risk to the public health and environment as concluded by substantial research, and the fact that EGUs were still the largest source of mercury.⁴⁵ U.S. EPA determined that the costs were "well within the range of historical variability."⁴⁶

³⁹ *Id.* at 79830; see 42 U.S.C. § 7412(c)(1).

⁴⁰ 77 Fed. Reg. 9304 (Feb. 16, 2012).

⁴¹ *White Stallion Energy Center v. EPA*, 748 F.3d 1222 (D.C. Cir. 2014).

⁴² *Michigan v. EPA*, 135 S.Ct. 702 (2014); *Michigan v. EPA*, 135 S. Ct. 2699 (2015).

⁴³ *Id.* at 2707.

⁴⁴ 81 Fed. Reg. 24420, 24421 (Apr. 25, 2016).

⁴⁵ *Id.* at 24420.

⁴⁶ *Id.*

U.S. EPA also explained that its approach was supported by the Clean Air Act:

because in addition to cost, it places value on the statutory goals of achieving prompt, permanent, and ongoing reductions in significant volumes of HAP emissions . . . and on the important . . . and unquantifiable advantages of reducing the significant hazards to public health posed by such emissions, including . . . most sensitive members of society."⁴⁷

U.S. EPA's second approach was based on a formal benefit-cost analysis in the RIA for the final MATS Rule.⁴⁸

Based on this analysis, U.S. EPA issued a final rule (2016 Supplemental Finding),⁴⁹ finding that considering costs does not alter the determination that it is appropriate and necessary to regulate mercury emissions from power plants.⁵⁰ U.S. EPA determined that based on these metrics, "it clearly remains appropriate and necessary to regulate HAP emissions from EGUs" and that this determination "is fully consistent with the dictates of the statute and with the *Michigan* decision."⁵¹ This finding remains true today.

U.S. EPA has now proposed to revisit these findings, this time excluding (for unsupported reasons) its prior co-benefit analysis entirely, and abandoning the multiple cost consideration methodologies that it previously used. Having stacked the deck against the only rational conclusion – that securing enormous public benefits is "appropriate" (and especially so with the regulatory regime long in force) – it proposes abandoning its prior findings. U.S. EPA insists that these findings do not necessarily destabilize MATS itself, but takes comments on precisely that point. In its deregulatory fervor, U.S. EPA suggests that its arbitrarily narrow new analysis might eventually justify exposing the public to increased power plant pollution. That new position is unacceptable.

Comments

U.S. EPA is in the unusual position of proposing, *sua sponte*, to reverse a factual determination which it has already made, and reaffirmed, years after the regulatory regime premised on that determination has gone successfully into effect. In these circumstances, the harm is very real – including millions of dollars in pollution control investments already spent and risk to the public that pollution may *increase* as a result of MATS weakening following from a revised finding. Even if U.S. EPA had authority to

⁴⁷ *Id.* at 24421.

⁴⁸ *Id.*

⁴⁹ *Id.*

⁵⁰ *Id.* at 24420.

⁵¹ *Id.*

consider reversing this factual determination, the Agency has not met the substantial legal and factual burden required to scrap years of work.

1. U.S. EPA faces substantial legal barriers to overturning its supplemental finding

As an initial matter, it is unlawful for U.S. EPA to revisit its finding at all. U.S. EPA has completed the analytic process that Congress set in motion in 1990. The statute offers no room to revisit or revise a finding; although U.S. EPA was compelled to add analysis in response to litigation, there is not an independent authority to revisit the process. Instead, the statute anticipates that after a finding, EGUs will be subject to toxics regulation, with any further analysis of regulatory options occurring under the substantive regulatory provisions of section 112 of the Clean Air Act – including, as relevant, the delisting provisions, which impose a strong presumption against deregulation. Congress, in other words, recognized that the finding would create strong reliance interests, and did not leave room to chip away at this foundational decision; instead, it created explicit statutory structures that could generate reasoned decisions on future regulatory steps. Reopening the initial finding at this late date has no place in the statutory scheme, and is illegal and improper.⁵² It destabilizes a well-established national regulatory program, and is not countenanced by the Clean Air Act.

Moreover, even if it were somehow appropriate to disturb this past work, U.S. EPA has entirely failed seriously to undermine its prior well-supported conclusions. Under the Clean Air Act, courts will set aside an agency action that is “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.”⁵³ An agency action is arbitrary and capricious where the agency (i) has relied on factors which Congress has not intended it to consider; (ii) entirely failed to consider an important aspect of the problem; (iii) offered an explanation for its decision that runs counter to the evidence before the agency; or (iv) is so implausible that it could not be ascribed to a difference of view or the product of agency expertise.⁵⁴

⁵² The California Attorney General’s Office discusses these matters extensively in their comments, to which CARB generally subscribes.

⁵³ 42 U.S.C. § 7607 (d)(7)(9).

⁵⁴ *Motor Vehicle Mfrs. Ass’n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983).

Rules may be arbitrary and capricious if they fail to accomplish their statutory objectives.⁵⁵ After a “searching and careful inquiry” into the facts,⁵⁶ courts will find U.S. EPA’s actions arbitrary and capricious if the agency has failed to “examine the relevant data and articulate a satisfactory explanation for its action, including a rational connection between the facts found and the choice made,” or has reached a conclusion unsupported by substantial evidence.⁵⁷

The “arbitrary and capricious test applie[s] to rescissions of prior agency regulations,”⁵⁸ which means that U.S. EPA’s actions must be consistent with statutory structure and intent, and grounded in the evidence. Courts have held that “an agency must supply a “good reason” for departing from prior policy.”⁵⁹ An “agency changing its course . . . is obligated to supply a reasoned analysis for the change.”⁶⁰ The Supreme Court has clarified that while an agency need not show that a new rule is better than the rule it replaced, it must demonstrate that “there are good reasons” for the replacement.⁶¹ Further, an agency must “provide a more detailed justification than what would suffice for a new policy created on a blank slate” when “its new policy rests upon factual findings that contradict those which underlay its prior policy.”⁶² Any “unexplained inconsistency” between an existing rule and a proposal to delay it is “a reason for holding an interpretation to be an arbitrary and capricious change.”⁶³

An agency may not simply discard prior findings without a reasoned explanation, even when reversing a policy after an election.⁶⁴ Also, an agency cannot suspend a validly

⁵⁵ See *Chem. Mfs. Ass’n v. EPA*, 217 F.3d 861, 867 (D.C. Cir. 2000) (rule was arbitrary and capricious absent evidence it would benefit human health and the environment) (citing *Small Refiner Lead Phase-Down Task Force v. EPA*, 705 F.2d 506, 520 (D.C. Cir. 1983)); See *Ctr. for Biological Diversity v. Nat’l Hwy. Traffic Safety Admin.*, 538 F.3d 1172, 1197 (9th Cir. 2008) (invalidating “standards that are contrary to Congress’s purpose in enacting the [relevant statute]”). “Well-intentioned policy objectives” do not on their own support agency deviations from statute. See, e.g., *Mexichem Fluor, Inc. v. EPA*, 866 F.3d 451, 460 (D.C. Cir. 2017).

⁵⁶ *Am. Trucking Ass’n v. EPA*, 283 F.3d 355, 362 (D.C. Cir. 2002).

⁵⁷ *Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (internal quotation marks and citation omitted)(State Farm); *Ass’n of Data Processing Serv. Orgs., Inc. v. Bd. of Governors of the Fed. Reserve Sys.*, 745 F.2d 677, 683–84 (D.C. Cir.1984).

⁵⁸ *State Farm* at 44.

⁵⁹ *Federal Commc’ns Comm’n v. Fox Television Stations*, 556 U.S. 502, 515 (2009) (Fox).

⁶⁰ *State Farm* at 42.

⁶¹ *Fox* at 515.

⁶² *Id.*

⁶³ *Nat’l Cable & Telecomms. Ass’n*, 545 U.S. at 981; see also *Good Fortune Shipping*, 897 F.3d at 264 (invalidating regulation where agency failed to explain how sound rationale for earlier rule “had somehow become unworkable”); *Goldstein v. S.E.C.*, 451 F.3d 873, 883 (D.C. Cir. 2006) (invalidating regulation as “completely arbitrary” where agency failed to “justify [it] by reference to any change in the nature of” the regulated industry since promulgation of original rule).

⁶⁴ *Organized Vill. of Kake v. U.S. Dep’t of Agric.*, 795 F.3d 956, 968 (9th Cir. 2015). See, e.g., *F.C.C. v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 (2009) (agency must provide detailed justification where it bases a new policy on facts that contradict prior policy); *Nat’l Cable & Telecomms. Ass’n, et al. v.*

promulgated rule without first “pursu[ing] available alternatives that might have corrected the deficiencies in the program which the agency relied upon to justify the suspension.”⁶⁵ Any reconsideration must be timely.⁶⁶ Last, an agency must explain how its new interpretation “is rationally related to the goals of the statute.”⁶⁷

In this case, there is no rational connection between the facts found and the choice made because U.S. EPA already issued a Supplemental Finding after the *Michigan* case, has failed to demonstrate that its prior finding was incorrect or to disturb its extensive record, and now, proposes to rely on an improper reading of *Michigan* based upon an outdated RIA despite the availability of updated information two years later. U.S. EPA arbitrarily ignores its own prior factual and legal findings in the Proposed Finding and is certainly not timely. Not only does U.S. EPA not have authority to revise its appropriate and necessary finding, but the reasoning for the change in position lacks adequate support in the record and deviates from prior, better reasoning.

Moreover, the Proposed Finding contravenes U.S. EPA’s congressional mandate to “protect and enhance the quality of the Nation’s air resources so as to promote the public health and welfare and the productive capacity of its population.”⁶⁸ As established by a number of scientific reports—mercury presents a threat to the human health and the environment. U.S. EPA also found previously that “implementation of other requirements under the [Clean Air Act] will not adequately address the serious public health and environmental hazards arising from such [mercury] emissions identified in the utility RTC and confirmed by the NAS study, and which section 112 is intended to address.”⁶⁹

The reason U.S. EPA offers to reverse its 2016 Supplemental Finding is flawed. Even without conducting an updated RIA, the benefits clearly outweigh the costs. As stated below, if U.S. EPA conducted an adequate RIA, it would see that its numbers are simply incorrect, especially because industry has now, for the most part, installed the controls and, again, the monetized benefits of mercury reductions alone are

Brand X Internet Servs., et al., 545 U.S. 967, 981 (2005) (agency must adequately explain reason for reversal of policy).

⁶⁵ *Pub. Citizen v. Steed*, 733 F.2d 93, 103 (D.C. Cir. 1984); see also *Organized Village of Kake v. U.S. Dept. of Agric.*, 795 F.3d 956, 966-68 (9th Cir. 2015) (invalidating rule where agency failed to provide the “reasoned explanation” required by *Fox* for disregarding the facts and circumstances underlying prior rule).

⁶⁶ See, e.g., *Ivy Sports Medicine, LLC v. Burwell*, 767 F.3d 81 (D.C. Cir. 2014); *Mazaleski v. Treusdell*, 562 F.2d 701, 720 (D.C. Cir. 1977).

⁶⁷ *Village of Barrington v. Surface Transp. Bd.*, 636 F.3d 650, 665 (D.C. Cir. 2011).

⁶⁸ 42 U.S.C. § 7401(b).

⁶⁹ 65 Fed. Reg. 79825, 79830 (Dec. 20, 2000).

potentially underestimated. However, even without this, the total benefits outweigh the costs by up to twelve times.

Thus, U.S. EPA's proposal is unlawful as contrary to statutory intent and an unjustified diversion from its prior finding. In light of the evidence supporting the need to regulate mercury from EGUs, it is hard to imagine how U.S. EPA could arrive at a decision that it is not necessary and appropriate to regulate EGUs. U.S. EPA's proposal can only be interpreted as its intent to shirk congressional obligations. Administrative agencies may not deregulate based on their own policy preferences where a statute mandates otherwise. The current proposal rests on a plainly incorrect reading of the statute and the *Michigan* case, and reflects an arbitrary, capricious, and inadequately explained departure from prior policy.

2. U.S. EPA may not abandon its finding that regulation is appropriate on multiple cost metrics

Although the bulk of these comments focus on U.S. EPA's baffling decision to ignore millions of dollars in co-pollutant benefits, the 2016 Supplemental Finding was also wholly justified by U.S. EPA's independent analysis of costs. As U.S. EPA explained in its findings, these costs are wholly bearable by the utility sector, and by ratepayers. This finding more than suffices to justify regulating the sector.

U.S. EPA's insistence that these extensive determinations must be abandoned is wrong. *Michigan* provides no warrant for abandoning or discounting the prior findings. Indeed, the opposite is true: *Michigan* fundamentally is rooted in the breadth of the word "appropriate" and suggests that U.S. EPA must be open to considering all relevant factors. At this late date, 29 years after Congress asked the Agency to look into control of HAPs from power plant, and half a decade after the rules have gone into force, the Agency cannot ignore the fact that its prior findings have been borne out in practice. The utility sector in fact is operating successfully under MATS – controlling remaining power plants, and shifting increasingly towards even cleaner sources of electricity.⁷⁰

U.S. EPA's efforts to ignore this fact, and its own prior analysis, and instead to justify its new blinkered analyses is wholly unpersuasive. The Agency was not required to ignore its prior work, and so may not do so. A full consideration of this work, including a look to the real world conditions of the power grid, offers no support for the

⁷⁰ See U.S. Department of Energy, *Staff Report to the Secretary on Electricity Markets and Reliability* (2017), available at: <https://www.energy.gov/downloads/download-staff-report-secretary-electricity-markets-and-reliability>. Note that FERC, considering this report, later concluded that the power sector's reliability was not being negatively impacts by coal-fired power plant closures. See also FERC, Order Terminating Rulemaking Proceeding, Initiating New Proceeding, and Establishing Additional Procedures, 162 FERC ¶ 61,012 (Jan. 8, 2018).

conclusion that regulation in general (or MATS in particular) is inappropriate. To the contrary, the grid is operating properly even as pollution has continued to fall - as the Federal Energy Regulatory Commission (FERC) and Department of Energy (DOE) have both recently affirmed.⁷¹

3. U.S. EPA must continue considering co-benefits as it has always done

The continued operation of the power sector under MATS, alone, fatally undermines the new Proposed Finding; so does U.S. EPA's prior, thoughtful, consideration of total costs to the sector. Thus, the Proposed Finding fails even without consideration of U.S. EPA's improper effort to exclude co-pollutant benefits. This proposal to ignore these plainly relevant factors does, however, further underline the unsupportable nature of the Proposed Finding.

A. The Michigan decision requires consideration of all relevant factors, and co-benefits are a relevant factor in deciding to regulate

In *Michigan*,⁷² the Court found that U.S. EPA failed to take cost into account in making its decision to regulate EGUs, and that the term "appropriate" required the consideration of cost in some form. Specifically, the Court directed U.S. EPA to consider *all* relevant costs. This includes the advantages and disadvantages of regulating. The decision hinges on the breadth of the word "appropriate." U.S. EPA's attempts to read *Michigan* as requiring a *narrow* approach that does not consider critical costs and benefits is thus unpersuasive.

The 2016 Supplemental Finding correctly concluded that U.S. EPA was complying with *Michigan* by considering cost and its consideration of cost did not change U.S. EPA's previous determination that regulation is "appropriate and necessary." In the 2016 Supplemental Finding, U.S. EPA said "[t]his action responds to the U.S. Supreme Court Decision in [*Michigan*], and explains how [U.S.EPA] has taken cost into account in evaluating whether it is appropriate and necessary to regulate coal- and oil-fired [] EGUs under section 112 of the [] Act []." ⁷³ U.S. EPA should not deviate from its prior, more methodical analysis.

While U.S. EPA, in its Proposed Finding, suggests it is complying with *Michigan* by removing consideration of co-benefits, it is actually violating *Michigan*. The Court held that "[c]onsideration of cost reflects the understanding that reasonable regulation ordinarily requires paying attention to the advantages *and* the disadvantages of

⁷¹ See *id.*

⁷² *Michigan* at 2699.

⁷³ *Id.*

agency decisions.”⁷⁴ These advantages would include co-benefits, and nothing in the *Michigan* decision states otherwise.

The Court stated “[i]t will be up to the Agency to decide (as always, within the limits of reasonable interpretation) how to account for cost.”⁷⁵ The Court went on to emphasize how expansive the consideration of cost really is: “One does not need to open up a dictionary in order to realize the capaciousness of this [appropriate] phrase. In particular, ‘appropriate’ is ‘the classic broad and *all-encompassing term* that naturally and traditionally includes consideration of *all* the relevant factors.’”⁷⁶ The Court also pointed out that U.S. EPA’s failure to consider cost “ignores every aspect of the rulemaking context in which that standard plays a part.”⁷⁷ In light of *Michigan*, the term “appropriate” means U.S. EPA must consider “all relevant factors.” Co-benefits worth billions of dollars are certainly a relevant factor, and a key part of the rulemaking context – and especially so when the standards are already operating to produce public benefits.

U.S. EPA’s citation to dicta in *Michigan* is off-point and irrelevant. U.S. EPA bases its drastic change in position on the following dicta: “One would not say that it is even rational, never mind ‘appropriate,’ to impose billions of dollars in economic costs in return for a few dollars in health or environmental benefits.” However, the Court explicitly indicated that it was *not* addressing whether ancillary benefits are part of the appropriate and necessary finding.⁷⁸ More importantly, the Court stated that all relevant factors should be considered – so this would include co-benefits.

Also, as we note above, U.S. EPA argues that the previously utilized cost-reasonableness approach, where it determined that the compliance costs and impacts on retail electricity prices were reasonable, was impermissible under *Michigan*.⁷⁹ However, there is no bright-line rule and the sentence U.S. EPA is referencing is mere dicta.

Last, in the 2016 Supplemental Finding, U.S. EPA carefully considered costs after reviewing case law, statutory goals and directives, and the uniqueness of EGUs. Hence, the 2016 Supplemental Finding already aligned with the mandates of *Michigan* and the Clean Air Act.⁸⁰ The new Proposed Finding gives no such in-depth thought.

⁷⁴ *Id.* at 2707.

⁷⁵ *Id.* at 2711.

⁷⁶ *Id.* at 2707 (emphasis added).

⁷⁷ *Id.* at 2725.

⁷⁸ *Id.* at 2711.

⁷⁹ 84 Fed. Reg. at 2675.

⁸⁰ 2015 Legal Memorandum at 11.

B. Quantification and consideration of co-benefits help fully analyze the cost-benefits, which is a vital component of any effective cost-benefit analysis

The Proposed Finding is so wholly divorced from a consideration of all “appropriate” factors that it even departs from guidelines from U.S. EPA itself,⁸¹ as well as from the Office of Management and Budget, to analyze monetary and non-monetary costs and benefits of proposed regulatory actions. None of these guidelines countenance U.S. EPA’s proposal entirely to discount important public benefits; instead, like *Michigan*, they direct full consideration of relevant factors.

U.S. EPA’s guidelines are clear on these points, as they must be. U.S. EPA’s guidelines direct it to assess “all identifiable costs and benefits,” including ancillary benefits and costs.⁸² For decades, U.S. EPA has taken co-benefits into account when evaluating regulations.⁸³

Congress has assigned disparate statutory requirements and parameters to the Agency’s cost-benefit analyses of different pollutants, sectors, and reduction strategies.⁸⁴ Preserving the legality of agency actions requires thoughtful analytic approaches.⁸⁵ Development of these guidelines was spearheaded by U.S. EPA’s

⁸¹ U.S. EPA, *Guidelines for Preparing Economic Analyses*, National Center for Environmental Economics, (Dec. 17, 2010), updated May 2014, available at <https://www.epa.gov/environmental-economics/guidelines-preparing-economic-analyses> (U.S. EPA Guidelines).

⁸² U.S. EPA, Guidelines at 11-12.

⁸³ See, e.g., 75 Fed. Reg. 51,570, 51,578, 51,582–83 (Aug. 20, 2010) (considering indirect benefits from reducing carbon monoxide, volatile organic compounds, and nitrogen oxides in regulating hazardous air pollutants from reciprocating internal combustion engines); 72 Fed. Reg. 8428, 8430 (Feb. 26, 2007) (finding that “[a]lthough ozone and PM_{2.5} are considered criteria pollutants rather than ‘air toxics,’” their reductions as “are nevertheless important co-benefits” of proposed controls on mobile sources to reduce emissions of benzene and other section 112 pollutants); 63 Fed. Reg. 18,504, 18,585–87 (Apr. 15, 1998) (discussing the indirect benefits of reducing co-pollutants like volatile organic compounds, particulate matter, carbon monoxide, and sulfur dioxide through section 112 standards for pulp and paper producers); 56 Fed. Reg. 24,468, 24,469, 24,473 (May 30, 1991) (justifying Clean Air Act section 111(b) performance standards and section 111(d) emission guidelines for municipal solid waste landfills based in part on “the ancillary benefit of reducing global loadings of methane”); 52 Fed. Reg. 25,399, 25,406 (Jul. 7, 1987) (considering “the full spectrum of the potential impacts of regulation,” including “indirect benefits accruing from concomitant reductions in other regulated pollutants” in deciding to regulate emissions from municipal waste incinerators under sections 111(b) and (d) of the Clean Air Act).

⁸⁴ “Most statutory provisions require or allow some consideration of cost and benefits when setting regulatory standards to achieve public health and environmental benefits, but there can be a significant variation in terminology and specificity provided in each law regarding the nature and scope of cost and benefit considerations”; “Even when Congress does include statutory language to indicate how U.S. EPA should weigh cost considerations against benefits and other relevant factors, there is considerable variation in the language used.” 83 Fed. Reg. 27524, 27525 (June 13, 2018).

⁸⁵ “For many of [U.S.] EPA’s regulatory programs, the courts have weighed in on the scope of costs to be considered during the development of a regulation”; “In cases where current [U.S.] EPA practice reflects prior judicial decisions, a change in course may come with significant burden to the Agency.” *Id.* at 27526, 27527.

National Center for Environmental Economics in consultation with economists across U.S. EPA, and they benefit from expert peer review (by U.S. EPA's Science Advisory Board Environmental Economics Advisory Committee or external experts) before finalization.

The Office of Management and Budget Circular A-4⁸⁶ guidance to federal agencies on cost-benefit analyses in regulatory decision-making, which was heralded in Executive Order 13783 (Mar. 28, 2017),⁸⁷ similarly focuses on clear and comprehensive analysis, and calls for agencies to consider "any important" co-benefits, including those "secondary to the statutory purpose of the rulemaking."⁸⁸ It states:

Your analysis should look beyond the direct benefits and direct costs of your rulemaking and consider any important ancillary benefits and countervailing risks. An ancillary benefit is a favorable impact of the rule that is typically unrelated or secondary to the statutory purpose of the rulemaking Like other benefits and costs, an effort should be made to quantify and monetize ancillary benefits and countervailing risks.⁸⁹

Furthermore, transparency in regulatory decision-making requires full analysis of all costs and benefits of a proposed regulation and regulatory and non-regulatory alternatives. This is among the reasons that presidents have issued multiple currently-effective Executive Orders to require and promote comprehensive regulatory analyses across the federal government, including Executive Order 12866 (Sept. 30, 1993), which requires agencies to fully assess the costs and the benefits of an intended regulation and available alternatives, including "both quantifiable measures (to the fullest extent that these can be usefully estimated) and qualitative measures of costs and benefits that are difficult to quantify, but nevertheless essential to consider."

Also, "agencies should select those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity), unless a statute requires another regulatory approach."⁹⁰ This was reaffirmed with Executive Order 13563 (Jan. 18, 2011), directing agencies "to use the best available techniques to quantify anticipated present and future benefits and costs as accurately as possible . . . [including] values that are

⁸⁶ Office of Mgmt. & Budget, *Circular A-4* (Sept. 17, 2003) available at https://obamawhitehouse.archives.gov/omb/circulars_a004_a-4/#e.

⁸⁷ "Promoting Energy Independence and Economic Growth," noting that Circular A-4 "was issued after peer review and public comment and has been widely accepted for more than a decade as embodying the best practices for conducting regulatory cost-benefit analysis." 82 Fed. Reg. 16093 (Mar. 28, 2017), Section 5(c), citing Circular A-4.

⁸⁸ Office of Mgmt. & Budget, *Circular A-4* at 29.

⁸⁹ *Id.* at §6.

⁹⁰ 58 Fed. Reg. 51735 (Sept. 30, 1993).

difficult or impossible to quantify, including equity, human dignity, fairness, and distributive impacts.”⁹¹

U.S. EPA nonetheless states that *equal reliance* on particulate matter (PM) air quality benefits as a result of HAP regulation is flawed because the focus of section 112 is HAP emissions, not other pollutants – and then sets the value of those benefits at zero.⁹² This is irrational on its face, and when considered against the background of standard agency practice. It is not clear what U.S. EPA means when it says “it is appropriate to not give equal weight to non-HAP co-benefits.”⁹³ This would seem to suggest there is some coefficient U.S. EPA thinks would be appropriate, but U.S. EPA instead seems to value co-benefits at zero. Even if co-benefits do not have equal weight, U.S. EPA provides no support for its position that co-benefits should have no weight – and co-benefits should be given weight.

Full consideration of co-benefits is a vital component of effective cost-benefit analysis. Partially considering benefits while fully considering costs is both inappropriate for economic analysis and unlawful, as appellate courts have confirmed,⁹⁴ as it results in significant underestimation of the benefits of environmental regulations. Full estimation of co-benefits of regulatory actions is critically important to ensuring appropriate actions are taken to comprehensively improve air quality.

U.S. EPA must maintain its historic commitment to the same principles, which would not be served by altering approaches for cost-benefit analysis in the manner that U.S. EPA presently contemplates. CARB vehemently opposes changes in policy or guidance that dilutes or prevents U.S. EPA from estimating co-benefits of potential regulatory actions.

C. The Clean Air Act is broad, requiring U.S. EPA to protect public health and the environment

Although U.S. EPA’s misreading of *Michigan* and core principles of economic analysis suffices to demonstrate its errors, the structure of the Clean Air Act further undermines the Proposed Finding. The Clean Air Act is rooted in a comprehensive approach to air

⁹¹ 76 Fed. Reg. 3821 (Jan. 18, 2011).

⁹² 84 Fed. Reg. at 2675.

⁹³ *Id.* at 2677.

⁹⁴ *E.g., Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1198 (9th Cir. 2008) (“Even if NHTSA may use a cost-benefit analysis to determine the “maximum feasible” fuel economy standard, it cannot put a thumb on the scale by undervaluing the benefits and overvaluing the costs of more stringent standards. NHTSA fails to include in its analysis the benefit of carbon emissions reduction in either quantitative or qualitative form. It did, however, include an analysis of the employment and sales impacts of more stringent standards on manufacturers.”).

pollution; U.S. EPA may not properly entirely discount the full range of air pollution benefits regulation is providing in considering whether regulation is “appropriate.”

The broad preamble of the Clean Air Act states that its purpose is to “protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population”⁹⁵ and to “achieve the prevention and control of air pollution.”⁹⁶ Given these purposes, and Congress’s careful efforts to secure comprehensive pollution controls (intensified in the 1990 Amendments that generated the appropriateness finding requirement), it would be perverse to ignore co-benefits in considering the appropriateness of regulation.

The 1990 Amendments were meant to target the aspects of the Clean Air Act that were not working and allowing increased air pollution – dealing with the “ineffectiveness of the risk-based approach created a ‘broad consensus that the program to regulate under section 112 of the Clean Air Act should be restructured to provide [U.S.] EPA with authority to regulate . . . with technology based standards.”⁹⁷ Most air pollution control technologies capture multiple pollutants. The Senate Report on section 112(d)(2) of the Clean Air Act recognizes that Maximum Achievable Control Technologies (MACT) standards also control criteria pollutant emissions.⁹⁸ Moreover, not considering co-benefits, and, therefore, not regulating mercury from EGUs, could result in increased mercury emissions, which negates the purpose of the Clean Air Act.

There is thus no statutory reason to parse cost on a pollutant-by-pollutant basis (and every reason to consider all pollutants) because the Clean Air Act’s focus is on comprehensive and rigorous control. Moreover, section 112 itself inquires only as to whether regulation from the sector is appropriate – and does not mandate a particularized pollutant-by-pollutant test. This point is further highlighted by U.S. EPA’s peer reviewed report “*The Benefits and Costs of the Clean Air Act*.”⁹⁹ U.S. EPA states that because emissions reductions achieved by each regulatory program interact with other regulations, “benefits cannot be reliably isolated or matched to provision-specific changes in emissions or cost.”¹⁰⁰ Section 112 aims, in particular, at a broader federal protective role – this was the point of the 1990 amendments.

⁹⁵ 42 U.S.C. § 7401 (b)(1).

⁹⁶ *Id.* at 7401(b)(2).

⁹⁷ 2015 Legal Memorandum Accompanying the Proposed Supplemental Finding; *Sierra Club v. EPA*, 353 F.3d 976, 979 (citing Legislative History of the 1990 Clean Air Act Amendments).

⁹⁸ U.S. EPA, *Legal Memorandum Accompanying the Proposed Supplemental Finding that it is Appropriate and Necessary to Regulate Hazardous Air Pollutants from Coal- and Oil-Fired Electric Utility Steam Generating Units* (EGUs) (2015), available at <https://www.epa.gov/sites/production/files/2016-05/documents/20151120legalmemo.pdf>.

⁹⁹ U.S. EPA, *The Benefits and Costs of the Clean Air Act From 1990-2020* (Apr. 2011), available at https://www.epa.gov/sites/production/files/2015-07/documents/fullreport_rev_a.pdf.

¹⁰⁰ *Id.*

D. Federalism considerations also support the existing supplemental finding

The Clean Air Act is rooted in cooperative federalism; U.S. EPA is required to “encourage cooperative activities with the States,”¹⁰¹ and States are reliant upon broad and rigorous toxics protections, consistent with the overall cooperative federalism structure of the Clean Air Act, and of section 112 in particular. Moreover, co-pollutant reductions from one set of controls (here, toxics controls) may aid states in meeting other pollution control requirements under the Clean Air Act, including attaining federally-mandated national ambient air quality standards. Here, for instance, co-pollutant reductions in particulate pollution aid in achieving standards for those pollutants. Thus, it is proper for U.S. EPA to consider these important structural and practical considerations in determining the appropriateness of regulating a source sector.

Conversely, abandoning federal programs has wide-ranging federalism implications for the states. Initially, in the absence of a federal structure, states will be required to individually adopt regulations that control mercury. Forcing states to regulate toxic sources individually transfers regulation to states, placing a burden on already resource-strapped states that rely on the federal structure. Networked sources like power plants that provide electricity to a national power grid also benefit from a shared federal floor of standards, to avoid emissions moving across state borders. National standards avoid serious seams issues in the grid.

Moreover, foregone co-pollutant reductions can have broader implications. In recent litigation, for example, *California Communities Against Toxics, et al. v. U.S. EPA, et al.*, No. 18-1085 (D.C. Cir. 2018), industry amici explained that (1) U.S. EPA allows nonattainment areas for ozone to incorporate reductions in ozone-precursors (NO_x, VOCs) resulting from MACT controls when accounting for NAAQS attainment compliance and has identified over 30 MACT standards that reduce ozone precursors; and (2) some MACT standards use criteria pollutants as surrogates for measuring HAP control because both are controlled using the same pollution control technology.¹⁰² The amicus brief also cites a 2007 U.S. EPA guidance document that quantified expected reductions in NO_x and VOCs from existing MACT standards.¹⁰³ To be sure, CARB does not agree with industry’s position in that case that such co-benefits justified U.S. EPA’s efforts to weaken toxics rules – instead, these points are offered to demonstrate the *importance* of strong toxics rules to support many other pollution reduction priorities.

¹⁰¹ 42 U.S.C. § 7402 (a).

¹⁰² Brief for American Chemistry Council et al. as Amici Curiae Supporting Respondents at 9-11, Cal. Cmty. Against Toxics et al. v. U.S. EPA et al., No. 18-1085 (D.C. Cir. Jan. 14, 2019).

¹⁰³ *Id.* at 9-10 (citing Memorandum from William T. Harnett, Director, Air Quality Policy Division, to Regional Air Division Directors, “Guidance for Estimating VOC and NO_x Emission Changes from MACT Standards,” (May 11, 2007)).

Additionally, the fact sheet accompanying the final MATS Rule alludes to interplay between the HAPs regulated by MATS and other criteria pollutants: (1) “Reducing toxic power plant emissions will also cut SO₂ and fine particle pollution...”; (2) “For all existing and new coal-fired EGUs, the rule establishes numerical emission limits for mercury, PM (a surrogate for toxic non-mercury metals),...”; (3) “For existing and new oil-fired EGUs, the standards establish numerical emission limits for PM (a surrogate for all toxic metals), HCl, and HF”; and (4) “The rule establishes alternative numeric emission standards, including SO₂ (as an alternate to HCl), individual non-mercury metal air toxics (as an alternate to PM), and total non-mercury metal air toxics (as an alternate to PM) for certain subcategories of power plants.”¹⁰⁴ Moreover, the MATS tables in the Code of Federal Regulations (40 CFR part 63, subpart UUUUU) allow facilities, by and large, to comply with their choice of a particulate matter standard, a total non-mercury HAP metals standard, or a collection of individual HAP metal standards. These benefits cannot properly be discounted; doing so imposes real costs on the states, if the analysis results in de-regulation. States will simply be left holding the bag to make up reductions elsewhere, if possible – and therefore less able to comply with binding federal and state mandates.

Absent statutory language to the contrary, U.S. EPA is required to consider co-benefits whenever it conducts a cost-benefit analysis, not only for purposes of section 112, but even outside of the context of the Clean Air Act.¹⁰⁵ It is not just the phrase “appropriate and necessary” or even just the Clean Air Act in general that requires consideration of co-benefits as part of any cost-benefit analysis – it is also part of the more fundamental requirement of reasoned decision-making that plays an important role in the Clean Air Act’s cooperative federalism structure.

4. Relying on an outdated Regulatory Impact Analysis (RIA) to rescind a rule without more information is inappropriate

U.S. EPA’s reasoning is also factually ungrounded, in that it fails to account for current conditions or current science. The RIA was sufficient when U.S. EPA issued the MATS Rule as it relied on information that was current at that time. However, now, U.S. EPA is relying on this same RIA, which was created in 2011, before U.S. EPA promulgated or implemented the MATS Rule to issue this Proposed Finding. Relying on cost information that is seven years old fails to meet the basic tenets of Executive Order 13563 and also suffers from administrative law flaws.

¹⁰⁴ U.S. EPA, *Fact Sheet: Mercury and Air Toxics Standards for Power Plants*, <https://www.epa.gov/sites/production/files/2015-11/documents/20111221matssummaryfs.pdf> (last visited Apr. 8, 2019).

¹⁰⁵ The question here is a narrow one because 112(n) is a specialized, provision. There are no other source categories with a similar “necessary and appropriate” finding requirement and, therefore, U.S. EPA’s flawed reasoning should not be extended to other provisions of the Clean Air Act.

Relying on an old RIA that was specifically not made for purposes of answering this question is contrary to U.S. EPA's regulatory obligations. Executive Order 13563 requires federal agencies such as U.S. EPA "to use the best available techniques to quantify anticipated *present* and future benefits and costs as *accurately* as possible." (emphasis added).¹⁰⁶ This requires a review of the most up to date information.

First, U.S. EPA is not allowed to revisit its prior findings, but even if it could revisit its finding at all at this late date, it was required to consider the current operation of the electrical grid – in which MATS has successfully been implemented. U.S. EPA should have also considered DOE and FERC reports on this matter (cited above), which show that there is no reliability crisis or concerning effect on ratepayers. Instead, the grid has successfully adapted. U.S. EPA would be required to consider the substantial costs of declaring ratepayer- and stockholder- funded improvements to comply with MATS no longer appropriate as well. The risk of stranding these assets, or disrupting rate recovery, is real, and needs fully to be weighed.

Also, the RIA predicted electricity generated by coal to be 2,002 billion kilowatt-hours (BkWh) in 2020, while more recent forecasts indicate it will be 1,024 BkWh¹⁰⁷ – and therefore, fewer units will be subject to the MATS Rule. This is due to the rise in natural gas and increasing renewable generation, as well as the slowed electricity demand growth rates due to energy efficiency.¹⁰⁸ Also, U.S. EPA fails to consider what operators of EGUs have already spent on compliance and the costs that industry has already spent on MATS should be removed from the RIA. A number of owners and operators of EGUs have already paid more than \$18 billion combined.¹⁰⁹ Therefore, actual cost to the industry is far lower than the estimates provided in 2011. The RIA may also overestimate current compliance costs. U.S. EPA even admits that the 2011 RIA "estimates may be over- or under-estimated, with the direction of potential bias ambiguous."¹¹⁰

Second, U.S. EPA failed to include important information that would have fully informed the estimates of the benefits of controlling HAP emissions. U.S. EPA admits that it was unable to estimate the true benefits of controlling HAPs from EGUs –

¹⁰⁶ 76 Fed. Reg. 3821 (Jan. 18, 2011).

¹⁰⁷ U.S. Energy Information Administration, *Annual Energy Outlook 2019 Table of Electricity Supply, Disposition, Prices and Emissions* (Table 8) (Jan. 24, 2019), available at <https://www.eia.gov/outlooks/aeo/>

¹⁰⁸ *Id.* at 90.

¹⁰⁹ Kim Riley, *EI, power industry colleagues request EPA move forward on nation's mercury standards*, Daily Energy Insider, July 11, 2018, available at <https://dailyenergyinsider.com/featured/13546-eei-power-industry-colleagues-request-epa-move-forward-on-nations-mercury-standards/>.

¹¹⁰ U.S. EPA, *Memorandum on Compliance Cost, HAP Benefits, and Ancillary Co-Pollutant Benefits for "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"* (Dec. 14, 2018) (U.S. EPA 2018 Memorandum).

including with respect to “other neurologic, cardiovascular, genotoxic, immunotoxic effects associated with exposures to mercury, including impacts on motor skills and attention/behavior” – nor was U.S. EPA able to estimate the economic value of certain other HAP reductions.¹¹¹ It also failed to consider marine fish consumption, which accounts for up to 80 percent methylmercury intake.¹¹²

The total monetized benefits are greater than what is contained in the RIA. U.S. EPA estimates the quantified HAP benefits to be around \$4-6 million annually. However, updated information shows this number is simply too low. One study showed the cumulative benefits associated with MATS exceeded \$43 billion,¹¹³ and other studies show U.S. EPA’s numbers are undervalued as well.¹¹⁴ A more recent study showed the societal costs of neurocognitive deficits associated with methylmercury exposure in the U.S. were estimated to be approximately \$4.8 billion per year.¹¹⁵

Furthermore, U.S. EPA should be considering the avoided premature deaths of the rule, reduced hospitalizations, avoided lost workdays, and reduced state resources expended¹¹⁶ from the MATS Rule. The social benefits clearly outweigh the costs. According to U.S. EPA’s own estimates, 17,200-43,000 premature deaths, 19,700 heart attacks, and millions of work days lost were avoided in just one year by the combination of the mercury and transport rules. For mercury, the social benefits outweigh social costs by ratios of 3/1 to 9/1.¹¹⁷

More fundamentally, U.S. EPA actions are also concerning because U.S. EPA admitted the effectiveness of the air program in its third peer-reviewed study,¹¹⁸ finding that the

¹¹¹ U.S. EPA December 2018 Memorandum, p. 3-4.

¹¹² Sunderland, E. M.; Li, M.; Bullard, K., *Decadal Changes in the Edible Supply of Seafood and Methylmercury Exposure in the United States*, *Environ. Health Persp.* (Jan. 16, 2018) DOI: 10.1289/EHP2644, available at <https://www.ncbi.nlm.nih.gov/pubmed/29342451>.

¹¹³ Giang, Amanda, Selin, Noelle, *Benefits of Mercury Controls for the United States*, *Proc. Nat’l Acad. Sci.* (2016), available at <https://www.pnas.org/content/113/2/286>.

¹¹⁴ Rice, G. and Hammit, J., *A probabilistic characterization of the health benefits of reducing methyl mercury intake in the United States*, *Environ. Sci. Technol.* (2010), available at <https://pubsdc3.acs.org/doi/10.1021/es903359u>.

¹¹⁵ Grandjean, P., Bellanger, M., *Calculation of the disease burden associated with environmental chemical exposures: application of toxicological information in health economic estimation*, *Environ Health* (Dec. 5, 2017), available at <https://www.ncbi.nlm.nih.gov/pubmed/29202828>.

¹¹⁶ States incur further costs as they attempt to reduce exposure to these risks. For instance, states incur costs to issue Fish Advisories – which are a direct result of fish containing mercury. All 50 states issue Fish Advisories and expend state resources on Fish Advisories. Avoided Fish Advisories as a result of less mercury pollution should be considered as a monetized benefit directly related to the Supplemental Finding and the MATS Rule. U.S. EPA should work with all states to itemize the cost savings from reduced mercury emissions if States no longer needed to issue Fish Advisories.

¹¹⁷ Vivian E. Thomson, Kelsey Huelsman, Dominique Ong, *Coal-fired power plant regulatory rollback in the United States: Implications for local and regional public health*, *Energy Policy*, Vol. 123, pg. 558-568 (Dec. 2018), available <https://doi.org/10.1016/j.enpol.2018.09.022>.

¹¹⁸ U.S. EPA, *The Benefits and Costs of the Clean Air Act From 1990-2020* (Apr. 2011).

“clean air programs are expected to yield direct benefits to the American people which vastly exceed compliance costs. It estimates a benefit of \$2 trillion in 2020 and explains that this “exceeds costs by a factor of more than 30-to-1, and the high benefits estimate exceeds costs by 90 times. Even the low benefits estimate exceeds costs by about 3-to-1.”¹¹⁹ The report also found that direct benefits exceed direct costs and the economic welfare of American households is better with post-1990 clean air programs than without them.

Given the importance of this rule, a reversal of the necessary and appropriate finding must be based on sufficient and recent information. U.S. EPA has not demonstrated that it has conducted a full review of these matters; it must do so if it wishes to proceed. The following is a list of resources¹²⁰ that should, at a minimum, have been included into U.S. EPA’s RIA:

- Attachment A: Streets, D.G., et al., *Global and regional trends in mercury emissions and concentrations, 2010-2015*, Atmosphere Environ. Vol. 201, pp. 417-427 (Mar. 2019), available at <https://doi.org/10.1016/j.atmosenv.2018.12.031>.
- Attachment B: Sunderland, E.M., et al., *Benefits of Regulating Hazardous Air Pollutants from Coal and Oil-Fired Utilities in the United States*. Environ. Sci. & Technol. Vol. 50 Issue (5), pp. 2117-2120 (2016) available at <https://pubs.acs.org/doi/pdf/10.1021/acs.est.6b00239>.
- Attachment C: Grandjean, P. and Bellanger, M., *Calculation of the disease burden associated with environmental chemical exposures: application of toxicological in health economic estimation*, Environ. Health, Vol. 16, p.123 (Dec. 5, 2017), available at: <https://doi.org/10.1186/s12940-017-0340-3>
- Attachment D: Genchi G., et al., *Mercury Exposure and Heart Diseases*, Int. J. Environ. Res. Public Health, Vol. 14, Issue (1), p. 74 (Jan. 12, 2017), available at 10.3390/ijerph14010074.
- Attachment E: Tan, S.W.; Meiller, J.C.; Mahaffey, K.R., *The endocrine effects of mercury in humans and wildlife*. Crit. Rev. Toxicol., Vol. 39, Issue (3), pp. 228–269 (2009), available at https://www.researchgate.net/publication/24195364_The_endocrine_effects_of_mercury_in_humans_and_wildlife.
- Attachment F: He, K., et al., *Mercury exposure in young adulthood and incidence of diabetes later in life: the CARDIA trace element study*, Diabetes Care, Vol. 36, pp. 1584–1589 (2013) available at <https://www.scholars.northwestern.edu/en/publications/mercury-exposure-in-young-adulthood-and-incidence-of-diabetes-lat>.
- Attachment G: Nyland, J. F., et al., *Biomarkers of methylmercury exposure and immunotoxicity among fish consumers in the Amazonian Brazil*, Environ. Health

¹¹⁹ *Id.*

¹²⁰ The articles in this list of resources are attached to be included in the record.

Perspect., Vol. 119, Issue (12), pp. 1733– 1738 (Aug. 25, 2011), available at [10.1289/ehp.1103741](https://doi.org/10.1289/ehp.1103741).

- **Attachment H:** Rice, G.E.; Hammitt, J.K; and Evans, J.S., *A probabilistic characterization of the health benefits of reducing methyl mercury intake in the United States*. Environ Sci Technol., Vol. 44, Issue (13), pp. 516-524 (2010). DOI:10.1021/es903359u.
- **Attachment I:** Sunderland, E. M.; Li, M.; Bullard, K., *Decadal Changes in the Edible Supply of Seafood and Methylmercury Exposure in the United States*, Environ. Health Perspect. (Jan. 16, 2018) available at DOI: 10.1289/EHP2644.
- **Attachment J:** Mercury Matters 2018 https://cdn1.sph.harvard.edu/wp-content/uploads/sites/2238/2018/12/Mercury-science-backgrounder_final1.pdf.
- **Attachment K:** Driscoll, C.T., et al., *Mercury Contamination on Remote Forest and Aquatic Ecosystems in the Northeastern U.S.: Sources, Transformations, and Management Options*, BioScience, Vol. 57, Issue (1), pp. 17-28 (Jan. 1, 2007) available at <https://doi.org/10.1641/B570106>.
- **Attachment L:** U.S. EPA, 2011 National Listing of Fish Advisories, EPA-820-F-13-058 (Dec. 2013), available at <https://www.epa.gov/sites/production/files/2015-06/documents/technical-factsheet-2011.pdf>.
- **Attachment M:** Chan, N.M., et al., *Impacts of Mercury on Freshwater Fish-eating Wildlife and Humans*, Human and Ecological Risk Assessment, Vol. 9, Issue (4), pp. 867-883 (June 2003), available at https://www.researchgate.net/publication/254878049_Impacts_of_Mercury_on_Freshwater_Fish-Eating_Wildlife_and_Humans.
- **Attachment N:** Sandheinrich, M.B.; Wiener, J.G., *Methylmercury in freshwater fish: Recent advances in assessing toxicity of environmentally relevant exposures*, In Environmental Contaminants in Biota: Interpreting Tissue Concentrations, 2nd; Beyer, W. N., Meador, J. P., Eds.; CRC Press/Taylor and Francis: Boca Raton, FL; pp. 169–190 (2011).
- **Attachment O:** Zhang, Y., et al., Observed decrease in atmospheric mercury explained by global decline in anthropogenic emissions. PNAS. Vol. 113, Issue (3), pp. 526- 531 (Jan. 19, 2016). DOI: 10.1073/pnas.1516312113.
- **Attachment P:** Lepak, R.F., et al., 2015. Use of Stable Isotope Signatures to Determine Mercury Sources in the Great Lakes. Environmental Science & Technology Letters, Vol. 2 Issue (12), pp. 335-34 (Nov. 12, 2015). DOI: 10.1021/acs.estlett.5b00277.
- **Attachment Q:** U.S. EPA, *Toxic Release Inventory (TRI) National Analysis*, <https://www.epa.gov/trinationalanalysis/electric-utilities-mercury-releases-2017-tri-national-analysis> (last visited Apr. 1, 2019).
- **Attachment R:** Cross, F.A.; Evans, D.W.; Barber, R.T., *Decadal declines of mercury in adult bluefish (1972–2011) from the mid- Atlantic coast of the U.S.A*, Environ. Sci. Technol. Vol. 49, pp. 9064–9072 (2015).
- **Attachment S:** U.S. EPA, *Trends in Blood Mercury Concentrations and Fish Consumption Among U.S. Women of Childbearing Age NHANES 1999-2010*,

EPA-823-R-13-002 (July 2013) <https://www.epa.gov/sites/production/files/2018-11/documents/trends-blood-mercury-concentrations-report.pdf>.

- Attachment T: Giang, A.; Selin, N. E. *Benefits of mercury controls for the United States*, Proc. Natl. Acad. Sci., Vol. 113, Issue (2), pp. 286-291 (Jan. 12, 2016), available at <https://doi.org/10.1073/pnas.1514395113>.
- Attachment U: Thomson, V. E.; Huelsman, K.; Ong, D., *Coal-fired power plant regulatory rollback in the United States: Implications for local and regional public health*, Energy Policy, Vol. 123, pp. 558-568 (Dec. 2018), available at <https://doi.org/10.1016/j.enpol.2018.09.022>.
- Attachment V: Daniel L. Shawhan and Paul D. Picciano, *Cost and benefits of saving unprofitable generators: A simulation case study for US coal and nuclear power plants*, Energy Policy, Vol. 124, pp. 383-400 (Jan. 2019), available at <https://doi.org/10.1016/j.enpol.2018.07.040>.
- Attachment W: U.S. EPA, *Fact Sheet: Final Consideration of Cost in the Appropriate and Necessary Finding for the Mercury and Air Toxics Standards for Power Plants* (2016), available at https://www.epa.gov/sites/production/files/2016-05/documents/20160414_mats_ff_fr_fs.pdf.
- Attachment X: Stephanie Bose-O'Reilly et al., *Mercury Exposure and Children's Health*, 40(8) Current Problems in Pediatric & Adolescent Health Care 186, 186 (2010), <https://doi.org/10.1016/j.cppeds.2010.07.002>.
- Attachment Y: Public Health & Environment, World Health Org., *Exposure to Mercury: A Major Public Health Concern* 3 (2007), <https://www.who.int/ipcs/features/mercury.pdf>.
- Attachment Z: Valoree S. Gagnon et al., *Great Lakes Research Center, Eliminating the Need for Fish Consumption Advisories in the Great Lakes Region 3* (2018), <https://www.mtu.edu/social-sciences/docs/res-fishconsumption-policybrief-030718.pdf>.

5. U.S. EPA has no authority or obligation to rescind its supplemental finding, or the MATS Rule, or to delist EGUs

U.S. EPA requests comments on alternative interpretations of the impact of reversing the 2016 Supplemental Finding. Specifically, U.S. EPA asks if it has authority to rescind the MATS Rule or delist EGUs. U.S. EPA then asks if it is obligated to rescind MATS and whether the *New Jersey* case¹²¹ limits U.S. EPA's authority to rescind MATS and last, whether it is obligated to rescind the MATS Rule or delist EGUs. To be clear, U.S. EPA has no authority to issue a supplemental finding and has no authority to rescind MATS or delist EGUs and certainly has no obligation to take these actions.

¹²¹ *New Jersey v. EPA*, 517 F.3d 574 (D.C. Cir. 2008).

First, U.S. EPA has no authority to issue a supplemental finding, as we emphasized at the outset. Section 112 limits U.S. EPA's authority to force regulation of HAPs. Unlike other sections of the Clean Air Act that require or allow subsequent reviews,¹²² the necessary and appropriate finding requirement in section 112 does not – this was not by mistake. Congress drafted section 112 to only allow one avenue for removing EGUs from regulation – this is the delisting provisions in section 112(c)(9). U.S. EPA cannot avoid the statutory requirements by arguing that it is complying with the *Michigan* mandate because it already did this when it issued the 2016 Supplemental Finding – the fact that the new Administration does not agree with what the old Administration put forth is of no import and the Court in *New Jersey* confirmed this: “[U.S.] EPA’s disbelief that it would be prevented from correcting its own listing “errors” except through section 112(c)(9)’s delisting process or court-sanctioned vacatur cannot overcome the plain text enacted by Congress.”¹²³

Furthermore, U.S. EPA has no authority to delist EGUs unless it can meet the requirements of section 112(c)(9), which it cannot. Once U.S. EPA issues a finding that it is “necessary and appropriate” to regulate mercury from EGUs and thereafter lists EGUs, U.S. EPA has no authority to remove sources, even if it reverses such a finding. The only way U.S. EPA may remove a source category is if it meets the delisting requirements set out in statute – which is what the Court confirmed in *New Jersey* and follows administrative law principles.

To delist, U.S. EPA must go through the delisting process and inform the public by publishing a notice of a proposed rulemaking regarding its intent to delist.¹²⁴ U.S. EPA must find that the emissions do not cause a lifetime risk of cancer greater than one in one million to the individual in the population who is most exposed to emissions of such pollutants from the source or exceed a level which is adequate to protect *public health with an ample margin of safety and no adverse environmental effect* will result from emissions from any source.¹²⁵ In *New Jersey*, the Court found that Congress, “unambiguously limit[ed] EPA’s discretion to remove sources, including EGUs, from the section 112(c)(1) list once they have been added to it” and that U.S. EPA could not “construe [a] statute in a way that completely nullifies textually applicable provisions meant to limit its discretion.”¹²⁶ The delisting criteria would prevent U.S. EPA from

¹²² For example, the following list highlights provisions of the Act that either requires or allows U.S. EPA to periodically revise the standards: National Ambient Air Quality Standards (42 U.S.C. § 7410); Standards of Performance for New Stationary Sources (42 U.S.C. § 7411); Emission Standards for New Motor Vehicles or New Motor Vehicle Engines (42 U.S.C. § 7521); and the Safe Alternatives Policy (42 U.S.C. § 7671k). Section 112 is not on this list because it does not contain language that allows revisions.

¹²³ *New Jersey*, 517 F.3d. at 583.

¹²⁴ 42 U.S.C. § 7607(d). See also *Portland Cement Ass’n v. EPA*, 665 F.3d 177 (D.C. Cir. 2011).

¹²⁵ 42 U.S.C. § 7412 (c)(9).

¹²⁶ *New Jersey v. E.P.A.* 517 F.3d at 582-583.

delisting EGUs, because EGUs continue to be a significant danger to the public (and would certainly be a greater danger if delisted).

U.S. EPA admits that the Proposed Finding does not delist sources¹²⁷ and explains that it is not conducting a delisting analysis or soliciting comment on what it would need demonstrate.¹²⁸ As such, U.S. EPA has not put the public on notice and would violate section 307(d)(3) of the Clean Air Act if it delisted EGUs in the final rule. Also, as U.S. EPA notes, the proposed results of its risk review indicate that the estimated inhalation cancer risk is 9-in-1-million.¹²⁹ Because this is above the 1-in-1-million standard, U.S. EPA rightfully acknowledges that the delisting criteria are not met.¹³⁰ U.S. EPA has reviewed this on at least two other occasions, coming to the same conclusion.¹³¹ Furthermore, U.S. EPA would also have to show that there will be “no adverse environmental effect will result from emissions” or that the sources do not “exceed a level that is adequate to protect public health with an ample margin of safety.”¹³² U.S. EPA cannot meet this threshold either given all the studies showing the ecological effects of EGU mercury emissions, which are well documented.

Last, U.S. EPA has no authority or obligation to rescind MATS. Once sources are listed, “the Administrator shall establish emissions standards.”¹³³ The “shall” indicates U.S. EPA is required to regulate emissions. This would prevent U.S. EPA from rescinding the MATS Rule. Also, U.S. EPA is not obligated to rescind MATS if U.S. EPA finds regulating EGUs is not “appropriate and necessary” because the plain text of the Clean Air Act does not require this and EGUs cannot be delisted, so they must be regulated. Even if U.S. EPA finalizes its Proposed Finding, it must not weaken the MATS Rule.

6. U.S. EPA’s Residual Risk and Technology Review (RTR) is inadequate

Under the Clean Air Act, U.S. EPA is required to examine the risk levels and make a determination on whether additional controls are necessary every eight years based on residual risk – known as the Residual Risk and Technology Review. U.S. EPA must first make an initial public health finding based on the potential risk to human health from the HAP emissions, and then determine whether the risk that remains is acceptable; if not, U.S. EPA must address all unacceptable risks to provide an ample

¹²⁷ 84 Fed. Reg. at 2670.

¹²⁸ *Id.* at 2679.

¹²⁹ *Id.*

¹³⁰ *Id.*

¹³¹ In 2011, U.S. EPA denied a petition to delist from an industry trade group, the Utility Air Regulatory Group (“UARG”). See 84 Fed. Reg. at 2679; U.S. EPA also conducted an independent assessment in the same year to determine if the delisting criteria could be met and determined it would not. 77 Fed. Reg. at 9365.

¹³² 42 U.S.C. § 7412(c).

¹³³ 42 U.S.C. § 7412 (c)(2).

margin of safety every eight years by determining whether additional standards are needed.¹³⁴

In the Proposed Finding, U.S. EPA is proposing the cancer risk is 9-in-1-million. U.S. EPA's previous determination that the cancer risks are not within the allowable limits still hold true, and this conclusion was further supported by U.S. EPA's 2016 Supplemental Finding. When U.S. EPA adopted MATS, it found that the highest estimated individual lifetime cancer risk from any of the 16 case study facilities was 20-*in-1-million*. Of the facilities with coal-fired EGUs, five facilities had maximum individual cancer risks greater than one in a million.¹³⁵

Now, U.S. EPA proposes a lesser residual risk based on inadequate information. U.S. EPA did not issue a new information collection request (ICR).¹³⁶ Also, U.S. EPA is supposed to base its assessment on "the basis of a broad set of health risk measures and information."¹³⁷ Yet, U.S. EPA notes that "it has not considered certain health information to date. . ." ¹³⁸ U.S. EPA should have issued a new information request, and should have obtained and reviewed health information, rather than relying on old data.

U.S. EPA's assessment also dilutes the sources' emission effects because U.S. EPA used long-term concentrations affecting the census blocks within 50 kilometers of each facility.¹³⁹ This is not a recommended approach because it assumes homogenous population distribution and estimates the impact at the centroid of the census block, which as U.S. EPA admits, is not always the case. Instead, U.S. EPA should look at potential exposure of all people living in that area.

In addition, U.S. EPA fails to consider total exposure to HAP, facility wide, plus background and cumulative emissions, instead of just focusing on the source category that is the subject of the regulation, which is against scientific advice.¹⁴⁰ Moreover, U.S. EPA fails to consider global mercury emissions and deposits. Global deposits of mercury affect the United States, and should also be accounted for in U.S. EPA's analysis of the impacts.¹⁴¹

¹³⁴ 42 U.S.C. § 7412 (c)(1).

¹³⁵ See 77 Fed. Reg. 9304, 9319 (Feb. 16, 2012).

¹³⁶ 84 Fed. Reg. at 2670.

¹³⁷ *Ibid*; 54 Fed. Reg. 38046 (Sept. 14, 1989).

¹³⁸ 84 Fed. Reg. at 2670.

¹³⁹ *Id.* at 2690.

¹⁴⁰ *Id.* at 2684.

¹⁴¹ See *National Academy of Sciences, Global Sources of Local Pollution: An Assessment of Long-Range Transport of Key Air Pollutants to and from the United States (2010)*, <https://www.nap.edu/read/12743/chapter/1> (last visited Apr. 8, 2019).

Last, U.S. EPA incorrectly uses Guideline values that address short-term acute exposures, rather than routine exposures of the lifetime of a facility. Instead of using the Acute Exposure Guideline Levels (AEGs) or Emergency Response Planning Guidelines (ERPGs) to assess the residual risk, U.S. EPA should be using the Reference Concentrations (RfCs). U.S. EPA has previously stated that the purpose of developing the guidelines which it incorrectly uses is to “develop guidelines for once-in-a-lifetime short-term exposures to airborne concentrations of acutely toxic chemicals.”¹⁴²

7. U.S. EPA should not carve out a subcategory acid gas standard for existing EGUs that fire eastern bituminous coal refuse

U.S. EPA is soliciting comment on whether it should establish a subcategory for emissions of acid gas HAP from existing EGUs firing eastern bituminous coal refuse. It should not. This category has shown that the current standards are achievable because there are technologies that are feasible. Not only is this subcategory not necessary, it is unfair to carve out this subcategory because many of these sources have spent the resources on control technologies and would be placed at a competitive disadvantage. There is no logical reason to carve out this subcategory because the facts have not changed, especially considering the toxic substance it is meant to reduce.

8. The Proposed Finding Risks Violating the Minamata Convention on Mercury

The Proposed Findings also raises serious compliance questions with Treaty obligations. Recognizing the importance of reducing mercury, in 2013, the United States signed and deposited its instrument of acceptance to become a Party to the Minamata Convention on Mercury (Minamata Convention).¹⁴³ It entered into force August 16, 2017. The Minamata Convention is a global treaty “to protect human health and the environment from anthropogenic emissions and releases of mercury and mercury compounds.”¹⁴⁴ It requires Parties to take measures to control emissions of mercury and to require use of best available control technologies.¹⁴⁵

¹⁴² U.S. EPA, A Review of the Reference Dose and Reference Concentration Processes, 2-3 (Dec. 2002), available at <https://www.epa.gov/sites/production/files/2014-12/documents/rfd-final.pdf>.

¹⁴³ Minamata Convention, available at <http://www.mercuryconvention.org/Portals/11/documents/Booklets/COP1%20version/Minamata-Convention-booklet-eng-full.pdf>.

¹⁴⁴ Minamata Convention, Article 1.

¹⁴⁵ Minamata Convention, Article 8.

The United States identified section 112 and the listing of mercury under 112 as one of its measures that the United States is relying on to implement the convention.¹⁴⁶ If, U.S. EPA were to finalize its Proposed Finding and then attempt to delist EGUs or rescind the MATS Rule, this would be contrary to what the United States has submitted as its means for compliance with the Minamata Convention.

9. U.S. EPA should comply with the mandates of its applicable Executive Orders

U.S. EPA failed to comply with various Executive Orders in its Proposed Finding, including that it failed to determine whether the Rule would disproportionately impact children, low-income or minority populations, tribes, and states. To satisfy its obligations to comply with Executive Orders 13132, 13175, 13045, and 12898, U.S. EPA states that the Proposed Finding will not have certain “implications” that would subject it to those orders. However, conclusory statements without analyses are insufficient and, in many respects, contravened by facts in the record. Further analysis is required. U.S. EPA should withdraw its rule until it has complied with all Executive Orders.

A. U.S. EPA failed to consider fundamental cooperative federalism principles, in violation of the Clean Air Act and Executive Order 13132

U.S. EPA is required to consider federalism implications under Executive Order 13132.¹⁴⁷ Specifically, “where national standards are required by Federal statutes, [the Federal government shall] consult with appropriate State and local officials in developing those standards.”¹⁴⁸ In the Proposed Finding, U.S. EPA claims there are no federalism implications because “[i]t will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.”¹⁴⁹

While U.S. EPA argues it is not delisting EGUs, it can be assumed that U.S. EPA is considering delisting EGUs or rescinding MATS once it reverses its finding that it is necessary and appropriate.¹⁵⁰ If this prediction is true, as stated above, the proposal leaves states without a coherent federal framework for controlling mercury emissions from EGUs. Not only does this depart from the already established and successful

¹⁴⁶ United States, Measures to Implement the Minamata Convention on Mercury, available at http://www.mercuryconvention.org/Portals/11/documents/submissions/USA%20declaration_Art%2030%20para%204.pdf.

¹⁴⁷ 64 Fed. Reg. 43255 (Aug. 4, 1999).

¹⁴⁸ *Id.*

¹⁴⁹ 84 Fed. Reg. at 2704.

¹⁵⁰ *A Budget for a Better America: Fiscal Year 2020* at 93 (Mar. 11, 2019), <https://www.whitehouse.gov/wp-content/uploads/2019/03/budget-fy2020.pdf>;

federalism structure of the Clean Air Act, it also departs from the requirements of Executive Order 13132.

The MATS Rule's current form reflects the importance of federal standards acting as critical components to state pollution control.¹⁵¹ Section 112 also reflects the uniqueness of EGUs and the need for federal regulation given the feed of electricity into a national grid that supplies electricity to the entire country. The standards also prevent races to the bottom on a system that is so interconnected, ensures a fair regulatory playing field among the states, and ensures states do not expend resources to address national problems.

If U.S. EPA plans to delist EGUs or rescind the MATS Rule, it will fail to establish a unified federal regulatory program, fail to curb mercury emissions that have been proven to be harmful to children, and require individual states to spend their own resources if they wish to control the problem in their jurisdictions. In effect, the Proposed Finding neglects U.S. EPA's federal duties while leaving states with a complex regulatory problem. U.S. EPA's blanket statement that there are no impacts, without any analysis or consideration of these principles, does not satisfy the intent of the Clean Air Act or Executive Order 13132. Because these are substantial direct effects on the states they must be properly disclosed and analyzed.

B. U.S. EPA failed to consult Native American Tribal Governments, as required by Executive Order 13175

U.S. EPA has failed to consult and coordinate with Native American Tribal Governments and thus, violated its obligations under Executive Order 13175, which requires federal agencies like U.S. EPA to "consult with tribal officials as to the need for Federal standards and any alternatives . . ." ¹⁵² U.S. EPA's own Tribal Consultation Policy indicates that regulations, rules, policies, guidance documents and directives "are normally appropriate for consultation if they may affect a tribe(s).¹⁵³

U.S. EPA indicated that the Proposed Finding does not have tribal implications because it "would neither impose substantial direct compliance costs on tribal governments, nor preempt Tribal law" and incorrectly concludes that Executive Order 13175 does not apply to this action."¹⁵⁴ U.S. EPA makes this incorrect assumption without any analysis on where these EGUs are located and if within proximity to tribal populations – which tend to fish and consume fish.

¹⁵¹ See, e.g., *GenOn REMA LLC v. U.S. EPA*, 722 F.3d 513, 523 (3d Cir. 2013).

¹⁵² 65 Fed. Reg. 67249 (Nov. 6, 2000).

¹⁵³ U.S. EPA, EPA Policy on Consultation and Coordination with Indian Tribes, 5 (May 4, 2011), <https://www.epa.gov/sites/production/files/2013-08/documents/cons-and-coord-with-indian-tribes-policy.pdf>.

¹⁵⁴ 84 Fed. Reg. at 2704.

U.S. EPA's conclusory and unsupported assertions are not supported by any record. There are over 200 federally recognized tribes in the United States that have reservation lands within a 50 mile radius of EGUs.¹⁵⁵ Furthermore, U.S. EPA's own Mercury RTC indicates that tribes are high consumers of fish. All tribal communities suffer higher rates of health effects from air pollution. Native peoples' cultures are rooted in the natural environment and closely integrated into the ecosystem. Native people hunt and fish, use native flora and fauna for medicinal and spiritual purposes, and associate their identities and histories closely with the land and water. Native people suffer disproportionately from the effects of pollution on wildlife, fish, and native plants, which they depend on for subsistence and maintaining traditional cultural practices. In fact, tribal member's methylmercury exposure may be greater than the general population because they are high-end fish consumers.¹⁵⁶

U.S. EPA's assertion is not supported by fact and as a result, U.S. EPA's failure to consult with tribes to determine whether the tribes are impacted or whether tribal members that live near EGUs or consume fish that are located within bodies of water that are located near EGUs is illegal. Any attempt to deregulate EGUs will impact native peoples by harming tribal health. Hence, adopting the Proposed Finding without consultation undermines tribal sovereignty and is likely to harm tribes.

C. U.S. EPA erroneously determined there are no disproportionate health or safety risks posed to children, in violation of Executive Order 13045

Executive Order 13045 requires federal agencies to "ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks."¹⁵⁷ All studies show that mercury has a disproportionate affect to children's ability to think and learn. U.S. EPA cannot argue otherwise as its own reports – the Utility RTC, Mercury RTC state this. U.S. EPA even admits this on its website:

[i]n past outbreaks of methylmercury poisoning, mothers with no symptoms of nervous system damage gave birth to infants with severe disabilities. This presented evidence that the nervous system of a developing infant may be more vulnerable to methylmercury exposures than an adult nervous system. Mothers who are exposed to methylmercury and breast-feed may also expose their infant children through their milk.¹⁵⁸

¹⁵⁵ Energy Development and Transport Map, <http://www7.nau.edu/itep/main/ntaa/Resources/EDTmap>.

¹⁵⁶ Mercury RTC, at 5-22.

¹⁵⁷ 62 Fed. Reg. 19885 (Apr. 21, 1997).

¹⁵⁸ U.S. EPA, *Populations Particularly Sensitive to Methylmercury Exposures*, <https://www.epa.gov/mercury/how-people-are-exposed-mercury> (last visited Mar. 28, 2019).

U.S. EPA argues it does not need to comply with Executive Order 13045 because the Proposed Finding is not a “significant regulatory action” as defined by Executive Order 12866. This is incorrect. Under Executive Order 12866, a “Significant regulatory action” means is one that may: [h]ave an annual effect on the economy of \$100 million or more or adversely *affect in a material way* the economy, a sector of the economy, productivity, competition, jobs, *the environment, public health or safety, or State, local, or tribal governments or communities.*”¹⁵⁹ The overwhelming body of evidence shows that not only does it surpass the dollar amount, it also will adversely affect in a material way the environment, and public health or safety, and the state, local, and tribal governments or communities.

D. U.S. EPA arbitrarily dismissed the environmental justice impacts, in direct contravention of Executive Order 12898

Under Executive Order 12898, federal agencies must identify and address “disproportionately high and adverse human health and environmental effects” of their actions on minority and low-income communities.¹⁶⁰ In the Proposed Finding, U.S. EPA argues that it is not subject to Executive Order 12898 in part because it “is only implementing a procedural change and [U.S.] EPA does not anticipate that it will have any material impact on human health or the environment.”¹⁶¹ This assertion is not supported by the evidence, the law, or U.S. EPA’s own words.

In contrast, the Proposed Finding shows there are significant environmental justice concerns as the sources are located in minority locations 99 percent, 60 percent being impoverished, and 67 percent being linguistically isolated.¹⁶² It is illogical to come to any other conclusion as the Proposed Finding itself has high adverse human health environmental effects on minorities and low income populations.¹⁶³

Communities located in the vicinity of these EGUs and populations consuming fish would be most directly impacted because of the health effects associated with mercury, and thus be disproportionately impacted by the Proposed Finding. Such communities tend to be low-income and minority communities. By failing to acknowledge that low-income and minority populations will be disproportionately impacted by the Proposed Finding and failing to analyze the extent of that impact, U.S. EPA has not met the requirements of Executive Order 12898.

¹⁵⁹ 58 Fed. Reg. 51735 (Sept. 30, 1993).

¹⁶⁰ 59 Fed. Reg. 7629 (Feb. 16, 1994).

¹⁶¹ 84 Fed. Reg. at 2704.

¹⁶² *Id.* at 2699.

¹⁶³ *Id.*

Conclusion

U.S. EPA's Proposed Finding is intended to weaken the MATS Rule and is illegal, arbitrary, and capricious on its face. U.S. EPA should not pursue a rulemaking that weakens clean air protections and is likely to impede public health and environmental protections. The Agency should instead maintain the appropriate and necessary finding, the MATS Rule, and maintain the existing structure, advancing mechanisms for monetizing or otherwise quantifying currently unquantified harms and benefits - this particularly includes co-benefit, negative externalities of pollution, and other relevant factors. U.S. EPA's changed position on co-benefits misses the important mandates of the Clean Air Act as a whole, its additive structure, principles of economics, sound decision-making, and basic common sense.

CARB recommends U.S. EPA withdraw the Proposed Finding and maintain the current appropriate and necessary finding, as well as the MATS Rule in its entirety and to continue considering and strengthening co-benefits – which is required for reasoned decision-making.