ORAL ARGUMENT NOT YET SCHEDULED

No. 16-1127 (and consolidated cases)

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

MURRAY ENERGY CORPORATION, *et al.*,
Petitioners,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, *et al.*,
Respondents.

On Petitions for Review of Final Agency Action of the United States Environmental Protection Agency 81 Fed. Reg. 24,420 (Apr. 25, 2016)

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GLOSSARY OF TERMS

Act	Clean Air Act
Agency	United States Environmental Protection Agency
CAA	Clean Air Act
EGU	Electric Generating Unit
EPA	United States Environmental Protection Agency
HAP	Hazardous Air Pollutant
JA	Joint Appendix
MATS Rule	Mercury and Air Toxics Standards, 77 Fed. Reg. 9304 (Feb. 16, 2012)
NAAQS	National Ambient Air Quality Standards
$PM_{2.5}$	Fine Particulate Matter
RTC	Response to Comments
Standards	Mercury and Air Toxics Standards, 77 Fed. Reg. 9304 (Feb. 16, 2012)
Supplemental Finding	Supplemental Finding That It Is Appropriate and Necessary To Regulate Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units; Final Rule, 81 Fed. Reg. 24,420 (Apr. 25, 2016)

SUMMARY OF ARGUMENT

In *Michigan v. EPA*, the Supreme Court held the Environmental Protection Agency's ("EPA" or "Agency") refusal "to consider whether the cost of its decision [to regulate hazardous air pollutant ("HAP") emissions from coal- and oil-fired electric generating units ("EGUs")] outweighed the benefits" violated the Clean Air Act ("CAA" or "Act"), because it was based on an unreasonable interpretation of §112(n)(1)(A) that deemed costs irrelevant to the decision to regulate power plants. 135 S.Ct. 2699, 2706-12 (2015). But on remand from that decision, EPA has again (1) failed to weigh costs against benefits in its "preferred approach"; (2) improperly relied on the co-benefits of reducing non-targeted pollutants in its "alternative approach"; and (3) ignored alternative control strategies and many of the relevant costs of regulation.

In defense of its preferred approach, EPA argues it need only be "aware" of the costs of regulation and refuses to compare them in any way to benefits. This conflicts directly with *Michigan*, which confirmed that no regulation is "rational" if its costs are entirely disproportionate to its benefits. EPA's preferred approach merely discusses costs in isolation and focuses on whether the industry can absorb them.

EPA's alternative approach weighs costs of regulation against benefits, but it improperly inflates those benefits by relying on the purported benefits of reducing pollutants other than HAPs (which make up over 99 percent of the benefits considered). EPA's argument that the CAA implicitly allows a decision to regulate

HAPs to be driven by the purported benefits of regulating non-HAPs ignores §112(n)(1)'s *explicit* identification of the factors EPA must consider, which focus exclusively on HAPs. EPA also fails to explain how its pursuit of reductions in non-HAP emissions under §112 comports with the CAA provisions governing those pollutants, or how reliance on benefits that it previously found too uncertain to justify direct regulation under those other provisions now supports indirect regulation under §112.

Finally, EPA's decision to ignore alternatives to regulating EGUs under §112 is contrary to the statute's explicit command to determine whether "regulation under this section" is appropriate in light of "alternative control strategies." And its decision to ignore many of the significant costs of its chosen regulatory approach violates *Michigan*'s command to consider "any disadvantage" of regulation. For these reasons, the petitions for review of EPA's supplemental "appropriate and necessary" finding ("Supplemental Finding") should be granted.

RESPONSE TO PURPORTED ERRORS

EPA identified five purported "errors" in Petitioners' statement of the case. Resp. 18-20. EPA's objections are incorrect or otherwise have no effect on the issues.

(1) Contrary to EPA's claim, Resp. 18, the Agency found in previous rulemakings that HAP emissions from EGUs did not pose significant health risks. Pet. Br. 4-5. EPA explicitly found "coal-fired power plants … do not emit mercury in such quantities that they are likely to" exceed levels EPA identified as sufficient to

"protect the public health with an ample margin of safety." 40 Fed. Reg. 48,292, 48,297, 48,298 (Oct. 14, 1975), JA___, ___; *see also* 49 Fed. Reg. 50,146, 50,147 (Dec. 26, 1984), JA___ (reaffirming no-risk finding "even assuming restrictive dispersion conditions and uncontrolled emissions"). These analyses built on EPA's determination in its first mercury regulations that even under worst-case assumptions, EGUs' mercury emissions were two orders of magnitude lower than health-protective levels. EPA, Background Information on Development of National Emission Standards for Hazardous Air Pollutants: Asbestos, Beryllium, and Mercury, APTD-1503, at 76-77 (Mar. 1973), JA___-___.

(2) EPA appears to dispute whether controls installed for compliance with the Acid Rain Program reduced HAP emissions from EGUs below pre-1990 levels. Resp. 19. In fact, that Program's reductions in HAP emissions are well-documented and significant. *E.g.*, EPA, Acid Rain Program 2004 Progress Report, EPA 430-R-05-012, at 21-22 (Oct. 2005), JA___-___ (noting "20 percent reduction in [EGUs'] mercury emissions" from Acid Rain Program).

(3) The claimed "error" regarding the 2000 "notice of regulatory finding" is a matter of semantics. Resp. 19. EPA's Response actually confirms Petitioners' point that EPA found it "appropriate and necessary" to regulate *all* HAPs from coal-fired EGUs based solely on purported risks from *mercury* emissions. 65 Fed. Reg. 79,825, 79,830 (Dec. 20, 2000), JA___. Likewise, EPA previously clarified its 2000 decision

to regulate all HAPs from oil-fired EGUs was based on purported risks from nickel emissions. *See* 70 Fed. Reg. 15,994, 15,996 n.7, 16,007 (Mar. 29, 2005), JA___, ___.

(4) EPA's fourth objection does not identify any "error" or inconsistency. Resp. 19-20. Petitioners agree EPA performed additional analyses for its 2012 reaffirmation of the "appropriate and necessary" finding—and those analyses yielded risks that were "relatively small" and "not changed much" from previous assessments. Pet. Br. 13-15.

(5) Petitioners agree EPA did not calculate the disaggregated compliance costs for the final Mercury and Air Toxics Standards Rule's ("MATS Rule" or "Standards") individual standards for mercury, non-mercury metals, and acid gases, Pet. Br. 16; these disaggregated costs were identified in testimony to Congress by an expert economist. *Id.* n.13. However, EPA did present disaggregated costs in its proposed Standards that are consistent with the cited estimates. 76 Fed. Reg. 24,976, 25,075 (May 3, 2011), JA___. Likewise, the other findings Petitioners described—including the finding that the MATS Rule's reductions in non-mercury metals and acid gases will yield no quantifiable benefits—were correctly attributed to EPA. Pet. Br. 16-17.

ARGUMENT

I. EPA's Preferred Approach Is Unlawful.

A. *Michigan* Requires That EPA Meaningfully Weigh Costs in Relation to Benefits.

In its Response, EPA attacks a straw man. Petitioners do not argue *Michigan* "mandated a *particular* method of weighing benefits against costs (*i.e.*, a formal benefit-cost analysis)" in which all costs and benefits are monetized. Resp. 25; *see Michigan*, 135 S.Ct. at 2711. Indeed, Petitioners *disavowed* that argument. Pet. Br. 29. Rather, Petitioners argue *Michigan* requires EPA to weigh the costs and benefits of regulating EGUs under §112, rather than considering costs in the abstract or in terms of "affordability," when making an "appropriate and necessary" finding. *Id.* EPA's focus on its straw man confirms it has no response to the argument Petitioners made.

In the Supplemental Finding, EPA claimed it was not required to weigh costs against benefits. *See* 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) at 26 (undated), EPA-HQ-OAR-2009-0234-20519 ("Legal Memorandum"), JA___; 80 Fed. Reg. 75,025, 75,031 (Dec. 1, 2015), JA___. This conflicts directly with the Supreme Court's holding that "[n]o regulation is 'appropriate' if it does significantly more harm than good." *Michigan*, 135 S.Ct. at 2707. The Court's emphasis on the need to weigh the costs of regulation against the advantages regulation confers underpins its

decision, and it is required by the Act's unique treatment of EGUs in §112. *Id.* at 2708; *see* Pet. Br. 29-33. Even the dissent noted it would be unreasonable to "impose massive costs far in excess of any benefit." *Michigan*, 135 S.Ct. at 2716-17 (Kagan, J., dissenting) (internal quotation marks and citation omitted). EPA has not distinguished any of the cases Petitioners cited showing that any reasonable weighing of costs entails some comparison to benefits. Thus, by evaluating costs only in light of "affordability," EPA has not avoided the possibility of "impos[ing] massive costs far in excess of any benefit" and has violated the Supreme Court's mandate in *Michigan*. *Id.*

Likewise, EPA argues extensively that cost "should not be treated as a predominant or overriding factor" in the appropriate and necessary analysis. Resp. 29; *see generally id.* 29-35. Petitioners never suggested cost should be the "predominant" consideration, although the Supreme Court's decision and the history and context of §112 indicate that it is an important one. Instead, Petitioners argue the costs of regulation must be balanced with benefits, as *Michigan* requires. This does not mean costs must be an "overriding factor"—but it does mean that costs have to at least be weighed against benefits when deciding whether regulation is appropriate.

In its Response, the Agency describes other factors it must consider and expounds at length on how regulatory decisions are made under other provisions of §112 that do not require a threshold "appropriate and necessary" finding. Resp. 32-35. Citing these provisions, EPA claims the "framework and aims" of §112 allow the

Agency to minimize the attention it gives to costs as just one of many factors it must consider, with little heed for *Michigan*. *Id.* 30. Indeed, EPA asserts its statutory obligation to consider costs is fulfilled so long as the Agency is "aware" of them when deciding whether to regulate, *id.* 28 (citing *Weyerhaeuser Co. v. Costle*, 590 F.2d 1011, 1046-47 (D.C. Cir. 1978))—effectively adopting the "Churchill Martini" legal standard for cost consideration, Pet. Br. 34 n.17.

This is not what the Supreme Court directed in *Michigan*. Based on its analysis of the Act's "framework and aims," the Court outlined the role costs have in the "appropriate and necessary" analysis.[1] *Michigan*, 135 S.Ct. at 2708 ("Statutory context reinforces the relevance of cost."). For the purposes of §112(n), the "limits of reasonable interpretation," *id.* at 2711, require that EPA compare the costs against the benefits in order to ensure that regulating HAP emissions from EGUs does not "do[] significantly more harm than good," *id.* at 2707. Further, the Court cautioned against minimizing the role of costs in the "appropriate and necessary" inquiry, noting that "'harmoniz[ing]' the program's treatment of power plants with its treatment of other sources … overlooks the whole point of having a separate provision about power plants: treating power plants *differently* from other stationary sources." *Id.* at 2710.

[1] For this reason, EPA is not entitled to deference under *Chevron, U.S.A., Inc. v. NRDC*, 467 U.S. 837 (1984). *See* Resp. 25, 27. This case involves EPA's interpretation of a decision by the Supreme Court, *see Michigan*, 135 S.Ct. at 2712, not its interpretation of an ambiguous statute. The judicial branch does not delegate the job of saying what its decisions mean to executive agencies.

This Court's decision in *Weyerhaeuser* reinforces this analysis. EPA relies on that case to argue that where the Agency is required to consider numerous factors, it may "'relate the various factors [to each other] as it deems necessary'" and need only "pay[] some attention" to each. Resp. 28 (quoting *Weyerhaeuser*, 590 F.2d at 1046). In *Weyerhaeuser*, however , the Court explained EPA enjoyed this kind of discretion only when deciding how to account for certain *secondary* decisional factors such as energy requirements and ancillary environmental impacts. *Weyerhaeuser*, 590 F.2d at 1045-46 (citing 33 U.S.C. §1314(b)(1)(B)). In contrast, when adopting effluent limitations under the Clean Water Act (the issue in *Weyerhaeuser*), EPA was required to weigh costs and benefits "in relation to" one another with "greater attention and rigor." *Id.* That costs and benefits require scrutiny in relation to one another is especially the case here, where the Supreme Court has directed EPA to weigh the costs of §112 regulation against the benefits as an important criterion in deciding whether to regulate EGUs under §112.

Thus, while nothing in *Michigan* requires EPA to conduct a *formal* cost-benefit analysis, the Agency must compare costs and benefits to ensure the two are not "disproportionate." 135 S.Ct. at 2710.

B. EPA's Preferred Approach Does Not Weigh Costs Against Benefits.

The Agency next argues that even though *Michigan* requires only that it be "aware" of costs, EPA's preferred approach nonetheless compared the costs and

benefits of regulating EGUs under §112. But as Petitioners explained, EPA's cost assessment focused narrowly on whether the electric utility industry as a whole could "absorb" the costs of regulating all of the HAPs emitted from EGUs under §112. Pet. Br. 35. In response, EPA simply recites back the cost "analysis" it performed in the Supplemental Finding and claims in an *ipse dixit* that it "weigh[ed] the reasonable cost of the Standards with [previous findings of] significant public health and environmental factors." Resp. 41; *see id.* 36-42. EPA's lengthy recitation only demonstrates how thoroughly divorced its cost assessment was from any comparison to the benefits of regulation.

In its Response, the Agency denies its cost assessment focused on whether the costs of regulation were affordable. Resp. 36. Yet EPA explicitly stated the opposite in the rulemaking, explaining its cost inquiry "focus[es] on whether the power sector can reasonably absorb the cost of compliance with MATS." 80 Fed. Reg. at 75,030, JA___. Further, a cursory examination of the four metrics EPA used in its "preferred approach" to determine whether costs were "reasonable" reveals all four dealt exclusively with whether the costs of regulation can be absorbed, and each omits any consideration of the benefits. *See* Resp. 36-39. EPA examined annual compliance costs as a share of annual sales and as a share of annual variation in capital and operating expenses; it examined the MATS Rule's effect on electricity prices as a share of annual variation; and it examined whether forced retirements would threaten electric reliability. 81 Fed. Reg. 24,420, 24,424-25 (Apr. 25, 2016), JA___-___. None

of these metrics says anything about whether the costs of regulation, even if affordable, are worth the advantages they convey. *See Indus. Union Dep't, ALF-CIO v. Am. Petroleum Inst.*, 448 U.S. 607, 668 n.4 (1980) (Powell, J., concurring in part and concurring in the judgment) ("The cost of complying with a standard may be 'bearable' and still not reasonably related to the benefits expected.").

Likewise, EPA denies it walled off its evaluation of costs from any comparison to benefits. Resp. 36. But the Agency's own description contradicts that denial:

> *After* determining that the cost of the Standards is reasonable, EPA *then* weighed that conclusion with the significant public health and environmental risks addressed by the Standards and concluded that a consideration of cost did not cause the Agency to alter its prior [appropriate and necessary] finding . . . .

Id. 23 (emphases added); *see also* 80 Fed. Reg. at 75,038, JA___ (stating—before any discussion of benefits—that "EPA has now evaluated cost" based on its four metrics). In other words, EPA determined the costs of regulating EGUs under §112 were "reasonable" because they could be absorbed by industry and, because they were "reasonable," concluded they were justified by whatever benefits had previously been identified by EPA. This approach cannot be reconciled with *Michigan*.

Rather than assessing the significance of the benefits to be gained from regulating EGUs under §112 and weighing them against the costs, the Agency merely pointed, without further analysis, to "specific public health and environmental hazards that EPA had already determined exist" in its original "appropriate and necessary" finding. Resp. 36. These previous "hazard" findings are a series of platitudes

representing, at best, the "presumed reduction in risk attendant to" reducing HAP emissions generally. Legal Memorandum at 18, JA___; *see* 80 Fed. Reg. at 75,038, JA___. Specifically, they consist of findings that: EGUs continue to emit some HAPs, despite the implementation of other parts of the Act; HAPs in sufficient quantities can be harmful to public health or the environment (although not necessarily in the amounts emitted from EGUs); and controls are available to reduce these emissions. Resp. 40-41; 80 Fed. Reg. at 75,038, JA___. By failing to do any weighing of the costs and benefits of regulation under §112, EPA has failed to fulfill the Court's mandate in *Michigan*.

Finally, as a last-ditch response, EPA argues its preferred approach is lawful because "[t]his Court has upheld less rigorous EPA approaches to considering costs in implementing the CAA." Resp. 41. But aside from the fact that none of EPA's cited cases involve a threshold decision whether regulation is appropriate, none of them actually support EPA's position because each case involved at least some weighing of costs against benefits. For example, in both *U.S. Sugar Corp. v. EPA*, 830 F.3d 579 (D.C. Cir. 2016), and *Lignite Energy Council v. EPA*, 198 F.3d 930 (D.C. Cir. 1999), the Agency made its regulatory decisions after considering the cost-effectiveness of its chosen standard. *See U.S. Sugar Corp.*, 830 F.3d at 616 (upholding beyond-the-floor standard that would only be implemented if cost-effective for sources); *Lignite Energy Council*, 198 F.3d at 933 (citing rule's cost-effectiveness discussion at 62 Fed. Reg. 36,948, 36,958 (July 9, 1997)). Cost-effectiveness provides

a standardized tool for EPA to gauge what emission reductions are being achieved for each dollar of compliance costs—in other words, it evaluates costs in terms of benefits. Likewise, while this Court in *Portland Cement Association v. Train* did not require a formal cost-benefit analysis, its premise for upholding EPA's cost analysis was that the Agency had ensured "that a gross disproportion between achievable reduction in emission and cost of the control technique would not be required." 513 F.2d 506, 508 (D.C. Cir. 1975).[2]

The Supreme Court in *Michigan* instructed that "[o]ne 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." 135 S.Ct. at 2707. EPA's preferred approach, which assesses the costs of regulation in terms of affordability and cuts off any balancing with benefits, leaves open precisely that possibility and is inconsistent with the statute and *Michigan*.

C. EPA Erred by Failing to Separately Assess the Costs and Benefits of Regulating Mercury, Non-Mercury Metals, and Acid Gases.

EPA's error was compounded by its refusal to address what it characterizes as the essential feature of "regulation under this section" (the focus of the §112(n)(1)(A)

[2] Energy Industry Respondent-Intervenors also cite *Consumer Electronics Ass'n v. FCC*, 347 F.3d 291 (D.C. Cir. 2003), in support of EPA's preferred approach. Energy Industry Resp't-Int. Br. 5. But *Consumer Electronics Association* primarily involved a dispute about what the compliance costs of regulation *were*, not whether the rule was justified in light of them. *Id.* at 303. Further, the agency in that case did in fact "weigh[] costs and benefits." *Id.* at 304.

determination)—the requirement for separate regulation of mercury, non-mercury metals, and acid gases, each of which entails distinct costs and benefits. EPA claims (1) this Court's decision in *White Stallion Energy Center, LLC v. EPA*, 748 F.3d 1222 (D.C. Cir. 2014), *rev'd*, *Michigan v. EPA*, 135 S.Ct. 2699 (2015), directed it to ignore the separate costs and benefits of these three control mandates, and (2) in any event, this analysis would be impractical. Resp. 42-44. Both responses are incorrect.[3]

First, this Court's decision in *White Stallion* was premised on the assumption EPA could lawfully ignore costs when determining that regulating EGUs under §112 was "appropriate and necessary," and EGUs should be regulated "the same way as other sources." *See* 748 F.3d at 1241, 1244. But the Supreme Court rejected that conclusion, finding "[n]o regulation is 'appropriate' if it does significantly more harm than good," *Michigan*, 135 S.Ct. at 2707, and that EPA's attempt to "'harmonize[]' the program's treatment of power plants with its treatment of other sources … overlooks the whole point of having a separate provision about power plants." *Id.* at 2710. That separate provision, the Court explained, requires EPA to determine whether regulation of power plants "under this section," i.e., under §112, is appropriate. *Id.* To the extent *White Stallion* says (as EPA argues) that "regulation under this section"

[3] To the extent EPA suggests this argument was not sufficiently developed in Petitioners' opening brief, *see* Resp. 42, EPA is wrong. This issue was thoroughly briefed in Argument Sections I.B.3 and III.A of Petitioners' opening brief, and as such is properly before the Court.

means regulation of a substance (e.g., acid gases) that presents no public health hazard at enormous cost, *Michigan* overruled it. EPA's approach here is inconsistent with *Michigan* because it would allow regulation where the costs are wholly disproportionate to the benefits.

Second, EPA is fully capable of separately estimating the costs of its three control mandates. Indeed, it did just that in the proposed MATS Rule, where it estimated annual costs of $3.029 billion for acid gas control, $2.227 billion for mercury control, and $3.249 billion for non-mercury metal control. 76 Fed. Reg. at 25,075, Tbl. 25, JA___. The assertion now that determining these three figures was "not practical" because "control technologies … target many different hazardous air pollutants" conflicts directly with the record. Resp. 43. EPA's refusal to consider separately the costs and benefits of the three control mandates therefore was not "a technical determination … entitled to deference," *id.* 43. It is a poorly-veiled attempt to avoid facts and analysis that leave no doubt that regulating EGUs under §112 "is [not] even rational, never mind 'appropriate.'" *Michigan*, 135 S.Ct. at 2707.

II. EPA's Alternative Approach Is Unlawful.

A. The Purported Benefits of Regulating Non-HAPs Cannot Justify Regulating HAP Emissions From EGUs Under §112.

EPA claims that because Congress directed EPA in the Utility Study to evaluate the public health risks from any HAP emissions from EGUs remaining after imposition of other provisions of the Act, Congress must have intended to authorize

EPA to base its decision to regulate HAPs from EGUs under §112 on reductions in non-HAPs that might result from such regulation. Resp. 46-47; Legal Memorandum at 24-25, JA___-___. This assertion makes no sense and is contradicted by the language of the statute.

Under §112(n)(1), the decision whether to regulate power plants focuses exclusively on addressing HAP emissions, not on reductions in non-HAPs. Thus, the statute's plain text directs the Agency to examine in the Utility Study "the hazards to public health reasonably anticipated to occur as a result of emissions [from EGUs]… of *pollutants listed under subsection (b)*," i.e. HAPs. CAA §112(n)(1)(A) (emphasis added). Congress then required that the "appropriate and necessary" finding be based on "the results of the [Utility] study"—i.e., on the hazards to public health from the HAP emissions identified in the Utility Study. *Id.* That Congress directed EPA to limit the Utility Study to evaluation of those HAP emissions from EGUs remaining "after imposition of the requirements" of the CAA, *id.*, does not expand the basis for the §112(n) regulatory decision to include non-HAP emissions; it merely specifies the HAPs on which EPA's "hazard" analysis and §112(n) regulatory decision must be based.

As the Supreme Court in *Michigan* made clear, the purpose of the §112(n)(1) "appropriate and necessary" finding is for EPA to answer the following question: Are the benefits of reducing HAPs worth the costs of regulating them? *See* 135 S.Ct at 2710. EPA's answer is: The benefits of reducing *non-HAPs* are worth the costs of

regulating HAPs. Put simply, EPA did not answer the question Congress asked. The Agency's invocation of the Utility Study as a blank check to rely on ancillary reductions in non-HAPs is a non-sequitur. The statutory language makes clear that reducing non-HAPs like fine particulate matter ("$PM_{2.5}$") to levels below the applicable national ambient air quality standard ("NAAQS") is irrelevant to the "appropriate and necessary" inquiry.

The statute is neither "ambiguous" nor "silen[t]" on whether EPA is precluded from considering co-benefits. Resp. 47, 51. Section 112(n)(1) explicitly identifies the specific factors that EPA must consider when making the "appropriate and necessary" finding, and all of these factors address hazards to public health from EGU *HAP* emissions, not non-HAPs like sulfur dioxide or $PM_{2.5}$.

As Petitioners explained in their opening brief, §112(n)(1) requires EPA to conduct three studies: the Utility Study; a second study under §112(n)(1)(B) to evaluate the "rate and mass" of EGU mercury emissions, "the health and environmental effects of such emissions," and the cost of available control technologies for mercury ("Mercury Study"); and a third study under §112(n)(1)(C) on "the threshold level of mercury exposure below which adverse human health effects are not expected to occur." Pet. Br. 32-33, 43-44. Those studies all focus on the hazards to public health caused by remaining HAP emissions from EGUs and the costs of available HAP control technologies, which EPA must take into account when making its "appropriate and necessary" finding.

By contrast, there is nothing in §112(n)(1) that gives EPA even implicit authority to consider health risks from non-HAPs in deciding whether to regulate. To the contrary, Congress' focus on the health risks from EGUs' remaining HAP emissions and the costs of controlling them *negates* any implication that EPA can base its finding on non-HAP emissions. In this regard, EPA misreads the Supreme Court's application, in *Michigan*, of its earlier decision in *Whitman v. American Trucking Associations, Inc.*, 531 U.S. 457 (2001).

In *American Trucking*, the Court emphasized EPA could not consider cost when setting NAAQS under §109(b) at levels "requisite to protect the public health" with an "adequate margin of safety." CAA §109(b). The Court in *Michigan* explained *American Trucking* "establishes the modest principle that where the Clean Air Act expressly directs EPA to regulate on the basis of a factor that on its face does not include cost, the Act normally should not be read as implicitly allowing the Agency to consider cost anyway." *Michigan*, 135 S.Ct. at 2709. Similarly, in this case, given Congress' single-minded focus in §112(n)(1) on the health hazards from EGU HAP emissions, there is *no* explicit or implicit authority for EPA to consider non-HAP co-benefits. *American Trucking* therefore supports the conclusion that EPA is precluded from considering co-benefits when it makes its "appropriate and necessary" finding.

EPA also fails to distinguish similar cases in which this Court rejected the Agency's attempts to rely on factors other than those specified by Congress when deciding whether and how to regulate. *See* Pet. Br. 45-47 (citing *Am. Petroleum Inst. v.*

EPA, 52 F.3d 1113 (D.C. Cir. 1995) ("*API*"); *Ethyl Corp. v. EPA*, 51 F.3d 1053 (D.C. Cir. 1995)). With respect to *API*, the Agency merely asserts it "is not arguing that a broad grant of statutory authority allows it to regulate pollutants beyond those targeted by the relevant statutory provision." Resp. 51. But that is *precisely* what EPA is doing. Just as the Agency in *API* justified its reformulated gasoline requirements by pointing to ancillary "global warming benefits" not targeted by the relevant statute, EPA here justifies its decision to regulate HAP emissions from EGUs by pointing to the co-benefits of reducing non-targeted pollutants like $PM_{2.5}$ (which make up over 99 percent of the cited benefits). 52 F.3d at 1116. As to *Ethyl Corp.*, EPA asserts it is not "relying on a factor other than those specified by Congress when deciding how to regulate." Resp. 51. But EPA's co-benefits approach does precisely that: as described above, *supra* pp.15-17, Congress directed EPA to base the "appropriate and necessary" inquiry on hazards associated with HAP, not non-HAP, emissions.

EPA's reliance on legislative history is also off-point. EPA cites a 1989 report by the Senate Committee on Environment and Public Works addressing an earlier version of §112, which purportedly envisions that EPA may consider non-HAP co-benefits when setting emission standards under §112(d)(2). Resp. 46-47. But choosing among potential emission standards differs from *the initial decision to regulate* that EPA is required to undertake under §112(n)(1)(A)—a distinction the Supreme Court emphasized in *Michigan*. 135 S.Ct. at 2706, 2709. Under the terms of §112(n)(1)(A), that initial decision must be based on "the results of the [Utility

S]tudy," that is, on the hazards to public health from any remaining HAP emissions from EGUs after imposition of the other provisions of the CAA. That EPA might consider non-HAP co-benefits in choosing among potential standard levels once the initial decision to regulate is made has no bearing on whether it is "appropriate" to regulate HAP emissions from EGUs in the first place.

EPA's reliance on *U.S. Sugar Corp.* is similarly misplaced. That case involved EPA's refusal to promulgate more lenient health-based emissions standards under §112(d)(4) for hydrogen chloride emissions from industrial boilers rather than technology-based standards under §112(d)(2). In support of its refusal to promulgate health-based standards, EPA considered "reductions in emissions of other pollutants, also known as 'co-benefits,' achieved through enforcement of the [technology-based standards]." 830 F.3d at 624. But here again, EPA overlooks the critical distinction between EPA's selection of alternative standards for source categories under §112(d) and its initial decision to regulate power plants under §112(n)(1)(A).

Further, in *U.S. Sugar* the Court determined EPA was not foreclosed from relying on co-benefits because the text of §112(d)(4) "does not specify the factors" EPA must consider when setting health-based standards. *Id.* at 626. By contrast, as discussed above, *supra* pp. 15-17, Congress in §112(n)(1)(A) foreclosed EPA from relying on non-HAP risks when determining whether it is "appropriate and necessary" to regulate HAP emissions from EGUs.

B. EPA's Guidance on Preparing Economic Analyses for Other Purposes Does Not Support EPA's Consideration of Non-HAP Co-Benefits.

EPA argues it is reasonable to consider non-HAP co-benefits when making its "appropriate" finding under §112(n)(1)(A) because it "routinely considers 'ancillary' consequences" when performing benefit-cost analyses for other purposes. Resp. 51. EPA notes its Guidelines for Preparing Economic Analyses ("Guidelines") state that all monetized benefits and costs, including "'ancillary (or co-) benefits and costs,'" should be included in a typical benefit-cost analysis. *Id.* 53 (quoting Guidelines at 11-2 (Dec. 17, 2010, updated May 2014), EPA-HQ-OAR-2009-0234-20503, JA___) (emphasis omitted). Similarly, EPA observes the Office of Management and Budget's Circular A-4 (which provides guidance to federal agencies on how to implement Executive Order 12866) states that a standard benefit-cost analysis should consider ancillary benefits. *Id.* 54.

EPA neglects to mention these guidelines were developed for conducting cost-benefit analyses under *other* authorities lacking the pollutant-specific focus of §112. *See* Guidelines at Ch.2, JA___-___ (listing authorities). In particular, the Guidelines primarily address cost-benefit analyses under Executive Order 12866, which broadly requires "[a]n assessment of the potential costs and benefits of the regulatory action." Exec. Order 12866 §6(a)(3)(B), 58 Fed. Reg. 51,735, 51,741 (Oct. 4, 1993), JA___. Although it may be appropriate for EPA to include ancillary benefits in benefit-cost analyses conducted for these broad purposes, these guidelines do not expand the

scope of the §112(n)(1)(A) initial regulatory determination, which Congress limited to HAP-related benefits.

Indeed, when read in the context of the "appropriate and necessary" analysis §112(n)(1)(A) requires, EPA's Guidelines confirm the Agency cannot base a decision to regulate HAP emissions from EGUs on non-HAP emission benefits. The Guidelines state "[a]n economic analysis of a policy or regulation compares the current state of the world, the *baseline scenario*, to the expected state of the world with the proposed policy or regulation in effect, the *policy scenario*." Guidelines at 5-1 (emphasis in original), JA___. Importantly, one of the "guiding principles" when specifying the baseline is to "[c]learly specify the current and future state of relevant economic variables, the environmental problem that the regulation addresses and the regulatory approach being considered[.]" *Id.* at 5-2, JA___.

Where a statute prohibits an agency from considering specific economic factors, those factors are not "relevant economic variables" under "the regulatory approach being considered." *Id.* Congress has done so here by specifying that EPA must consider HAP costs and benefits when making its "appropriate and necessary" finding.

EPA tries to dismiss this self-evident conclusion by claiming Petitioners quote these passages out of context. Resp. 53-54, n.11. In fact, it is EPA that fails to acknowledge the context and significance of the Guidelines here. The Guidelines make clear the "the current and future state of relevant economic variables" are

guiding principles for an economic analysis that compares the baseline, "current state of the world" and "the expected state of the world" with the proposed regulation. Guidelines at 5-1, 5-2, JA___, ___. In other words, it is essential that the scope of the baseline correspond to the policy scenario, since the results of the cost-benefit analysis are "measured as the differences between these two scenarios." *Id.* at 5-1, JA___. Thus, the ancillary co-benefits Congress prohibited EPA from considering are not "relevant economic variables" under the Guidelines and must be excluded when EPA undertakes the "appropriate and necessary" under §112(n)(1)(A).

C. EPA's Reliance on Co-Benefits Conflicts With Other CAA Programs.

1. Congress did not intend for EPA to use §112 as an end-run around other CAA programs.

EPA offers nothing to refute Petitioners' detailed showing that resting the "appropriate and necessary" finding on reductions in non-HAP emissions is an illegitimate end-run around both the NAAQS program and the Title IV Acid Rain Program, Pet. Br. 47–49, other than the blanket assertion that "it is not," Resp. 56. As a result, EPA offers no explanation for why Congress would have intended for EPA to use §112 as an "end run around the restrictions that would otherwise … give [EPA] less control" over non-HAP emissions in the NAAQS program, and to reject the judgments and compromises of Congress in the Acid Rain Program specifically setting limits on sulfur dioxide emissions from these very same sources. Tr. of Oral

Arg. at 59–61, *Michigan v. EPA*, 135 S.Ct. 2699 (2015) (No. 14-46).[4] Thus, EPA has "relied on [a] factor[] which Congress has not intended it to consider" in determining whether it is appropriate to regulate EGUs under §112. *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983).

2. EPA fails to address its prior determination that available evidence does not support $PM_{2.5}$ reductions beyond those already required by the NAAQS.

EPA maintains reducing $PM_{2.5}$ below the concentration of 12 micrograms per cubic meter ("$\mu g/m^3$") it set as the NAAQS in 2013 produces "real" health benefits. Resp. 56. As support, it notes the available scientific evidence cannot establish a specific concentration of $PM_{2.5}$ in the ambient air "below which health risk reductions are not achieved." *Id.* 57; *see also* 81 Fed. Reg. at 24,440, JA___ ("[T]here is no evidence of a $PM_{2.5}$ concentration below which health effects would not occur.").

EPA fails to address Petitioners' main argument that, because EPA in 2013 determined any health benefits from reducing concentrations of $PM_{2.5}$ below 12 $\mu g/m^3$ were too uncertain to justify regulation under the NAAQS program, EPA cannot now assert the health benefits from such lower concentrations have become so substantial (supposedly worth $37-$89 billion each year) that they justify HAP regulation, without explaining why it currently has confidence in the existence of such

[4] Similarly, EPA's other arguments ignore the Acid Rain Program (which is specific to EGUs) and the purpose behind the §112(n)(1) provision. This distinguishes this case from *U.S. Sugar*, which specifically dealt with small boilers exempted from both the Acid Rain Program and §112(n)(1).

benefits when in 2013 it did not. Pet. Br. 51-55. Although EPA may choose to ignore Petitioners' argument, it cannot avoid the fact that EPA failed to identify any new scientific information that would refute its 2013 determination that it lacked confidence in the existence of health benefits below the NAAQS. And EPA's reliance on a double negative (that "there is no evidence of a $PM_{2.5}$ concentration below which health effects would not occur") fails to affirmatively demonstrate the existence of any such benefits. Resp. 57 (quoting 81 Fed. Reg. at 24,440, JA___). In short, EPA has not shown $PM_{2.5}$ concentrations below the NAAQS provide any reliable health benefits (much less benefits of $37-$89 billion per year). For that reason alone, it cannot rely on $PM_{2.5}$ co-benefits as support for its "affirmative and necessary" finding.

D. EPA Never Made an Appropriate Finding That Was Properly Limited to the Relevant HAP Benefits.

Finally, EPA fails to respond to Petitioners' argument that the Agency's refusal to exclude non-HAP co-benefits from its benefit-cost analysis renders that analysis invalid. Pet. Br. 42, 55-57. As Petitioners acknowledged, EPA relied on various benefits from reducing HAP emissions it was unable to monetize. *Id.* 55-57. But EPA never weighed the relevant benefits it is authorized to consider (that is, benefits from reducing HAP emissions) against the costs of the MATS Rule. *See supra* pp.5-14. And EPA does not now argue non-monetized benefits from reducing HAPs outweigh the costs.

Rather than respond to that key point, EPA simply lists benefits it could not quantify or monetize. Resp. 59. That is a non sequitur. In a proper "appropriate and necessary" inquiry, EPA must limit the scope of its benefit-cost analysis to the legally relevant benefits and costs Congress authorized it to consider, and it must explain why those benefits justify the enormous costs of regulating HAP emissions from EGUs under §112. EPA has not done the former; and it likely cannot do the latter.

III. EPA Must Consider All Relevant Costs and Disadvantages in Light of Alternative Control Strategies.

A. EPA Wrongly Refused to Consider Alternative Control Strategies.

1. EPA's view of "alternative control strategies" is wrong and ignores the obligation to consider disadvantages.

EPA does not dispute that the specific alternative control strategies the Agency was asked to consider—including §111 or relying on State regulation under §116 and §112(*l*)—"would avoid many of the disadvantages" of using §112. Pet. Br. 58. These avoidable disadvantages are costs EPA must consider. *See Michigan*, 135 S.Ct. at 2707 (stating EPA must consider "any disadvantage"). Simply put, if EPA has alternatives to achieve the benefits it seeks at less cost, EPA must consider them. EPA's refusal to do so represents an "artificial narrowing of option[s]" "antithetical to reasoned decisionmaking." *Int'l Ladies' Garment Workers' Union v. Donovan*, 722 F.2d 795, 817 (D.C. Cir. 1983) (internal quotation marks and citation omitted).

In this regard, the statute provides EPA must determine if regulating EGUs "under this section" (i.e., under §112) is "appropriate and necessary after considering

the results" of a study that is to "develop and describe" "alternative control strategies." CAA §112(n)(1)(A). EPA argues that "alternative control strategies" is limited to "types of control technologies," rather than "different regulatory frameworks." Resp. 61–62 (emphasis omitted). But it is implausible that Congress intended its direction to EPA (to determine whether "regulation under this section" is appropriate after considering "alternative control strategies") to mean something at odds with this plain language—i.e., that EPA was instead to "develop" air toxics *control technologies* "within 3 years." CAA §112(n)(1)(A). In contrast to EPA's counter-textual argument, Congress often directs agencies to develop *regulatory strategies* and 3 years is ample time for such a task.

Statutory context likewise refutes EPA's reading because §112 repeatedly uses "strategy" and "strategies" to refer to regulatory options. CAA §112(k)(3)(A) ("prepare" "comprehensive strategy to control emissions"); *id.* §112(k)(4) ("encourage and support areawide strategies developed by State … agencies"); *id.* §112(n)(5) ("develop and implement" "control strategy for emissions"). Indeed, §112(n)(5) calls for EPA to consider a "control strategy" under which EPA and the States work together to regulate under §111, illustrating that "alternative control strategies"

include §111 and similar options like relying on and encouraging States to use their authority preserved by §116.[5]

Moreover, EPA explained to Congress in 1990 that one of the purposes of the provision that became §112(n)(1) was to "allow[] the needed flexibility to identify and address the most significant toxic chemicals from utilities without mandating expensive controls that may be unnecessary." Letter from William K. Reilly, Adm'r, EPA, to Members of the Senate (Jan. 26, 1990), JA___; *see also* Pet. Br. 59; *id.* 6–7 & n.5 (citing extensive legislative history discussed in Comments of Murray Energy Corp. at 14-29 (Jan. 15, 2016), EPA-HQ-OAR-2009-0234-20536 ("Murray Comments"), JA___-___). The critical "needed flexibility" is afforded only by turning to more flexible alternative control strategies that EPA is required by statute to identify. EPA's refusal to even consider them frustrates a core purpose of §112(n)(1).[6]

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[5] EPA's claim that it read "strategies" to mean "technologies" in the 1998 study without subsequent objection from Congress, Resp. 62, is immaterial post-enactment legislative history. *See Continental Air Lines, Inc. v. DOT*, 843 F.2d 1444, 1447, n.3 (D.C. Cir. 1988). Besides, Congress did in fact respond by requesting an analysis of alternative control strategies from the U.S. Energy Information Administration. *See* U.S. Energy Info. Admin., Analysis of Alternative Mercury Control Strategies, SR-OIAF/2005-01, at 1 (Jan. 2005), https://www.eia.gov/oiaf/servicerpt/mercury/index.html, JA____.

[6] Another core purpose of §112(n)(1) was for EPA to consider alternatives that would not conflict with the flexibility of the Title IV Acid Rain Program for regulating EGU emissions of sulfur dioxide. EPA's claim that "there is no record evidence that a conflict exists," Resp. 62, is plainly false. *See* Pet'rs' Br. 6–7, 59 (citing Murray

Finally, *White Stallion* does not absolve EPA from assessing the costs of §112 in light of less costly and more flexible alternative control strategies. *See* Resp. 63–64. The discussion EPA cites addresses "the appropriate mechanism for regulating … under §112 after the 'appropriate and necessary' determination was made," not the options EPA is required to consider beforehand. *White Stallion*, 748 F.3d at 1244.

2. EPA did not reasonably consider and reject alternatives.

After arguing it need not consider alternatives, EPA asserts it did "consider[]"—but "reasonably rejected"—the alternative control strategies of using §111 or relying on State regulation preserved by §116 and encouraged by §112(*l*).[7] Resp. 66. However, EPA effectively concedes it "rejected considering §111 as an alternative strategy" based exclusively on the claim that there was no "clear framework for developing standards" under §111, Pet. Br. 22, and it "refus[ed] 'to evaluate the potential for state action'" based on its interpretation that deferring to

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Comments); *see also id.* 47–49 (detailing "concerns that §112(d) standards would undo the efficiency of the Title IV program by mandating uniform controls of acid gases so as to eliminate the flexibility, freedom of choice, and efficiency that are the core goals of Title IV"). Also, the statement EPA refers to as "a single statement by one Representative," Resp. 62, was not: it outlined the "sense of the conferees." 136 CONG. REC. 35,013 (Oct. 26, 1990), JA___.

[7] EPA conflates §112(k)(4), a directive that EPA encourage State and local actions to regulate smaller "area" sources, with §112(*l*), the program that calls for EPA to encourage and support State participation in an "optional program … for the review of high-risk point sources" and for EPA to "establish and maintain an air toxics clearinghouse and center to provide technical information and assistance to State and local agencies" in regulating all stationary sources of HAPs. *See* Resp. 61; CAA §112(*l*).

state regulation would be in conflict with the statute. *Id.* 23; Resp. 65. As a result, nowhere in the record has EPA assessed the cost of using §112 to regulate EGUs relative to these alternatives.

The claim that §111 is not a "clear regulatory alternative framework" is absurd. EPA has used §111 and its implementing regulations to regulate stationary sources for decades. *See* 40 C.F.R. Part 60.

EPA's justification for refusing to consider the alternative of relying on state regulation is also flawed. EPA reasons by negative implication that the direction in §112(n)(1) that EPA must consider the "imposition of the requirements" of the Act means Congress has forbidden EPA from considering actions by States preserved by §116. Again, Congress expressly directed that EPA consider "alternative control strategies." Moreover, the very same section of the Act directs EPA to, among other things, "encourage and support … strategies developed by State or local air pollution control agencies" to use the retained authority under §116 to address HAP emissions, CAA §112(k)(4), and to give States "technical information and assistance," *id.* §112(*l*)(3). Surely EPA is not implicitly prohibited from considering State and local emission reduction "strategies" when Congress explicitly identifies, strongly endorses, and orders EPA to support this method of advancing §112's objectives.

EPA asserts considering the obvious alternative of relying on State actions "would not serve Congress's goal" for "prompt, permanent, and ongoing reductions" of HAP emissions. Resp. 65. EPA once again ignores Congress's express instruction

in §112(n)—i.e., reducing such EGU emissions must be found "appropriate and necessary" under §112—as well as Congress's explicit statement of goals and purposes. CAA §101(a)(3) ("[A]ir pollution prevention … and air pollution control at its source is the primary responsibility of States and local governments."). Consideration of State and local actions to address EGU emissions entirely comports with these explicit objectives of the Act. EPA has not offered any reason to suppose that Congress would prohibit the Agency from considering what would happen if it does not regulate EGUs under §112, or that Congress would force EPA to consider only a hypothetical alternative world in which no alternatives for regulating HAP emissions from EGUs exist.

B. EPA Concedes It Must Consider All Relevant Costs and Disadvantages, But Then Fails to Do So.

EPA does not dispute Petitioners' argument that *Michigan*, §112(n)(1), and reasoned decisionmaking demand that EPA consider "any disadvantage" of using §112 and "*all* of the relevant costs." Pet. Br. 64 (quoting *Michigan*, 135 S.Ct. at 2707; *Mingo Logan Coal Co. v. EPA*, 829 F.3d 710, 737 (D.C. Cir. 2016) (Kavanaugh, J., dissenting)). The only question is whether EPA met this obligation. It did not. Indeed, EPA does not deny it ignored many costs and disadvantages, taking issue only with whether the Agency improperly failed to consider "certain costs" specifically discussed in its brief. Resp. 60, 67.

1. EPA does not dispute it ignored the costs of §112(f).

Michigan squarely held that EPA "must consider cost—*including, most importantly, cost of compliance*—before deciding whether regulation is appropriate and necessary." 135 S.Ct. at 2711 (emphasis added). One such "cost of compliance" is the potential compliance costs associated with §112(f)—a second stage of regulation under §112. If EPA interprets §112 as requiring that EGUs be regulated the same as other source categories, such that this second stage is required,[8] the "cost of compliance" would not be just the potential costs associated with the first stage of §112 regulation (i.e., §112(d)). EPA, however, refuses to clarify whether §112(f) review is required for EGUs, and it refused to consider these potential costs at all based entirely on the fact that the initial threshold §112(f) analysis of residual risk—if applicable—was not yet due. EPA, Response to Comments (RTC) for Supplemental Finding that it is Appropriate and Necessary to Regulate Hazardous Air Pollutants from Coal- and Oil-Fired Electric Utility Steam Generating Units at 35 (Apr. 2016), EPA-HQ-OAR-2009-0234-20578 ("RTC"), JA___; Resp. 67. Uncertainty is not a valid excuse, however. At the time of a §112(n)(1) determination, both the cost of first round §112(d) regulation and the cost of second round §112(f) regulation may be uncertain. EPA tried, but failed, to persuade the Supreme Court in *Michigan* that, for this reason, the

[8] Petitioners maintain that if this Court were to uphold the Supplemental Finding, then it would be unlawful for EPA to impose on EGUs in the future additional compliance costs that were not accounted for in the "appropriate and necessary" determination required by *Michigan*.

§112(n)(1) determination "need not consider cost when first deciding *whether* to regulate power plants because it can consider cost later when deciding *how much* to regulate them." *Michigan*, 135 S.Ct. at 2709. Further, EPA misses the mark when it argues that it need not consider §112(f) compliance costs because those costs could in theory end up being zero dollars. Resp. 67. While EPA might have lawfully determined that §112(f) compliance costs are *likely* zero based on a reasoned analysis, *Michigan* does not permit EPA to entirely avoid consideration of these compliance costs based on the possibility those costs *could be* zero.

2. EPA does not dispute it ignored power plant layoffs.

Even though EPA admits regulating EGUs under §112 caused many power plants to be shut down, EPA does not—and could not—deny it refused to consider the resulting layoffs of workers. *See* RTC at 90, JA___ ("[E]xamining highly localized impacts … is outside of the scope of the cost consideration performed in the proposed and final supplemental findings"). Instead, EPA changes the subject by arguing it considered *other* "localized impacts" in the form of "retail price impacts at a regional level" and "the availability of generation capacity in 32 modeling regions."[9]

[9] The Resource Adequacy and Reliability study EPA quotes as finding "'little overall impact'" or "'only small impacts at the regional level,'" Resp. 68, was explicitly limited to resource adequacy and reliability; it did not examine or discuss any other impacts. *See* Resource Adequacy and Reliability in the IPM Projections for the MATS Rule at 1 (undated), EPA-HQ-OAR-2009-0234-19997, JA___.

Resp. 68. This is no defense for failing to consider layoffs EPA predicted would result from its §112 program.

3. EPA does not dispute it ignored coal industry impacts.

While EPA does not directly defend its refusal to consider the impacts of regulating EGUs under §112 on the coal industry and coal miners, the Agency obliquely defends its earlier justification that it could refuse to consider these impacts based exclusively on its initial erroneous projection of only a "1 percent" decrease in "coal production for the electric power sector." RTC at 92-94, JA___-___; Resp. 68–69. But reasoned decisionmaking requires agencies to consider all of the "relevant data," *State Farm*, 463 U.S. at 43, including data cited by commenters showing EPA's early projection dramatically understated the impacts of its decision on the coal industry. *See* Pet. Br. 66. EPA claims it can exclude data that was not "available" "when EPA should have considered cost in the appropriate and necessary finding" (i.e., in 2000). Resp. 69. Yet EPA is relying on the demonstrably erroneous projections EPA made "when the Standards were promulgated" *12 years later*. *Id.* If EPA's inaccurate projection in 2012 is "relevant data," then the actual evidence of the consequences of its decision is no less "relevant." The actual evidence showing much larger impacts underscores the irrationality of EPA's refusal to consider the costs and disadvantages for the coal industry and its miners.

4. EPA does not dispute it ignored hardest hit consumers.

EPA responds to the assertion that it failed to consider the "localized impacts" on "consumers" of electricity, Pet. Br. 65, by pointing to regional analyses of "retail prices" and "availability of generation capacity." Resp. 68. But even if the lights do not go out and the price increases are single-digit percentage rate hikes, EPA's regional analysis does not address the most affected consumers, including low income families and electricity-intensive manufacturers that can ill afford even small price increases. EPA cannot refuse to consider these hardest hit consumers just because EPA believes most consumers are more modestly affected. EPA must give "at least some attention" to the impacts of price increases on low income families and electricity-intensive manufacturers. *See Michigan*, 135 S.Ct. at 2707.

5. EPA does not dispute it ignored unique costs in ERCOT.

EPA does not dispute it refused to "analyze costs to ERCOT independently," RTC at 67, JA___, even though Texas's competitive ERCOT market is indisputably unique. EPA further concedes its assumption that costs would be passed through to consumers does not apply to ERCOT. Resp. 69. EPA's only defense is that two of its "metrics" did not "assum[e] all costs would be passed on to consumers." *Id.* But that is not the case. Under both its "capital expenditure" and "percentage of revenue" metrics, EPA *did* assume that "many of these sources are able to pass-through compliance costs to ratepayers." 81 Fed. Reg. at 24,436, JA___; *see also id.* at 24,435, JA___ (explaining EPA's "comparison of revenues to costs" assumed "a

significant share of operating expenditures may ultimately be borne by consumers"). In ERCOT, the price of electricity, and therefore revenue, is set by market forces, not by regulated rates. Therefore, operators in Texas are not necessarily operating "with the expectation that they will recover their costs (*i.e.*, expenditures) in addition to a profit," *id.*, as EPA assumed. Because *all* of EPA's costs metrics assumed sharing costs with customers through rate adjustments, a condition not true in ERCOT, EPA's ultimate conclusion that the costs of regulation were "reasonable" is infected with this error and must be set aside.[10]

6. EPA does not dispute it ignored the environmental benefits lost by shutting down ARIPPA's coal-refuse boilers.

EPA completely sidesteps ARIPPA's assertion that EPA failed to evaluate the cost corresponding to the lost environmental benefits resulting from the forced shutdown of ARIPPA's bituminous coal refuse-fired sources. Instead, EPA simply observes that certain coal refuse-fired sources are among the best-performing sources for acid gas HAPs, and then concludes "ARIPPA's claim of forced closures due to the Standards is belied by the record." Resp. 70. This argument is meritless.

Although the pool of "best-performing sources" for acid gases includes certain coal refuse-fired sources, these sources generally combust *anthracite* coal refuse.

[10] Another of EPA's core assumptions—the "interconnectedness of the electricity grid," RTC at 50, JA___—is also not true for ERCOT. *See Texas v. EPA*, 829 F.3d 405, 431 (5th Cir. 2016) ("In its electrical grid, as in so many things, Texas stands alone. . . . [N]early 90% of Texas is covered by a single isolated grid with limited connections to external power supplies.").

Memorandum from Jeffrey Cole, RTI Int'l, to Bill Maxwell, EPA (Dec. 16, 2011) ("Coal Acid Gases" appended spreadsheet), EPA-HQ-OAR-2009-0234-20132, JA___. The only two *bituminous* coal refuse-fired sources that met the standard have materially different characteristics than the conventional bituminous coal refuse-fired sources operated by ARIPPA, *see* Comments of ARIPPA at 10-11 (Jan. 14, 2016), EPA-HQ-OAR-2009-0234-20535, JA___-___, which EPA failed to consider. Indeed, ARIPPA's conventional bituminous coal refuse-fired sources *cannot* satisfy the acid gas limit EPA ultimately adopted due to unique equipment configurations, design features, and the importance of preserving ash characteristics essential to the beneficial reuse of ash in mine reclamation. *Id.* at 9-17, JA___-___. These plants will be forced to close and the environmental benefits they provide will be eliminated. Because EPA did not consider the cost of the lost environmental benefits, EPA's evaluation was unreasonable.

CONCLUSION

For the foregoing reasons, the petitions for review should be granted.

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CERTIFICATE OF COMPLIANCE

Pursuant to Rule 32(a), (f), and (g) of the Federal Rules of Appellate Procedure and Circuit Rules 32(e)(1) and 32(e)(2)(C), I hereby certify that the foregoing Reply Brief of State and Industry Petitioners contains 8,914 words, as counted by a word processing system that includes headings, footnotes, quotations, and citations in the count, and therefore is within the word limit of 9,000 words as established by the Court in its Order of October 14, 2016. I also certify that this brief complies with the typeface and type-style requirements of Rule 32(a)(5) and (6) of the Federal Rules of Appellate Procedure because it has been prepared in a proportionally spaced typeface using Microsoft 2010 with 14-point Garamond font.

Dated: February 24, 2017

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CERTIFICATE OF SERVICE

I hereby certify that, on this 24th day of February, 2017, a copy of the foregoing Reply Brief of State and Industry Petitioners was served electronically through the Court's CM/ECF system on all ECF-registered counsel.

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