No. 15A-886

IN THE SUPREME COURT OF THE UNITED STATES

STATE OF MICHIGAN, *et al.*,
Applicants

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY,
Respondent

ON APPLICATION TO STAY OR ENJOIN THE MERCURY AND AIR TOXICS STANDARDS PENDING A PETITION FOR A WRIT OF CERTIORARI

MEMORANDUM IN OPPOSITION OF INDUSTRY RESPONDENT-INTERVENORS CALPINE CORPORATION, EXELON CORPORATION, NATIONAL GRID GENERATION LLC, AND PUBLIC SERVICE ENTERPRISE GROUP INCORPORATED

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CORPORATE DISCLOSURE STATEMENTS

Pursuant to Supreme Court Rule 29.6, Industry Respondent-Intervenors provide the following disclosure statements.

Calpine Corporation ("Calpine") is a major U.S. power company which owns 84 primarily low-carbon, natural gas-fired and renewable geothermal power plants in operation or under construction that are capable of delivering nearly 27,000 megawatts of electricity to customers and communities in 18 U.S. States and Canada. Calpine's fleet of combined-cycle and combined heat and power plants is the largest in the nation. Calpine is a publicly traded corporation, organized and existing under the laws of the State of Delaware. Its stock trades on the New York Stock Exchange under the symbol CPN. Calpine has no parent company, and no publicly held company has a 10 percent or greater ownership interest in Calpine.

Exelon Corporation ("Exelon") owns Exelon Generation Company, LLC, which owns or controls approximately 32,000 megawatts of generating facilities, and is engaged in the generation and sale of electricity in wholesale and retail markets. Exelon is also engaged in the purchase, transmission, distribution and sale of electricity through its regulated electric utility subsidiaries, Baltimore Gas and Electric Company ("BGE") of Baltimore, MD, Commonwealth Edison Company ("ComEd"), of Chicago, IL, and PECO Energy Company ("PECO"), of Philadelphia, PA. Together, BGE, ComEd and PECO own transmission and distribution systems and serve approximately 6.7 million retail electric customers in central Maryland, northern Illinois, and southeastern Pennsylvania. The company's Constellation business unit provides energy products and services to more than two million residential, public sector and business customers. Exelon is a publicly-traded corporation, organized and existing under the laws of the Commonwealth of Pennsylvania. Its stock trades on the New York Stock Exchange under the

ticker symbol EXC. Exelon has no parent company, and no publicly-held company has a 10 percent or greater ownership interest in Exelon.

National Grid Generation, LLC ("National Grid Generation") states that it is a limited liability company organized under the laws of the State of New York that owns and operates 50 natural gas- and oil-fired electric generating units capable of delivering approximately 3,800 megawatts of electricity. All of the outstanding membership interests in National Grid Generation LLC are owned by KeySpan Corporation. All of the outstanding shares of common stock of KeySpan Corporation are owned by National Grid USA, a public utility holding company with regulated subsidiaries engaged in the generation of electricity and the transmission, distribution and sale of natural gas and electricity. All of the outstanding shares of common stock of National Grid USA are owned by National Grid North America Inc. All of the outstanding shares of common stock of National Grid North America Inc. are owned by National Grid (US) Partner 1 Limited. All of the outstanding ordinary shares of National Grid (US) Partner 1 Limited are owned by National Grid (US) Investments 4 Limited. All of the outstanding ordinary shares of National Grid (US) Investments 4 Limited are owned by National Grid (US) Holdings Limited. All of the outstanding ordinary shares of National Grid (US) Holdings Limited are owned by National Grid plc. National Grid plc is a public limited company organized under the laws of England and Wales, with ordinary shares listed on the London Stock Exchange, and American Depositary Shares listed on the New York Stock Exchange.

Public Service Enterprise Group Incorporated ("PSEG") is a diversified energy company whose family of companies distributes electricity to approximately 2.2 million customers and gas to approximately 1.8 million customers in New Jersey and owns and operates

approximately 12,000 megawatts of electric generating capacity concentrated in the Northeast. PSEG owns a diverse fleet of generating units, including coal-fired units. PSEG is a publicly-traded New Jersey corporation. It has no parent companies and no publicly-held company holds a 10 percent or greater ownership interest.

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Industry Respondent-Intervenors[1] participated as respondent-intervenors in the proceedings below in the Court of Appeals for the District of Columbia Circuit and in the Supreme Court to support the United States Environmental Protection Agency ("EPA") against challenges to the Mercury and Air Toxics Standards ("the Rule"),[2] which impose limits on hazardous air pollutant emissions from large commercial coal- and oil-fired power plants. Industry Respondent-Intervenors are engaged in the electric generation business. Collectively, they own nearly 75 gigawatts of generation capacity, including coal, oil, gas, nuclear, wind, solar, and other energy sources, some of which are subject to the Rule. For the reasons set forth below, Industry Respondent-Intervenors oppose the application by twenty States to stay or enjoin the Rule.

INTRODUCTION

A stay pending appeal is granted only under "extraordinary circumstances." *Ruckelshaus v. Monsanto Co.*, 463 U.S. 1315, 1316-17 (1983) (Blackmun, J. in chambers). The circumstances here are far from extraordinary. In *Michigan v. EPA*, 135 S. Ct. 2699 (2015), this Court concluded that EPA must consider costs in determining whether it is "appropriate and necessary," under section 112(n)(1)(A) of the Clean Air Act, 42 U.S.C. § 7412(n)(1)(A), to regulate emissions of hazardous air pollutants from power plants under section 112 of the Act, *id.* § 7412. It remanded the case to the D.C. Circuit "for further proceedings consistent with [the] opinion." *Michigan v. EPA*, 135 S. Ct. at 2712. The D.C. Circuit has followed that

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1 Industry Respondent-Intervenors are Calpine Corporation, Exelon Corporation, National Grid Generation LLC, and Public Service Enterprise Group Incorporated.

2 National Emission Standards for Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units, 77 Fed. Reg. 9304 (Feb. 16, 2012).

direction properly and faithfully, considering the nature and extent of the flaw identified by this Court, and selecting a remedy that allows EPA to correct its error expeditiously without imposing unnecessary harm to the regulated community or the public at large.

On remand, the D.C. Circuit considered separate motions to govern filed by many parties, including by a group comprised mostly of State petitioners (including Applicants), by EPA, and by Industry Respondent-Intervenors. *See* Order, Docket No. 12-1100 (D.C. Cir. Dec. 15, 2015). With just a few small exceptions, electric power generators who originally challenged the Rule *did not* seek vacatur of the Rule; only States and coal industry groups sought vacatur.[3] Industry Respondent-Intervenors opposed vacatur because of the severe disruption it would cause to power generators and electricity markets, supporting their motion with unrebutted declarations establishing the nature and extent of the disruption.[4]

After hearing oral argument on the motions, the D.C. Circuit remanded the Rule to EPA, without vacatur, in an order dated December 15, 2015 ("Remand Order"). *See* Application Appendix A. Applying its well-established precedent in *Allied-Signal, Inc. v. U.S. Nuclear Reg. Comm'n*, 988 F.2d 146 (D.C. Cir. 1993), the D.C. Circuit concluded that the Rule should remain in effect while EPA complies with this Court's direction to consider costs, among other relevant factors, in deciding whether it is "appropriate" to regulate hazardous air pollution

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[3] Reply of Industry Respondent Intervenors in Support of Its Motion to Govern Future Proceedings, Document No. 1582027 at 3-5, Docket No. 12-1100 (D.C. Cir. *filed* Nov. 4, 2015) (noting that Oak Grove Management Company LLC, operator of a 1.6 gigawatt power plant, White Stallion Energy Center, LLC, a prospective industry entrant who had proposed a new coal-fired power plant, and Tri-State Generation and Transmission, LLC ("Tri-State"), owner of less than two gigawatts of generation capacity, had joined in the request for vacatur). Tri-State primarily sought relief for one emission limitation for one small plant. Tri-State's Reply, Document No. 1581995 at 3, Docket No. 12-1100 (D.C. Cir. *filed* Nov. 4, 2015).

[4] Motion of Industry Respondent Intervenors to Govern Future Proceedings, Document No. 1574838 at 11-19, Docket No. 12-1100 (D.C. Cir. *motion filed* Sept. 24, 2015).

emissions from power plants. *See* Remand Order. EPA represented in its motion that it anticipated completing its determination by April 15, 2016. The Remand Order was unanimous, even though the panel had originally split on the issue ultimately decided by this Court. *See White Stallion Energy Center, LLC v. EPA*, 748 F.3d 1222, 1258-59 (D.C. Cir. 2014) (Kavanaugh, J. dissenting).[5]

Consistent with its representation to the Court of Appeals, on December 1, 2015, EPA published a proposed finding under section 112(n) that it is necessary and appropriate to regulate power plants under section 112 after including consideration of cost.[6] EPA's proposal carefully addressed consideration of cost using several different approaches, including methods going beyond the minimum required by this Court. The public comment period on that proposal has closed. Unless the public comments demonstrate that EPA should modify its proposal, EPA will soon issue a final finding that it is necessary and appropriate to regulate power plants' emissions of toxic pollutants after consideration of costs and will thereby remedy the deficiency that this Court identified in EPA's 2012 finding supporting the Rule.

In effect since April 2012, with compliance requirements that took effect in April 2015, the Rule has been in place for nearly four years. Yet until now, Applicants have never asked the D.C. Circuit or this Court to stay the Rule. No doubt encouraged by this Court's stay of the Clean Power Plan,[7] Applicants now seek to stay the Rule until their not-yet-filed petition

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5 The D.C. Circuit panel previously had unanimously upheld the Rule in all other respects. *White Stallion Energy Center*, 748 F.3d at 1229.

6 Supplemental Finding That it is Appropriate and Necessary to Regulate Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units, Proposal, 80 Fed. Reg. 75,025 (Dec. 1, 2015).

7 *West Virginia, et al. v. EPA, et al.*, No. 15A773, S. Ct. Order Feb. 9, 2016.

for writ of *certiorari* of the Remand Order is resolved, or until EPA finalizes its supplemental finding on remand.

Applicants' request is fundamentally flawed in at least two respects. First, they ask for a stay of *the Rule*, but invoke authority to stay *the Remand Order* pending a petition for writ of *certiorari*. Staying the Remand Order would, in fact, leave the Rule in place, while staying the Rule would only serve to create confusion for the industry. Second, Applicants conflate the question already decided by this Court in *Michigan* with the question that has not yet been decided and would be addressed on *certiorari*: whether the D.C. Circuit erred in applying the *Allied-Signal* test and remanding the Rule without vacatur. Applicants cannot show either that this Court is likely to grant *certiorari* on the Remand Order, or that Applicants have a "fair prospect" of prevailing on the merits.

Applicants also have failed to demonstrate that a stay (or an injunction) is necessary to spare them from irreparable harm, or indeed any harm at all. States are not directly regulated by the Rule, nor does the Rule impose new regulatory obligations on the States. On this ground alone, their Application should be denied. Moreover, any stay would cause substantial harm to the electric generation industry, as well as to its pollution control suppliers. It is not a coincidence that there are no commercial power generators among the Applicants.

Finally, as an alternative to the stay, Applicants seek an injunction blocking the Rule. Having failed to meet the requirements for a stay, their request for an injunction also necessarily fails. Applicants have no "indisputably clear" right to relief and no injunction is necessary to protect the Court's jurisdiction. As with a stay, an injunction would harm the electric generation industry.

The Court should deny the application.

REASONS TO DENY THE APPLICATION TO STAY OR ENJOIN THE RULE PENDING A PETITION FOR WRIT OF *CERTIORARI*

I. APPLICANTS HAVE NOT DEMONSTRATED ANY OF THE PREREQUISITES FOR A STAY.

A. Applicants Ask To Stay The Rule But Rely On The Standard And Authority To Stay The Remand Order.

There is a fundamental disconnect between the relief that Applicants seek and the authority on which they rely for that relief. Applicants ask this Court to stay *the Rule*. However, they invoke as authority for the stay 28 U.S.C. § 2101(f), which authorizes the Court to stay a "final judgment or decree" entered by a lower court that is subject to review by this Court on writ of *certiorari*. 28 U.S.C. § 2101(f) ("In any case in which the final judgment or decree of any court is subject to review by the Supreme Court on writ of certiorari, the execution and enforcement *of such judgment or decree* may be stayed for a reasonable time to enable the party aggrieved to obtain a writ of certiorari from the Supreme Court.") (emphasis added).

Nothing on the face of section 2101(f) authorizes a stay of the Rule. The only "final judgment or decree" that could now be put before this Court is the Remand Order. Applicants do not ask this Court to stay the Remand Order. In fact, if the Remand Order were stayed, the Rule would remain in place. Instead, Applicants request a stay of the Rule, and only until EPA either finalizes its proposed finding that regulation is appropriate and necessary (which EPA intends to do by April 15, 2016), or until the Court resolves Applicants' not-yet-filed petition for writ of *certiorari*. *See* Application at 15; *see also* Application at 14. Applicants' request for relief is ambiguous, but the most logical way to read their request in the current context is that they seek a stay until the *earlier* of these two events. Yet, even if the Court were to stay the Rule for a limited period, that stay could create confusion about the status

of the administrative proceedings on remand, causing uncertainty for the industry that is harmful and unnecessary.

Undeterred by these impediments, Applicants ask for a stay of the Rule and apply the standard for a stay of the Remand Order pending a petition for writ of *certiorari*. Under that standard, they must demonstrate: "(1) a reasonable probability that four Justices will consider the issue sufficiently meritorious to grant certiorari; (2) a fair prospect that a majority of the Court will vote to reverse the judgment below; and (3) a likelihood that irreparable harm will result from the denial of a stay." *Hollingsworth v. Perry*, 558 U.S. 183, 190 (2010). Even when these first three prongs are met, however, a stay will not automatically issue. *Philip Morris USA Inc. v. Scott*, 131 S. Ct. 1, 4-5 (2010) (Scalia, J., in chambers). The Court must also "balance the equities and weigh the relative harms to the applicant and to the respondent." *Hollingsworth*, 558 U.S. at 190; *see also Philip Morris*, 131 S. Ct. at 4 ("[S]ound equitable discretion will deny the stay when a decided balance of convenience weighs against it." (internal quotations omitted)); *Nken v. Holder*, 556 U.S. 418, 426 (2009) (in considering a stay, courts ask whether the stay will "substantially injure the other parties interested in the proceeding" and "where the public interest lies").

Supreme Court Rule 23 imposes an additional requirement that the party seeking a stay first seek the relief it requests in the lower court. Sup. Ct. R. 23.2, 23.3. Only in "the most extraordinary circumstances" will the Court consider an application in which the party failed to seek relief in the lower court. Sup. Ct. R. 23.3. Applicants have not asked the D.C. Circuit to stay the Rule, or even to stay its Remand Order, and this case is not among the "most extraordinary circumstances" that would excuse their failure to do so. On this ground alone, the

Court should deny the Application. In addition, Applicants have failed to demonstrate any of the other prerequisites for a stay.

B. Applicants Have Failed To Demonstrate A Reasonable Likelihood That *Certiorari* Will Be Granted And That They Will Prevail On The Merits.

Applicants conflate what this Court already has decided—that it was unreasonable for EPA not to have considered costs in evaluating whether it was "appropriate" to regulate power plants under section 112—with what this Court would decide on *certiorari*—whether in remanding the Rule to EPA to address the deficiency in its finding, the D.C. Circuit should also have vacated the Rule. *See* Application at 5-6. They frame the issues as: whether this Court would likely grant *certiorari* on whether EPA's interpretation of "appropriate" in section 112(n)(1)(A) was reasonable, and whether there was a "fair prospect" the Court would find that interpretation unreasonable. *Id.* Of course, this Court in *Michigan* already determined that EPA's statutory interpretation was unreasonable. But that question would *not* be before the Court on a petition for *certiorari* of the Remand Order. Instead, Applicants must show that there is a "reasonable probability" that this Court would grant *certiorari* to review the Remand Order, and that there is a "fair likelihood" that a majority of the Justices would overturn the D.C. Circuit's decision, after thorough briefing and argument, to leave the Rule in effect during remand. They cannot satisfy either factor.

1. The Court is Unlikely to Grant Certiorari to Review the Remand Order.

Applicants do not attempt to show that this Court is likely to grant *certiorari*, and in fact the Court seems unlikely to do so. Applicants previously invited this Court to vacate the Rule. *See Brief for Petitioners State of Michigan, et al.*, Sup. Ct. Docket Nos. 14-46, 14-47, 14-49 at 5, 48; *see also Opening Brief of Petitioner the National Mining Association*, Sup. Ct. Docket Nos. 14-46, 14-47, 14-49, at 45. Petitioner Utility Air Regulatory Group asked for a

suspension of all future compliance deadlines in the Rule to accommodate power plants that had received extensions. *Reply Brief of Petitioner Utility Air Regulatory Group, et al.*, Sup. Ct. Docket Nos. 14-46, 14-47, 14-49, at 13. Yet, this Court opted *not* to grant those explicit requests for relief. Nor did the Court direct the D.C. Circuit to vacate the Rule, instead remanding to the D.C. Circuit "for further proceedings consistent with [the] opinion." *Michigan v. EPA*, 135 S. Ct. at 2712. The implication is that the Court consigned the fact-sensitive decision on remedy to the D.C. Circuit.

Applicants offer no new reason for this Court to mandate vacatur today, when it declined to do so last June. In fact, the only relevant developments since the Court's decision are EPA's formal proposal of a supplemental finding and EPA's affirmation to the D.C. Circuit (memorialized in the Remand Order) that EPA expects to finalize that proposal in April 2016. These developments only lend further support to the D.C. Circuit's decision to remand without vacatur.

In reaching that decision, the D.C. Circuit applied its well-established *Allied-Signal* test and evaluated (1) "the seriousness of the [Rule's] deficiencies (and thus the extent of doubt whether the agency chose correctly)," and (2) "the disruptive consequences of an interim change that may itself be changed." *Allied-Signal*, 988 F.2d at 150-51 (citation omitted); *see* Remand Order. The D.C. Circuit has employed that test for more than two decades to determine the proper remedy in a variety of contexts where an agency has erred, including when an agency has failed to make a prerequisite finding required by statute. *See, e.g.*, *Sugar Cane Growers Co-op. of Florida v. Veneman*, 289 F.3d 89, 97-98 (D.C. Cir. 2002) (declining to vacate action even though agency failed to make four prerequisite findings required by statute, including a finding

regarding cost). This Court has never taken issue with the D.C. Circuit's long-standing application of the *Allied-Signal* factors.

It is particularly unlikely that four Justices would find *this case* to be an appropriate vehicle for reviewing the propriety of the D.C. Circuit's use of the *Allied-Signal* standard to evaluate the proper remedy from an agency error. The Court contemplated that EPA would have an opportunity to reconsider its finding, taking cost into account. *Michigan v. EPA*, 135 S. Ct. at 2711 ("It will be up to the Agency to decide (as always, within the limits of reasonable interpretation) how to account for cost."). The Court's opinion contained neither a direct instruction to vacate the Rule nor an unavoidable implication that vacatur was required.[8] This Court did not constrain in any way the intrinsic discretion of every court to fashion an appropriate remedy, even when addressing activity that violates a statute. *See, e.g.*, *Weinberger v. Romero-Barcelo*, 456 U.S. 305, 313 (1982) ("The grant of jurisdiction to ensure compliance with a statute hardly suggests an absolute duty to do so under any and all circumstances, and a federal judge sitting as chancellor is not mechanically obligated to grant an injunction for every violation of law."); *Winter v. Natural Resources Defense Council, Inc.*, 555 U.S. 7, 32 (2008) ("An injunction is a matter of equitable discretion; it does not follow from success on the merits as a matter of course."); *see also Nken*, 556 U.S. at 433-34 ("'A stay is not a matter of right, even if irreparable injury might otherwise result.' It is instead 'an exercise of judicial discretion,' and '[t]he propriety of its issue is dependent upon the circumstances of the particular case.'" (quoting *Virginian R. Co. v. United States*, 272 U.S. 658, 672-73 (1926))).

Given this intrinsic discretion, the D.C. Circuit's well-established *Allied-Signal* test, and the absence of any constraining instruction from this Court, the D.C. Circuit's decision

[8] Applicants did not petition this Court for rehearing to ask the Court to vacate the Rule. *See* Sup. Ct. R. 44.

was foreseeable (even predictable). It is unlikely that the Court would want to review the D.C. Circuit's exercise of its discretion in the proceedings on remand from this Court.

Moreover, it is unlikely that four Justices would vote to grant *certiorari* to review the Remand Order when the case would become moot as soon as EPA issues its supplemental finding in a matter of weeks.[9] When EPA completes its action on its proposed supplemental finding, the status of the Rule for the four-month period between the Remand Order and EPA's action will no longer be a relevant controversy. With no petition for writ of *certiorari* from the Remand Order yet filed, there is essentially no chance that a petition would be fully briefed and ready for the Court's consideration before EPA takes a final action on its proposed supplemental finding. The Court seems unlikely to afford a place on its crowded docket to a case that will not survive the briefing schedule.

2. Applicants are Unlikely to Succeed on the Merits.

Applicants have also failed to demonstrate a "fair prospect" that a majority of the Court would reverse the Remand Order. In effect, Applicants' argument seems to be that after *Michigan v. EPA*, the D.C. Circuit had a ministerial duty to vacate the Rule, and the D.C. Circuit failed to execute that duty. Presumably on this basis, Applicants go so far as to suggest that this Court need not apply its framework for analyzing requests for stays pending review. Application at 8 ("Indeed, the stay analysis itself should be unnecessary…"). The D.C. Circuit correctly rejected their argument.

First, four Justices dissented in *Michigan* and recognized the many ways that EPA had considered costs in developing the regulation. *Michigan*, 135 S. Ct. at 2725-26 (Kagan, J.,

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[9] Recognizing that the issue on which they seek review will be moot, Applicants suggest that this case presents an issue that is capable of repetition evading review. Application at 14. They offer no support for this assertion.

dissenting). This suggests that at least half of the Court would not find it either unreasonable or unlawful for the D.C. Circuit to have left the Rule in place while EPA reconsidered its "appropriate" determination, taking into account costs and other factors.

Also, Applicants are unlikely to succeed on the merits because their argument rests squarely on the notion that this Court's decision in *Michigan v. EPA* deprived the D.C. Circuit of any equitable power to fashion a remedy. As discussed above, this position runs headlong into the Court's decision *not* to vacate the Rule or to direct the D.C. Circuit to do so, the D.C. Circuit's well-established precedent to apply a fact-specific equitable test to fashion an appropriate remedy, and the many circumstances in which courts retain and apply equitable powers even in the face of a statutory violation. Section I.B.1 *supra*.[10]

Applicants are not entitled to a stay of the Rule as a matter of right. *See Nken*, 556 U.S. at 433-34. None of the authorities that Applicants offer suggest otherwise. Applicants argue that language in the Administrative Procedure Act requires vacatur (Application at 8 (citing 5 U.S.C. § 706(2)), but the Clean Air Act expressly supersedes that provision. 42 U.S.C. § 7607(d)(1). Under the Clean Air Act, the D.C. Circuit has authority to "reverse" EPA's adoption of the Rule, but the statute does not mandate the court vacate the Rule on remand. *Id.* § 7607(d)(9).

Applicants urge this Court to adopt a rigid and unreasonable rule that would require that a lower court vacate essentially all agency actions found to be in error, regardless of whether the error can readily be remedied and regardless of the consequences. It is clear that the Court in *Michigan v. EPA* endorsed EPA's authority to regulate, provided EPA considers the

[10] This is not a case where the D.C. Circuit has violated a clear order or pronouncement of law issued by the Supreme Court. Thus, Applicants' citations to *Jaffree v. Board of School Commissioners of Mobile County*, 459 U.S. 1314 (1983) (Powell, J. in chambers) and *Pacileo v. Walker*, 446 U.S. 1307 (1980) (Rehnquist, J., in chambers) are unavailing.

relevant factors in making its determination that regulation is "appropriate." 135 S. Ct. at 2711. The Clean Air Act clearly compels EPA to conduct a study of the public health impacts from hazardous air pollutant emissions from power plants and, after considering the results of that study, to regulate those emissions if it is "appropriate and necessary." 42 U.S.C. § 7412(n)(1)(A) ("The Administrator shall perform a study…" and "shall regulate electric utility steam generating units under [section 7412], if the Administrator finds such regulation is appropriate and necessary after considering the results of the study…"). EPA can correct the deficiency in the regulatory process through which it exercised this clear authority, and it is acting swiftly to do so.[11]

C. Applicants Have Not Demonstrated A Likelihood Of Irreparable Harm.

Applicants also must show that they would suffer irreparable harm in the absence of a stay. *Rubin v. United States*, 524 U.S. 1301, 1301 (1998) (Rehnquist, J., in chambers) ("An applicant for stay *first* must show irreparable harm if a stay is denied." (emphasis added)). Incorrectly stating that the first two factors are dispositive (Application at 7), Applicants have failed to show any likelihood of irreparable harm pending a decision on a petition for writ of *certiorari*. The absence of a showing of irreparable harm alone requires that the Application be denied. *See Ruckelshaus v. Monsanto*, 463 U.S. at 1317 ("An applicant's likelihood of success on the merits need not be considered, however, if the applicant fails to show irreparable injury from the denial of the stay.").

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[11] Applicants cite *Bowen v. Georgetown University Hospital*, 488 U.S. 204 (1988) and *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001) (Application at 6), but neither case is helpful. Those cases involve review of rules where the agency could never address the identified defect because the statute simply provided the agency with no authority whatsoever to promulgate the rule. They did not involve a circumstance where the agency merely had failed to consider a relevant factor in its rulemaking process.

The Rule requires large commercial coal- and oil-fired electric generation units to meet uniform federal emissions standards for hazardous air pollutants. Applicants are twenty States, none of which is regulated by the Rule. States have no compliance obligations under the Rule. They will incur no material costs as a result of the Rule. They do not operate power plants and have made no investments that would be affected by a stay of the Rule. Applicants do not even claim any direct harm to States. Applicants therefore cannot demonstrate they are likely to suffer irreparable harm in the absence of a stay pending appeal. *See id.* at 1316-17 ("An applicant for a stay 'must meet a heavy burden of showing not only that the judgment of the lower court was erroneous on the merits, but also that *the applicant* will suffer irreparable injury if the judgment is not stayed pending his appeal.'" (quoting *Whalen v. Roe*, 423 U.S. 1313, 1316 (1975) (Marshall, J., in chambers)) (emphasis added)).

Applicants' claim to harm is limited to the conclusory and unsupported claim that power generators and, by extension, their customers, would be harmed without a stay. First, Applicants complain that costs that power generators have *already* incurred to comply with the Rule constitute irreparable harm. Application at 9. Costs already spent or irretrievably committed would not be avoided if a stay were granted and so cannot justify a stay.[12]

In reality, nearly all of the capital costs associated with the Rule have already been incurred or contractually committed. *See* Declaration of James E. Staudt, Ph.D., CFA ¶¶ 3, 15 (attached hereto and to Industry Respondent-Intervenors' Motion to Govern below as Exhibit 1, with attachments) ("Staudt Declaration"). Electric generators base investment

[12] Applicants' reliance on *Philip Morris*, 131 S. Ct. at 4 is misplaced. Application at 9. In *Philip Morris*, applicants sought relief from a judgment requiring them to pay $241 million to fund a smoking cessation program. They apparently had not yet incurred the fees associated in establishing the fund, nor had a "substantial portion" of the fund been expended before their appeal could be adjudicated. *Philip Morris*, 131 S. Ct. at 4.

decisions on long-term operational plans, and therefore investment decisions made to comply with the Rule were made long before the April 2015 compliance deadline. Any harm arising from those commitments has already occurred and would not be avoided even by a permanent stay, much less the stay requested here.

Second, Applicants contend that power generators suffer irreparable harm from the ongoing costs of compliance with the Rule: operating pollution controls and complying with monitoring, reporting, and recordkeeping requirements. Application at 9-10. They presented this argument to the D.C. Circuit to support vacatur, but offered no evidence below—and offer no evidence here—of the estimated savings from a temporary stay of the Rule. In any case, these costs would be avoided only for the short time until EPA takes final action on its proposed determination that it remains "appropriate" to regulate power plants under section 112. Moreover, the D.C. Circuit was presented with evidence that actual total annual compliance costs, including sunken capital costs, are less than one-quarter of EPA's 2012 total cost estimate. The actual annual non-capital costs, the only costs that could be avoided by a stay, are only about one-tenth of EPA's 2012 total cost estimate. *See* Staudt Declaration ¶¶ 5, 12, 14, 15.

Applicants' claims of harm are particularly suspect in light of the fact that neither Applicants nor any other party sought a stay of the Rule in the D.C. Circuit or from this Court prior to the decision in *Michigan v. EPA*. After this Court remanded the case to the D.C. Circuit, Applicants requested vacatur of the Rule, but still never asked for a stay.[13] And although the D.C. Circuit entered its Remand Order on December 15, 2015, Applicants waited more than two months before filing the Application. This delay "vitiates much of the force of [Applicants']

[13] Joint Motion to Govern Further Proceedings, Document No. 1574809, Docket No. 12-1100 (D.C. Cir. *motion filed* Sept. 24, 2015).

allegations of irreparable harm." *Beame v. Friends of the Earth*, 434 U.S. 1310, 1313 (1977) (Marshall, J., in chambers).

D. The Considerable Harm To Industry From A Stay Of The Rule Outweighs Any Considerations Supporting A Stay.

Staying the Rule is particularly inappropriate because it would result in considerable disruption to Industry Respondent-Intervenors and other members of the power generation sector. Industry Respondent-Intervenors have consistently supported the Rule, and even industry members who opposed the Rule did not ask the D.C. Circuit to vacate the Rule on remand to EPA.[14] Among those who did *not* join in a request for vacatur were most of the electric generators who were petitioners in the proceedings below, including FirstEnergy Generation Corporation, with a generation profile of approximately 17 gigawatts, and the Utility Air Regulatory Group, a trade association representing many large power generators.[15] Even Tri-State, which initially asked the D.C. Circuit to suspend the Rule's future compliance deadlines for the "small number of plants" that had obtained extensions of time to comply with the Rule, Tri-State's Reply, Document No. 1581995 at 1, Docket No. 12-1100 (D.C. Cir. *filed* Nov. 4, 2015), withdrew that request, acknowledging that "some and perhaps even most of the plants with future compliance deadlines have already made irrevocable commitments to install controls or shut down by April 2016 and might not have an interest in having the MATS compliance obligations suspended," *id.* at 2.[16]

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14 *See supra* note 3.

15 EPA's Response to Petitioners' Motions to Govern Future Proceedings, Document No. 1579186 at 1 n.2, Docket No. 12-1100 (D.C. Cir. *filed* Oct. 21, 2015).

16 Instead, Tri-State narrowed its request and sought relief for only one emission limitation for one small power plant that Tri-State operates. *Id.* at 3.

The silence from industry petitioners below was deafening. As Industry Respondent-Intervenors demonstrated in the D.C. Circuit, staying the Rule would cause severe disruption to the power generation industry, undermining the investments that generators have made with the expectation that the Rule would remain in place, even after this Court's decision in *Michigan*. This disruption would victimize both supporters and opponents of the Rule alike, as uncertainty is anathema to the electric generation industry.

Power generators make investment decisions based on expectations of future prices, among other things. *See* Declaration of William B. Berg (attached hereto and to Industry Respondent-Intervenors' Motion to Govern below as Exhibit 2) ("Berg Declaration") ¶¶ 8, 10-13. Generators require some degree of certainty about future conditions in which they will operate. The Rule has been in effect for nearly four years, and as a consequence, many investments have been made—by generators subject to the Rule, by generators not subject to the Rule, and by other industries—with the Rule in mind. *See id.* ¶¶ 7-9. For example, some generators have upgraded power plants with emission controls. Some generators have restructured their generation portfolios, retiring older, inefficient power plants and selling others to reduce exposure to the Rule. Companies have invested in natural gas generation, which is not covered by the Rule but which competes directly against coal-fired generation, and in forms of non-emitting generation. Companies have invested in new transmission capacity to accommodate new power plants and the retirement of existing plants. All of these plans are economically justified by the reasonable expectation that the Rule would remain in effect, and that the investments would be justified by future electricity prices or capacity market payments. *See id.* ¶ 18.

Staying the Rule would interfere with the price predictions that generators relied on to make those investment decisions, frustrating their expectations and leading to uncertainty in future prices—and future plans—for power generators. Certainty is essential to generators in competitive wholesale electricity markets, as well as to vertically integrated generators whose "sales" are comprised of state-regulated electricity rates. Pollution control costs factor into the costs that generators charge for their electricity. *See* Berg Declaration ¶¶ 18-20. A stay now would advantage only those generators who opted not to invest in pollution controls, leaving those operators who have complied with the Rule—which, at this stage, are virtually all operators who intend to comply with the Rule—at a price disadvantage, because they have to recover their investment costs. *Id.* ¶ 20. A stay for even a brief period of time creates a moving target that is disruptive to the industry. *Id.* ¶ 21.

A stay could also result in uncertainty that disturbs long-range capacity markets, which are the means by which regional transmission organizations ensure adequate generation capacity to preserve reliability. *See* Berg Declaration ¶¶ 12, 22. In many areas of the country, the regional transmission organizations or independent system operators that manage the electric grid pay generators to commit their power plants to be available in the future. *Id.* ¶¶ 12-13. In this way, capacity markets ensure that sufficient generation capacity will be available to meet future demand. Capacity prices depend on the amount of generation that will be available and therefore are very sensitive to power plant retirements. *Id.* ¶ 12. Interrupting the Rule would create uncertainty for power plants that are considering bidding into capacity markets. For example, ISO New England just conducted a capacity auction that concluded on February 11, 2016, and power generators who participated in that market understood from the Remand Order that the Rule would remain in effect while EPA reconsidered its finding. A stay of the Rule at

this stage would undermine those expectations without any consequent benefit to the industry or States.

Looking beyond the electric generation industry, other equities counsel against a stay. In response to demand created by the Rule, the pollution control industry has invested upwards of $1 billion in manufacturing capacity and infrastructure to develop improved products, such as activated carbon for mercury removal and sorbents for acid gas removal. Staudt Declaration ¶ 16. These investments have made it less costly for industry to comply with the Rule but were economically justified only if the increased demand for these materials created by the Rule continues.

The balance of the equities weighs heavily against the Applicants. The harm to the electric power industry from a stay, however brief, is enormous, even considering the small savings that some generators might reap (which comprise Applicants' only specific allegations of "irreparable harm"). Industry Respondent-Intervenors have supported their claims of harm with fact-laden declarations, while Applicants—which are not themselves subject to any obligation under the Rule—offer only generalizations about harm to the very industry to which Industry Respondent-Intervenors belong. Moreover, while delays are certainly possible in any administrative process, it is apparent that EPA will issue its final supplemental finding soon. When it does, the stay requested by Applicants presumably would dissolve, and Applicants' petition for a writ of *certiorari* from the Remand Order would be moot. The Court should not subject its mighty power to such trivial use.

II. THE COURT SHOULD NOT ENJOIN THE RULE.

Although they fashion most of their application as a request for stay, the relief Applicants seek is more appropriately considered an injunction to block the Rule. Rather than "'simply suspend[] judicial alteration of the status quo,'" Applicants seek to upset the status quo

by doing what no court has yet done: suspending the Rule, as applied to all parties, and thus "'grant[ing] judicial intervention that has been withheld by lower courts.'" *Nken*, 556 U.S. at 429 (quoting *Ohio Citizens for Responsible Energy, Inc. v. NRC*, 479 U.S. 1312, 1313 (1986) (Scalia, J., in chambers)).

Recognizing this, Applicants also request an injunction pending appeal. But "[t]he Circuit Justice's injunctive power is to be used sparingly and only in the most critical and exigent circumstances." *Ohio Citizens for Responsible Energy*, 479 U.S. at 1313 (internal quotations omitted). At a minimum, an injunction may be issued only when "[n]ecessary or appropriate in aid of [the Court's] jurisdiction" and "the legal rights at issue are indisputably clear." *Hobby Lobby Stores, Inc. v. Sebelius*, 133 S. Ct. 641, 642-43 (2012) (Sotomayor, J.) (citation omitted). This is a "demanding standard for…extraordinary relief," *id*. at 643, one that "'demands a significantly higher justification' than that required for a stay," *Lux v. Rodrigues*, 131 S. Ct. 5, 6 (2010) (Roberts, C.J., in chambers) (quoting *Ohio Citizens for Responsible Energy*, 479 U.S. at 1313). Applicants cannot meet either requirement for injunctive relief, and their request should be denied.

As for the first prong, Applicants claim this Court must issue an injunction in order to preserve its jurisdiction to "effectuate its decision in *Michigan v. EPA*." Application at 14. That is untrue. EPA is in the process of reconsidering its finding supporting the Rule in light of the infirmity that this Court identified in *Michigan v. EPA*, has proposed and taken comment on a supplemental finding, and has committed to completing that determination by April 15, 2016. Any party aggrieved by the final supplemental finding may seek review in the D.C. Circuit. Enjoining the Rule is not necessary for this Court to review the supplemental finding once EPA completes the regulatory process. *See Hobby Lobby Stores, Inc.*, 133 S. Ct. at 643

(holding that an injunction is not necessary or appropriate to aid the Court's jurisdiction where the applicants may continue their challenge in the lower courts).

As for the second prong, Applicants again grossly mischaracterize the issue. The question before the Court should be whether Applicants' entitlement to relief is "indisputably clear." *See, e.g.*, *Hobby Lobby Stores, Inc.*, 133 S. Ct. at 643. This Court has not previously addressed the line of D.C. Circuit precedent flowing from *Allied-Signal*. *See id*. (holding that applicants' entitlement to relief was not indisputably clear where the Supreme Court had not previously addressed the claims asserted in the underlying action). Given that long-standing line of cases, it is certainly not "indisputably clear" that the Court will reverse the Remand Order. Beyond that, Applicants are not automatically entitled to injunctive relief. *See* Section I.B.1, *supra*. An injunction is an equitable remedy. *See Winter*, 555 U.S. at 32. Here, the equities clearly demonstrate that enjoining the Rule for even a limited period would cause significant harm to the electric power industry and other parties, with no clear benefit to Applicants. *See* Section I.C, *supra*.

CONCLUSION

The Application should be denied.

Dated: March 2, 2016

Respectfully submitted,

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EXHIBIT 1

ARGUED DECEMBER 10, 2013
DECIDED APRIL 15, 2014

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

WHITE STALLION ENERGY CENTER, LLC, et al.,	)	
Petitioners,	)	Case No. 12-1100, and consolidated cases
v.	)	
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY,	)	
Respondent.	)	

DECLARATION OF JAMES E. STAUDT, PH.D., CFA

I, James E. Staudt, make the following declaration in support of the Motion of Industry Respondent Intervenors to Govern Future Proceedings, and declare under penalty of perjury that the following is true to the best of my knowledge, information and belief:

1. I am an engineer and Chartered Financial Analyst with decades of experience in all aspects of energy and air pollution control in the electricity generation sector, as reflected in my CV attached hereto as Exhibit 1. I conduct market studies for the air pollution control industry and, as part of my business,

routinely track the installation of air pollution control equipment on power plants. This is done by review of publicly available information and by direct interaction with people who work at air pollution control companies and at power companies.

2. As reflected in the report attached hereto as Exhibit 2, I have conducted a review of the actual costs that have been incurred by the power generation industry to comply with EPA's Mercury and Air Toxics Standards (the "Rule") and compared these costs to those that EPA estimated *ex ante* as reflected in EPA's Regulatory Impact Analysis ("RIA") for the final Rule.

3. The data regarding costs reflect the final data regarding actual compliance costs through June 30, 2015 and projections of additional measures that might be implemented by the extended deadline of April 2016 for complying with the Rule. The data reflect all existing contracts for the installation of any air pollution control systems that represented any material aspect of EPA's cost estimate in the RIA. Further, all contracts that would be required to install equipment to meet the requirements of the Rule by even the extended deadlines will have been executed and will be reflected in the publicly available data.

4. To the extent that a contract has not been executed for a generating unit operating under a compliance extension, the owner of the generating unit will plan to retire that unit or to use natural gas in lieu of coal or oil to fuel the unit.

5. Experience with technologies deployed for compliance with the Rule has shown them to be less expensive and more effective than originally assumed in EPA's analysis. Technological improvements and a lower price of natural gas than originally projected have further reduced costs. As a result, the true cost of complying with the Rule is approximately $7 billion per year less than estimated by EPA, making the true cost of the Rule approximately $2 billion or less than one-quarter of what EPA originally estimated the Rule to cost.

6. The reduced actual cost of meeting the Rule's emissions limits are due to the facts that: (1) improvements in dry sorbent injection ("DSI") and activated carbon injection ("ACI") technologies have significantly lowered the costs of those pollution control systems; (2) natural gas prices have been significantly lower than those upon which EPA's estimates were premised; and (3) EPA overestimated the generation capacity that would require installation of fabric filters (also known as baghouses), dry flue gas desulfurization ("FGD") systems and wet FGD upgrades. As a result of EPA's overestimate of the generation capacity requiring those systems, the amortized capital costs, costs associated with fuel changes, variable operating and maintenance costs, and fixed operating and maintenance costs associated with each of these systems were also overestimated. The effect has been that the actual costs have been significantly lower than EPA's *ex ante* estimates.

7. With respect to fabric filter installations, EPA's Air Markets Program Data show only about 82 GW of Electric Utility or Small Power Producer Generation equipped with baghouses for particulate matter control at the end of second quarter 2015. My firm and its clients, who include manufacturers of pollution control equipment, are aware of about 8.7 GW in capacity of additional fabric filter projects currently underway at power plants that received compliance extensions and are not associated with new FGD systems. In other words, the RIA overestimated the fabric filter installations by about 100 GW (191 GW of total fabric filter projected to be installed versus about 91 GW).

8. With respect to dry FGD, EPA's RIA forecast 51 GW of dry FGD to be installed in the Policy Case versus 29 GW in the Base Case, when, in fact, Air Markets Program Data show that at the end of second quarter 2015 there were only about 33 GW of dry FGD installed, so that the RIA overestimated the required installations by 18 GW. Although additional dry FGD installations are planned in the coming years, these are primarily being installed for Regional Haze Rules or for other SO_2 reduction needs.

9. With respect to wet FGD upgrades, EPA's forecast of 63 GW in wet FGD upgrades is also higher than the actual capacity that has been installed. In 2015 there was about 170 GW of wet FGD installed on coal-fired electric utility units or small power plants and just over 2 GW of additional wet scrubber capacity in

requested compliance extensions. On the other hand, a review of EPA's 2009 Information Collection Request data shows only about 7,600 MW of the roughly 52,000 MW of capacity with wet FGD installed that reported hydrochloric acid emissions to the Information Collection Request, or about 15%, had hydrochloric acid emissions in excess of the Rule's emissions limit. This would suggest only about 30 GW of wet FGD upgrades to be expected. About 16 GW of wet FGD upgrades have been identified in applications for compliance extensions. While there is no official data showing the level of wet FGD upgrades, it is reasonable to assume that at least 16 GW and no more than 30 GW of wet FGD upgrades will be performed for compliance with the Rule. To that point, most of the wet FGD upgrades were justified on the basis of improved SO_2 control for other regulatory programs such as the Cross-State Air Pollution Rule.

10. EPA's estimates for the operating costs associated with DSI and for ACI did not account for the improved performance of these reagents or sorbents in reducing the demand for reagent/sorbent or the cost of waste disposal. EPA also forecast an increase in fuel cost as natural gas replaced coal as utility fuels.

11. EPA's forecast Policy Case projected a cost of natural gas in 2015 of $5.66/MMBtu versus $5.40/MMBtu in its Base Case. Data from the Energy Information Administration indicates that in 2015 natural gas to utility customers has ranged from a high of $4.99/thousand cubic feet down to $3.24/thousand cubic

feet, or about $4.99/MMBtu to about $3.24/MMBtu because a cubic foot of gas has very close to 1,000 Btu's of energy. Therefore, much lower natural gas prices than forecast by EPA have made gas a much more attractive fuel and has resulted in the cost of compliance with the Rule to be much lower than anticipated.

12. Table 1 summarizes the overestimate in costs resulting from EPA's overestimate of the new air pollution control equipment that would be required to comply with the Rule:

Table 1. Approximate overestimate of costs

	FF [1]	dry FGD [2]	DSI [3]	wet FGD [4]	ACI [5]	Total
Capital, million $	$16,072	$8,838	$0	$5,692	$414	$31,016
Annualized, capital, million $	$1,816	$999	$0	$643	$47	$3,505
Operating costs, million $	$102	$391	$1,400	$37	$1,787	$3,718
Total Annual Million $	$1,918	$1,390	$1,400	$680	$1,834	$7,223

Notes:

1. *The overestimate of FF is the amount over actual installations that is not explained by dry FGD*
2. *Dry FGD estimate for excess dry FGD over actual installed*
3. *DSI estimate assumes that actual reagent is roughly one third of EPA assumption.*
4. *Wet FGD upgrade assumes 30 GW of actual upgrade versus 63 GW predicted. No formal data is available. Also factors in the fact that the actual reduction in wet FGD versus the Base Case was greater than forecast by EPA*
5. *Accounts for: EPA assumption about fly ash waste for facilities where fly ash is collected with carbon; higher carbon demand from units with ESP versus TOXECON because EPA assumed more TOXECON installations, which include new baghouses; overestimate of ACI installations after rule is fully implemented*

13. My analysis of the dramatic reductions in cost is also reflected in the securities filings of electricity generating companies, which show a consistent pattern of actual costs falling significantly below those that were originally projected, as reflected in Exhibit 3.

14. EPA's original estimate of cost of $9.6 billion per year in 2015 exceeds the actual cost to utilities by over $7 billion. These results are neither unusual nor are they surprising. In virtually all cases where *ex ante* estimates of the costs of complying with pollution control requirements are compared with actual pollution control costs, the actual costs are significantly lower than the costs originally estimated both by EPA and by industry, sometimes by an order of magnitude.

15. Moreover, at this point all fixed capital expenses have already been incurred or must be paid pursuant to existing contracts. Therefore, a large portion of the expense of the Rule is already committed. I have also conducted a rough bottom up estimate of the costs of the Rule, in which I have used conservative estimates. This estimate is that the total cost of the Rule is now slightly less than $2 billion per year, with almost half of that cost amortized capital that has already been committed. Thus, the remaining costs will likely be less than $1 billion.

16. Finally, the companies that supply activated carbon and DSI reagents have invested at least several hundred million dollars and perhaps close to one billion dollars in the United States into new manufacturing plants, plant expansions, additional personnel, and supply chain infrastructure in order to produce the materials necessary to meet the anticipated ongoing and future demand of the utility industry for these materials in complying with the Rule. These investments were necessary for the development and production of the improved reagents that

have enabled the utility industry to avoid many of the capital costs identified in paragraphs 7 through 9 and are also responsible for the reduction in operating costs associated with DSI and ACI as discussed in paragraph 10. In the event the Rule is vacated, this will dramatically reduce the demand for these products, have a severe negative impact on these companies and their employees, and will disrupt the ability of these companies to serve the electric utility and other markets in the future.

Dated: September 24, 2015

James E. Staudt

Exhibit 1

James E. Staudt, Ph.D., CFA

Dr. Staudt has been involved in the energy sector for several decades, and is a nationally-recognized expert in the energy and air pollution control and monitoring industries. He has experience that spans many aspects of power generation to include use of fossil energy, turbomachinery, nuclear energy, energy storage and process sensor development. His experience also spans other energy-intensive industries, such as Portland Cement, Refining, Iron & Steel, Pulp & Paper and others. Dr. Staudt has a deep knowledge of both the technical issues of the energy industry as well as economics and finance as they relate to this industry.

- Dr. Staudt has authored emissions control technology documents and software that are licensed by professionals in the United States, Europe, and Asia.
- He has worked with state and federal agencies on regulation of emissions from fossil fueled power plants and major industrial facilities.
- He has advised owners of energy and manufacturing facilities on how to most cost-effectively meet their environmental obligations.
- He has advised technology suppliers on business strategy, to include market analysis, mergers and acquisitions, and valuation of businesses.
- He has advised investors in energy and environmental sector companies.to include valuations
- Dr. Staudt is a reviewer for the Mass Ventures START program for the Commonwealth of Massachusetts. START is a program funded by the Commonwealth of Massachusetts to assist Massachusetts-based companies that have been successful in the Federal Small Business Innovation Research (SBIR) program.

Dr. Staudt's experience in the energy and air pollution sectors spans over three decades. Prior to starting his consulting practice, Andover Technology Partners (ATP), in 1997, Dr. Staudt was employed by suppliers of air pollution control or monitoring technology and energy industry equipment. At these employers he was in senior management roles and developed technologies that are widely used at industrial facilities. He was a founder of a process sensor and analyzer company. Previous employment also includes serving as a commissioned officer in the US Navy nuclear power program.

Dr. Staudt has published over 60 technical papers, articles or reports and has also authored numerous reports for clients as part of his consulting practice.

Education and Professional Credentials

- B.S. in Mechanical Engineering from the U.S. Naval Academy (1979)
- M.S. (1986) in Engineering from the Massachusetts Institute of Technology (M.I.T.)
- Ph.D (1987) in Engineering from the Massachusetts Institute of Technology (M.I.T.) with a minor in Business Management
- Chartered Financial Analyst (CFA) designation (2001)

Awards

2007 US Environmental Protection Agency Science and Technology Achievement Award

- *Providing the Public with a Comprehensive Summary of Technologies for Control of Mercury Emissions from Electric Utility Boilers*

Business and Professional Associations

- Member, CFA Institute
- Associate Member, Institute of Clean Air Companies

Military Service

From 1979 to 1984 Dr. Staudt served as a commissioned officer in the U.S. Navy in the Engineering Department of the nuclear-powered aircraft carrier USS ENTERPRISE (CVN-65), attaining the rank of Lieutenant (O-3) prior to leaving the service.

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James E. Staudt, Ph.D.
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Exhibit 2

Andover Technology Partners 978-683-9599
Consulting to the Air Pollution Control Industry

REVIEW AND ANALYSIS OF THE ACTUAL COSTS OF COMPLYING WITH MATS IN COMPARISON TO PREDICTED IN EPA'S REGULATORY IMPACT ANALYSIS

At this point we are in a position to make a post-hoc assessment of what the cost has been to comply with US EPA's Mercury and Air Toxics Standards (MATS) for power plants. In its Regulatory Impact Analysis (RIA) for the final rule.[1] EPA estimated a cost for the rule of $9.6 billion (2007 dollars) versus quantified benefits of between $33 billion to $81 billion, depending upon discount rate (plus other unquantified benefits). The $9.6 billion annual cost is primarily the cost to control coal-fired units, at an estimated $9.4 billion. This $9.4 billion includes the following components:

- Amortized capital
- Costs associated with change in fuel
- Variable operating and maintenance (VOM)
- Fixed operating and maintenance (FOM)

These costs are estimated using the Integrated Planning Model (IPM), which is described later. The fuel costs are associated with the costs of switching to natural gas or to lower chlorine coal.

Experience with technologies deployed for MATS compliance has shown them to be less expensive and more effective than originally assumed in EPA's analysis. Technological improvements and a lower price of natural gas than originally projected have further reduced costs. As a result, the true cost of complying with the MATS rule is approximately $7 billion per year per year less than estimated by EPA, making the true cost of the rule approximately $2 billion, or less than one-quarter of what EPA originally estimated the Rule to cost.

Except for the fuel charge, EPA's forecast of the cost impact of the MATS rule is determined in large part by the forecast of installed air pollution control equipment, which is shown in Figure 1. This figure shows the forecast installations (expressed as GW of installed capacity) in the Base Case and forecast installations in the case of the MATS rule. As shown, EPA forecast a reduction in wet FGD systems (fewer FGD retrofits in the policy case than in the Base Case) and increases in dry FGD systems, FGD upgrades, increase in Dry Sorbent Injection (DSI), an increase in Activated Carbon Injection (ACI), and increases in Fabric Filters (FF) and ESP upgrades. These forecasts are determined using ICF International's Integrated Planning Model (IPM), which is described briefly in the insert on the following

[1] Regulatory Impact Analysis for the Final Mercury and Air Toxics Standards, EPA-452/R-11-011, December 2011

page, and the methodology and assumptions for IPM are described in detail in the documentation found on EPA's web site.

Methods to comply with the regulation may include addition of control technology, changing fuels, or even retirement. For every technology considered EPA makes assumptions about the capital and operating cost of the technology and the performance of the technology with regard to emissions control performance. Costs for fuels are considered as well, and this is particularly important when an option is to change to different fuels. IPM selects the approach that provides the lowest cost to comply, or, alternatively, the highest future value for operation of the facility. IPM estimates the future dispatch of the facility based upon the economics of that facility relative to other facilities in the region. In cases where the facility is determined to be uneconomical to operate in the future, IPM will determine that the facility will be retired and electricity supplied from other sources.

According to the RIA issued with the final rule: *"This analysis projects that by 2015, the final rule will drive the installation of an additional 20 GW of dry FGD (dry scrubbers), 44 GW of DSI, 99 GW of additional ACI, 102 GW of additional fabric filters, 63 GW of scrubber upgrades, and 34 GW of ESP upgrades. . . .With respect to the increase in operating ACI, some of this increase represents existing ACI capacity on units built before 2008. EPA's modeling does not reflect the presence of state mercury rules, and EPA assumes that ACI controls on units built before 2008 do not operate in the absence of these rules. In the policy case, these controls are projected to operate and the projected compliance cost thus reflects the operating cost of these controls. Since these controls are in existence, EPA does not count their capacity toward new retrofit construction, nor does EPA's compliance costs projection reflect the capital cost of these controls (new retrofit capacity is reported in the previous paragraph)."*

EPA uses the Integrated Planning Model (IPM) to analyze the projected impact of environmental policies on the electric power sector in the 48 contiguous states and the District of Columbia. Developed by ICF Consulting, Inc. and used to support public and private sector clients, IPM is a multi-regional, dynamic, deterministic linear programming model of the U.S. electric power sector. It provides forecasts of least-cost capacity expansion, electricity dispatch, and emission control strategies for meeting energy demand and environmental, transmission, dispatch, and reliability constraints. IPM can be used to evaluate the cost and emissions impacts of proposed policies to limit emissions of sulfur dioxide (SO_2), nitrogen oxides (NO_x), carbon dioxide (CO_2), and mercury (Hg) from the electric power sector. The IPM was a key analytical tool in developing the Clean Air Interstate Rule (CAIR).

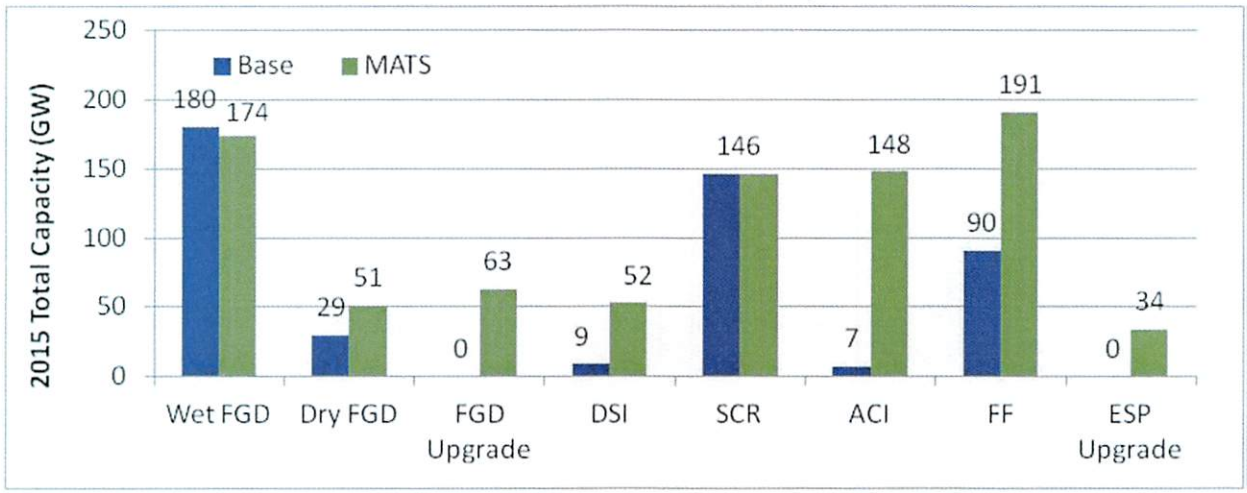
Among the factors that make IPM particularly well suited to model multi-emissions control programs are (1) its ability to capture complex interactions among the electric power, fuel, and environmental markets; (2) its detail-rich representation of emission control options encompassing a broad array of retrofit technologies along with emission reductions through fuel switching, changes in capacity mix and electricity dispatch strategies; and (3) its capability to model a variety of environmental market mechanisms, such as emissions caps, allowances, trading, and banking. IPM's ability to capture the dynamics of the allowance market and its provision of a wide range of emissions reduction options are particularly important for assessing the impact of multi-emissions environmental policies like CAIR.

http://www.epa.gov/airmarkets/progsregs/epa-ipm/

Now that we know what companies have done to comply with the MATS rule, we are in a position to determine how accurate this forecast was. There are a few things that stand out about the methods that were projected by EPA for industry to comply with the rule:

- The very high level of projected fabric filter systems
- The level of projected dry FGD systems
- The level of scrubber upgrades
- The high cost of dry sorbent injection ("DSI") and activated carbon injection ("ACI") systems that did not take account of technological advances reducing those costs
- The limited amount of fuel switching compared to actual levels driven by low shale gas prices

Figure 1. Operating Pollution Control Capacity on Coal-fired Capacity (by Technology) under the Base Case and with MATS, 2015 (GW)[2]



Fabric Filter - EPA's Air Markets Program Data shows only about 82 GW of Electric Utility or Small Power Producer Generation equipped with baghouses for particulate matter control at the end of second quarter 2015. Another 8.7 GW of fabric filter projects – not part of dry FGD projects - are underway with extensions for a total of perhaps 91 GW.[3] In other words, IPM overestimated the baghouse installations by about 100 GW (191 GW of total FF projected to be installed versus 91 GW) as shown in Figure 2. This is related to assumptions about DSI, dry FGD and the need for PM upgrades.

Dry FGD - IPM forecast 51 GW of dry FGD to be installed in the MATS policy case versus 29 GW in the Base Case when, in fact, AMPD data shows that at the end of second quarter 2015 there were only about 33 GW of dry FGD installed – or an overestimate of 18 GW as shown in Figure 2. Although there are an estimated 22 GW of dry FGD projects underway to be completed in the coming years and MATS extensions have been permitted associated with these projects,[3] these

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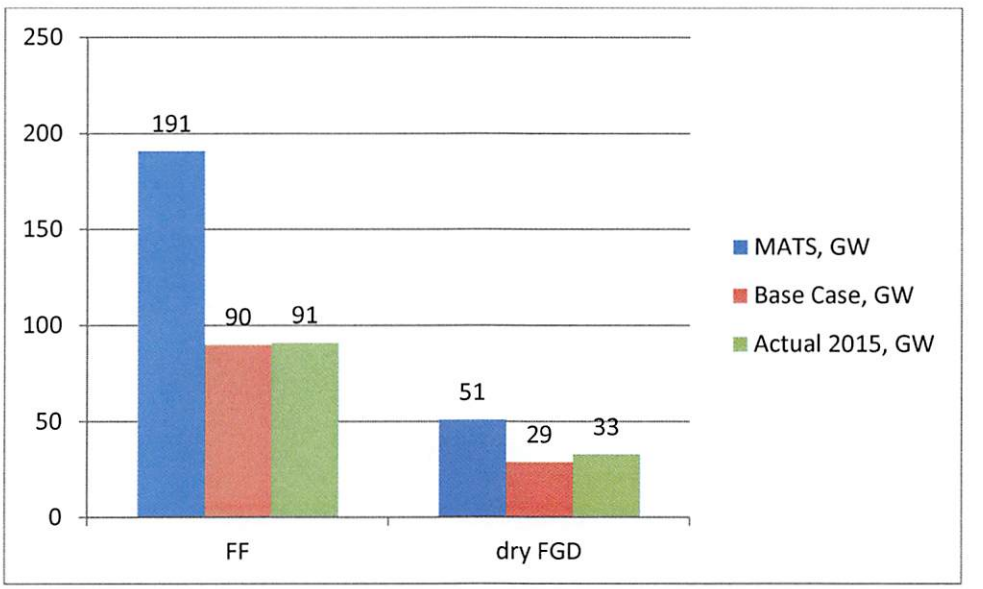
2 Note: The difference between controlled capacity in the base case and under the MATS may not necessarily equal new retrofit construction, since controlled capacity above reflects incremental operation of dispatchable controls in 2015. Additionally, existing ACI installed on those units online before 2008 are not included in the base case to reflect removal of state mercury rules from IPM modeling. For these reasons, and due to rounding, numbers in the text below may not reflect the increments displayed in this figure. See IPM Documentation for more information on dispatchable controls.

3 Michael J. Bradley and Associates, "MATS Compliance Extension Status Update", MJB&A Issue Brief, June 24, 2015. Examination of the underlying data showed that of the 17 GW of FF with extensions, 8.3 GW were associated with FGD systems, leaving 8.7 GW of FF not associated with FGD.

dry FGD systems are primarily part of plans for compliance with the Regional Haze Rule or other SO_2 control requirements.

Scrubber upgrades – EPA's forecast of 63 GW in wet FGD upgrades is higher than actual. In 2015 there was about 170 GW of wet FGD installed on coal fired electric utility units or small power plants. On the other hand, a review of the Information Collection Request (ICR) data shows only about 7,600 MW of the roughly 52,000 MW of capacity with wet FGD installed that reported HCl emissions to the ICR, or about 15%, had HCl emissions in excess of the MATS limit. This would suggest only about 30 GW of FGD upgrades to be expected. About 16 GW of scrubber upgrades have been identified in applications for MATS extensions.[3] While there is no official data showing the level of wet FGD upgrades, it is reasonable to assume that at least 16 GW and no more than 30 GW of scrubber upgrades were performed. To that point, most of the FGD system upgrades were justified on the basis of improved SO_2 control for CAIR or CSAPR rather than MATS.

Figure 2. MATS and Base Case projections, and 2015 actual or planned installations of FF and dry FGD, expected to be directly a result of MATS, GW



The projected fixed and variable operating costs are also impacted by the type of equipment projected to be used and the assumed reagent usage rates for this equipment. Of particular concern with regard to variable operating cost are reagent usage assumptions relating to dry sorbent injection (DSI).
This Report will review each of the following as they relate to EPA's projection of cost to the MATS rule.

- Capital and operating cost projections relating to EPA forecasts for DSI
- Capital and operating cost projections relating to EPA forecasts for dry FGD
- Forecasts for PM control retrofits to fabric filters
- Forecasts for ACI variable operating and maintenance costs

- Fuel cost projections

Projections for the capital and operating costs for Dry Sorbent Injection (DSI)

In practice, DSI may be deployed for control of SO_3, HCl or SO_2. For SO_3 control the DSI system may be deployed in combination with an ACI system to enhance the Hg capture of the ACI system. On the other hand, IPM only forecasts DSI systems for MATS compliance as a means for controlling HCl. Therefore, many of the DSI systems installed to enhance Hg control in response to the MATS rule were not installed to control the pollutant EPA targeted DSI for. By and large, DSI systems for SO_3 control, however, are quite inexpensive to own and operate compared to those used for SO_2 or HCl control as a result of the comparatively very low reagent demand necessary to control SO_3. Therefore, the costs of the DSI systems associated with SO_3 capture can be ignored when compared against these other costs.

DSI capital cost

EPA's assumptions regarding use of a fabric filter in combination with DSI and EPA's assumptions about DSI treatment rates for controlling HCl introduce a number of issues. As described in Section 5.5.3 of the IPM documentation, EPA assumes that facilities that select DSI for reduction of HCl emissions always install a fabric filter. Treatment rate is assumed by EPA to be at a Normalized Stoichiometric Ratio of 1.55 using milled Trona per Appendix 5-4 of the IPM v4.10 documentation.[4] Experience has shown that lower treatment rates are possible without the need to retrofit a fabric filter.

Sodium based sorbents, such as Trona actually improve ESP capture efficiency due to the beneficial impact on fly ash resistivity making a fabric filter retrofit unnecessary. In fact, very few DSI systems that have been installed in response to the MATS rule entailed installation of a fabric filter. EPA's overestimation of fabric filters is due in part to the assumption that use of DSI for HCl control requires a baghouse. Assuming that the 9 GW of DSI forecast in the Base Case does not have FF, this means that IPM forecast at least an additional 43 GW of DSI that was equipped with FF (52 GW projected in the policy case versus 9 GW in the Base Case). Fabric filters increase the installed cost of a DSI system by a substantial amount – costing on the order of $150-$250/kW, depending upon the size of the facility and other factors.

Although EPA assumed that a fabric filter would be necessary for control of HCl, it is also worth examining the capital costs EPA uses for use of DSI upstream of an ESP, because this is by far the most common application of DSI. Appendix 5-4 of the IPM documentation describes the cost estimating approach developed by Sargent & Lundy for use in the IPM.[4] This methodology predicts capital costs of $40/kW for a 500 MW plant and costs well in excess of $100/kW for plants of about 100 MW in size. Discussions of these costs with both utilities and technology providers indicates pretty clearly that these capital cost estimates are well above what has been experienced in practice. This may be the result of the overestimation of Trona demand – that would necessitate more equipment than in fact is necessary.

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[4] Sargent & Lundy, "IPM Model – Updates to Cost and Performance for APC Technologies Dry Sorbent Injection for SO2 Control Cost Development Methodology Final", August 2010 Project 12301-007

DSI operating costs

DSI operating costs are also lower than estimated. EPA assumed that DSI would provide 90% HCl removal and would require a normalized stoichiometric ratio (NSR) of 1.55 when using DSI in combination with a baghouse for capturing HCl. Studies by Solvay[5] showed DSI achieving over 98% HCl removal at much lower treatment rates. They examined several sorbents at different milling levels.

- Trona (S200) - d50 : 30 μm
- Milled Trona (S250) - d50 : 15 μm, d90 : 60 μm
- Milled Sodium Bicarbonate (S350) - d50 : 12 μm, d90 : 40 μm
- Finely Milled Sodium Bicarbonate (S450) - d50 : 7 μm ,d90 : 17 μm
- Hydrated Lime - d90 : 45 μm, purity: 96.8%

Figures 3a and 3b show the results of pilot tests performed with injection upstream of an ESP and Figures 4a and 4b show the results of pilot tests performed with injection upstream of a baghouse. As demonstrated by Figure 3a, 90% HCl capture was achieved with milled Trona (D250) with an NSR or roughly 0.3 and 99% capture was achieved with an NSR of roughly 0.6. This compares to an assumed forecast of 1.55 for 90% capture. EPA's assumed treatment rate at 90% removal was therefore almost five times what is shown in this data. As demonstrated in Figure 3a, with an ESP milled trona produced 90% capture at an NSR of about 0.35 and 99% capture with an NSR of about 0.70. However, in this case much better performance was provided by the more reactive sodium bicarbonate (S350 and S450). While any given facility may experience slightly different results than shown in these pilot tests, it is clear that whether using trona or sodium bicarbonate it is possible to achieve well in excess of 90% without a fabric filter at treatment rates well below those assumed by EPA.

SO_2 capture is normally well below that of HCl because SO_2 is slower to react, and Figures 3b and 4b confirm that. At treatment rates where milled trona is expected to achieve 90% HCl capture, roughly 20% SO_2 capture is expected, and at treatment rates where 99% HCl capture is achieved, roughly 40% SO_2 capture is expected. These significant levels of SO_2 capture are nonetheless lower than the 70% assumed by EPA.

Another aspect of operating costs is waste disposal. EPA assumes that the by-product must be disposed of at a much higher cost than normally used for landfill of coal combustion products. This is an unnecessary cost because sodium by product can be blended or neutralized and disposed of as a non-hazardous waste at a much lower cost. Moreover, if this were a sufficiently large concern, the facility owner could use calcium-based reagent, such as hydrated lime, which produces a highly stable product.

Other factors that caused the IPM forecast of fabric filters to be too high was the result of overestimation of dry FGD, overestimation of waste disposal costs associated with ACI, and underestimation of the ability of existing ESPs to achieve the MATS PM emission standard with simple upgrades.

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5. Yougen Kong, Mike Wood, Solvay Chemicals Inc.," HCl Removal in the Presence of SO2 Using Dry Sodium Sorbent Injection", Houston, Texas, available at www.solvay.com

Figure 3a. HCl removal with injection upstream of an ESP

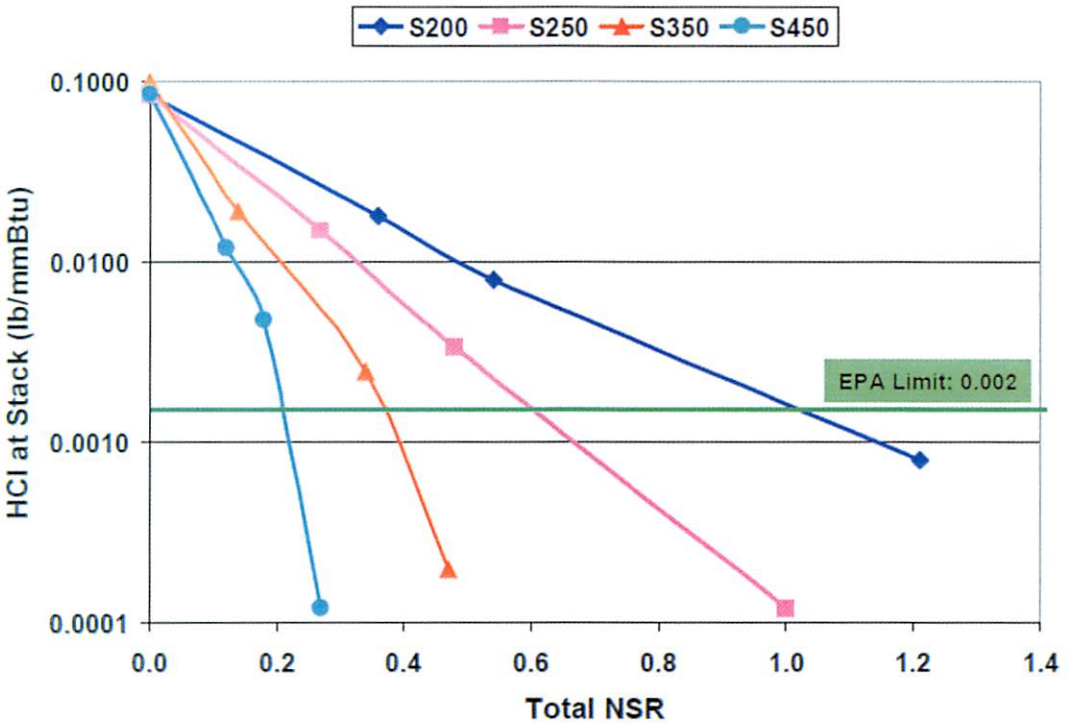


Figure 3b. SO_2 reduction with injection upstream of an ESP

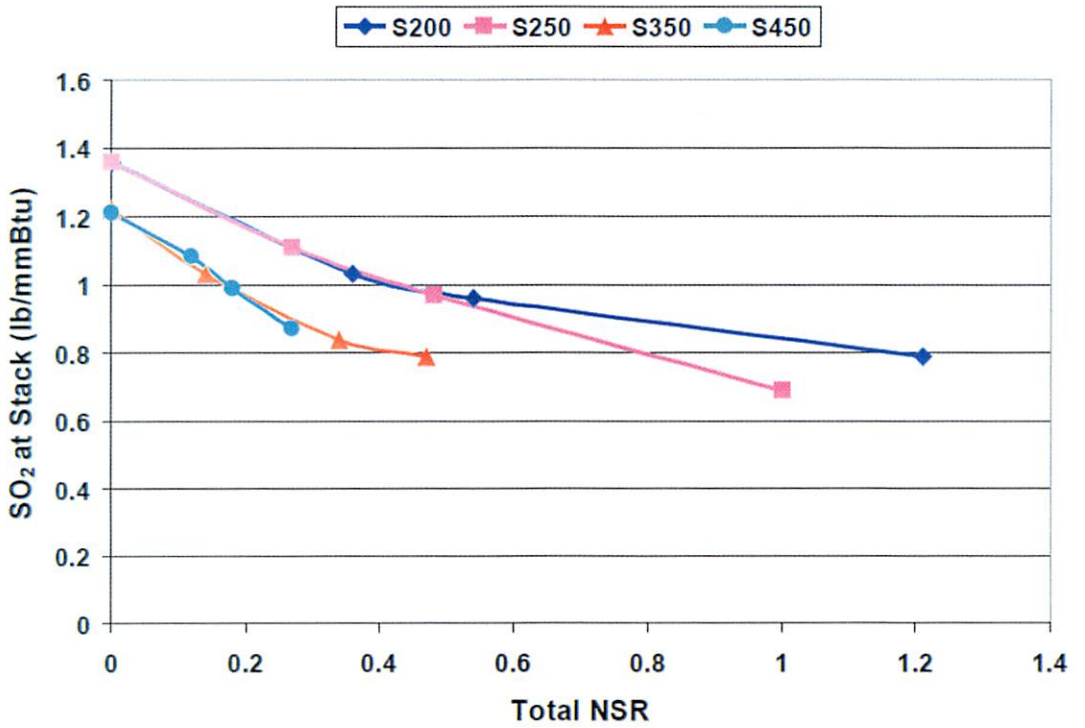


Figure 4a. HCl removal with injection upstream of baghouse

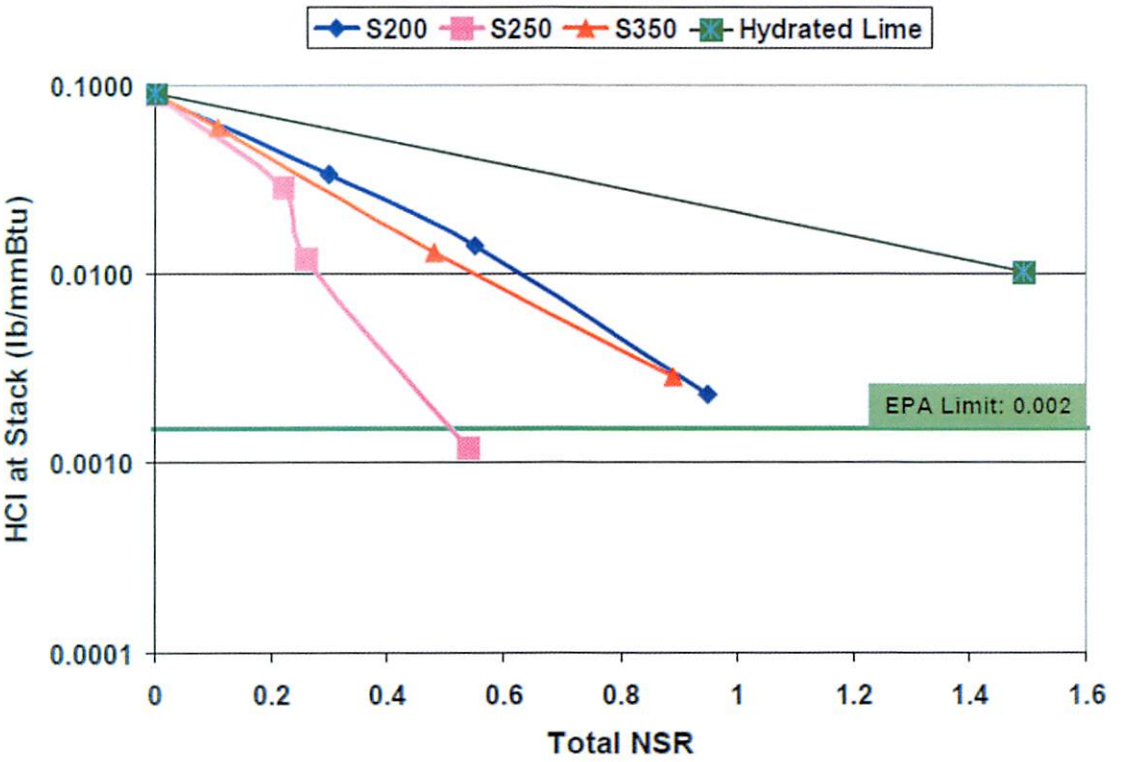
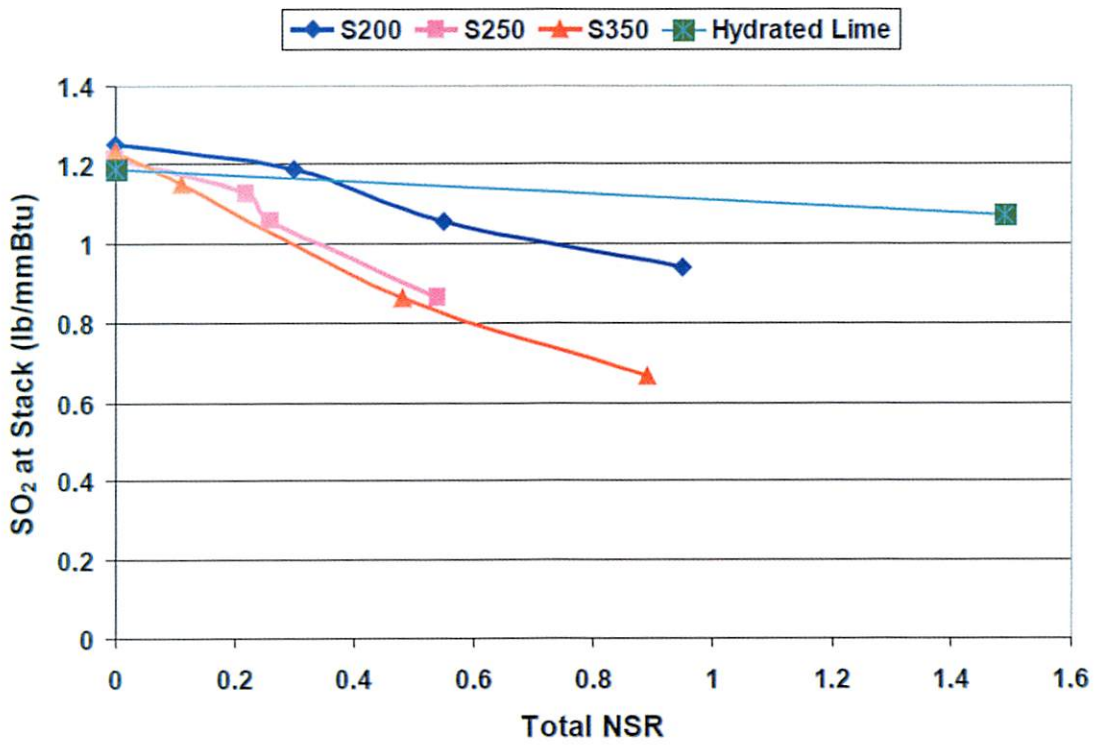


Figure 4b. SO_2 reduction with injection upstream of a baghouse



Projections for dry FGD

Dry FGD systems are commonly installed with fabric filters. As a result, an overestimation of dry FGD installations will result in an overestimation of fabric filter installations. The reason for the high forecast for dry FGD is likely the result of forecasts for DSI costs with a fabric filter (that may have made the incremental cost for dry FGD more acceptable) or the assumption by EPA that DSI is limited to only 90% HCl capture (that would force dry FGD to be selected by the IPM if greater than 90% HCl reduction was necessary). These assumptions would cause IPM to project that companies would select dry FGD for acid gas control rather than DSI in situations where DSI is, in fact, capable of providing adequate acid gas control. But, the effects of DSI and dry FGD can explain about 65 GW[6] of the roughly 100 GW of FF that were forecast but are not actually installed.

Projections for PM control

EPA's assumptions regarding DSI and dry FGD do not adequately explain the overestimation of fabric filters in their MATS cost estimate. EPA also made assumptions about the need to retrofit fabric filters for PM control to meet the MATS PM standard or for use in ACI systems. The assumptions for PM were used in a spreadsheet to identify facilities projected to need upgrade of their ESP or retrofit of a fabric filter. The projection developed with the spreadsheet was exogenously input to the IPM model to determine if improvement in PM collection efficiency was needed and, if so, what kind of improvement would be performed and what it would cost. In this manner that spreadsheet determined if a PM retrofit with a baghouse was necessary or if ESP upgrade was adequate. The approach used apparently underestimated the ability of the existing ESP to achieve the MATS PM emission standard. In fact, most ESPs were capable of achieving the emission standard without any modifications or with relatively modest changes – at most changes to the transformer rectifier sets and perhaps electrodes. In many cases rebalancing of flows was adequate at minimal cost.

The result is that EPA projected more fabric filter retrofits than were, in fact, built. EPA's modeling attributes 101 GW of FF to MATS versus the Base Case, some of which are attributed to dry scrubbers. Moreover, EPA also likely overestimated the cost of modifying existing ESPs to comply with the regulation. ATP's estimate of the market size for ESP upgrades in 2014 was only in the range of about $50 million based upon interviews with discussions with suppliers of these services and equipment.

ACI variable operating and maintenance costs

According to Appendix 5-3 to Chapter 5 of the IPM documentation,[7] EPA assumes that when activated carbon and fly ash are collected in the same PM control device that the cost of disposal for all solids – fly ash and activated carbon – are increased. The effect is that the projected cost of waste disposal exceeds that of the carbon sorbent – more than doubling the VOM. This is based upon the presumption that addition of activated carbon renders beneficial reuse of fly ash impossible. In practice, this does not

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[6] 22 GW of additional dry FGD for MATS versus the Base Case plus 43 GW of additional FF on DSI for MATS versus the Base Case

[7] Sargent & Lundy, "IPM Model – Revisions to Cost and Performance for APC Technologies Mercury Control Cost Development Methodology, Final", March 2011, Project 12301-009

happen. First, despite the desirability of beneficially reusing fly ash as a concrete additive, in practice most fly ash is not used for this purpose because of local market conditions or other reasons. Furthermore, activated carbon suppliers have developed "cement friendly" carbons that do not have the adverse impact of conventional carbons. The assumption that waste disposal costs increase so much may also partially account for the overestimate of fabric filters, as installation of an additional fabric filter would facilitate segregation of fly ash from activated carbon.

EPA also overestimated the ACI that is attributable to MATS – 148 GW of ACI forecast for MATS versus 7 GW in the Base Case. According to ATP's estimates, *at least* 20 GW of ACI was in operation in 2014, clearly well over the 7 GW attributed by EPA to the Base Case. Furthermore, EPA's estimate of 148 GW of ACI exceeds somewhat ATP's estimates of total ACI systems, which is about 120 GW once MATS is fully implemented. ATP estimates that with the rule fully implemented, about 100 GW of ACI is attributable to MATS.

Fuel Costs

Facility owners will convert to natural gas or switch to higher cost coal if in their estimation this is a less costly approach to complying with the MATS rule. EPA's forecast Policy Case projected a cost of natural gas in 2015 of $5.66/MMBtu versus $5.40/MMBtu in its Base Case. Data from the Energy Information Administration indicates that in 2015 natural gas to utility customers has ranged from a high of $4.99/thousand cubic feet down to $3.24/thousand cubic feet, or about $4.99/MMBtu to about $3.24/MMBtu because a cubic foot of gas has very close to 1,000 Btu's of energy. Therefore, much lower natural gas prices than forecast by EPA have made gas a much more attractive fuel and has resulted in the cost of compliance with the rule to be much lower.

Impact on cost

A rough estimate of the impact on cost of the various assumptions addressed in this memo is shown in Table 1. This shows the estimated excess costs associated with:

- the fabric filter overestimate that is not associated with dry FGD,
- the overestimate of dry FGD
- the overestimate of reagent consumption associated with DSI
- the overestimate of capital cost associated with wet FGD upgrades,
- the overestimate associated with waste disposal assumptions for ACI,
- an adjustment to account for the underestimate of carbon use if the facilities that are assumed to install TOXECON systems do not,
- the overestimate of the ACI systems attributable to the MATS rule

Section 8 of the IPM documentation states that a capital charge rate of 11.3% is used for environmental retrofits, which is what is used to determine amortized capital charges. the assumed capacity factor is 65%. Cost estimates are developed using capital costs ($/kW), VOM ($/MWh) and FOM ($/kW-yr) rates taken from the IPM v4.10 documentation used to develop the MATS rule. The fabric filter overestimate

is clearly the most significant, followed by the overestimate of dry FGD and the overestimate associated with DSI.

The overestimate of FF that is not explained by dry FGD is 82 GW. 43 GW of this is explained by DSI attributed to MATS, leaving 40 GW unexplained by DSI or dry FGD. This results in an additional 40 GW that can be ACI systems in TOXECON arrangements. As a result, there are roughly 101 GW (141 GW – 40 GW) that are ACI systems without TOXECON that where waste-disposal costs are overestimated. This is offset in part by the underestimate of sorbent costs if the 40 GW of forecast TOXECON systems are made to be conventional ACI systems upstream of an ESP.

Table 1. Approximate overestimate of costs

	FF [1]	dry FGD [2]	DSI [3]	wet FGD upgrade [4]	Wet FGD [5]	ACI Waste [6]	ACI carbon [7]	ACI excess [8]	Total
million $	$16,072	$8,838	$0	$4,700	$992	$0	$0	$414	$31,016
Annualized, capital, million $	$1,816	$999	$0	$531	$112	$0	$0	$47	$3,505
Operating costs, million $	$102	$391	$1,400	$0	$37	$1,196	-$207	$798	$3,718
Million $	$1,918	$1,390	$1,400	$531	$149	$1,196	-$207	$845	$7,223

Notes:

1. *The overestimate of FF is the amount over actual installations that is not explained by dry FGD*
2. *Dry FGD estimate for excess dry FGD over actual installed*
3. *DSI estimate assumes that actual reagent is roughly one third of EPA assumption.*
4. *Wet FGD upgrade assumes 30 GW of actual upgrade versus 63 GW predicted. No formal data is available.*
5. *The actual reduction in wet FGD versus the Base Case was greater than forecast by EPA*
6. *Accounts for EPA assumption about fly ash waste for facilities where fly ash is collected with carbon*
7. *Accounts for higher carbon demand from units with ESP versus TOXECON. EPA assumed more TOXECON installations, which include new baghouses.*
8. *Accounts for overestimate of ACI installations after rule is fully implemented. Only includes carbon for VOM as waste already addressed.*

Conclusion

Experience with technologies deployed for MATS compliance has shown them to be less expensive and more effective than originally assumed in EPA's analysis. As a result, the true cost of complying with the MATS rule is more than $7 billion per year less than estimated by EPA, making the true cost of the rule about one quarter of what EPA originally estimated the rule to cost.

Exhibit 3

Company	Original Compliance Cost Estimates	Actual Cost of Compliance
FirstEnergy	Respecting the pending maximum achievable control of technology rules for mercury and hazardous air pollutants, *we still expect investments of about $2 billion to $3 billion in our generation fleet to comply*. Our investments are expected to primarily focus on reducing mercury, and particulate emissions at our supercritical units. -- 2011 Q3 Earnings Call, Anthony Alexander CEO Now last year, I told you that our spend -- *our capital spend was $2 billion to $3 billion to comply with this rule when it was MACT. Now that we understand the rule and we've dug into it and analyzed the situation more deeply, we are right now looking at a $1.3 billion to $1.7 billion spend to comply*. And we continue to work further to reduce that cost. And we will be in compliance by the spring of 2015. – 2011 Q4 Earnings Call, James H. Lash The new MATS were finalized at the end of 2011, ... *Our current estimate is that it may cost approximately $1.3 - $1.7 billion to bring our remaining units into compliance*.-- 2012 10-K As a result of this analysis, we have significantly reduced our projected capital investment related to MATS compliance. *We now estimate investment of about $975 million across our Fossil Fleet. This is down from the $1.3 billion to $1.7 billion estimate we provided in February and well below our initial projections of $2 billion to $3 billion*. While we still have work to do to confirm and refine our current estimate, we're clearly moving in the right direction. -- 2012 Q2 Earnings Call, Anthony Alexander, CEO "As a result of this analysis, we have significantly reduced our projected capital investment related to MATS compliance. *We now estimate investment of about $975 million across our Fossil Fleet. This is down from the $1.3 billion to $1.7 billion estimate we provided in February and well below our initial projections of $2 billion to $3 billion.* While we still have work to do to confirm and refine our current estimate, we're clearly moving in the right direction. -- 2012 Q2 Earnings Call, Tony Alexander We also significantly decreased our competitive cost structure. Annual operating expenses have been reduced through our continued focus on managing fuel costs and O&M expense. And more importantly, our projected capital spending in the generation group over the next several years has been reduced by more than	On December 28, 2012, the WVDEP granted a conditional extension through April 16, 2016 for MATS compliance at the Fort Martin, Harrison and Pleasants stations. On March 20, 2013, the PADEP granted an extension through April 16, 2016 for MATS compliance at the Hatfield's Ferry and Bruce Mansfield stations. In December 2014, FG requested an extension through April 16, 2016 for MATS compliance at the Bay Shore and Sammis stations and await a decision from OEPA. In addition, an EPA enforcement policy document contemplates up to an additional year to achieve compliance, through April 2017, under certain circumstances for reliability critical units. MATS was challenged in the U.S. Court of Appeals for the D.C. Circuit by various entities, including FirstEnergy's challenge of the PM emission limit imposed on petroleum coke boilers, such as Bay Shore Unit 1. On April 15, 2014, MATS was upheld by the U.S. Court of Appeals for the D.C. Circuit, however, the Court refused to decide FirstEnergy's challenge of the PM emission limit imposed on petroleum coke boilers due to a January 2013 petition for reconsideration still pending but not addressed by EPA. On November 25, 2014, the U.S. Supreme Court agreed to review MATS, specifically, to determine if EPA should have evaluated the cost of MATS prior to regulating. Depending on the outcome of the U.S. Supreme Court review and how the MATS are ultimately implemented, *FirstEnergy's total capital cost for compliance (over the 2012 to 2018 time period) is currently expected to be approximately $370 million (CES segment of $178 million and Regulated Distribution segment of $192 million), of which $133 million has been spent through 2014* ($56 million at CES and $77 million at Regulated Distribution). -- 2014 10-K, p. 16 *We're investing $370 million in upgrades to comply with MATS. Most of [the investments] will have been made by the time the Supreme Court rules*. – First Energy spokeswoman Stephanie Walton in March 30, 2015 in RTO Insider article

Company	Original Compliance Cost Estimates	Actual Cost of Compliance
	$1 billion through our recent actions. *This includes additional reductions in our expected spend for compliance with Mercury and Air Toxics Standards , which is now at $465 million across the entire generation fleet, with only an estimated $240 million at our competitive units.* The majority of the remaining capital will be invested in projects to extend the life of our nuclear assets, with new steam generators at Davis-Besse in 2014 and new steam generators and reactor head at Beaver Valley 2 in 2017. – 2013 Q3 Earnings Call, Anthony Alexander, CEO	
Southern Company	As you'll recall, we previously provided a MATS compliance capital projection of up to $2.7 billion for the 2012 through 2014 time frame. We also indicated that this amount could be reduced by $500 million to $1 billion, depending primarily on the number of baghouses in our final compliance strategy, bringing the final number to between $1.7 billion and $2.2 billion....*Based on our current analysis, our projection for MATS compliance for 2012 through 2014 now totals $1.8 billion, representing a reduction of $900 million from our previous estimates.* While the number of baghouses has been reduced to 4 or 5 from a high of as many as 17, other costs have been added to our plan to reflect the need for additive injection systems and related plant modifications. As before, this plan also includes significant investment in transmission projects as well as fuel switching to natural gas. – 2012 Q2 Earnings Call, Art Beattie, CFO So it's -- so at least in terms of kind of what we said before with respect to MATS, we said $2.7 billion. And then we -- as we got kind of the new rule, not the proposed rule, we said it could be between *$0.5 billion or $1 billion less, and therefore, we said $1.7 billion to $2.2 billion. Well, sure enough, it ended up at $1.8 billion. When you think about the total amount of CapEx, it was $18.2 billion or $18.3 billion, and now we kind of think it's going to be $16.4 billion, $16.3 billion, somewhere in that realm.* -- 2012 Q2 Earnings Call, Thomas Fanning, CEO With respect to the impact of the MATS rule on capital spending from 2012 through 2014, the Southern Company system's preliminary analysis anticipates that potential incremental environmental compliance capital expenditures to comply with the MATS rule are likely to be substantial and could be up to *$2.7 billion from 2012 through 2014*. – 2012 10-K p. II-22	The Company has developed a compliance plan for the MATS rule which includes reliance on existing emission control technologies, the construction of baghouses to provide an additional level of control on the emissions of mercury and particulates from certain generating units, the use of additives or other injection technology, the use of existing or additional natural gas capability, and unit retirements. Additionally, certain transmission system upgrades are required. 2015 10-K p II-134 The Southern Company system expects that capital expenditures to comply with environmental statutes and regulations will total approximately *$2.1 billion from 2015 through 2017, with annual totals of approximately $1.0 billion, $0.5 billion, and $0.6 billion for 2015, 2016, and 2017*, respectively. -- 2015 10-K p. II-22 Southern Company has made about *$9 billion in investments in environmental control technology and anticipates spending an additional $2.1 billion over the next three years to comply with MATS* and other environmental regulations – Southern Company spokesman Jack Bonnikson to Bloomberg BNA via e-mail for April 2015 article

Company	Original Compliance Cost Estimates	Actual Cost of Compliance
AEP	Estimating the capital spend for our environmental effort. *Originally, we started with a $6 billion to $8 billion anticipated capital outlay for these types of requirements. And that changed, from $5 billion to $7 billion, over a period of time when the EPA came up with the -- came out the rules, particularly on particulate matter.* We had one situation where, instead of achieving 99.7% removal rate, the proposed rule was saying you had to achieve 99.9%, and that 0.2% was costing us about $800 million. So the EPA did listen and made the adjustments, so that adjusted reduction down as a result. *And then now, we're saying the cost is going to be from $4 billion to $5 billion.* And we've looked at technologies. We believe from a compliance standpoint that we can achieve further compliance reductions as a result of technology improvements, but also how we run the generation. So those are the kinds of things that we're looking at as well. -- 2012 Q4 Earnings Call, Nicholas Akins, CEO *So we believe it's going to be $4 billion to $5 billion, and we're committed to continuing down that process. But now, right now, it says $4 billion to $5 billion.*– 2012 Q4 Earnings Call, Nicholas Akins, CEO "So we continue to also move forward on the EPA-related mandates, such as Mercury HAPs MACT and others, as we transition our fleet with the planned . . . retrofits and refueling of 11,000 megawatts at a cost of around $*4 billion to $5 billion over the 2012 to 2020 time period.* - 2013 Q1 Earnings Call, Nicholas Akins, CEO	Emissions of nitrogen and sulfur oxides, mercury and particulates from fossil fueled generation plants are subject to increased regulations, controls and mitigation expenses. Compliance with these legal requirements requires us to commit significant capital toward environmental monitoring, installation of pollution control equipment, emission fees and permits at all of our facilities and could cause us to retire generating capacity prior to the end of its estimated useful life. . . . *If we retire generation plants prior to the end of their estimated useful life, there can be no assurance that we will recover the remaining costs associated with such plants. We typically recover our expenditures for pollution control technologies, replacement generation, undepreciated plant balances and associated operating costs from customers through regulated rates in regulated jurisdictions.* -- 2014 10-K p 41 (See table below as well) We continue to refine the cost estimates of complying with these rules and other impacts of the environmental proposals on our coal-fired generating facilities. *Based upon our estimates, additional investment to meet these proposed requirements ranges from approximately $2.8 billion to $3.3 billion through 2020. These amounts include investments to convert some of our coal generation to natural gas..* -- 2014 10-K p 10

Company	Original Compliance Cost Estimates	Actual Cost of Compliance
DTE	These rules have led to additional controls on fossil-fueled power plants to reduce nitrogen oxide, sulfur dioxide, mercury and other emissions. To comply with these requirements, DTE Electric has spent approximately $1.9 billion through 2012. *The Company estimates DTE Electric will make capital expenditures of approximately $335 million in 2013 and up to approximately $1.6 billion of additional capital expenditures through 2020 based on current regulation* – 2012 10-K p 90	DTE Electric is subject to the EPA ozone and fine particulate transport and acid rain regulations that limit power plant emissions of sulfur dioxide and nitrogen oxides. The EPA and the State of Michigan have issued emission reduction regulations relating to ozone, fine particulate, regional haze, mercury, and other air pollution. These rules have led to controls on fossil-fueled power plants to reduce nitrogen oxide, sulfur dioxide, mercury and other emissions. *To comply with these requirements, DTE Electric spent approximately $2.2 billion through 2014. The Company estimates DTE Electric will make capital expenditures of approximately $100 million in 2015 and up to approximately $30 million of additional capital expenditures through 2019 based on current regulations*. -- 2014 10-K p 25 Estimated $400 million capital investment for environmental compliance for the years 2015-2019 -- August 2015 Business Update
PPL	...from an environmental perspective, I think you're aware that on a competitive fleet side, we're very well equipped to deal with the MATS and the CSAPR. *So we're not looking at any major new incremental investments on the environmental side*.- 2012 Q1 Earnings Call, William Spence, CEO Now that we've signed contracts with various vendors, we've updated our estimate of capital spending necessary to complete our previously discussed environmental compliance projects [MATS and CSAPR]. *We now estimate these projects will come in closer to $2.5 billion, a reduction of $500 million from our original forecast.* We're able to deliver these savings to customers in Kentucky because we proactively addressed EPA regulations and were able to secure bids before others. - 2012 Q3 Earnings Call, William Spence, CEO "I think at this juncture, we don't see a lot of incremental CapEx required on the environmental front, for either Brunner Island or Montour stations in Pennsylvania. I think we are in fairly decent shape. There is some related to the math. Really, folks more around mercury control than it is around SOX or NOX. So at this point, I don't see any significant addition that we would need to make." -- Q1 2014 Earnings Call, William Spence, CEO	LG&E, KU and PPL Energy Supply have received compliance extensions for certain plants. PPL, PPL Energy Supply, LKE, LG&E and KU are generally well-positioned to comply with MATS, primarily due to recent investments in environmental controls at PPL Energy Supply and approved ECR plans to install additional controls at some of LG&E's and KU's Kentucky plants. With respect to PPL Energy Supply's Pennsylvania plants, PPL Energy Supply believes that installation of chemical additive systems and other controls may be necessary at certain coal-fired plants, the capital cost of which is not expected to be significant. PPL Energy Supply continues to analyze the potential impact of MATS on operating costs. *PPL Energy Supply is retrofitting the scrubbers at its Colstrip, Montana plant, the cost of which is not expected to be significant.. ... LG&E's and KU's anticipated retirement of certain coal-fired electricity generating units located at Cane Run and Green River is in response to MATS and other environmental regulations. The retirement of these units is not expected to have a material impact on the financial condition or results of operations of PPL, LKE, LG&E or KU....*– 2014 10-K p 102

Company	Original Compliance Cost Estimates	Actual Cost of Compliance
Duke Energy	One of the reasons that we were pursuing the variance from the Multi-Pollutant Standard with the Illinois Pollution Control Board was in fact that we were able to comply with the MATS rules without that scrubber. And it was really these Illinois rules that were imposing the need to construct that scrubber…*So, we do believe that the capital expenditure plans that we've laid out, will -- while as to comply with MATS.* And it's really a function of a number of things. It's a function of the investments that we've already made in our plans overtime. We've made significant investments in pollution control equipment…We also burned low sulfur coal, which helps with our overall emissions. And as a result of compliance with the Multi-Pollutant Standard Illinois we are already using significant amounts of activated carbon for control of mercury. *So, through the -- I'd say the compliance with the Multi-Pollutant Standard, we've actually built into our operations of those things that are needed to comply with the MATS rules*. -- Q3 2012 Earnings Call, Marty Lyons, Senior Vice President and CFO "At the end of this year we expect to have retired more than 3800 megawatts of this capacity. *As a combined company we have already invested around $7 billion in control equipment for our existing coal plants positioning now for compliance with more stringent air emission regulations. However we estimate we will spend an additional $5 billion to $6 billion over the next decade to comply with pending environmental regulations on air, water and coal ash*." -- Q4 2012 Earnings Call, Jim Rogers As a group, these non-GHG environmental regulations will require the Duke Energy Registrants to install additional environmental controls and accelerate retirement of some coal-fi red units. While the ultimate regulatory requirements for the Duke Energy Registrants from the group of EPA regulatory actions will not be known until all the rules have been finalized, for planning purposes, the Duke Energy Registrants *currently estimate the cost of new control equipment that may need to be installed to comply with this group of rules could total $5 billion to $6 billion, excluding AFUDC, over the next 10 years. This range includes estimated costs for new control equipment necessary to comply with the MATS of $650 million to $800 million.*– 2012 10-K p 67 *$1.4 billion in environmental capex from '13-'15 (Includes $600-$650 million for MATS compliance*) –2013 Analyst Meeting *Anticipated ~$5-6 billion in compliance costs for approved or pending air, water, and waste regulations over the next 10 years* – Q2 2014 Earning Review and Business Update	Duke Energy Registrants are on track to meet the requirements. Strategies to achieve compliance include installation of new air emission control equipment, development of monitoring processes, fuel switching and acceleration of retirement for some coal-fired electric-generation units. – 2015 Q2 10-Q p 116 "As of June 30, we now have total ARO obligations of *$4.5 billion*, which represents our best estimate to comply with state and federal rules. These costs will be spent over the next several decades. We will continue to refine this estimated liability as plans are finalized." Q2 2015 Earnings call, Steve Young, EVP, CFO "Duke Energy is currently reviewing today's ruling by the Supreme Court…*at this time, there will be no immediate effect on Duke Energy's MATS compliance program. All Duke Energy power plants will continue existing compliance activities."* – June 29, 2015 Spokesman Chad Eaton, via email for an article in Platts

AEP 2014 10K p 13

Historical and Projected Environmental Investments

	2012 Actual	2013 Actual	2014 Actual	2015 Estimate	2016 Estimate	2017 Estimate
			(in thousands)			
Total AEP (a)	$ 241,000	$ 424,200	$ 539,800	$ 661,000	$ 401,000	$ 531,000
APCo	52,400	44,800	31,300	70,000	53,000	151,000
I&M	30,000	28,300	51,400	40,000	49,000	84,000
OPCo (b)	70,300	129,300	—	—	—	—
PSO	26,300	56,100	72,100	85,000	49,000	9,000
SWEPCo	24,200	135,700	225,300	316,000	86,000	66,000

EXHIBIT 2

ARGUED DECEMBER 10, 2013
DECIDED APRIL 15, 2014

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

WHITE STALLION ENERGY CENTER, LLC, et al.,	)	
Petitioners,	)	Case No. 12-1100, and consolidated cases
v.	)	
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY,	)	
Respondent.	)	

DECLARATION OF WILLIAM B. BERG

I, William B. Berg, make the following declaration in support of the Motion of Industry Respondent Intervenors to Govern Future Proceedings, and declare under penalty of perjury that the following is true to the best of my knowledge, information, and belief:

1. I currently serve as Vice President of Wholesale Market Development for Exelon Corporation. In that capacity, I manage Exelon's wholesale policy development and advocacy in all competitive wholesale electricity markets in which

Exelon is engaged (PJM, ISO New England, Electric Reliability Council of Texas, Southwest Power Pool, Midcontinent Independent System Operator, and New York Independent System Operator) to ensure outcomes that are aligned with Exelon's business strategy. In this role, I work closely with the various business units within Exelon (electric generation, retail, demand response, commodities trading, and utility interests) to understand the business needs of the Corporation, and I participate in strategic decisions regarding whether to make capital investments in generation capacity and pollution controls and whether to retire units.

2. I have worked in the electric power industry for 23 years, and in that time I have developed an understanding of market dynamics in regulated and deregulated markets. I have served in my current position as Vice President of Wholesale Market Development at Exelon since July 2014. Prior to that, from 2005 to 2014, I held positions of increasing responsibility at Exelon and performed many of the same functions I perform in my current role except with respect to a smaller geographic area. Before joining Exelon, from 2001 to 2004, I worked for Reliant Energy and was responsible for wholesale market development for the PJM region. Throughout my time with Exelon and Reliant, I have consistently worked closely with the various commercial units to understand the business needs of the companies to ensure alignment with competitive market development. From 1992 to 2001, I worked for the Florida Public Service Commission, a state regulatory agency that regulates a traditional cost of service, rather than a competitive, electric system. I held

many roles of increasing responsibility while at the Commission, and my last role was Chief Advisor to its then Chairman, J. Terry Deason, providing technical analysis on federal initiatives and state electric policy.

3. I hold a Bachelor of Arts in Business Administration with a Minor in Economics from Lenoir-Rhyne University and a Master of Arts in Applied Economics from the University of Central Florida, College of Business.

4. From my experience and training, I have personal knowledge of the matters on which I testify in this declaration. In particular, I am aware of the electric generation industry's response to the Mercury and Air Toxics Standards ("Standards"), the impact of the Standards on generators that participate in competitive electricity markets, and the likely consequences to electric generators and their customers should the Court disturb the Standards.

5. The Standards were released by EPA to the public in December 2011, although they were not published in the Federal Register until February 2012, effective April 16, 2012.

6. The Standards gave electric generators three years to comply – the maximum time permitted by the Clean Air Act. The Act allows permitting authorities to grant an additional one-year extension when "necessary for the installation of controls." In promulgating the Standards, EPA made clear that it would adopt a very broad interpretation of this term. EPA further indicated that it would also allow

additional time beyond the four-year extended compliance period for plants that were necessary to preserve electric reliability.

7. The Standards had been anticipated for several years, and prudent generators had long taken the forthcoming standards into account in making capital investment decisions for their generating fleets. Many generators began to develop their final plans for complying with the Standards when the proposed Standards were published and, with the release of the final Standards, all electricity generators either finalized or began to develop plans to comply with the Standards.

8. The capital decisions made by industry were not limited to coal- and oil-fired power plants to which the Standards apply. Because the electric generation industry is interconnected, the Standards also were directly relevant to decisions as to whether to invest in maintaining or expanding existing nuclear, natural gas-fired, and renewable generation, and whether to invest in new capacity of all fuel types.

9. Generators adopted a number of different strategies for compliance with the Standards. Some had already transitioned their fleets away from the coal-fired generation most affected by the Standards. Some had already upgraded their coal-fired plants in response to state laws or other obligations and could achieve the Standards without further investment. Others chose which of their existing plants justified the investment needed to comply with the Standards, and which plants would be "retired," that is, permanently closed.

10. Electric generators base capital investment (such as that necessary to add or to upgrade pollution controls) on long-term operational plans. Whether participating in competitive electricity markets or traditional state-regulated resource planning, generators base investment decisions largely on the same set of considerations: the remaining useful life of a plant; the expected cost to maintain the plant in good working order; the cost of the required emission controls; and the revenue that the plant is expected to generate. Absent specific local reliability concerns, which are rare, generators will ordinarily choose to retire plants when expected revenues do not justify the cost of maintaining those plants, whether due to ordinary repairs or emission control or other necessary upgrades, such as for safety.

11. Power plant revenues typically include revenue from direct or indirect wholesale sales of electricity to local distribution companies (that is, retail electric suppliers like PEPCO and Baltimore Gas & Electric), industrial users, and others. Depending on the level of electricity demand and the available generation resources, wholesale power prices can fluctuate from $0 per megawatt hour (and less in some circumstances) to hundreds of dollars per megawatt hour. Often power plant owners will sell their electricity output in advance, entering contracts to deliver electricity months or years ahead. This approach allows generators and their customers to lock in prices to avoid the risk posed by highly variable wholesale power prices. These advance sales provide generators with a measure of revenue certainty and customers with a measure of cost certainty.

12. Power plant revenues can also include "capacity payments" – payments for ensuring that a plant will be available in the future to generate electricity if called upon. In much of the Northeastern and Midwestern regions of the country, forward capacity markets ensure that adequate generation resources will be available in future years. For example, PJM – which operates the electric power grid in all or part of 13 states and Washington, D.C., and is the largest power grid operator in the country – conducts a capacity auction each year for a period beginning three years later. So in 2015, PJM conducted an auction to acquire adequate generation capacity in the 2018/2019 delivery year. Power plants selected through that auction, held this summer, are required to do what is necessary to remain operational for the 2018/2019 delivery year, and those plants will receive capacity payments during that period, in addition to any revenues they receive from electricity sales. Because capacity prices are dependent on the amount of generation capacity that will be available, prices are very sensitive to power plant retirements, which reduce the available capacity.

13. Long-term capacity commitments require that electric generators develop and follow through on long-term capital planning. Generators responded quickly to the proposed and final Standards, evaluating available control options and identifying plants where additional investments would – and would not – be justified by projected revenues. PJM conducted its capacity auction covering the 2015/2016 delivery year (the first in which the Standards would be in effect) just five months after the Standards were released. That auction saw increased capacity prices

reflecting the additional investment some generators would have to make to comply with the Standards, and those generators whose plants cleared that auction are now receiving those higher payments.

14. Many generators with power plants subject to the Standards received one-year compliance extensions from their state permitting authorities, deferring compliance at specific power plants until April 16, 2016. With that deadline now less than seven months away, those generators have certainly decided whether to upgrade those plants to comply with the Standards or to shut the plants down when the deadline arrives.

15. Where material additional investments are to be made at a power plant, a number of arrangements must be made long before the actual upgrade work can be performed at the plant. Because power plants must be turned off in order for upgrade work to be performed, the generator must obtain permission from the grid management authority or resource planning agency to schedule an "outage" to allow the work to proceed. Outages must be scheduled at times of low electricity demand, when the power plant's output would be more easily replaced by other generators, typically in the Spring or Fall. This planning requires a long lead time, and planning for any outages required to install controls before April 2016 has been completed.

16. Based on the planning work and the schedules set by the grid operator, generators must engage pollution control contractors to install the equipment during the scheduled outage, and those contractors in turn must order any equipment that

must be installed during the project. For any significant upgrade project, these interlocking arrangements are made long in advance, ordinarily one year or more before the actual work will be performed. Thus, these decisions and the vast majority of this work have already happened, and these improvements have been priced into the market.

17. With all of these long-term planning criteria in mind, the electric generation industry moved quickly after the Standards were released in December 2011 to ensure a smooth transition to compliance by the April 2015 deadline, and where necessary, by the extended April 2016 deadline. According to industry and third-party reports, the majority of generation capacity subject to the Standards met the April 2015 compliance date. But for the few plants that obtain further extensions required to preserve reliability, the remaining power plants will be retired or upgraded by April 2016. Grid operators have long accounted for this deadline in planning.

18. As is clear from the above, all generators have had good reason to incorporate the Standards into their long-term planning. This is true not only of generators that are directly affected by the Standards, but also of generators that use natural gas, nuclear, hydropower, wind, solar, and other means to produce electricity. Because the air pollution reductions required by the Standards impose significant capital and operating costs on previously uncontrolled coal-fired generation, the Standards were expected to affect – and have affected since April 2015 and before – the wholesale price of electricity and capacity prices where such markets exist. These

price impacts have been relied upon by *all generators* in making investment decisions: by coal-fired generators deciding whether to upgrade or retire their plants; by gas generators deciding whether to build new power plants; by nuclear generators deciding whether to increase output from existing plants; and by renewable developers deciding whether to build new wind or solar projects. These price impacts are also relevant to owners of nuclear and other non-emitting sources that must decide whether to retire existing plants or to make capital investments necessary to keep those plants operating or to increase capacity.

19. Now, nearly four years after adoption of the Standards, virtually all generators are either in compliance with the Standards or have finalized plans to come into compliance by April 2016. Any vacatur or stay of the Standards would disrupt the market's reasonable expectations and jeopardize the investments that the electric power sector has made over the past four years and earlier.

20. An interruption in the applicability of the Standards would disrupt wholesale electricity prices and disadvantage generators that timely complied with the Standards. Those generators would have to compete for a prolonged period of time against coal-fired plants that would otherwise retire by April 2016; a vacatur or stay would allow those non-compliant power plants to continue to operate, selling power at prices unaffected by any incremental compliance costs. This price uncertainty would disadvantage compliant generators and, ultimately, their customers.

21. Moreover, any vacatur or stay of the Standards would deprive the electric power industry of the ability to predict when the Standards would be reinstated after EPA reaffirms its finding, or whether the Standards would be replaced with different, more stringent requirements. In any case, if the Standards were vacated or stayed, the power industry would have complied with the Standards since April 2015, then would suffer an indeterminate period during which the Standards were nullified, and finally would have the Standards or some other (possibly more stringent) requirements imposed again. Such a moving target would be highly disruptive to the electric power industry and the markets and other regulatory regimes in which its participants operate.

22. This uncertainty could persist long enough even to disturb the long-range capacity markets. Each year those regional transmission organizations that conduct capacity markets hold one or more auctions to ensure capacity in later years. In February and May 2016, ISO New England and PJM, respectively, will conduct capacity markets for the delivery year 2019/20, and in April 2016, the Midcontinent Independent System Operator will conduct a capacity market for the delivery year 2016/17. If uncertainty continues to exist during those auctions – the first of which is only five months from now – electric generators may be reluctant to commit their power plants to operate in the subsequent years, or may commit those plants only to find that even greater investment will be required than anticipated. This uncertainty is

likely to cause higher bids and higher costs for electricity consumers than would otherwise occur.

September 24, 2015

William B. Berg
Vice President of Wholesale Market
Development for Exelon Corporation