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## Clean Air v. Electric Reliability: The Case of the Potomac River Generating Station

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# Clean Air v. Electric Reliability: The Case of the Potomac River Generating Station

James W. Moeller\*

*Initially, let me emphasize that [the] EPA completely agrees with the goal of maintaining the reliability of the electricity grid. The lights have not gone out in the past, due to Clean Air Act regulations, and our rules won't cause them to go out in the future.<sup>1</sup>*

## Abstract

*Environmental activists considered the shutdown of the Potomac Station a victory for environmental sustainability and a victory for the cause of clean air. Additionally, citizens of Alexandria, Virginia found this to be a victory over the “outdated” polluting coal burning power plant. Looking at the history of the Potomac Station, however, shows that without significant increases in transmission capacity to the mid-Atlantic, the Potomac Station could never have been shut down. This article addresses the case of the Potomac Station and the role of the Department of Energy, the Environmental Protection Agency, the Virginia Department of Environmental Quality, and the Federal Energy Regulatory Commission in the shutdown of the Potomac Station to show that without an expansion in transmission capacity, the environmental concerns would not be enough to shut down the Potomac Station.*

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1. *The American Energy Initiative, Part 19: Focus on H.R. 4273, The Resolving Environmental and Grid Reliability Conflicts Act of 2012, and H.R. 5892, the Hydropower Regulatory Efficiency Act of 2012: Hearing Before the Subcomm. on Energy and Power of the H. Comm. on Energy and Commerce, 112th Cong. 46 (2012) (statement of Regina A. McCarthy, Assistant Adm’r of Air and Radiation, Evtl. Prot. Agency).*

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### *I. Introduction and Background*

#### *A. Clean Air v. Electric Reliability*

A plethora of proposed and promulgated regulations under the Clean Air Act (CAA)<sup>2</sup> has ignited a debate over the impact of Environmental Protection Agency (EPA) regulations on the reliability of the U.S. electric power grid. In the last several years, final and proposed rules on, for example, cross-state air pollution,<sup>3</sup> revised air quality standards

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2. 42 U.S.C. § 7401 (2011).

3. See Federal Implementation Plans: Interstate Transport of Fine Particulate Matter and Ozone and Correction of SIP Approvals, 76 Fed. Reg. 48,208 (Aug. 8, 2011) (final rule) (limiting the transport of harmful particles across states); see also *EME Homer City Generation, L.P. v. EPA*, 696 F.3d 7 (D.C. Cir. 2012), cert. granted in part, 133 S. Ct. 2857 (2013) (vacating the Cross-State Air Pollution Rule in August 2012).

for ozone,<sup>4</sup> national emissions standards for hazardous air pollutants,<sup>5</sup> and greenhouse gas emissions,<sup>6</sup> have raised concerns that new CAA regulations could force the shutdown of coal-fired electric power plants critical to electric reliability.<sup>7</sup> The ensuing debate over clean air versus electric reliability acquired additional momentum in June 2013 when President Obama announced a national plan to address climate change and new standards for coal-fired power plants.<sup>8</sup>

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4. See National Ambient Air Quality Standard for Ozone, 75 Fed. Reg. 2938 (proposed Jan. 19, 2010); Presidential Statement on the Ozone National Ambient Air Quality Standards, 2011 WEEKLY COMP. PRES. DOC. 00607 (Sept. 2, 2011) (directing the EPA to withdraw the rulemaking).

5. See 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. 9,304 (Feb. 16, 2012) (final rule) (“Pursuant to CAA section 112, the EPA is establishing [national emission standards for hazardous air pollutants] that will require coal- and oil-fired [electric utility steam generating units] to meet hazardous air pollutant (HAP) standards reflecting the application of the maximum achievable control technology [the Mercury and Air Toxics Standards (MATS)].”); 77 Fed. Reg. 45,967 (Aug. 2, 2012) (notice of partial stay of effectiveness of final rule) (“The Clean Air Act authorizes the EPA to stay the effectiveness of a rule if the Administrator has convened a proceeding to reconsider the rule.”); Reconsideration of Certain New Source and Startup/Shutdown Issues, 77 Fed. Reg. 71,323 (Nov. 30, 2012) (notice of public hearing on proposed rules) (“[T]he EPA is announcing reconsideration of certain new source standards for MATS, the requirements applicable during periods of startup and shutdown for MATS.”); Reconsideration of Certain New Source Issues, 78 Fed. Reg. 24,073 (Apr. 24, 2013) (final rule on reconsideration) (“[O]n the basis of information provided since the reconsideration proposal, today’s action revises certain new source numerical limits in the MATS NESHAP.”); *White Stallion Energy Center, LLC v. EPA*, No. 12-1100 (D.C. Cir. Feb. 16, 2012). (appealing the Mercury and Air Toxics Standards to the D.C. Circuit).

6. See Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources; Electric Utility Generating Units, 77 Fed. Reg. 22,392 (proposed Apr. 13, 2012) (proposing more stringent standards for CO<sub>2</sub> emissions).

7. See, e.g., *The American Energy Initiative, Part 12: Impacts of the Environmental Protection Agency’s New and Proposed Power Sector Regulations on Electric Reliability: Hearing Before the Subcomm. on Energy and Power of the H. Comm. on Energy and Commerce*, 112th Cong. (2011) (addressing concerns about the lack of and reliability of energy sources). “The tension between reliability needs and environmental rules has long existed, but the potential for conflict has recently been highlighted by increasingly stringent environmental restrictions and cybersecurity initiatives.” Debra Raggio, Vice President and Assistant Gen. Counsel, GenOn Energy Inc., Statement at the Reliability Technical Conference at 1 (Nov. 29, 2011), available at [http://www.ferc.gov/CalendarFiles/20111208072456-Raggio,%20GenOn%20Presentation%20\(Part%201\).pdf](http://www.ferc.gov/CalendarFiles/20111208072456-Raggio,%20GenOn%20Presentation%20(Part%201).pdf) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

8. See, e.g., Juliet Eilperin, *Obama Unveils Climate Agenda*, WASH. POST, June 26, 2013, at A-1 (“President Obama delivered his most forceful push for action on global

In the context of this debate, an obscure federal statute has suddenly gained hypothetical prominence.<sup>9</sup> Section 202(c) of the Federal Power Act authorizes the Department of Energy (DOE) to require the generation, transmission, or distribution of electric power in wartime or in other national emergencies:

During the continuance of any war in which the United States is engaged, or whenever the Commission determines that an emergency exists by reason of a sudden increase in the demand for electric energy, or a shortage of electric energy or of facilities for the generation or transmission of electric energy, or of fuel or water for generating facilities, or other causes, the Commission shall have authority, either upon its own motion or upon complaint, with or without notice, hearing, or report, to require by order such temporary connections of facilities and such generation, delivery, interchange, or transmission of electric energy as in its judgment will best meet the emergency and serve the public interest.<sup>10</sup>

DOE issuance of orders under the statute is rare. In December 2000, the DOE issued several orders under Section 202(c) in response to an electric

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warming on Tuesday, declaring that his administration would impose tighter pollution controls on coal- and gas-fired utilities.”).

9. See, e.g., *The American Energy Initiative, Part 12*, *supra* note 7, at 394–96 (discussing coal and current electricity generation in response to EPA regulations); see also *Electrical Outages: Hearing Before the S. Comm. on Energy and Natural Resources*, 112th Cong. 41–45 (2012) (statement of Patricia Hoffman, Assistant Secretary, Office of Electricity Delivery and Energy Reliability, U.S. Department of Energy) (stating that the Department of Energy’s order required the Mirant power station to continue generating electricity, regardless of the violation of federal environmental law and even though there was not an immediate need for power generation, only a concern that there may be a need for additional electrical capacity).

10. 16 U.S.C. § 824a(c) (2012); see generally 10 C.F.R. §§ 205.370–79 (regulating emergency interconnections of electric facilities and transfers of electricity to alleviate an emergency electric power shortages). The DOE proposed regulations to implement Section 202(c) in January 1981. See *Emergency Interconnection of Electric Facilities and the Transfer of Electricity to Alleviate an Emergency Shortage of Electric Power*, 46 Fed. Reg. 71 (proposed Jan. 2, 1981) (proposing a rulemaking regarding the regulations pursuant to section 202(c) and 202(d)). These regulations to implement Section 202(c) were promulgated in August 1981. See *Emergency Interconnection of Electric Facilities and the Transfer of Electricity To Alleviate an Emergency Shortage of Electric Power*, 46 Fed. Reg. 39,984 (Aug. 6, 1981) (to be codified at 10 C.F.R. pt. 205 § 370).

power shortage in California.<sup>11</sup> In August 2003, in response to a massive blackout throughout the Northeast, an order was issued under the statute to require the operation of a transmission line from Connecticut to Long Island.<sup>12</sup> In September 2005, the DOE issued two orders under Section 202(c) in response to Hurricane Rita.<sup>13</sup> Finally, the DOE issued an order in September 2008 in response to Hurricane Ike.<sup>14</sup>

To ensure electric reliability, the DOE could use the statute to thwart the shutdown of a power plant unable to comply with new EPA regulations. Since its enactment in 1935, Section 205 has only been used in one instance to require the operation of a power plant despite its violation of CAA requirements.<sup>15</sup> On August 24, 2005, Mirant Potomac River, LLC (Mirant Potomac) shut down the Potomac River Generating Station (Potomac Station), a 482-megawatt (MW) power plant in the city of

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11. See, e.g., Notice of Issuance of Emergency Orders Under Section 202(c) of the Federal Power Act, 65 Fed. Reg. 82,989 (Dec. 29, 2000) (providing notice of the emergency order and subsequent amendment to the order to address a shortage of electric energy in California); see also Amended Order Pursuant to Section 202(c) of the Federal Power Act, 65 Fed. Reg. 82,990 (Dec. 20, 2000) (providing notice of amended order); Order Pursuant to Section 202(c) of the Federal Power Act (Jan. 11, 2001), available at <http://energy.gov/sites/prod/files/202%28c%29%20order%20January%2011%2C%202001%20-%20California.pdf> (ordering entities to generate electricity).

12. See Dep't of Energy Order No. 202-03-1 (Aug. 14, 2003) (ordering the Cross-Sound Cable Company to operate the Cross-Sound Cable as necessary to resolve disruptions in energy transmission in the Northeast United States and Southeast Canada); Dep't of Energy Order No. 202-02-1 (Aug. 16, 2002) (addressing the operation of the transmission line from Connecticut to Long Island); see also Dep't of Energy Order No. 202-03-2 (Aug. 28, 2003) (extending the August 14, 2003 order); Dep't of Energy Order No. 202-03-4 (May 7, 2004) (terminating the August 14, 2003 order); see generally *Regional Energy Reliability and Security: DOE Authority to Energize the Cross Sound Cable: Hearing Before the Subcomm. on Energy and Air Quality of the H. Comm. on Commerce and Energy*, 108th Cong., 2nd Sess. (2004) ("Following the blackout last August 14, Secretary of Energy used his emergency powers to order the cable put into operation. Testimony today will address how the cable was used to stabilize the grid in the northeast and how it can help relieve transmission congestion in New York and the New England RTO.").

13. See Dep't of Energy Order No. 202-05-1 (Sept. 28, 2005) (authorizing and directing CenterPoint Energy to connect to transmission lines to restore energy services to Entergy Gulf States, Inc. and electrical cooperatives in Texas); Dep't of Energy Order No. 202-05-2 (Sept. 30, 2005) (authorizing and directing TXU Electric Delivery to temporarily provide electrical energy to Deep East Electric Cooperative, a utility normally served by Entergy Gulf States, Inc.).

14. See generally Dep't of Energy Order No. 202-08-1 (Sept. 14, 2008) (authorizing and directing CenterPoint Energy to provide power to Entergy Gulf States, Inc. in response to devastation from Hurricane Ike).

15. See *Proposed Budget for Fiscal Year 2012 for the Department of Energy: Hearing Before the S. Comm. on Energy and Natural Resources*, 112th Cong. 70 (2011) (responses of Hon. Steven Chu to questions from Senator Murkowski) ("The [DOE] is aware of only one instance where there was a possible conflict between an emergency order issued under FPA section 202(c) and environmental statutes.").

Alexandria, Virginia.<sup>16</sup> A sixty-year-old coal-fired power plant, Potomac Station sold electric power to the Potomac Electric Power Company (PEPCO), which provides electric power to Washington, D.C. and to adjacent counties in Maryland. Mirant Potomac initiated the shutdown after the Virginia Department of Environmental Quality (DEQ) ordered “such action as necessary” for the protection of human health and the environment in the area around Potomac Station.<sup>17</sup>

In response to the shutdown, the District of Columbia Public Service Commission (PSC), on August 24th, filed an emergency petition and complaint with the DOE and the Federal Energy Regulatory Commission (FERC).<sup>18</sup> Filed under Section 202(c),<sup>19</sup> the petition sought a DOE order that would direct Mirant Potomac to resume the operation of Potomac Station.<sup>20</sup> On December 20th, almost four months after the shutdown, and in response to the PSC petition, DOE issued an order to Mirant Potomac to restart Potomac Station.<sup>21</sup>

Last December, following a prolonged campaign by environmental activists, Potomac Station was retired.<sup>22</sup> The Sierra Club and the American

16. See Leef Smith, *Mirant Power Plant to Close Temporarily*, WASH. POST, Aug. 25, 2005, at B1 (reporting the closing of the Mirant power plant); see also Leef Smith, *Power Plant Faces Shutdown Over Pollutants*, WASH. POST, Aug. 23, 2005, at B1. (detailing the wattage specifics and some of the complaints regarding the plant’s environmental effects on the surrounding community).

17. See Letter from Robert G. Burnley, Dir., Dep’t of Env’tl. Quality, Commonwealth of Va., to Lisa D. Johnson, President, Mirant Potomac River, LLC (Aug. 19, 2005) (requesting that Mirant take immediate action to insure the protection of human health and the environment) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

18. See generally Emergency Pet. & Compl. of the Dist. of Columbia Pub. Serv. Comm’n, No. EL05-415-000 (2005) (seeking to avert the shutdown of the Potomac River Generating Station because of the potential immediate effect on energy reliability in Washington, D.C.) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT); Emergency Pet. & Compl. of the Dist. of Columbia Pub. Serv. Comm’n, EO-05-01 (2005) (offering several purported alternatives to maintain electricity reliability in the Washington, D.C. area) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

19. See § 824a(c) (authorizing the Commission to require generation of electric energy).

20. See Emergency Pet. & Compl., *supra* note 188 (responding to the impending shut down of the Potomac Station).

21. See Dep’t of Energy Order No. 202-05-3 (Dec. 20, 2005) (ordering that the Potomac Station restart producing electricity due to a shortage of electric energy); see also Emergency Order to Resume Limited Operation at the Potomac River Generating Station, Alexandria, VA, in Response to Electricity Reliability Concerns in Washington, D.C., 71 Fed. Reg. 3279 (Jan. 20, 2006) (describing the DOE order and the subsequent response and actions by the Center on Environmental Quality).

22. See Patricia Sullivan, *GenOn Power Plant in Alexandria Set to Close*, WASH. POST (Sept. 29, 2012), [http://articles.washingtonpost.com/2012-09-29/local/35494994\\_1\\_genon-](http://articles.washingtonpost.com/2012-09-29/local/35494994_1_genon-)

Clean Skies Foundation aided local activists.<sup>23</sup> The plant was permanently shut down, however, only after measures, years in the making, were put into place to ensure electric reliability for Washington, D.C.<sup>24</sup>

The case of the Potomac Station shutdown over clean air concerns, its restart under Section 202(c) due to electric reliability concerns, and ultimate retirement over clean air concerns, indicate that environmental activism did not force the shutdown of Potomac Station.<sup>25</sup> Instead, careful and farsighted transmission expansion planning, which ensured electric reliability for Washington, D.C., permitted the retirement of the power plant.<sup>26</sup>

Ironically, the transmission expansion planning that permitted the retirement of Potomac Station<sup>27</sup> was not supported by the environmental activists that sought to shut down the power plant.<sup>28</sup> In fact, some of those activists opposed the construction of a transmission line<sup>29</sup> that supported a determination that the retirement of Potomac Station would have no adverse

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coal-fired-plants-power-plant (describing the shut-down of the Potomac Station) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

23. See Eugene L. Meyer, *On a Postindustrial Potomac, an Old Plant Gives Way*, N.Y. TIMES, Aug. 31, 2011, at B8 (discussing the partnership between the American Clean Skies Foundation and the Sierra Club).

24. See ANALYSIS GRP., INC., POTOMAC RIVER GENERATING STATION: UPDATE ON RELIABILITY AND ENVTL. CONSIDERATIONS 1 (2011) (stating that the substantial transmission system upgrades made have enabled Washington, D.C. to have adequate power without reliance on the Potomac Station) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

25. See *Updated: Activists Claim Victory as Market Forces Cause GenOn to Power Down Coal Plant*, ALEXANDRIA TIMES (Aug. 30, 2011), <http://alextimes.com/2011/08/breaking-genon-to-close-alexandria-powe/> (“And despite mounting pressure and outrage over air quality, the company’s decision to close is economic, GenOn spokeswoman Misty Allen said.”).

26. See ANALYSIS GRP., INC., *supra* note 244, at 12 (discussing the transmission expansion plan that was undertaken to ensure reliable energy to the D.C. area).

27. See *id.* (discussing the transmission expansion plan undertaken to ensure reliable energy to the D.C. area).

28. See Anna Prados, *Fight Against Coal Power Plant in Alexandria Continues*, OLD DOMINION SIERRAN (Virginia Chapter of the Sierra Club, Richmond, Va.), Sept./Oct. 2007, at 1, available at [virginia.sierraclub.org/newsletter/ODS-2007-09.pdf](http://virginia.sierraclub.org/newsletter/ODS-2007-09.pdf) (discussing the group’s opposition the Potomac Station) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

29. See Duane Nichols, *Opposition to TrAIL Power Line Strengthens in West Virginia*, MOUNTAIN STATE SIERRAN (West Virginia Chapter of the Sierra Club, Morgantown, W.V.), Nov. 2007, at 3, available at [http://westvirginia.sierraclub.org/newsletter/archives/Nov-Dec2007\\_Sierra%20Club%20Newsletter.pdf](http://westvirginia.sierraclub.org/newsletter/archives/Nov-Dec2007_Sierra%20Club%20Newsletter.pdf) (discussing the Sierra Club’s opposition to the TrAIL project in West Virginia) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

consequences for electric reliability for Washington, D.C.<sup>30</sup> It appears, therefore, that those activists were working at cross purposes.

The foreseeable use by the DOE of Section 202(c) to thwart the shutdown of a coal-fired power plant unable to comply with new EPA regulations suggests a need to update the seventy-five year old statute. In particular, a power plant unable to comply with new CAA requirements, if ordered to generate electric power to maintain electric reliability, would be forced to choose between compliance with a DOE order and compliance with the CAA.<sup>31</sup> The statute should be updated to clarify the legal liability of the power plant for compliance with the DOE order.

## *B. Background*

### *1. Potomac Station*

PEPCO constructed Potomac Station between 1949 and 1957.<sup>32</sup> In December 2000, PEPCO, in response to deregulation of electric power in Maryland,<sup>33</sup> sold Potomac Station and three Maryland electric power plants to Southern Energy, Inc. (SEI), an affiliate of Southern Company.<sup>34</sup> SEI

30. See ANALYSIS GRP., INC., *supra* note 244, at 11 (“According to PEPCO, construction of these lines was anticipated to resolve all reliability concerns, including those that would result from the retirement of the PRGS.”).

31. See *infra* note 73 and accompanying text (noting that it is necessary to violate CAA requirements in order to comply with a DOE order).

32. See ANALYSIS GRP., INC., *supra* note 244, at 3 (stating that the five turbines were built between 1949 and 1957).

33. See Electric Customer Choice and Competition Act of 1999, MD. CODE ANN., PUB. UTIL. COS. §§ 7-501 to 7-517, (1999) (deregulating electricity in Maryland); see also The Potomac Electric Power Company’s Proposed: (A) Stranded Cost Quantification Mechanism; (B) Price Protection Mechanism; and (C) Unbundled Rates, Case No. 8796, Order No. 75850 (P.S.C. Md. Dec. 22, 1999) (discussing PEPCO’s filings under the Electric Customer Choice and Competition Act of 1999).

34. See, e.g., Potomac Electric Power Co., Order Authorizing Disposition of Jurisdictional Facilities, Disclaiming Jurisdiction Over Passive Investors, Granting Waivers of Codes of Conduct, and Granting Waiver of Certain Requirements Under Order Nos. 888 and 889, 93 Fed. Energy Reg. Comm’n Rep. (CCH) ¶ 61,240 (2000) (discussing and approving the sale of the Potomac Station to SEI). In addition to Potomac Station in Alexandria, Virginia, PEPCO sold the 2,339-MW Chalk Point Station in Prince George’s County, Maryland; the 837-MW Dickerson Station in Montgomery County, Maryland; and the 1,412-MW Morgantown Station in Montgomery County. See *id.* ¶ 61,766 (discussing PEPCO’s proposed transfer of four power generating stations); see also Dana Hedgpeth, *PEPCO to Sell Four Power Plants*, WASH. POST, June 9, 2000, at E4 (“Potomac Electric Power Co. will sell four of its power-generating plants in Maryland and Virginia for \$2.65 billion to Atlanta-based Southern Energy Inc., a unit of Southern Co.”). PEPCO ultimately sold the four plants for \$2.75 billion. See *Business in Brief*, WASH. POST, Dec. 20, 2000, at E2 (reporting that PEPCO sold the four power plants for \$2.75 billion).

placed Potomac Station under the control of Southern Energy Potomac River, LLC,<sup>35</sup> which, in February 2001, changed its name to Mirant Potomac.<sup>36</sup> Soon thereafter, Mirant Potomac concluded an agreement with Mirant Americas Energy Marketing, LP (MAEM) for the sale of electric power from Potomac Station to MAEM,<sup>37</sup> and MAEM concluded two agreements with PEPCO for the sale of electric power from MAEM to PEPCO.<sup>38</sup>

In July 2003, Mirant Corporation filed for bankruptcy in the U.S. Bankruptcy Court for the Northern District of Texas.<sup>39</sup> An amended plan for the reorganization of Mirant Corporation was approved in December 2005.<sup>40</sup> In January 2006, Mirant Corporation emerged from bankruptcy.<sup>41</sup>

On December 3, 2010, Mirant Corporation merged with RRI Energy, Inc. (RRI). The surviving corporation, RRI, changed its name to GenOn Energy, Inc. (GenOn).<sup>42</sup> Two years later, NRG Energy, Inc. (NRG) acquired GenOn, which became a subsidiary company of NRG.<sup>43</sup>

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35. See 93 F.E.R.C. at 61,775 (describing the parties).

36. See Interstate Power Company, 66 Fed. Reg. 15,712, 15,713 (F.E.R.C. Mar. 20, 2001) (notice of succession filed with F.E.R.C. in Docket No. ER01-1277-000) (noting Southern Energy Potomac River, LLC's name change to Mirant Potomac).

37. See System Energy Resources, Inc., Electric Rate and Corporate Regulation Filings, 66 Fed. Reg. 48,051, 48,052–53 (F.E.R.C. Sept. 17, 2001) (agreement filed with FERC in Docket No. ER01-2976-000) (noting that on August 30, 2011 Mirant Potomac filed with FERC its sales agreement with MAEM).

38. See Metro Energy, LLC, 66 Fed. Reg. 39,310, 39,311–12 (F.E.R.C. July 30, 2001) (agreements filed with FERC in Docket No. ER01-2634-000) (solidifying transfer to PEPCO).

39. See *In re Mirant Corp.*, 378 F.3d 511, 516 (5th Cir. 2004) (“In July 2003, Mirant filed for Chapter 11 bankruptcy.”); Neil Irwin, *Mirant Filing Might Bring PEPCO Rate Hike*, WASH. POST, July 16, 2003, at E1 (reporting the bankruptcy announcement and potential effects); Peter Behr, *Mirant Puts PEPCO, Workers in a Bind*, WASH. POST, July 21, 2003, at E1 (providing some background on Mirant’s bankruptcy filing).

40. See Findings of Fact and Conclusions of Law in Support of the Amended and Restated Second Amended Joint Chapter 11 Plan of Reorganization for Mirant Corporation and Its Affiliated Debtors, *In re Mirant Corp.*, 318 B.R. 100 (Bankr. N.D.Tex. Dec. 9, 2004) (No. 03-46590) (discussing the reorganization plan and the valuation hearing); Order Confirming the Amended and Restated Second Amended Joint Chapter 11 Plan of Reorganization for Mirant Corporation and Its Affiliated Debtors, *In re Mirant Corp.*, 318 B.R. 100 (Bankr. N.D.Tex. Dec. 9, 2004) (No. 03-46590) (denying the Till Motion and upholding the determined valuation of Mirant Co.).

41. See *Mirant Corp. and Its Public Utility Subsidiaries*, 115 Fed. Energy Reg. Comm’n Rep. (CCH) ¶ 62,075, 64,439 (2006) (discussing Mirant’s reorganization plan and authorizing the disposition and acquisition of jurisdictional facilities).

42. See GenOn Energy, Inc., Annual Report (Form 10-K) (Mar. 1, 2011) at 1 (“On December 3, 2010, Mirant and RRI Energy completed their Merger.”).

43. See NRG Energy, Inc., Annual Report (Form 10-K) (Mar. 1, 2013) at 9 (“On December 14, 2012, NRG completed the previously announced Merger with GenOn in

## 2. Clean Air Act Regulation

Pursuant to Section 110 of the CAA, the Commonwealth of Virginia maintains an EPA-approved State Implementation Plan (SIP) to provide for the attainment of National Ambient Air Quality Standards (NAAQS).<sup>44</sup> Under Section 113 of the CAA, the EPA is authorized to enforce the Virginia SIP.<sup>45</sup>

In September 2000, the DEQ, pursuant to the Virginia Air Pollution Control Law (APCL),<sup>46</sup> and in accordance with the regulations promulgated thereunder,<sup>47</sup> issued a permit to PEPCO to operate Potomac Station.<sup>48</sup> The three-page permit included nine conditions.<sup>49</sup> Incorporated into the SIP,<sup>50</sup> the permit limited Potomac Station emissions of nitrogen oxides (NO<sub>x</sub>) to 1,019 tons each year from May 1st through September 30th (Ozone Season).<sup>51</sup> Compliance with this limit would begin in 2003 and would require continuous emissions monitoring.<sup>52</sup> An emissions report for each Ozone Season would be submitted to the DEQ by October 30th each year.<sup>53</sup>

Under the APCL, the Virginia Air Pollution Control Board (APCB) promulgates regulations to implement the statute.<sup>54</sup> The DEQ enforces the statute and the regulations promulgated thereunder.<sup>55</sup> The DEQ also issues

accordance with the Merger Agreement, with GenOn continuing as a wholly-owned subsidiary of NRG.”)

44. See 42 U.S.C. § 7410 (2012) (articulating SIPs); see also 40 C.F.R. § 52.2420–52.2465 (2007) (laying out the SIP for Virginia under the CAA). The SIP was revised in December 2000 to reflect the issuance of a DEQ operating permit to PEPCO to operate Potomac Station). See Approval and Promulgation of Air Quality Implementation Plans, 65 Fed. Reg. 78,100 (Dec. 14, 2000) (revising the SIP to reflect the issuance of a DEQ operating permit to PEPCO to operate Potomac Station).

45. See 42 U.S.C. § 7413 (1990) (permitting the EPA to enforce state SIP programs).

46. VA. CODE ANN. §§ 10.1-1300–10.1-1328 (2000).

47. See 9 VA. ADMIN. CODE §§ 5-10-10 to 5-510-250 (2013) (establishing ambient air quality standards and authorizing the DEQ to grant operating permits).

48. See Commonwealth of Virginia Operating Permit, Stationary Source Permit to Operate (Sept. 18, 2000) (discussing permit issuing under 9 VA. ADMIN. CODE § 5-80-800 C.2.b).

49. See *id.* (establishing several limitations including a NO<sub>x</sub> cap).

50. See Approval and Promulgation of Air Quality Implementation Plans, 65 Fed. Reg. 78,100 (Dec. 14, 2000) (revising the SIP to reflect the issuance of a DEQ operating permit to PEPCO to operate Potomac Station).

51. See Stationary Source Permit to Operate, *supra* note 488, at Permit Condition 3.

52. See *id.* at Permit Condition 4 (discussing the monitoring requirement).

53. See *id.* at Permit Condition 5 (discussing the submission of an emissions report).

54. See VA. CODE ANN. § 10.1-1308 (2011) (describing the Board’s process in creation of regulations and providing a description of the regulations).

55. See VA. CODE ANN. § 10.1-1307.3 (2007) (stating that under the APCL, the Executive Director of the Virginia Department of Air Pollution Control enforces the statute

permits under the APCL.<sup>56</sup> Thus, the DEQ is authorized to issue special orders to require compliance with the APCL, with regulations promulgated thereunder by the APCB, and with permits issued by the DEQ under the APCL.<sup>57</sup> In addition, the APCL authorizes civil penalties and injunctions for violations of the statute and of APCB regulations promulgated thereunder.<sup>58</sup>

### 3. *Electric Reliability and Transmission Planning*

PEPCO owns the transmission lines that provide power service to the metropolitan D.C. region.<sup>59</sup> PJM Interconnection, L.L.C. (PJM), a FERC-approved regional transmission organization for a thirteen-state area concentrated in the Mid-Atlantic region, operates those transmission lines and the entire transmission system for the Mid-Atlantic region. PJM, an acronym for Pennsylvania-Jersey-Maryland, provides transmission service to fifty four million people in all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and Washington, D.C.<sup>60</sup> PJM also manages wholesale bulk power markets in the Mid-Atlantic region.<sup>61</sup>

Under the FERC-approved PJM Open Access Transmission Tariff (OATT),<sup>62</sup> PJM is required to operate the Mid-Atlantic transmission system

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and the regulations promulgated thereunder). In 1992, DEQ assumed the programs and functions of the Department of Air Pollution Control. *See* VA. CODE ANN. § 10.1-1183 (2013) (stating that the DEQ assumed the programs and functions of the Department of Air Pollution Control. in 1992); *see generally* VA. CODE ANN. §§ 10.1-1182–10.1-1197.4 (2013) (codifying the DEQ’s responsibilities to control air pollution); 9 VA. ADMIN. CODE §§ 15-11-10–15-30-170 (2013) (laying out the responsibilities of the DEQ).

56. *See* VA. CODE ANN. § 10.1-1322 (2012) (establishing that under the APCL, the Department of Air Pollution Control issues permits).

57. *See* VA. CODE ANN. § 10.1-1186 (2012) (stating that issuing special orders is a power of the Board that the Director may delegate as he sees fit).

58. *See* VA. CODE ANN. § 10.1-1316 (2013) (defining enforcement and civil penalties available for violations).

59. *See generally* *Fact Sheets*, PJM, <http://www.pjm.com/documents/fact-sheets.aspx> (explaining the services PEPCO provides to the D.C. area) (last visited Oct. 26, 2013) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE AND THE ENVIRONMENT).

60. *See* *Who We Are*, PJM, <http://www.pjm.com/about-pjm/who-we-are.aspx> (listing the areas PJM serves) (last visited Oct. 26, 2013) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

61. *See* *Fact Sheets*, *supra* note 59 (stating that PJM is involved in the coordination of the movement of wholesale electricity throughout the Mid-Atlantic region).

62. *See, e.g.*, PJM Interconnection, L.L.C., FERC Electric Tariff, Sixth Rev. Vol. No. 1 (Dec. 18, 2006) (discussing how the PJM OATT is revised and amended on an ongoing basis).

in accordance with, *inter alia*, electric reliability standards adopted by the North American Electric Reliability Corporation (NERC).<sup>63</sup> NERC reliability standards are enforceable by FERC under the Energy Policy Act of 2005.<sup>64</sup>

Because the reliability of the electric grid in the Mid-Atlantic region is the responsibility of PJM, transmission expansion is planned and supervised by PJM.<sup>65</sup> To plan for the enhancement and expansion of

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63. See, e.g., OATT, Attachment K, Appendix ¶ 1.7.11(a) (setting out the minimum emergency procedure requirements); Amended and Restated Operating Agreement of PJM Interconnection, L.L.C., Third Revised Rate Schedule FERC No. 24 (Sept. 29, 2006) (Operating Agreement), Schedule 1 ¶ 1.7.11(a).

64. Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594, 594-1143 (codified in scattered sections of 42 U.S.C., among other titles). Section 215 of the Federal Power Act requires the promulgation of electric reliability standards by an Electric Reliability Organization (ERO) and the approval of those standards by FERC. 16 U.S.C. 824. The statute was enacted by Section 1221 of the Energy Policy Act of 2005. Federal Power Act, Pub. L. No. 109-58, § 1221, 119 Stat. 594, 941 (2005). In July 2006, the FERC certified the North American Electric Reliability Corporation (NERC) as the ERO under Section 215. See *North American Electric Reliability Corporation*, 116 Fed. Energy Reg. Comm'n Rep. (CCH) ¶ 61,062 (2006), *order on reh'g*, 117 Fed. Energy Reg. Comm'n Rep. (CCH) ¶ 61,126 (2006), *aff'd sub nom.*, *Alcoa Inc. v. FERC*, 564 F.3d 1342 (D.C. Cir. 2009); see also *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval and Enforcement of Electric Reliability Standards*, 71 Fed. Reg. 8,662 (Feb. 17, 2006) (permitting the ERO to enforce and delegate enforcement of reliability standards); *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval and Enforcement of Electric Reliability Standards*, 71 Fed. Reg. 19,814 (April 18 2006) ("The Commission will certify one organization that will develop and enforce Reliability Standards for the Bulk-Power System in the United States."); *Rules Concerning Certification of the Electric Reliability Organization and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards*, Order No. 672, FERC Stats. & Regs. ¶31,204 (2006), *order on reh'g* Order No. 672-A, FERC Stats. & Regs. ¶ 31,212 (2006), *codified at* 18 C.F.R. Part 39. Pursuant to Section 215, the FERC issued Order No. 693 in March 2007. *Mandatory Reliability Standards for the Bulk-Power System*, 72 Fed. Reg. 16,416 (April 4, 2007) ("Once approved, the Reliability Standards may be enforced by the ERO, subject to Commission oversight or the Commission can independently enforce Reliability Standards."); *Mandatory Reliability Standards for the Bulk-Power System*, 72 Fed. Reg. 40,717 (July 25, 2007) (noting that the ERO is responsible for enforcing the Reliability Standards); *Mandatory Reliability Standards for the Bulk-Power System*, 120 FERC ¶ 61,053 (2007); Order No. 693 *codified at* 18 C.F.R. Part 40 (approving 83 of the 107 Reliability Standards proposed by NERC). Under Section 215, "[a]ll users, owners and operators of the bulk-power system shall comply with reliability standards that take effect under this section." 16 U.S.C. 824o(b) (2012); see also 18 C.F.R. § 40.2(a) (2013) (requiring compliance with the reliability standards created by the ERO).

65. See PJM INTERCONNECTION, PJM 2010 REGIONAL TRANSMISSION EXPANSION PLAN 1 (2011) [hereinafter 2010 RTEP], available at <http://www.pjm.com/documents/reports/rtep-documents/2010-rtep.aspx> (explaining that regional transmission planning and addressing reliability are the primary responsibilities for PJM as a FERC-approved Regional

transmission facilities to ensure electric reliability, PJM has developed an annual Regional Transmission Expansion Plan (RTEP) each year since 1997.<sup>66</sup> To develop each annual plan, PJM employs a process that utilizes a five-year and a fifteen-year window.<sup>67</sup> Within those windows, PJM analyzes anticipated increases in demand for electric power,<sup>68</sup> potential requests to interconnect new power plants to the transmission system,<sup>69</sup> anticipated retirements of old power plants,<sup>70</sup> and other variables that affect the need for transmission.<sup>71</sup> PJM also assesses transmission projects proposed by the public utilities that belong to PJM and that own the transmission facilities that PJM operates.<sup>72</sup>

## *II. Potomac Station Shutdown and Section 202(c)*

### *A. Federal and State Clean Air Act Violations*

#### *1. EPA Notice of Violation*

The shutdown of Potomac Station in August 2005 was preceded by violations of CAA requirements identified by the EPA and by the DEQ.<sup>73</sup> It

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Transmission Organization) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

66. *See id.* at 1–2 (stating that RTEPs have provided guidance in choosing transmission system enhancements that maintain grid reliability since 1997). PJM is responsible for the reliability needs of thirteen states and the District of Columbia. *See id.* at 1. The RTEP is developed in accordance with Schedule 6 of the Amended and Restated Operating Agreement of PJM Interconnection, L.L.C., Third Revised Rate Schedule FERC No. 24. *See* AMENDED AND RESTATED OPERATING AGREEMENT OF PJM INTERCONNECTION, L.L.C. 60 (2013) (“[The PJM Board shall a]pprove the Regional Transmission Expansion Plan in accordance with the provisions of the Regional Transmission Expansion Planning Protocol set forth in Schedule 6 of this Agreement.”) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

67. *See* 2010 RTEP, *supra* note 65, at 1 (stating that the RTEP process includes a five-year and a fifteen-year assessment as planning horizons).

68. *See id.* at 29 (“Recent trends have shown an increase in DSR [demand side response] across PJM.”).

69. *See id.* at 32 (stating that PJM’s market has attracted almost 310,000 MW of interconnection requests).

70. *See id.* at 43 (“Generator deactivations alter power flows that can cause transmission line overloads.”).

71. *See id.* at 17 (illustrating that the PJM load forecast model incorporates three types of variables into its model: calendar effects, economic conditions, and weather conditions across the transmission area).

72. *See id.* at 45 (discussing the multi-faceted analysis of assessing merchant transmission proposals).

73. *See* Mirant Corp. Potomac River Plant, at 2–3 (EPA Jan. 22, 2004) (notice of violation) [hereinafter EPA NOV], (explaining findings of violations) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT); Mirant

also was preceded by an unsuccessful attempt by the City of Alexandria to force the shutdown of the plant.<sup>74</sup>

In January 2004, the EPA issued a Notice of Violation (NOV) to Mirant Potomac under the CAA.<sup>75</sup> The NOV alleged a violation of limits on NO<sub>x</sub> emissions from Potomac Station under the DEQ 2000 operating permit.<sup>76</sup>

In September 2004, the EPA filed with the U.S. District Court for the Eastern District of Virginia a proposed consent decree with Mirant Potomac to settle the NOV.<sup>77</sup> Virginia and Maryland were signatories to the proposed consent decree, which would have imposed conditions on Potomac Station as well as on Chalk Point Station in Prince George's County, Maryland; the Dickerson Station in Montgomery County, Maryland; and the Morgantown Station in Charles County, Maryland.<sup>78</sup> In

Potomac River, LLC (Dept. of Env'tl. Quality Sept. 10, 2003) (notice of violation) [hereinafter DEQ NOV], available at <http://alexandriava.gov/uploadedFiles/tes/info/2003-09-10%20-%20VaDEQ%20to%20Mirant%20-%20NOx%20NOV.pdf> (stating that Mirant's NO<sub>x</sub> emissions for 2003 exceeded the emissions limit of Mirant's Permit and thus violated a condition of the Permit) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

74. See *Council Votes Against Mirant*, WASH. POST, Nov. 18, 2004, at T4 (explaining that the Alexandria City Council voted to revoke the operating status of Mirant Potomac River power plant in 2004).

75. See EPA NOV, *supra* note 7373, at 1 ("This Notice of Violation is issued to Mirant Corporation for violations of the Clean Air Act.")

76. See *id.* at 2–3 (alleging that Mirant reported NO<sub>x</sub> emissions exceeding the DEQ permit limit by 155 tons). On August 26, 2003, Mirant Potomac advised DEQ that NO<sub>x</sub> emissions from Potomac Station from May 1 through August 26 totaled 1,174 tons. See *id.* at 3 ("On August 26, 2003, [DEQ] was informed by Mirant that the NO<sub>x</sub> emissions . . . beginning with the commencement of the 2003 ozone season was approximately 1,174 tons. The reported amount exceeded . . . Permit Condition 3 of the Permit to Operate by approximately 155 tons."). By the end of ozone season in 2003, NO<sub>x</sub> emissions for the year totaled 2,139 tons. See *id.* ("By the end of the 2003 ozone season, the emissions of NO<sub>x</sub> from the plant totaled approximately 2,139 tons, approximately 965 tons in excess of the emission limit in Permit Condition 3.")

77. See Consent Decree, *United States v. Mirant Potomac River, LLC*, No. 1:04-cv-1136 (E.D. Va. 2004), available at <http://alexandriava.gov/uploadedFiles/tes/info/2004-xx-xx%20-%20Consent%20Decree.pdf> (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT); see also Notice of Lodging of the Proposed Consent Decree Between the United States, The State of Maryland, The Commonwealth of Virginia, Mirant Mid-Atlantic, LLC and Mirant Potomac River, LLC, 69 Fed. Reg. 60,187 (Oct. 7, 2004) ("Notice is hereby given that on Monday, September 27, 2004, a proposed Consent decree was lodged with the United States District Court for the Eastern District of Virginia."); Joshua Partlow, *Mirant to Cut Emissions, Pay Civil Fine*, WASH. POST, Sept. 28, 2004, at B3 (explaining that Mirant and environmental officials entered a settlement that required Mirant to reduce air-polluting emissions).

78. See Consent Decree No. 1:04-cv-1136 ¶¶ 2, 16 (explaining that the Consent Decree is binding on Mirant, and that the "Mirant System" includes the Chalk Point Plant, Dickerson Plant, Morgantown Plant, and Potomac River Plant). Chalk Point Station was

particular, the consent decree would have required a reduction in aggregate NO<sub>x</sub> emissions from the four electric power plants from 36,500 tons in 2004 to 16,000 tons by 2010.<sup>79</sup>

In addition, and with respect to Potomac Station, the consent decree would have required Mirant Potomac to: (i) install and operate, by May 1, 2005, low-NO<sub>x</sub> burners on Unit Nos. 3, 4 and 5 to reduce NO<sub>x</sub> emissions;<sup>80</sup> (ii) cease operation, by May 1, 2005, of Unit Nos. 3, 4, and 5 unless it had installed separated over-fire air technology to reduce NO<sub>x</sub> emissions;<sup>81</sup> and (iii) limit NO<sub>x</sub> emissions throughout the Ozone Season to 1,750 tons in 2004, 1,625 tons in 2005, 1,600 tons in 2006–2009, and 1,475 tons thereafter.<sup>82</sup>

The consent decree contemplated two civil penalties imposed on Mirant Potomac: a \$250,000 fine payable to the U.S. and a second \$250,000 fine payable to the Commonwealth of Virginia.<sup>83</sup> Finally, the consent decree would have required Mirant Potomac to undertake nine environmental projects, specified in an appendix to the decree, for Potomac Station.<sup>84</sup> A failure by Mirant Potomac to spend a minimum of \$1 million on the nine projects would have required the expenditure of additional

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owned by Mirant Chalk Point, LLC while Dickerson and Morgantown Stations were owned by Mirant Mid-Atlantic, LLC. *See id.* at 1 (stating the underlying facts of the consent decree). All three plants were operated by Mirant Mid-Atlantic, LLC. *See id.* (noting the station operator).

79. *See id.* ¶ 49 (requiring Mirant to comply with NO<sub>x</sub> tonnage limitations starting at 36,500 tons in 2004 and falling each year until they reach 16,000 tons by 2010).

80. *See id.* ¶ 42 (stating that Potomac Station must install and operate low-NO<sub>x</sub> burners for certain units as long as those units are in operation).

81. *See id.* ¶ 43 (stating that unless Potomac Station has installed and continuously operated “SOFA” technology, it must discontinue operation of Potomac Plant Units 3, 4, and 5).

82. *See id.* ¶ 44 (setting limits on Potomac Station’s ozone season NO<sub>x</sub> emissions from 2004 onward).

83. *See* Consent Decree, *supra* note 78, ¶¶ 71, 73 (requiring Mirant to pay \$250,000 to the federal government and \$250,000 to the Commonwealth of Virginia within thirty days of the Consent Decree).

84. *See id.* ¶ 64 app. A (explaining that Mirant shall comply with the terms of the Consent Decree, which include nine different environmental projects meant to reduce emissions). The nine projects concerned bottom ash and fly ash silo vent filtration, coal pile wind erosion and dust suppression, coal-conveying system dust suppression, ash-loading system upgrade, ash-loading system dust suppression, coal railcar unloading system dust suppression, settled dust investigation, truck washing facilities, and Mirant Corporation financial participation in the Clean Air Partners Project of the Commonwealth of Virginia. *See id.* at app. A (discussing the nine projects).

funds, for increased reductions of particulate matter (PM) and fugitive dust emissions, until the \$1 million objective was achieved.<sup>85</sup>

In response to public comments on the proposed consent decree, the terms of the agreement were revised, and a proposed amended consent decree was filed with the Eastern District of Virginia in May 2006.<sup>86</sup> Like the original consent decree, the amended consent decree required a reduction in aggregate NO<sub>x</sub> emissions from the four electric power plants from 36,500 tons in 2004 to 16,000 tons by 2010;<sup>87</sup> and required Mirant Potomac to install and operate the low-NO<sub>x</sub> burners on Unit Nos. 3, 4 and 5,<sup>88</sup> cease operation of Unit Nos. 3, 4 and 5 unless it installed separated over-fire air technology,<sup>89</sup> and limit NO<sub>x</sub> emissions throughout the Ozone Season to 1,750 tons in 2004, 1,625 tons in 2005, 1,600 tons from 2006–2009, and 1,475 tons thereafter.<sup>90</sup>

In addition, and also like the original consent decree, the amended consent decree imposed on Mirant Potomac a \$250,000 fine payable to the U.S.,<sup>91</sup> imposed a second \$250,000 fine payable to the Commonwealth of Virginia,<sup>92</sup> and required Mirant Potomac to undertake the original nine environmental projects for Potomac Station.<sup>93</sup> In contrast to the original consent decree, however, the amended consent decree imposed on Potomac Station annual NO<sub>x</sub> emissions limits as well as NO<sub>x</sub> emissions limits for the

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85. *See id.* ¶ 65 (stating that if Mirant completes each of the nine projects in Appendix A, but spends less than \$1 million on them, it must either spend the balance of the \$1 million on a project or must pay the balance as a penalty).

86. *See* Amended Consent Decree, *United States v. Mirant Potomac River, LLC*, No. 1:04-CV-1136 (E.D. Va. Apr. 20, 2007) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT); *see also* Notice of Lodging of Consent Decree Under the Clean Water Act, the Clean Air Act, and the Resource Conservation and Recovery Act, 71 Fed. Reg. 30,163 (May 25, 2006) (stating that the amended consent decree was filed on May 8, 2006, modifying the original as a consequence of public comments).

87. *See* Amended Consent Decree, *supra* note 86, ¶ 57 (requiring that Mirant comply with tonnage limitations for NO<sub>x</sub>, which begin at 36,500 tons for 2004 and fall each year until they reach 16,000 tons for 2010).

88. *See id.* ¶ 50 (stating that the Potomac Station must install and operate low-NO<sub>x</sub> burners for certain units as long as those units were in operation).

89. *See id.* ¶ 51 (stating that unless the Potomac plant has installed and continuously operated “SOFA” technology, it must shut down operation of Potomac Plant Units 3, 4, and 5).

90. *See* Amended Consent Decree, *supra* note 86, ¶ 52 (setting limits on Potomac Plant’s ozone season NO<sub>x</sub> emissions from 2004 onward).

91. *See id.* ¶ 79 (requiring that within thirty days of the entry of the Amended Consent Decree, Mirant must pay a civil penalty of \$250,000 to the United States).

92. *See id.* ¶ 81 (requiring Mirant to pay a civil penalty of \$250,000 within thirty days of the entry of the Amended Consent Decree).

93. *See id.* ¶ 72 (stating that Mirant shall implement each of the nine projects in Appendix A).

Ozone Season.<sup>94</sup> The amended consent decree required Mirant Potomac to limit annual NO<sub>x</sub> emissions to 3,700 tons from 2005 to 2010 and in each year thereafter.<sup>95</sup>

In January 2007, the EPA requested that the Eastern District approve the amended consent decree.<sup>96</sup> In April 2007, over three years after the issuance of the EPA NOV, the court approved the amended consent decree and entered judgment in the case.<sup>97</sup>

## 2. DEQ Consent Order

In addition to an NOV issued by EPA, the alleged violation of limits on NO<sub>x</sub> emissions from Potomac Station during the 2003 Ozone Season also resulted in the issuance of an NOV by DEQ in September 2003.<sup>98</sup> Like the EPA NOV, the DEQ NOV also alleged a violation of the DEQ 2000 permit to operate Potomac Station, which limited Potomac Station NO<sub>x</sub> emissions to 1,019 tons each year during the Ozone Season.<sup>99</sup> The NOV was revised after the close of the Ozone Season.<sup>100</sup>

No civil penalties or injunctions, however, were issued.<sup>101</sup> One year after the DEQ NOV was issued, the state enforcement proceeding was resolved.<sup>102</sup> In September 2004, Mirant Potomac accepted a consent order

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94. See *id.* ¶ 52 (limiting the annual, as well as Ozone Season, NO<sub>x</sub> emissions).

95. See *id.* (requiring that from 2005 onward, the annual tonnage limit for NO<sub>x</sub> is 3,700 tons).

96. See Kirstin Downey, *Courts Reject Alexandria Power Plant Moves*, WASH. POST, Apr. 21, 2007, at B4 (discussing the Amended Consent Decree between the EPA and Mirant).

97. See *id.* (stating that federal district court approved the amended consent decree).

98. See DEQ NOV, *supra* note 73, at 1 (discussing the terms of the notice of violation). The NOV was issued soon after DEQ issued a report on PM emissions from Potomac Station. See Chris L. Jenkins, *Digging Up Dirt on Mystery Ash in Alexandria*, WASH. POST, Nov. 20, 2003, at T14 (discussing a DEQ report that associated a significant portion of soot buildup with Potomac Station).

99. See *id.* at 2 (stating that Mirant's Potomac Station emissions exceeded the 1,019 tons allowed under its Permit).

100. See Letter from Richard J. Baier, Dir., Transp. & Env'tl. Serv., to Dir., Dep't of Env'tl. Quality (Oct. 28, 2004), available at <http://alexandriava.gov/uploadedFiles/tes/info/2004-10-28%20-%20City%20of%20Alexandria%20Comments%20on%20the%20Revised%20Draft%20State%20Operating%20Permit.pdf> (arguing that the draft of Mirant's Operating Permit needed to be revised) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

101. See DEQ NOV, *supra* note 73, at 2-3 (stating that while the DEQ had the authority to impose a civil penalty up to \$10,000, the notice of violation only required Mirant to contact DEQ and inform the agency of their planned corrective action).

102. See AIR POLLUTION CONTROL BD., COMMONWEALTH OF VA. DEP'T OF ENVTL. QUALITY, ORDER BY CONSENT ISSUED TO MIRANT POTOMAC RIVER, LLC § A (2004)

issued by the APCB.<sup>103</sup> In particular, Mirant Potomac agreed under the consent order to perform a refined modeling analysis to assess the effect of “downwash” from Potomac Station on concentrations of sulfur dioxide (SO<sub>2</sub>), nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), and PM for comparison to applicable NAAQS in the area around the plant.<sup>104</sup>

Mirant Potomac also agreed that, if the modeling analysis indicated a violation of NAAQS for those pollutants, then a plan and schedule would be submitted to the DEQ within ninety days to eliminate and prevent the violation.<sup>105</sup> Finally, the consent order observed that the DEQ had undertaken a review of the permit to operate Potomac Station.<sup>106</sup>

The consent order imposed the requirement for the “downwash” analysis in part on the basis of an analysis, commissioned by residents of a condominium building near Potomac Station, which concluded that plant emissions might violate applicable NAAQS.<sup>107</sup> The consent order observed that “[a]lthough the Sullivan Screening does not establish conclusively that emissions from the Facility result in exceedances [*sic*] of the NAAQS at Marina Towers, the [DEQ] believes that the results of the Sullivan Study warrant that further comprehensive analysis be conducted in accordance with DEQ and EPA approved modeling procedures.”<sup>108</sup>

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[hereinafter 2004 Consent Order], available at <http://alexandriava.gov/uploadedFiles/tes/info/2004-09-23%20-%20Consent%20Order%20-%20Downwash%20Modeling.pdf> (stating that the purpose of the September 2004 order was an agreement between Mirant and DEQ to ensure compliance with ambient air quality standards) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

103. See *id.* at 6 (stating that Mirant Potomac River voluntarily agreed to this order dated Sept. 23, 2004).

104. See *id.* § D ¶ 1 (stating that Mirant agreed to do a refined modeling analysis to assess the effect of “downwash” on concentrations of various pollutants). Downwash “means the effect that occurs when aerodynamic turbulence induced by nearby structures causes pollutants from an elevated source (such as a smokestack) to be mixed rapidly toward the ground resulting in higher ground-level concentration of pollutants.” *Id.* § B ¶ 11.

105. See *id.* § D ¶ 4 (explaining that if modeling analysis shows that emissions exceed NAAQS standards, Mirant must submit a plan to eliminate the excess to the DEQ).

106. See *id.* § C ¶ 1 (stating that DEQ is in the process of modifying Potomac Station’s Stationary Source Permit to Operate).

107. See SULLIVAN ENVTL. CONSULTING, INC., SCREENING-LEVEL MODELING ANALYSIS OF THE POTOMAC RIVER POWER PLANT LOCATED IN ALEXANDRIA, VIRGINIA (2004), available at <http://alexandriava.gov/uploadedFiles/tes/info/Sullivan%20Modeling.pdf> (explaining that, in Sullivan’s view, further review needs to take place to be sure that NAAQS are being met around the facility) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

108. 2004 Consent Order, *supra* note 102, § C ¶ 4.

### 3. Alexandria Ordinance

In addition to the January 2004 EPA NOV and the September 2003 DEQ NOV, the City of Alexandria launched a legal initiative of its own for alleged violations of NO<sub>x</sub> emission limits from Potomac Station during the 2003 Ozone Season.<sup>109</sup> The initiative also was in response to citizen concerns, raised in 2003, with PM emissions from Potomac Station.<sup>110</sup> To address those concerns, the City, in October 2004, formed a Mirant Community Monitoring Group.<sup>111</sup> Thereafter, in response to NO<sub>x</sub> emissions and PM emissions,<sup>112</sup> Alexandria, in December 2004, voted to revoke the municipal permit to operate Potomac Station.<sup>113</sup>

In particular, the City Council unanimously adopted a municipal ordinance to amend the City of Alexandria Zoning Ordinance.<sup>114</sup> The municipal ordinance provided that a coal-burning power plant, located in a zone in which the operation of the plant is not a permitted use or a special use permit use, “shall be deemed a nonconforming use, and shall be subject to abatement.”<sup>115</sup> Under the abatement provision of the Alexandria Zoning

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109. See Alexandria, Va., An Ordinance to Amend and Reordain Section 12-200 of Article XII of the City of Alexandria Zoning Ordinance (Dec. 18, 2004), [hereinafter An Ordinance to Amend] available at <http://dockets.alexandriava.gov/fy05/121404rm/di22.pdf> (stating that section 12-200 of the City of Alexandria Zoning Ordinance is amended to provide for the abatement of any nonconforming electrical power generating plants) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

110. See Chris L. Jenkins, *Digging Up Dirt on Mystery Ash in Alexandria*, WASH. POST, Nov. 20, 2003, at T14 (discussing how two Alexandria residents presented a report on the public health impact of Potomac Station PM emissions to Alexandria in August 2004, raising community concerns about Mirant’s PM emission); Spencer S. Hsu, *Power Plant Study Raises Concern*, WASH. POST, May 18, 2002, at B3 (citing a study that estimated that pollution from five power plants near Washington contributed to more than 260 premature deaths).

111. See *Arlington Briefs*, WASH. POST, Oct. 21, 2004, at T5. (“The Alexandria City Council has voted to create the Mirant Community Monitoring Group to deal with issues involving the Mirant Potomac River Power Plant.”).

112. See Juliet Eilperin, *Areas With Dirtiest Air Named*, WASH. POST, Dec. 18, 2004, at A20 (explaining that dangerous levels of soot pollution exist throughout large parts of Maryland, Virginia, and Washington, D.C). In December 2004, the EPA released a list of counties in the U.S. with dangerous concentrations of PM emissions. See *id.* (discussing U.S. counties with dangerous concentrations of PM emissions, including Washington, D.C. and “large swaths of Maryland and much of Northern Virginia”).

113. See *Council Votes Against Mirant*, WASH. POST, Nov. 18, 2004, at T4. (“The Alexandria City Council voted 7–0 on Saturday to revoke the operating status of the Mirant power plant.”).

114. See generally An Ordinance to Amend, *supra* note 109 (amending section 12-200 of the City of Alexandria Zoning Ordinance).

115. See ALEXANDRIA, VA., ZONING ORDINANCE § 12-216(A) (1992) (stating that any electrical power generating plant that produces power by coal combustion may be subject to abatement if located in a non-permitted zone).

Ordinance, the power plant could be shut down after seven years.<sup>116</sup> In addition, the municipal ordinance provided that a nonconforming plant is prohibited from building alterations that would extend the life of the electric power plant and from installing or replacing fixtures used for the generation of electric power.<sup>117</sup>

In addition, the City Council unanimously approved the revocation of two special use permits, issued by the City of Alexandria in 1989, for facilities and plans related to the operation of Potomac Station.<sup>118</sup> The special use permits, the revocation of which was unanimously recommended by the Planning Commission of the City of Alexandria,<sup>119</sup> were issued not for the operation of the plant *per se* but for incidental facilities and plans.<sup>120</sup> The legal rationale for the revocation was based in

116. *See id.* § 12-214(A) (“The nonconforming use shall be discontinued on or before the expiration of a period of seven years . . . unless, prior to the expiration of such period, a special use permit which authorizes the continuation of the nonconforming use has been approved . . .”).

117. *See id.* § 12-216(B)(1)–(2) (stating that any nonconforming use cannot perform alterations to a building which prolongs the nonconforming use or replace, install, or upgrade fixtures used to generate power).

118. *See* City Council of Alexandria, Va., Public Hearing Meeting 7–9 (Dec. 18, 2004), available at <http://dockets.alexandriava.gov/fy05/011105rm/di3b.pdf> (describing both the special use permits granted to Mirant Potomac River and unanimously revoking those permits) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT). Special Use Permit No. 2296 approved the construction and use of 18,000 square feet of administrative offices, laboratories, and conference space at Potomac Station. *See id.* at 7 (describing the purposes of Special Use Permit 2296). Special Use Permit 2297 approved the Transportation Management Plan for the plant. *See id.* at 7 (describing what Special Use Permit 2297 allowed). The revocation (i) would take effect in 120 days to permit Mirant Potomac to file applications for new special use permits; (ii) would be stayed if Mirant Potomac filed applications for new special use permits within the 120 day period; (iii) would be moot if the City Council approved the applications for new special use permits; and (iv) would become effective forthwith if the City Council denied the applications for new special use permits and the operation of Potomac Station would be an illegal use. *See id.* at 9–10 (describing the conditions for which the City Council revoked these Special Use Permits).

119. *See id.* at 7 (showing that the Planning Commission unanimously recommended to revoke the Special Use Permits). The Planning Commission is a citizen board that makes recommendations to the City Council of Alexandria. *See Planning & Zoning, ALEXANDRIAVA.GOV*, <http://alexandriava.gov/planning/info/default.aspx?id=6698> (last visited Oct. 3, 2013) (describing the make-up and role of the Alexandria Planning Commission) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

120. *See* Public Hearing Meeting, *supra* note 118, at 7–9 (explaining that the Special Use Permits were granted in 1989 to approve the construction of administrative offices, laboratories, and other spaces, and to approve the Transportation Management Plan). The ordinance requires a Special Use Permit for the operation of an electric power plant. *See ALEXANDRIA, VA., ZONING ORDINANCE § 4-1303(B)* (stating that an electrical power generating plant needs a special permit to operate in a UT zone). The permit provisions of

part on the January 2004 EPA NOV.<sup>121</sup> Under the Alexandria Zoning Ordinance, a special use permit can be revoked for “fail[ure] to comply with any law.”<sup>122</sup>

The legal gambit launched by the City of Alexandria met stiff resistance. In January 2005, Mirant Potomac sued the City Council in state court.<sup>123</sup> The Circuit Court for the City of Alexandria, for reasons stated in open court,<sup>124</sup> entered judgment for Mirant Potomac in February 2006. The Circuit Court declared the municipal ordinance that deemed a power plant a nonconforming use under the Alexandria Zoning Ordinance invalid, and vacated the City Council revocation of the two special use permits.<sup>125</sup>

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the ordinance provide, however, that “[n]o use shall be conducted in any manner which would render it noxious or offensive by reason of dust, refuse matter, odor, smoke, gas, fumes, noise, vibration or glare.” *Id.* § 4-1306(A). The operation of Potomac Station predates the special use permit provisions of the Alexandria Zoning Ordinances. *See Sullivan, supra* note 22 (noting that the Potomac River Generating Station has operated for two generations).

121. *See* Alexandria Planning Commission, Planning Commission Action, (December 7, 2004) (discussing Mirant’s violations of EPA statutes) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

122. ALEXANDRIA, VA., ZONING ORDINANCES § 11-506(A) (2007).

123. *See* Mirant Potomac River, LLC v. Alexandria City Council, No. CH05001092 (Va. Cir. Ct. 2005) (discussing the procedural history). *See generally* Jerry Markon, *Mirant Suit Targets Alexandria*, WASH. POST, Feb. 10, 2005, at T3 (stating that Mirant sued the city council) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

124. *See* Alexandria City Council v. Mirant Potomac River, LLC, 643 S.E.2d 203, 206–08 (Va. 2007) (stating the circuit court’s conclusions). The Circuit Court concluded, first, that the municipal ordinance violated section 10.1–1321.1 of the Virginia Code. *See id.* at 207 (arguing that the grounds for this violation do not need to be addressed because the court found a violation of VA. CODE ANN. § 15.2–2307). Second, the Circuit Court concluded that the municipal ordinance violated section 15.2–2307. *See id.* at 206–07 (finding that the City Council’s action impaired Mirant’s vested right to use the property under section 15.2–2307). The Circuit Court concluded, third, that the municipal ordinance constituted “piecemeal downzoning” that was unsupported by changed circumstances. *See id.* at 206 (stating the Circuit Court’s reasons for ruling against the City Council). Finally, the Circuit Court concluded that the revocation of the special use permits under section 11-506(A) of the Alexandria zoning ordinances for a violation of “any law” required a nexus between the violation of law and the subject matter of the special use permits which nexus the City of Alexandria failed to establish. *See id.* at 208 (finding that the City’s construction of the special use permit did not establish the requisite nexus, unlike the trial court’s construction).

125. *See* Mirant Potomac River, LLC v. Alexandria City Council, No. CH05001092, Order Entering Final Judgment, 1 (Va. Cir. Ct. Feb. 24, 2006) (invalidating Ordinance 4366 and reversing the revocation of Mirant’s use permits); *see also* *City Still Fighting to Close Power Plant*, WASH. POST, Jan. 26, 2006, at T2 (stating that although the Circuit Court set aside the revocation of Mirant’s permit, the City would appeal).

The City appealed the judgment to the Supreme Court of the Commonwealth of Virginia.<sup>126</sup> In April 2007, the Supreme Court upheld the judgment of the Circuit Court.<sup>127</sup> The Court concluded that, because the municipal ordinance “impaired an established vested right to operate” Potomac Station,<sup>128</sup> the ordinance violated the state vested rights statute.<sup>129</sup> The Court also concluded that the revocation of the two special use permits was unlawful.<sup>130</sup>

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126. See Alexandria City Council, 643 S.E.2d at 204 (describing the City of Alexandria’s appeal).

127. See *id.* (stating that the Circuit Court did not err).

128. See *id.* (stating that the amendment violated the Virginia Code because it impaired Mirant’s vested right to operate the plant).

129. See VA. CODE ANN. § 15.2–2307 (2010) (stating that “[n]othing in this article shall be construed to authorize the impairment of any vested right”). Under the statute, “a landowner acquires a vested property right to conduct nonconforming use on its property if that use was in existence on the effective date of zoning ordinance which would make the use nonconforming.” *Mirant Potomac*, 643 S.E.2d at 206; see, e.g., *Holland v. Board of Supervisors*, 441 S.E.2d 20, 22 n.\* (Va. 1994) (stating that a landowner could acquire a vested right for a nonconforming use if it began before the effective date). Commenced in 1949, the operation of the Potomac Station predates the 1992 special use permit provisions of the Alexandria Zoning Ordinance. See *Mirant Potomac*, 643 S.E.2d at 204–05 (discussing the history of the Potomac Station). Because the Virginia Supreme Court concluded that the ordinance violated the state vested rights statute, it declined to address the alternate grounds of the Circuit Court decision. See *Mirant Potomac*, 643 S.E.2d at 207 (“In light of our holding . . . we need not address the alternate grounds cited by the circuit court as a basis for its holding regarding the Text Amendment.”).

130. See *Mirant Potomac*, 643 S.E.2d at 207–08 (affirming the circuit court’s reversal of the city’s revocation of the permits). The Supreme Court affirmed that that the revocation of the special use permits under section 11-506(A) of Alexandria zoning ordinances for a violation of “any law” required a relationship between the violation of law and the special use permits. See *id.* at 208 (“[T]he circuit court did not err in construing the phrase ‘any law’ in § 11–506(A) of the zoning ordinance as any law having a nexus to the purpose of the SUP . . .”). The ordinance provides that “the city council may revoke or suspend any special use permit approved by it upon proof that the holder of the permit has failed to comply with the law, including, without limitation, *the conditions subject to which the special use permit was granted.*” ALEXANDRIA VA., ZONING ORDINANCES § 11-506(A) (emphasis added). The Virginia Supreme Court concluded that “this provision reflects an intent to base the revocation of the SUP on activities related to the SUP.” *Mirant Potomac*, 643 S.E.2d at 208. Thus the permits could be revoked for a violation of the Alexandria Zoning Ordinance but not for a violation of the APCL or of the CAA. See *id.* at 209 (discussing the nexus requirement of section 11-506(A)).

*B. State Shutdown and Federal Intervention**1. DEQ Order*

The City of Alexandria ultimately failed to force the shutdown of Potomac Station.<sup>131</sup> Where the City failed, however, the DEQ succeeded.

In accordance with the September 2004 consent order, Mirant Potomac performed a refined modeling analysis to assess the effect of “downwash” from Potomac Station on concentrations of SO<sub>2</sub>, NO<sub>2</sub>, CO, and PM for comparison to applicable NAAQS in the area around the plant (Downwash Analysis).<sup>132</sup> Published in August 2005, the Downwash Analysis concluded that “worst-case modeling results” indicate that the downwash from Potomac Station would result in violations of the NAAQS for SO<sub>2</sub>, PM, and NO<sub>2</sub> “assuming that the facility operates at maximum possible load for the entire year.”<sup>133</sup>

Also in August 2005, Alexandria released its own ambient air quality analysis of Potomac Station. Prepared by a consultant, the analysis concluded that maximum short-term impacts of emissions of PM and SO<sub>2</sub> exceeded ambient air quality standards by “between five and eighteen times” and that maximum annual impacts of PM, SO<sub>2</sub> and NO<sub>2</sub> exceeded standards by “between three and twelve times.”<sup>134</sup> The analysis of annual impacts indicated “that residents in these areas [near Potomac Station] are chronically exposed to concentration [of air pollutants] in excess of health-based standards.”<sup>135</sup>

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131. See *City of Alexandria v. Mirant Potomac River, LLC*, No. CH05002882, Order Entering Final Judgment (Va. Cir. Ct. filed Feb. 24, 2006) (rendering judgment for Mirant against the City of Alexandria Oct. 7, 2005). Alexandria suspended the nuisance suit in December 2006. See *Virginia Briefing*, WASH. POST, Dec. 14, 2006, at B2 (reporting that Alexandria suspended its nuisance suit against Mirant).

132. See ENSR CORPORATION, A DISPERSION MODELING ANALYSIS OF DOWNWASH FROM MIRANT’S POTOMAC RIVER POWER PLANT, 1-1 (Aug. 2005) [hereinafter Downwash Analysis] (providing the background and an overview of the methods used in Mirant’s Downwash Analysis) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

133. *Id.* at 6-1. Several conservative assumptions were incorporated into the analysis. “For example, modeling assumed that all combustion sources at the power plant are operating at maximum load for the entire year even though the power plant operates about 60% capacity in a typical year.” *Id.* at 1-3. The Downwash Analysis observed that the condominium building near Potomac Station, the residents of which building commissioned the Sullivan Study, “was constructed without considering the effects of pre-existing emissions from the power plant . . .” *Id.* at 5-3.

134. AERO ENGINEERING SERVICES, AMBIENT AIR QUALITY ANALYSIS, POTOMAC RIVER GENERATING STATION, ALEXANDRIA, VIRGINIA i (Aug. 2005) [hereinafter Ambient Air Quality Analysis] (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

135. *Id.* at 3-16.

The consent order that required the Downwash Analysis also provided that if the modeling analysis indicated a violation of NAAQS for specified pollutants, then a plan and schedule would be submitted to the DEQ within ninety days to eliminate and prevent the violation.<sup>136</sup> Thus the Downwash Analysis stated that “Mirant will propose a plan and schedule to eliminate these exceedances [*sic*] on a timely basis. This plan and schedule will be submitted by November 14 in accordance with the Consent Order.”<sup>137</sup>

Before the plan and schedule were submitted, however, the DEQ, in response to the Downwash Analysis, ordered Mirant Potomac, on August 19, 2005, to “*immediately* undertake such action as is necessary” for the protection of human health and the environment in the area around Potomac Station.<sup>138</sup> The order was issued under an administrative regulation that authorizes the DEQ to shut down a power plant subject to the APCL.<sup>139</sup> In immediate response to the order, Mirant Potomac reduced the output of Potomac Station from 482 MW to 175 MW and met with DEQ officials to explore options for compliance.<sup>140</sup> On August 24th, however, Mirant Potomac decided to shut down the power plant.<sup>141</sup>

The reaction to the shutdown was instantaneous. Concern for electric reliability in Washington, D.C. prompted the PSC, on August 24th,<sup>142</sup> to file an emergency petition and complaint with the DOE and FERC.<sup>143</sup> The PSC argued that “the proposed shutdown will have a drastic

136. See 2004 Consent Order, *supra* note 102, at 4 (requiring Mirant to submit a plan to ensure compliance with Standards of Performance).

137. Downwash Analysis at 6-1.

138. See Letter from Robert G. Burnley, *supra* note 177, at 2 (directing Mirant Potomac to advise DEQ by August 24 of actions that will be taken to eliminate and prevent violations of the NAAQS for SO<sub>2</sub>, PM, and NO<sub>2</sub>).

139. See 9 VA. ADMIN. CODE § 5-20-180(I) (stating that the APCB may shut down a facility if necessary to prevent a violation of any primary ambient air quality standard).

140. See Smith, *Power Plant Faces Shutdown Over Pollutants*, *supra* note 16616 (stating that Mirant reduced output and planned to meet with the DEQ to discuss compliance).

141. See Leef Smith, *Mirant Power Plant to Close Temporarily*, WASH. POST, Aug. 25, 2005, at B1 (“Mirant Corp. decided yesterday to shut down its power plant in Alexandria . . .”).

142. See Investigation Into the Effect of the Bankruptcy of Mirant Corporation on the Retail Electrical Service in the District of Columbia, No. 1023 (Pub. Serv. Comm. of D.C. 2005) (final order) (instructing PEPCO to advise the Commission on the impact Mirant’s action will have on consumers) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

143. See Emergency Petition and Complaint of the District of Columbia Pub. Serv. Comm’n at 9, FERC (2005) (No. EL05-145-000) [hereinafter FERC Petition] (requesting that FERC take action) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT); see also Emergency Petition and Complaint of the District of Columbia Public Service Commission at 9, DOE (2005) (No. EO-05-01)

and potentially immediate effect on the electric reliability in the greater Washington, D.C., area and could expose hundreds of thousands of consumers, agencies of the Federal Government and critical federal infrastructure to curtailments of electric service, load shedding and, potentially, blackouts.”<sup>144</sup>

The PSC petition and complaint requested that the DOE issue an order to Mirant Potomac to require the restart of Potomac Station.<sup>145</sup> The petition and complaint also requested that FERC commence an administrative hearing and “take immediate action” to prevent a Potomac Station shutdown and to avoid curtailments in electric service in the Washington area.<sup>146</sup> The petition and complaint sought relief from the DOE under Section 202(c) of the Federal Power Act.<sup>147</sup>

In the PSC-initiated proceeding before the FERC, seventeen parties intervened, seven parties and three individuals filed comments, and protests were filed by the DEQ and by the Southern Environmental Law Center (SELC).<sup>148</sup> Mirant Potomac and PEPSCO filed answers to the protests and

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[hereinafter DOE Petition] (requesting that the DOE to take action) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT); DC Commission, 70 Fed. Reg. 51,769 (Aug. 31, 2005) (notice) (stating that FERC noticed the petition and complaint).

144. FERC Petition, *supra* note 143, at 1.

145. See DOE Petition, *supra* note 143, at 2 (“DCPSC requests that the Secretary issue orders . . . and direct Mirant to continue the operation of the Potomac River Plant until further orders are issued.”).

146. See FERC Petition, *supra* note 143, at 2 (requesting a hearing and immediate action to prevent Mirant from ceasing action).

147. See *id.* (requesting relief from the FERC under Section 207 and Section 309 of the Federal Power Act); 16 U.S.C. § 824f (2012) (providing that the Commission can determine the service to be furnished by order, rule, or regulation when a state commission complains that a public utility is affected). Section 309 provides that “[t]he Commission shall have power to perform any and all acts, and to proscribe, issue, make, amend, and rescind such orders, rules, and regulations as it may find necessary . . . .” 16 U.S.C. § 825h (2012).

148. See Order on Petition and Complaint, FERC No. EL05-415-000, at 3 (2006) (describing the various responsive pleadings) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT). DEQ argued that FERC “should not issue any order requiring restoration of operations at the Potomac River Plant without giving due consideration to the impacts of that order on the air quality and health of the citizens of Virginia . . . .” Motion to Intervene and Protest of Robert G. Burnley, Dir., the Commonwealth of Virginia Dep’t of Env’tl. Quality, No. EL05-415-000, at 4 (FERC 2005) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT). The SELC argued that Potomac Station shutdown was not an “emergency” within the meaning of Section 202(c). See Protest of the Southern Env’tl. Law Ctr., No. EL05-415-000, at 2–4 (FERC 2005) (“Section 202(c) may be invoked only . . . when an emergency actually ‘exists’ . . . . In this case . . . DCPSC concedes that no emergency exists . . . . DCPSC’s alleged emergency is purely conjectural.”) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT). The SELC also argued that the DOE and the FERC could not authorize the continued operation of

comments.<sup>149</sup> The DEQ also filed a motion to deny the petition and complaint.<sup>150</sup> Answers to the motion followed.<sup>151</sup>

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Potomac Station because the plant could not be operated in compliance with federal and state air pollution control requirements. *See id.* at 4–7 (arguing that Mirant cannot operate the plant in compliance with state mandates and the FERC cannot force Mirant to violate the regulations).

149. *See* Order on Petition and Complaint at 3 (2006) (“Mirant and PEPCO filed answers to the protests and comments.”). Mirant Potomac clarified that it was required by DEQ to shut down Potomac Station. *See* Motion for Leave to Answer and Answer of Mirant Potomac River, LLC, No. EL05-145-000, at 2–3 (FERC 2005) (clarifying that Mirant was required to close and did not have an option) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT). Mirant Potomac also argued that a request for a permanent shutdown of the plant is beyond the scope of the FERC complaint proceeding. *See id.* at 4 (asserting that the relief requested “involves matters beyond the scope of this proceeding . . .”). PEPCO proposed a solution for the operation of Potomac Station “that ameliorates the risk to electric reliability caused by the shutdown and either eliminates potential exceedances of air quality limits or dramatically reduces such environmental impacts.” Potomac Electric Power Company’s Motion for Leave to Answer and Answer to Comments and Protests, No. EL05-145-000, at 4 (FERC 2005) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

150. *See* Motion of Robert G. Burnley to Deny Petition, No. EL05-145-100, at 5–11 (FERC 2005) (requesting the DCPSC’s motion be denied) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT). DEQ first argued that the relief requested by the PSC is impermissible because it would contribute to significant exceedances of air quality standards. *See id.* at 11–12 (arguing that the relief requested would frustrate DEQ enforcement of the APCL); *see also id.* at 13–15 (arguing that FERC cannot act before it addresses the requirements of the Nat’l Envtl. Policy Act (NEPA); *id.* at 15–16 (arguing that the relief requested is within the jurisdiction of DOE).

151. *See* Order on Petition and Complaint, *supra* note 148, at 8–9 (discussing the DEQ’s motion and PJM and PEPCO’s answer). PJM and PEPCO filed a joint answer to the DEQ motion which argued that (i) the DEQ motion is procedurally deficient, (ii) the electric reliability issues raised in the petition and complaint implicate serious risks to public health, safety and security; (iii) there is no conflict between the relief requested and applicable federal and state law; (iv) the relief requested would not frustrate DEQ enforcement of the APCL; (v) the requested relief requires no NEPA review; and (vi) FERC is authorized to act on the petition and complaint under Section 207. *See* Answer of Potomac Elec. Power Co. and PJM Interconnection, L.L.C., to Motion of Robert G. Burnley, No. EL05-145-100, at 6–25, (FERC 2005) (asserting six counterarguments to the arguments raised in the DEQ motion) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT). The PSC also filed an answer to the DEQ motion which argued that (i) the DEQ motion is an impermissible late protest; (ii) FERC is authorized to act under Section 207 and Section 309 and should grant the requested relief; (iii) there is no conflict between the relief requested and applicable law; (iv) the relief requested would not frustrate DEQ enforcement of the APCL; and (v) the requested relief requires no NEPA review. *See* Answer of the District of Columbia Pub. Serv. Comm’n to Motion of Robert G. Burnley, No. EL05-145-100, at 8–25 (FERC 2005) (raising five arguments against the DEQ motion) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT); *see also* Motion for Leave to File a Consolidated Answer and Consolidated Answer of Robert G. Burnley, No. EL05-145-100, at 1–2 (FERC 2005) (answering the October 13 joint answer by PEPCO and PJM and the October 26 answer of the DCPSC) (on

An extended shutdown of Potomac Station was not anticipated.<sup>152</sup> Indeed, Mirant Potomac restarted the power plant on September 21, albeit at a reduced level.<sup>153</sup> On November 15, the DOE requested that FERC not take action on the PSC petition and complaint because the DOE expected to take action in the near future.<sup>154</sup>

## 2. DOE Order

On December 20, in response to the PSC petition and complaint, the DOE issued an order to Mirant Potomac under Section 202(c) to resume the generation of electric power at Potomac Station to the extent required to provide the “central D.C. area” with electric service.<sup>155</sup> The order was issued upon a determination “that an emergency exists due to a shortage of electric energy.”<sup>156</sup> The order was effective immediately and was set to expire on October 1, 2006.<sup>157</sup>

The DOE order explained that the central D.C. area depended on Potomac Station and on two existing 230-kV PEPSCO transmission lines for electric power.<sup>158</sup> The plant, the DOE reasoned, must be operational if one

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file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT); Motion for Leave to Answer and Answer of Potomac Elec. Power Co., No. EL05-145-100, at 1 (FERC 2005) (answering the November 10, 2005 DEQ consolidated answer of Burnley) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

152. See, e.g., Leef Smith, *Power Plant Likely to Reopen, Analysts Say*, WASH. POST, Aug. 28, 2005, at C6 (discussing industry analysts’ statements that the plant would likely open quickly).

153. See Annie Gowen, *Mirant Will Restart Controversial Va. Plant*, WASH. POST, Sept. 21, 2005, at B7 (stating that Mirant announced a limited reopening of the plant even though critics were angry); see also Jerry Markon, *Mirant Plans to Request Plant’s Reopening*, WASH. POST, Sept. 15, 2005, at T3 (describing plans by Mirant to propose a reopening of the plant).

154. See Letter to the Hon. Joseph T. Kelliher, Chairman, FERC, from Kevin M. Kolevar, Dir., Office of Elec. Delivery and Energy Reliability, DOE (Nov. 15, 2005) (requesting no action be taken on docket number EL05-145) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

155. See Order No. 202-05-3, DOE No. EO-05-01, at 1 (2005) [hereinafter DOE Order] (ordering Mirant to resume generating electricity) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT); see also Emergency Order to Resume Limited Operation at the Potomac River Generating Station, Alexandria, VA, in Response to Electricity Reliability Concerns in Washington, D.C., 71 Fed. Reg. 3279 (Jan. 20, 2006) (stating the plant was ordered to begin functioning again on a limited basis).

156. DOE Order at 1.

157. See *id.* at 10 (“This order is effective immediately and will terminate at 12:01 a.m. October 1, 2006.”).

158. See *id.* at 2–3 (observing that there are no transmission lines that connect the Benning Road and Buzzard Point electric power plants to the central D.C. area).

line is out of service.<sup>159</sup> In addition, the plant must otherwise remain operational to minimize the start-up time for full power generation in the event of simultaneous line failures.<sup>160</sup> The order required the submission of a plan to ensure compliance with these operational requirements.<sup>161</sup>

The DOE order indicated that PEPCO had filed an application with the PSC to construct two additional 230-kV transmission lines to provide electric power to the central D.C. area.<sup>162</sup> The construction of the lines would require eighteen to twenty-four months even though the DOE stated that it expected the PSC to expedite approval of the application.<sup>163</sup> In response to arguments raised by the DEQ, the DOE concluded that no NEPA analysis was required to issue the order.<sup>164</sup>

In consideration of environmental concerns, however, the DOE ordered Mirant Potomac to resume the generation of power “in a manner that provides reasonable electric reliability, but that also minimizes any adverse environmental consequences from operation of the Plant.”<sup>165</sup> For this reason, the DOE declined to impose additional operational requirements.<sup>166</sup>

On December 30, Mirant Potomac submitted the Operating Plan of Mirant Potomac River, LLC in Compliance with Order No. 202-05-03 (“Operating Plan”).<sup>167</sup> The Operating Plan proposed a Temporary Phase as

159. *See id.* at 10 (“[D]uring any period in which one or both of the 230-kV lines serving the Central D.C. area is out of service, whether planned or unplanned, Mirant will operate the [Potomac Station] to produce the amount of power . . . needed to meet demand in the Central D.C. area . . .”); *see also id.* at 4 (stating that since 2000, there have been thirty-four instances of one-line outages for maintenance and seven instances of unplanned one-line outages and two instances of two-line failures).

160. *See id.* at 10 (“Mirant shall keep as many units in operation, and shall take all other measures to reduce the start-up time of units not in operation, for the purpose of providing electricity reliability . . .”).

161. *See* DOE Order, *supra* note 155, at 10 (requiring Mirant to submit this plan within ten days).

162. *See id.* at 3 (stating PEPCO had applied to construct two lines that would power central D.C.).

163. *See id.* at 11 (“DOE expects that the DCPSC will take all reasonable actions to augment electrical reliability and to reduce electricity demand in the central D.C. area.”).

164. *See id.* at 5 (stating that DOE did not believe this was a “major action” and it consulted with the Council of Environmental Quality (CEQ) to make that determination).

165. *Id.* at 8–9.

166. *See id.* at 10 (“The [DOE] is not prepared to order actions that could cause more localized NAAQS exceedances than are necessary in order to assure adequate electric reliability for the Central D.C. area.”).

167. *See* Operating Plan of Mirant Potomac River, LLC in Compliance With Order No. 202-05-03, DOE (2005) (No. EO-05-01) [hereinafter Operating Plan] (requesting that the Operating Plan be Mirant Potomac’s plan in compliance with the DEP Order from September 23, 2004) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

well as an Intermediate Phase.<sup>168</sup> A Long-Term Phase was addressed in general terms but was “not the focus” of the plan.<sup>169</sup> In the Temporary Phase, Unit No. 1 operated on a limited basis and subject to operational limitations.<sup>170</sup> The Operating Plan sought DOE approval for expanded operation of Unit No. 1 throughout the Temporary Phase subject to a SO<sub>2</sub> emissions cap.<sup>171</sup>

The Operating Plan offered two alternatives for the Intermediate Phase.<sup>172</sup> Under the first alternative, which Mirant Potomac proposed and DOE selected on January 4th,<sup>173</sup> Units Nos. 1–2 would operate up to sixteen hours per day and one of the other three units would operate without restriction.<sup>174</sup> Under the second option, Units Nos. 3–5 would operate unconstrained up to twelve hours per day with low-sulfur coal.<sup>175</sup> The Operating Plan indicated that Mirant Potomac had ordered a system for the injection into each unit of sodium sesquicarbonate (trona), which is used to control SO<sub>2</sub> emissions.<sup>176</sup> Finally, each unit in the Intermediate Phase would be subject to an SO<sub>2</sub> emissions cap.<sup>177</sup>

Addressed in general terms, a Long-Term Phase contemplated an increase in the height of the smoke stacks for Potomac Station in an effort to mitigate the adverse impact of “downwash” from Potomac Station.<sup>178</sup>

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168. See *id.* at 1 (stating that Mirant “anticipates a phased-in resumption of operation” of the Potomac Station and that the Temporary Phase commenced on September 21, when Mirant Potomac resumed the operation of Potomac Station at a reduced level).

169. See *id.* at 2 (discussing the focus of the operating plan).

170. See *id.* at 3–4 (proposing a limited plan for Unit No. 1); see also Leef Smith, *Alexandria Pushes to Shut Mirant*, WASH. POST, Mar. 21, 2006, at B2 (stating that Mirant Potomac believed trona injections were a unique technique and could be patented).

171. See Operating Plan, *supra* note 167, at 4 (proposing an SO<sub>2</sub> emissions cap of 7.4 tons per day).

172. See *id.* at 1–2 (reporting that the operation of Potomac Station under the first option would result in no NAAQS exceedances and the operation of Potomac Station under the second option would dramatically reduce reliability risks but would result in NAAQS exceedances for one pollutant); see also Jerry Markon, *Mirant Plan Breaks Emission Cap*, WASH. POST, Jan. 12, 2006, at T3 (discussing Mirant’s plan to use the second option under the Operating Plan).

173. See Mirant’s Compliance Plan, 71 Fed. Reg. 3280 (authorizing Mirant to implement Option A).

174. See Operating Plan, *supra* note 167, at 4 (“Mirant proposes to operate the two cycling units . . . up to 16 hours per day each . . .”).

175. See *id.* at 5 (“Under Option B, Mirant would operate the 3 base load units continuously with up to 12 hours per day at full load . . .”).

176. See *id.* at 6 (discussing the five systems Mirant had rented).

177. See *id.* at 7 (“Mirant will operate such unit subject to a unit-specific 24 hr daily SO<sub>2</sub> emission rate cap.”).

178. See *id.* at 8–9 (“Mirant continues to explore the most effective method of reconfiguring [heightening] the stacks in some manner . . . to mitigate against the downwash effect . . .”).

The power plant, however, is just one mile south of Ronald Reagan Washington National Airport.<sup>179</sup> A stack height increase would therefore require an approval from the Federal Aviation Administration (“FAA”).<sup>180</sup> The Operating Plan indicated that Mirant Potomac had submitted a proposal for the increase to the FAA.<sup>181</sup>

Although the DOE concluded that no NEPA analysis was required to issue the order,<sup>182</sup> in January 2006, the Department, in accordance with DOE NEPA regulations,<sup>183</sup> issued a notice to advise the public of the DOE order and to “set forth the steps it intends to take in the future to comply with [NEPA] in the matter.”<sup>184</sup> In particular, the DOE, in consultation with the Council on Environmental Quality (CEQ), decided to: (i) prepare a Special Environmental Analysis (SEA) of the DOE order; (ii) provide opportunities for public involvement; (iii) continue consultations with appropriate agencies on relevant environmental issues; and (iv) develop measures that would mitigate the environmental impact of the DOE order.<sup>185</sup>

To allow time for the completion of the SEA, the DOE extended the DOE Order, which was to expire on October 1, 2006, through December 1, 2006, and again through February 1, 2007 to allow public review and comment on the SEA.<sup>186</sup>

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179. See Downwash Analysis, *supra* note 132, at 2-1 (describing the location of the airport).

180. See 49 U.S.C. § 44718 (“[I]f the Secretary decides that constructing or altering a structure may result in an obstruction of the navigable airspace . . . , the Secretary shall conduct an aeronautical study to decide the extent of any adverse impact on the safe and efficient use of the airspace, facilities, or equipment.”); see also 14 C.F.R. Part 77 (regulating objects affecting navigable airspace).

181. See *e.g.*, Mirant Potomac River, LLC, Aeronautical Study No. 2005-AEA-2959-OE (FAA Feb. 2, 2006) (determining that the proposed stack height increase would pose no hazard to air navigation) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT); see also Jerry Markon, *FAA Has 2nd Look At Mirant*, WASH. POST, Dec. 1, 2005, at VA03 (reporting that Mirant had requested a more detailed study from the FAA on the increases in stack height).

182. See, *e.g.*, 10 C.F.R. § 1021.343(a) (2005) (providing the DOE with the ability to disregard NEPA requirements under certain scenarios); see also 40 C.F.R. § 1506.11 (2007) (discussing the CEQ NEPA requirements).

183. See generally 10 C.F.R. Part 1021 (2007) (establishing procedures for the DOE to comply with NEPA requirements).

184. Emergency Order to Resume Limited Operation at the Potomac River Generating Station, Alexandria, VA, in Response to Electricity Reliability Concerns in Washington, D.C., 71 Fed. Reg. 3279 (Jan. 20, 2006).

185. See *id.* at 3281 (providing four alternate arrangements for implementation).

186. See Order No. 202-07-1, DOE No. EO-05-01, at 1 (2006) (noting previous deadlines, and extending the DOE order to allow for public comment) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

### 3. FERC Order

Within three weeks of the DOE order, the FERC issued an order in the PSC-initiated proceeding.<sup>187</sup> The FERC order “supplements the [DOE] actions by focusing on a more permanent and comprehensive solution to be provided by the transmission entities.”<sup>188</sup> Thus the order directed PJM and PEPCO, pursuant to Section 207 of the Federal Power Act,<sup>189</sup> to file with the FERC a long-term plan to maintain power service for the Washington metropolitan region and to file a plan to provide power service pending the implementation of the long-term plan.<sup>190</sup>

Whereas the DOE reacted to the Potomac Station shutdown with a mandated resumption of electric power generation, the FERC reacted with a mandated expansion of local electric power transmission to ensure electric reliability in Washington, D.C.<sup>191</sup> The legal basis for the FERC order was the FERC-approved OATT.<sup>192</sup>

The FERC order concluded that the planned or inadvertent loss of power from Potomac Station could result in a violation of NERC reliability standards.<sup>193</sup> Thus FERC ordered PJM and PEPCO to develop and implement a long-term plan for the construction and operation of adequate and sufficient local electric transmission facilities to ensure electric reliability for Washington, D.C.<sup>194</sup>

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187. Order on Petition and Complaint, 114 Fed. Energy Reg. Comm’n Rep. (CCH) ¶ 61,017 (2006) [hereinafter FERC Order] (ordering PJM and PEPCO to develop and implement plans and provide monthly progress reports) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

188. *Id.* at 61,037 ¶ 2; *see also id.* at 61,042 ¶ 28 (“[W]e address establishing transmission solutions to the reliability problems in the Washington, D.C. area.”).

189. *See generally* 16 U.S.C. § 824(f) (giving FERC the authority to determine whether interstate electricity service is inadequate and provide order to compel sufficient service).

190. *See* FERC Order, *supra* note 187, at 61,037 ¶ 2 (“[W]e are issuing this order under section 207 of the FPA to require PJM Interconnection, L.L.C. (PJM) and Potomac Electric Power Company (PEPCO) to file a long-term plan to maintain adequate reliability in the Washington, D.C. area and surrounding region, and a plan to provide adequate reliability pending implementation of this long-term plan.”).

191. *See id.* at 61,041 ¶ 24 (“The Commission directs [PJM and PEPCO] to develop and implement comprehensive long-term plans for the operation, planning and construction of transmission facilities to address the current reliability risks to the system.”).

192. *See, e.g.*, PJM Interconnection, FERC Electric Tariff, Sixth Rev. Vol. No. 1 (Dec. 18, 2006) (setting out the details of the PJM OATT).

193. *See* FERC Order, *supra* note 187, at 61,041 ¶ 24, 61,042 ¶ 30 (observing that the likelihood that a single 230-kV PEPCO transmission line will fail is significant); *see also id.* at 61,042 ¶ 25 (noting that without generation from Potomac Station, routine transmission line maintenance poses an electric reliability concern).

194. *See id.* ¶ 31 (“Therefore, in coordination with the Department of Energy order, the Commission orders PJM and PEPCO to jointly develop a plan to maintain adequate reliability . . .”).

FERC ordered PJM and PEPCO to file within one month a short-term plan to provide electric power to the metropolitan D.C. region in coordination with the DOE. The plan was to provide for the duration of the DOE order as well as for the period between the expiration of the DOE order and the implementation of the long-term plan.<sup>195</sup> Finally, the FERC order required the submission of monthly progress reports on the implementation of the plans.<sup>196</sup>

In February 2006, PEPCO and PJM filed the Potomac River Substation Transmission Reliability Plan (Reliability Plan), which addressed long-term as well as short-term electric reliability concerns and proposed operational measures as well as local transmission line construction to resolve those concerns.<sup>197</sup> Information on short-term operational measures, however, was not made public pursuant to FERC regulations for the protection of critical energy infrastructure information.<sup>198</sup>

With respect to long-term local transmission line construction, the Reliability Plan stated, “the prudent course of action is to expedite upgrades of the transmission system for the particular local area served by the Potomac River Plant and substation.”<sup>199</sup> The plan observed that PEPCO “has committed to construct” two additional 230-kV transmission lines to provide electric power to the Washington region.<sup>200</sup> Because the lines would not become operational until June 2007, the Reliability Plan proposed an extension of the DOE order until that time.<sup>201</sup>

The long-term local transmission line construction would ensure electric reliability for the metropolitan D.C. region.<sup>202</sup> In addition, however, PEPCO and PJM explained that “PJM is planning for the overall reliability of the greater Washington, D.C. area [and] will continue to review these

195. *See id.* (“This plan . . . shall be submitted to the Commission within one month from the date of this order.”).

196. *See id.* (“PJM and PEPCO are to jointly submit monthly progress reports on the implementation of such plans to the Commission.”).

197. *See* Letter from Kirk J. Emge, Gen. Counsel, PEPCO, to Magalie R. Salas, Sec’y, Attachment A: Potomac River Substation Transmission Reliability Plan (Feb. 8, 2006) [hereinafter Reliability Plan] (submitting the reliability plan to FERC) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

198. *See* 18 C.F.R. §§ 388.112–388.113 (providing for special treatment of information deemed as critical energy infrastructure information (CEII)).

199. Reliability Plan *supra* note 197, at 3.

200. *See id.* at 6–7 (proposing the construction of two additional 69-kV transmission lines to provide electric power to the Blue Plains sewage treatment plant in Southeast D.C.).

201. *See id.* at 6. (“Without an extension of this order . . . operation of the PEPCO transmission system may revert to the unacceptable reliability level that existed prior to the December 20 DOE Order.”).

202. *See id.* at 7 (“[T]he long-term construction plan proposed . . . is anticipated to alleviate all operating constraints discussed herein . . .”).

larger matters through its Regional Transmission Expansion Planning (“RTEP”) process.”<sup>203</sup> Thus the Reliability Plan assured the FERC that “PJM is evaluating, and will continue to evaluate, within its RTEP process, the need for additional transmission facilities on the Pepco and neighboring systems that may be required to address the potential permanent loss of 482 MW of Potomac River Plant generation on the Pepco system.”<sup>204</sup>

In March, FERC sought clarification from PEPCO and PJM on proposed operational measures in the Reliability Plan to address short-term electric reliability concerns.<sup>205</sup> Following the submission of a clarification, FERC accepted the Reliability Plan.<sup>206</sup> Between March 2006 and August 2007, PEPCO and PJM submitted monthly progress reports on the implementation of the Reliability Plan describing the progress on the construction of the two additional 230-kV transmission lines to provide electric power to the Washington region as well as on the two additional 69-kV transmission lines to provide electric power to the Blue Plains sewage treatment plant in Southeast D.C.<sup>207</sup> The report for July 2006 indicated that the two additional 69-kV transmission lines had been completed and placed in service.<sup>208</sup>

The report for June 2007 indicated that the two additional 230-kV transmission lines had been completed and placed in service.<sup>209</sup> Thus in August 2007 FERC issued an order that terminated the requirement for

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203. *Id.* at n.7.

204. *Id.* at 7.

205. *See generally* Letter from Joseph McClelland, Dir., Div. of Reliability, Office of Energy Mkts. and Reliability, FERC to Kirk J. Emge, Gen. Counsel, & Craig Glaser, Vice President of Fed. Gov’t Policy, PEPCO (Mar. 6, 2006) (“Please provide a complete assessment of the reliability impacts of transferring load from the Potomac River substation to other nearby substations . . .”) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

206. *See* Letter From Div. of Reliability, Office of Energy Mkts. and Reliability, FERC, to Kirk J. Emge, Gen. Counsel, PEPCO (June 5, 2006) (“[Y]our submittal filed in [Docket No. EL05-145-000] is accepted for informational purposes.”) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

207. *See, e.g.*, Letter from Helen M. Hight, Assistant Gen. Counsel, PEPCO, to FERC (Mar. 8, 2006) (including a progress report on design, permitting, procurement, and related activities) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

208. *See* Letter from Helen M. Hight, Assistant Gen. Counsel, PEPCO, to Magalie R. Salas, Sec’y, FERC (Aug. 8, 2006) (explaining that Feeder No. 69021 was placed in service on July 15, 2006) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

209. *See* Letter from Amy L. Blauman, Assistant Gen. Counsel, PEPCO, to Magalie R. Salas, Sec’y, FERC (July 13, 2007) (“The construction of the 230 kV lines is now complete and PEPCO has finalized the implementation of its related work plan.”) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

monthly progress reports.<sup>210</sup> The order required, however, a final report on specific electric reliability issues affecting the Washington, D.C. area, on improvements implemented to resolve those issues, and on outstanding electric reliability issues.<sup>211</sup>

The order found that “construction of the new transmission lines into Washington, D.C. near [Potomac Station] has provided new capacity to adequately serve load absent [Potomac Station].”<sup>212</sup> Nonetheless, FERC reported that, to ensure electric reliability in the event of a Potomac Station shutdown, additional transmission improvement was required;<sup>213</sup> despite the two additional 230-kV transmission lines, the Washington, D.C.-Baltimore area needed additional voltage support;<sup>214</sup> and that PJM, PEPCO and Baltimore Gas & Electric Company (BGE) must develop a regional long-term plan to ensure electric reliability for the region.<sup>215</sup> Thus the order required a final report on reliability issues affecting the Washington, D.C. area.<sup>216</sup>

In September 2007, PJM filed the required report, which identified the specific electric reliability issues that would arise in the event of a Potomac Station shutdown.<sup>217</sup> The report also identified a potential overload on the 500-kV Doubs-Mt. Storm transmission, and transmission enhancements required to meet the need for additional voltage support in the event of a shutdown.<sup>218</sup> Finally, the report detailed all transmission

210. See Order on Reporting Requirements 120 Fed. Energy Reg. Comm’n Rep. (CCH) ¶ 61,185, ¶ 1 (2007) (“In this order, the Commission terminates the requirement for submission of monthly progress reports . . .”) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

211. See *id.* ¶ 6 (directing PEPCO and PJM to submit one more report detailing specific regional reliability issues including voltage and other concerns mentioned in the 2006 RTEP).

212. *Id.* ¶ 5.

213. See *id.* ¶ 6 (addressing reliability concerns).

214. See *id.* (“[I]n addition to the construction of the two transmission lines, voltage support was needed in the Baltimore-Washington, D.C. area.”).

215. See *id.* (“[A] more detailed, joint PJM, PEPCO, and Baltimore Gas & Electric Company study was necessary to develop a regional long-term plan.”).

216. See Order on Reporting Requirements, *supra* note 210, ¶ B (“PEPCO and PJM are hereby required to file a report with the Commission that identifies and addresses the specific regional reliability issues affecting the Washington, D.C. area . . .”).

217. See Letter From Jeffrey W. Mayes, Senior Counsel, PJM, to Kimberly D. Bose, Sec’y, FERC (Sept. 27, 2007) (stating that this letter was filed in satisfaction of the Commission’s requirement) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

218. See *id.* at 3 (“PJM also identified an additional thermal overload on the Mt. Storm to Doubs 500 kV line for the outage of the Bedington to Black Oak 500 kV line.”).

upgrades for PEPCO and BG&E region.<sup>219</sup> In January 2008, the FERC accepted the report and closed the proceeding.<sup>220</sup>

#### 4. PSC Order

The commitment to construct two additional 230-kV transmission lines to provide electric power to the metropolitan D.C. region was apparent in October 2005, within two months after the Potomac Station shutdown, when PEPCO filed an application with the PSC to construct the transmission lines.<sup>221</sup> Filed under Section 34-302 of the D.C. Code,<sup>222</sup> the application also proposed the construction of two additional 69-kV transmission lines to provide electric power to the Blue Plains sewage treatment plant in Southeast D.C.<sup>223</sup> The application requested an approval from the PSC by December 31, 2005.<sup>224</sup>

The PSC held a one-day administrative hearing on the PEPCO application on February 2, 2006.<sup>225</sup> PEPCO, PJM, the District of Columbia, and the Office of the People's Counsel of the District of Columbia ("OPC") participated in the hearing.<sup>226</sup> In March 2006, the commission issued an order that authorized the construction of the transmission lines.<sup>227</sup> The order

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219. See *id.* at 4–7 (providing tables that show completed upgrades).

220. See Letter From Office of Elec. Reliability, Office of Energy Mkts. and Reliability, FERC, to Craig Glazer, Vice President of Fed. Gov't Policy, PJM (Jan. 10, 2008) (stating that pursuant to 18 C.F.R. §§ 375.307 and 375.314, the Director of the Office of Electric Reliability accepts the uncontested filing of PJM's report) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

221. See Emergency Application of the Potomac Elec. Power Co. for a Certificate of Pub. Convenience and Necessity to Construct Two 69-kV Overhead Transmission Lines and Notice of the Proposed Construction of Two 230-kV Underground Transmission Lines, No. 1044-E-1, at 2 (D.C.P.S.C. 2005) [hereinafter Emergency Application] (filing to construct two 69-kV Overhead Transmission Lines) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT); see also Notice, 52 D.C.Reg. 9731 (Oct. 28, 2005) (providing notice of the Public Service Commission's consideration of an emergency application to construct two new power transmission lines).

222. See D.C. CODE § 34-302 ("No person shall begin the construction of a gas plant or an electric plant without first having obtained the permission and approval of the [PSC]."); see generally D.C. MUN. REGS. tit. 15, ch. 21 (detailing provisions for construction of electric generating facilities and transmission lines).

223. See Emergency Application, *supra* note 221, at 2 (proposing the construction two 69-kV Overhead Transmission Lines).

224. See *id.* (requesting an order by December 31, 2005).

225. See Transcript of Proceedings, No. 1044-E-55, at 59 (D.C.P.S.C. 2006) (noting that a substantial segment of the hearing was held in closed session) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

226. See *id.* 225 at 2 (listing the participants).

227. See Order No. 13,895 ¶ 1 (D.C.P.S.C. 2006) ("By this Order, the Public Service Commission of the District of Columbia ('Commission') grants the Emergency Application

concluded that it is “clearly and unequivocally” in the public interest to allow the construction of the transmission lines.<sup>228</sup>

In a separate order issued soon thereafter, the PSC established a working group in response to the DOE Order to assess the reasonableness of energy conservation, *i.e.*, demand response, programs in the area to which Potomac Station provides electric power.<sup>229</sup> The working group was tasked with an investigation of the potential for reduced demand for electric power through demand response programs.<sup>230</sup> In May, the working group, which consisted of, *inter alia*, PEPCO, PJM, the District of Columbia, the OPC, and FERC, reported that it had failed to reach a consensus on the implementation of near-term demand response programs in the downtown area of D.C.<sup>231</sup> After a period for public comment,<sup>232</sup> the PSC accepted the working group report in September 2006.<sup>233</sup>

### III. Retirement of Potomac Station

#### A. Federal and State Clean Air Act Violations

##### 1. EPA Notice of Violation

Throughout the turbulent DEQ, DOE, FERC, and PSC proceedings and orders regarding Potomac Station, clean air and electric reliability, which resulted in the shutdown and restart of Potomac Station as well as in

of [PEPCO] . . . because it is in the public interest.”) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT); *see also* Order No. 13,958 ¶ 1 (D.C.P.S.C. 2006) (“On March 6, 2006, the Commission issued an Order approving the [PEPCO] request for approval to construct additional electric transmission lines in the event that power from the nearby Potomac River Generation Plan becomes unavailable.”) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

228. *See* Order No. 13,895, *supra* note 227 ¶ 25 (“The Commission believes that it is clearly and unequivocally in the public interest to avoid these consequences by creating a long-term solution which allows for the continued reliability of the District’s electric system.”); *see also* Order No. 13,850, ¶ 16 (D.C.P.S.C. 2005) (allowing waiver of procedural rules) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

229. *See* Order No. 13,907 (D.C.P.S.C. 2006) (ordering PSC to create a Demand Response Working Group) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

230. *See id.* at 2–3 (listing the questions to be investigated by the Demand Response Working Group).

231. *See* Formal Case No. 1044, Report of the Demand Response Working Group (D.C.P.S.C. May 8, 2006) (reporting results from investigation).

232. *See* Order No. 13,942 (D.C.P.S.C. May 15, 2006) (calling for comments to the Demand Response Working Group’s findings).

233. *See* Order No. 14,403 ¶ 7 (D.C.P.S.C. Sept. 8, 2006) (ordering the acceptance of the Working Group Report).

the Operating Plan and the Reliability Plan, the EPA maintained a watchful eye on Potomac Station.<sup>234</sup> For example, the EPA evaluated the response of Mirant Potomac to the August 19, 2005, DEQ order that precipitated the shutdown and, in December 2005, advised Mirant Potomac that it had failed to “*immediately* undertake such action as is necessary” for the protection of human health and the environment in the area around Potomac Station.<sup>235</sup> Although Mirant Potomac had shut down Potomac Station on August 24th, it had failed to shut down the plant on August 19th.<sup>236</sup>

As a result of this failure, on December 22, 2005 the EPA issued an NOV to Mirant Potomac under the CAA.<sup>237</sup> The NOV alleged a violation of the Virginia SIP, which the EPA is authorized to enforce under Section 113 of the CAA,<sup>238</sup> and the administrative regulation under which the August 19, 2005 DEQ order was issued.<sup>239</sup> The NOV resulted in the issuance, in June 2006, of an EPA Administrative Compliance Order (ACO),<sup>240</sup> to which Mirant Potomac consented.<sup>241</sup>

The ACO imposed operational limitations on Potomac Station when the two existing 230-kV PEPCO transmission lines that provide

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234. See EPA Issues Administrative Order to Mirant Potomac River, ENVIRONMENTAL PROTECTION AGENCY (June 2, 2006), <http://yosemite.epa.gov/opa/admpress.nsf/7c02ca8c86062a0f85257018004118a6/2e1916f8aef739048525718100417b12> (discussing the EPA requirements for Potomac Station) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

235. See *id.* (discussing the EPA Administrative Order).

236. See Carla Branch, *Potomac River Generating Station Ceases Operation*, ALEXANDRIA NEWS (Sep. 29, 2012), <http://www.alexandrianews.org/2012/potomac-river-generating-station-ceases-operation/> (noting that the actual date of Potomac Station’s shut down was August 24) (one file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

237. See Mirant Corp. Potomac River Plant (EPA Dec. 22, 2005) (notice of violation), available at <http://epa.gov/compliance/resources/novs/civil/caa/nov-coal-mirant012204.pdf> (noticing Mirant’s violation of the CAA and Virginia Code) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT);

238. See 42 U.S.C. § 7413 (2012) (detailing enforcement of SIP requirements).

239. See 9 VA. ADMIN. CODE § 5-20-180(I) (2002) (stating that facility operations may be reduced or stopped to prevent a violation); see also 40 C.F.R. § 52.2420(c) (2007) (setting forth Virginia’s implementation plan to meet national air quality standards).

240. Administrative Compliance Order by Consent, Mirant Potomac River LLC Potomac River Generating Station, (EPA June 1, 2006) [hereinafter Administrative Compliance Order] (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

241. See Annie Gowen, *EPA Lets Mirant Increase Output*, WASH. POST (June 3, 2006), <http://www.washingtonpost.com/wp-dyn/content/article/2006/06/02/AR2006060201672.html> (discussing advantages the terms and effects of the Order give Mirant) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

electric power to the central D.C. area were both in service.<sup>242</sup> If either of the lines was out of service, then Potomac Station was required under the ACO to generate the amount of electric power required to meet the PJM-determined demand in the central D.C. area.<sup>243</sup> In addition, the ACO limited annual nitrogen oxide emissions from Potomac Station to 3,700 tons.<sup>244</sup> Finally, the ACO directed Mirant Potomac to cooperate with the DEQ in the development of emissions limits for the DEQ permit to operate Potomac Station.<sup>245</sup>

## 2. DEQ Operating Permits

The ACO issued by the EPA in June 2006 expired on May 31, 2007.<sup>246</sup> On June 1, 2007 the DEQ issued an interim operating permit to Mirant Potomac to operate Potomac Station.<sup>247</sup> The permit limited Potomac Station SO<sub>2</sub> emissions to 3,813 tons per year, established hourly and daily SO<sub>2</sub> emissions limits, and required the continued operation of devices, installed pursuant to the ACO, to measure SO<sub>2</sub> concentrations.<sup>248</sup>

In July 2008, DEQ issued a permanent operating permit to operate Potomac Station.<sup>249</sup> The twenty-three page permit included fifty-one

242. See Administrative Compliance Order, *supra* note 240, at art. IV § B (discussing operational limits imposed on Potomac Station). In addition to operational limits, the ACO imposed a schedule for the installation of trona injection systems, required the adoption of additional measures in the event of elevated concentrations of SO<sub>2</sub>, and mandated the installation of devices to measure SO<sub>2</sub> concentrations. See *id.* (listing orders imposed on Potomac Station in addition to operational limitations).

243. See *id.* at art. IV § C (discussing the amount of energy to be generated).

244. See *id.* at art. IV § D (“At all times, Mirant shall not emit more than 3700 tons of NO<sub>x</sub> per year . . .”).

245. See *id.* at art. IV § E (detailing permitting requirements). The day after the ACO was issued, the DOE directed Mirant Potomac to operate Potomac Station in accordance with the ACO when the two existing 230-kV PEPCO transmission lines that provide electric power to the central D.C. area are both in service and to operate the plant in accordance with the DOE Order if one or both of the lines is out of service. See Letter From Kevin Kolevar, Dir., Office of Electricity Delivery and Energy Reliability, DOE, to Robert Driscoll, CEO, Mirant Mid-Atlantic, LLC (June 2, 2006) (directing Mirant Potomac’s plant operations) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

246. See Administrative Compliance Order, *supra* note 2400, at art. XI ¶ 24 (providing effective date and expiration date).

247. See Commonwealth of Virginia, Stationary Source Permit to Operate (June 1, 2007) [hereinafter Stationary Source Permit 2007].

248. See *id.* ¶¶ 5–10 (establishing emission limits and hourly and daily quotas, and requiring continued measurement of emissions).

249. See generally Commonwealth of Virginia, Stationary Source Permit to Operate (July 31, 2008) [hereinafter Stationary Source Permit 2008] (explaining the effectiveness of the Stationary Source Permit) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

conditions, which limited SO<sub>2</sub> emissions to 3,813 tons per year, limited NO<sub>2</sub> emissions to 3,700 tons per year, and limited NO<sub>2</sub> emission during Ozone Season to 1,475 tons after 2009;<sup>250</sup> required emissions controls on SO<sub>2</sub>, NO<sub>2</sub>, and PM; required compliance with federal regulations on continuous emissions monitoring systems; set forth specifications for the coal to be burned in the boilers; and required that Potomac Station “reduce the level of operation at the facility if the [APCB] determines that this is necessary to prevent a violation of any primary ambient air quality standard.”<sup>251</sup>

The permit reflected the terms of an agreement between Mirant Potomac and the City of Alexandria for measures to reduce PM emissions from Potomac Station.<sup>252</sup> Under the agreement, Mirant Potomac agreed to place \$34 million in an escrow account to be spent on plant modifications to reduce PM emissions and to control fugitive dust from the plant site.<sup>253</sup> In return, the City agreed to not oppose the issuance of the DEQ permit or the contemplated plant modifications.<sup>254</sup>

Finally, the permit authorized Mirant Potomac to reconfigure the smoke stacks of Potomac Station to consolidate the five stacks into two stacks.<sup>255</sup> Until the reconfiguration was completed, Potomac Station would operate in accordance with the June 1, 2007 permit.<sup>256</sup> Once the reconfiguration was completed, that permit would be superseded and Potomac Station would operate in accordance with the July 31, 2008 permit.<sup>257</sup> The consolidation would disperse plant emissions over a broadened area.<sup>258</sup>

250. See *id.* at 13 (providing facility-wide emissions limits).

251. *Id.* at 23; see also *id.* at 4–8 (detailing emissions controls, system monitoring requirements, and fuel requirements).

252. See *id.* at Exhibit 1 (discussing terms of the Project Schedule and Agreement).

253. See *id.* (“Whereas Mirant has agreed to deposit thirty-four million dollars (\$34,000,00.00) in an interest bearing escrow account (“Escrow Account”) pursuant to the terms of an escrow agreement for the purpose of implementing air pollution control technology to reduce stack and fugitive particulate matter emissions from the Facility . . .”).

254. See *id.* (discussing the city’s authority to protect its citizens and its desire for a comprehensive state operating permit).

255. See *id.* at 3 (detailing stack reconfiguration); see also Daniel Deane, *City to Pursue ‘All Available’ Options Against Mirant*, WASH. POST (Aug. 30, 2007), <http://www.washingtonpost.com/wp-dyn/content/article/2007/08/28/AR2007082801950.html> (reporting on a DEQ meeting to discuss whether stack reconfiguration required a permit) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

256. See Stationary Source Permit 2008, *supra* note 249, at 3 (discussing facility operation while the stacks are being reconfigured).

257. See *id.* (discussing operation after reconfiguration is complete).

258. See David A. Fahrenthold, *Power Plant Still Battling to Stay Open*, WASH. POST (Sept. 13, 2007), <http://www.washingtonpost.com/wp->

The formulation of the environmental requirements set forth in the permanent operating permit provided for public participation,<sup>259</sup> which revealed that, despite those requirements, the well-publicized efforts of environmental activists to close Potomac Station over clean air concerns would continue.<sup>260</sup> The public participation also revealed a degree of popular resentment toward the DEQ, which, it was believed, “has been too lenient toward the Mirant plant.”<sup>261</sup>

Two years later, the DEQ issued a permit to operate Potomac Station during the Ozone Season.<sup>262</sup> The permit supplemented the July 2008

[dyn/content/article/2007/09/12/AR2007091202349.html](http://www.washingtonpost.com/wp-dyn/content/article/2007/09/12/AR2007091202349.html) (explaining that a higher smokestack will allow the exhaust to be blown higher into the atmosphere resulting in a greater dispersion of pollutants allowing the plant to burn more coal and produce power without increasing harm to the local area) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

259. See Mark Bermand, *Public Hearing to Address Permit for Mirant*, WASH. POST (Nov. 15, 2007), <http://www.washingtonpost.com/wp-dyn/content/article/2007/11/13/AR2007111302578.html> (“The Virginia Department of Environmental Quality will host a briefing and public hearing in Alexandria on Monday to allow residents to comment on the proposed state operating permit for the controversial Mirant power plant.”) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT); but see Kirstin Downey, *State Panel Skips Hearing on Mirant*, WASH. POST (Nov. 21, 2007), <http://www.washingtonpost.com/wp-dyn/content/article/2007/11/20/AR2007112002015.html> (“Members of a state environmental panel reviewing Mirant Corp. operations did not show up at a hearing in Alexandria on Monday night, angering City Council members and about 100 residents who had come to testify.”) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

260. See, e.g., Chris L. Jenkins, *Mirant to Improve Pollution Curbs*, WASH. POST, July 3, 2008, at B5 (“Officials are pushing for the plant to reduce other emissions further, and city activists hope to shut down the plant.”).

261. Daniela Deane, *Arlington, Alexandria Define Legislative Priorities*, WASH. POST (Dec. 6, 2007), <http://www.washingtonpost.com/wp-dyn/content/article/2007/12/05/AR2007120500804.html> (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT); see also Kirstin Downey, *Longtime Foes Face Off Over Mirant Power Plant*, WASH. POST (Dec. 18, 2007), <http://www.washingtonpost.com/wp-dyn/content/article/2007/12/17/AR2007121701767.html> (reporting on public officials’ belief that the DEQ’s actions undermined their efforts) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT). This resentment resulted in successful opposition to a bill that would have transferred APCB responsibilities to DEQ. See Kirstin Downey, *Compromise Preserves Board’s Permitting Clout*, WASH. POST (Mar. 20, 2008), [http://articles.washingtonpost.com/2008-03-20/news/36774176\\_1\\_mirant-mid-atlantic-air-pollution-control-board-new-bill](http://articles.washingtonpost.com/2008-03-20/news/36774176_1_mirant-mid-atlantic-air-pollution-control-board-new-bill) (discussing how public resentment resulted in successful opposition to a bill that would have transferred APCB responsibilities to DEQ) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

262. Commonwealth of Virginia, *Mirant Potomac River, LLC, Registration No. 70228, Stationary Source Permit to Operate* (July 29, 2010). [hereinafter Stationary Source Permit

permit and superseded the September 2000 permit.<sup>263</sup> The permit provided that, beginning with the 2010 Ozone Season, total NO<sub>x</sub> emissions could not exceed 890 tons.<sup>264</sup> The permit also cautioned that a violation of a NAAQS could force the shutdown of the plant:

Regardless of any other provision of this section, the owner of any facility subject to the Regulations for the Control and Abatement of Air Pollution shall, upon request of the Board, reduce the level of operation at the facility if the Board determines that this is necessary to prevent a violation of any primary ambient air quality standard. Under worst-case conditions, the Board may order that the owner shut down the facility if there is no other method of operation to avoid a violation of the primary ambient air quality standard.<sup>265</sup>

Finally, the permit could be revoked for violations of NAAQS or of permit conditions.<sup>266</sup>

### 3. DEQ Consent Orders

Although the DEQ operating permits authorized Potomac Station to continue to generate electric power, the DEQ continued to require strict compliance with clean air requirements.<sup>267</sup>

For example, just prior to the issuance of the operating permit in July 2008, Mirant Potomac agreed to the issuance of a consent order for violations of the APCL and the APCB regulations promulgated thereunder.<sup>268</sup> In particular, the consent order found that, on February 23, 2007, while Potomac Station operated under the DOE Order, and during a scheduled transmission line outage required to complete the installation of

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2010] (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

263. *See id.* (noting the permit's relationship to prior permits).

264. *See id.* at 4 (defining the limits of NO<sub>x</sub> emissions).

265. *Id.* at Condition 10.

266. *See id.* at Condition 12 (allowing the permit to be revoked).

267. *See generally* Order by Consent Issued to Mirant Potomac River, LLC for the Mirant Potomac River Generating Station, Registration No. 70228 (July 2, 2008) [hereinafter Order by Consent 2008] (requiring compliance with the DEQ permit) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

268. *See id.* ("Mirant agrees that written procedures, protocols, and training of Plant personnel may provide for minimizing excess emissions.").

the two additional 230-kV transmission lines, SO<sub>2</sub> emissions increased.<sup>269</sup> The DEQ concluded that Potomac Station lacked appropriate operating, maintenance, and training procedures for its air pollution control equipment during the scheduled outage.<sup>270</sup>

In addition, an unannounced site visit on January 30, 2008 revealed that windscreens for coal pile dust suppression were in a state of disrepair.<sup>271</sup> A follow-up site visit on February 13, 2008 revealed that the windscreens, which constitute air pollution control equipment, had not yet been repaired.<sup>272</sup> The consent order imposed a civil fine of \$52,000.<sup>273</sup> Mirant Potomac also agreed to develop and implement operating procedures to minimize air emissions and to maintain air pollution control equipment.<sup>274</sup>

Unannounced site visits on November 21, 2008 and December 10, 2008 again revealed that the windscreens were in a state of disrepair.<sup>275</sup> In March 2009, Mirant Potomac agreed to the issuance of an amendment to the prior consent order.<sup>276</sup> The amendment imposed a civil fine of \$26,000, and Mirant Potomac agreed to install a new coal pile fence.<sup>277</sup>

A subsequent consent order documented violations of the operating permit and resulted in a civil fine of \$275,562 as well as corrective actions to address those violations.<sup>278</sup> Conducted between February and September

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269. *See id.* § C(3) (“On February 23, 2007, a fence-line ambient air monitor on Mirant’s property detected increased levels of SO<sub>2</sub>.”).

270. *See id.* § C(5) (determining that Mirant lacked the proper procedures for the operation of the plant).

271. *See id.* § C(8)–(9) (reporting on the unannounced site visit and associated findings).

272. *See id.* § C(15) (discussing DEQ findings of the February 13, 2008 DEQ unannounced visit).

273. *See id.* § C (listing the terms of the agreement).

274. *See* Order by Consent 2008, *supra* note 167, at app. A (discussing Mirant’s agreed terms).

275. *See* Order by Consent Issued to Mirant Potomac River, LLC for the Mirant Potomac River Generating Station, Registration No. 70228 § B(4)–(5) (Mar. 16, 2009), [hereinafter Order by Consent 2009] (explaining findings of November and December 2008 unannounced site visits) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

276. *See generally* Amendment to Order by Consent Issued to Mirant Potomac River, LLC for the Potomac River Generating Station, Reg. No. 70228 (Mar. 9, 2009) (amending the order due to Mirant’s failure to maintain and operate the plant’s air pollution control equipment) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

277. *See id.* § C (detailing the terms of the agreement).

278. *See* Order by Consent Issued to GenOn Potomac River, LLC for the Potomac River Generating Station, Registration No. 70228 (May 6, 2011) [hereinafter Order by Consent 2011] (listing the terms of the 2011 agreement and order) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT); *see also*

2010, DEQ audits of Potomac Station compliance with the APCL, APCB regulations, and the operating permit found, *inter alia*, that: (i) data from the Continuous Emissions Monitoring System (CEMS) for PM was incomplete and unreliable; (ii) the plant had burned bituminous coal with an excessive ash content; and (iii) the plant had controlled SO<sub>2</sub> emissions with injections of sodium bicarbonate instead of with sodium sesquicarbonate (trona).<sup>279</sup> These findings documented violations of, *inter alia*, conditions five, twenty-five and twenty-six of the permit.<sup>280</sup> Thus DEQ imposed a civil fine of \$275,562.<sup>281</sup>

In addition, the consent order required GenOn to develop procedures to ensure the proper use of PM-CEMS data, the use of coal with an acceptable ash content, and the proper use of sodium sesquicarbonate injections.<sup>282</sup>

Finally, a DEQ inspection in July 2011 revealed inadequate emissions controls on PM and excessive NO<sub>x</sub> emissions for several test periods.<sup>283</sup> The inspection resulted in a consent order that included a \$280,704 civil fine.<sup>284</sup>

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Christy Goodman, *Coal-Burning Plant Penalized \$275,000*, WASH. POST, May 12, 2011, at A18 (“Alexandria’s coal-burning power plant must pay \$275,500 in civil penalties to the state for numerous permit violations, including excessive visible emissions and not turning in paperwork on emissions monitoring.”).

279. See Order by Consent 2011, *supra* note 278, § C (discussing the findings of fact and conclusions of law).

280. See *id.* (noting violations of the plant’s permit).

281. See *id.* § D (listing orders and agreements).

282. See *id.* at app. A (providing a schedule for compliance).

283. See Order by Consent Issued to GenOn Potomac River, LLC for the Potomac River Generating Station, Registration No. 70228 (Feb. 9, 2012) § C [hereinafter Order by Consent 2012] (explaining findings of the July 2011 DEQ inspection) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

284. See Patricia Sullivan, *Alexandria Power Plant Fined Again*, WASH. POST (Feb. 14, 2012), [http://articles.washingtonpost.com/2012-02-14/local/35445146\\_1\\_genon-power-plant-fine-particulate-matter](http://articles.washingtonpost.com/2012-02-14/local/35445146_1_genon-power-plant-fine-particulate-matter) (“Alexandria’s coal-burning power plant, scheduled to shut down Oct. 1 after years of local opposition, must pay a \$280,704 fine for violating air-quality laws . . .”) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

*B. Environmental, Health, and Reliability Assessments*

*1. DOE Environmental Assessment*

The restart of Potomac Station under the DOE Order triggered environmental, health, and reliability assessments, all of which ultimately informed a decision to retire the power plant.<sup>285</sup>

In November 2006, the DOE, in accordance with the January 2006 notice, prepared and published, in consultation with the CEQ, an SEA of the DOE Order.<sup>286</sup> The SEA stated that the DOE Order was “the product of the best available balance between providing electricity reliability to the Central D.C. area and protecting the environment and human health in Alexandria, Virginia, until the additional 230-kV lines are in service.”<sup>287</sup> The DOE invited public comment on the SEA.<sup>288</sup> The SEA offered no recommendations *per se*, but summarized the environmental impact of power plant operations on air, human health, water, ecological resources, waste management, transportation, and environmental justice.<sup>289</sup>

The SEA also discussed three options for future DOE action. First, the DOE could allow the DOE Order to expire before the completed installation of the two additional 230-kV transmission lines, which “would likely place the Central D.C. area in risk of a potential blackout.”<sup>290</sup> Second,

285. See Patricia Sullivan, *GenOn Power Plant in Alexandria is Set to Close*, WASH. POST (Sept. 29, 2012), [http://articles.washingtonpost.com/2012-09-29/local/35494994\\_1\\_genon-coal-fired-plants-power-plant](http://articles.washingtonpost.com/2012-09-29/local/35494994_1_genon-coal-fired-plants-power-plant) (chronicling the factors and events leading to the close of the plant) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

286. See Dep’t of Energy, Special Env’tl. Analysis for Actions Taken Under Dep’t of Energy Emergency Orders Regarding Operation of the Potomac River Generating Station in Alexandria, Virginia, DOE/SEA-04 (Nov. 2006) [hereinafter Special Environmental Analysis] (“In emergency situations, . . . [NEPA] regulations call for agencies to consult with CEQ to determine what alternative arrangements the agency will take in lieu of preparing an [EIS] . . . DOE is issuing this SEA in compliance with the ‘alternative arrangements’ plan agreed upon with CEQ.”) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

287. *Id.* at S-5.

288. See Notice of Availability of a Special Environmental Analysis; Potomac River Generating Station, 71 Fed. Reg. 69,102 (Nov. 29, 2006) (“DOE is providing the public an opportunity to comment before the Secretary considers whether to allow the Order to expire, extend the Order, or extend the Order with mitigation measures.”).

289. See Special Environmental Analysis, *supra* note 286, at S-5 to S-8 (summarizing the environmental impact of the plant). The SEA assessed emissions of SO<sub>2</sub>, PM, and NO<sub>2</sub> as well as emissions of mercury, CO, and contributions of power plant operations on global climate change. See *id.* S-9 to S-11 tbl. S-1 (illustrating power plant contributions of emissions).

290. *Id.* at 108. “[B]lackouts can cause, and historically have caused, significant health and environmental impacts.” *Id.*

the DOE could extend the DOE Order.<sup>291</sup> Third, the DOE could extend the order with mitigation measures, and, for example, (i) require Mirant Potomac “to improve plant operations and pollution control measures,”<sup>292</sup> (ii) require Mirant Potomac to reduce the exposure of Alexandria residents to plant pollutants,<sup>293</sup> (iii) manage the demand for electric power in the central D.C. area,<sup>294</sup> (iv) use alternative sources for the generation of electric power,<sup>295</sup> and (v) “expedite the installation of the two additional 230-kV transmission lines,”<sup>296</sup> the completion of which was scheduled for July 1, 2007.<sup>297</sup>

To respond to public comment on the SEA, and to allow time for the installation of the two additional 230-kV transmission lines, the DOE, in January 2007, extended the DOE Order through July 1, 2007.<sup>298</sup> In response to public criticism of the assumptions and approach employed in the SEA, the extension affirmed that the environmental analysis was accurate, appropriate, reasonable, and sound.<sup>299</sup>

The extension addressed, but for the most part rejected, the five mitigation measures delineated in the SEA.<sup>300</sup> For example, in view of the EPA ACO, the extension rejected the imposition of additional pollution

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291. *See id.* at 109 (stating that an extension of the current order as the second option for future DOE action).

292. *Id.* 286; *see also id.* at 110 (explaining that the DOE could require Mirant Potomac to increase the height of the smoke stacks for Potomac Station to the FAA-approved height of fifty feet).

293. *See* Special Environmental Analysis, *supra* note 286, at 109 (noting that the DOE could require Mirant “to reduce exposure to pollutants to . . . nearby residents”).

294. *See id.* at 112 (stating that the DOE could require the PSC to develop an electric conservation, or demand response, program). “Reducing electrical demand in the Central D.C. area would reduce the need for operation of the Plant.” *Id.*

295. *See id.* at 113 (suggesting that “specific facilities” and government agencies could use temporary or back-up sources of energy, or the DOE could encourage Federal agencies to use alternative sources of energy).

296. *Id.*

297. *See id.* at 113 (“Pepco notified DOE on September 7, 2006, that the expected installation date of the new 230-kV lines is now June 21, 2007, instead of July 1, 2007.”); *see also id.* at 114 (noting that the DOE could also encourage the construction of additional transmission lines from other plants near to the central D.C. area).

298. *See* ORDER NO. 202-07-2, at 8 (DOE Jan. 31, 2007) [hereinafter ORDER NO. 202-07-2], available at <http://energy.gov/sites/prod/files/oeprod/DocumentsandMedia/EO-05-01.pdf> (stating that the previous order to install the two 230-kV transmission lines is extended until July 1, 2007) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

299. *See id.* at 4–5 (stating that the DOE’s SEA research “used a reasonable set of assumptions, sound methodology, and an appropriate level of detail”).

300. *See generally id.* at 5–7 (reviewing the possible mitigation measures).

control measures.<sup>301</sup> DOE also rejected the proposed relocation of Alexandria residents, for the duration of NAAQS “exceedances,” to reduce the exposure of those residents to plant pollutants.<sup>302</sup> Finally, the extension observed that the PSC had undertaken several demand response programs and had approved the PEPCO application for the installation of two additional 230-kV transmission lines.<sup>303</sup>

The DOE Order expired on July 1, 2007.<sup>304</sup> On June 29th, PEPCO had completed the installation of the two additional 230-kV transmission lines.<sup>305</sup> In addition to Potomac Station, therefore, there were four high-voltage transmission lines to ensure electric reliability for the central D.C. area.<sup>306</sup>

## 2. ATSDR Health Assessment

In addition to the environmental assessment of the DOE Order, the federal government conducted a health assessment of emissions from Potomac Station at the request of the City of Alexandria.<sup>307</sup> In January 2006, the Director of the Health Department for Alexandria requested that the federal Agency for Toxic Substances and Disease Registry (ATSDR) review available emissions and other environmental data related to Potomac

301. *See id.* (“The ACO contains detailed provisions designed to protect air quality. DOE believes imposing additional pollution mitigation measures . . . is not necessary.”).

302. *See id.* at 6–7 (stating that there is insufficient evidence to justify payment for the relocation of Alexandria residents).

303. *See id.* (discussing how the installation of the additional power lines is on schedule and that they will “alleviate the reliability situation”).

304. *See id.* (“By its terms, Order No. 202-07-2 expired on July 1, 2007.”).

305. *See* Office of Electricity Delivery and Energy Reliability, *Docket-EO-05-01: Documents Concerning the 2005-2007 Emergency Reliability Orders Concerning the Potomac River Generating Station under Section 202(C) of the Federal Power Act*, DEP’T OF ENERGY, <http://energy.gov/oe/services/electricity-policy-coordination-and-implementation/other-regulatory-efforts/docket-eo-05> (last visited Oct. 2, 2013) (“Pepco completed and made operational its two new 230kV lines into downtown Washington, D.C. on June 29, 2007.”) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

306. *See* ORDER NO. 202-07-2, *supra* note 2988, at 1 (noting that PEPCO has two 230-kV transmission lines, requests permission to add two more, and that the Mirant plant would not need to remain open with these additional lines).

307. *See* DEP’T OF HEALTH AND HUMAN SERVS.: AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY, HEALTH CONSULTATION: MIRANT POTOMAC RIVER GENERATING SYSTEM I (2011) [hereinafter 2011 MIRANT HEALTH CONSULTATION], *available at* <http://www.atsdr.cdc.gov/hac/pha/MirantPotomacRiver/MirantPotomacRiverGSFinalHC03212011.pdf> (“In 2006, the Alexandria, VA Health Department Director requested that ATSDR review the Mirant Potomac River Generating Station’s (PRGS) operations-related air dispersion modeling data.”) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

Station and assess if the data indicated a potential health risk for Alexandria citizens.<sup>308</sup>

In January 2007, ATSDR responded to the request with a “health consultation” letter.<sup>309</sup> Based on data provided by Mirant Potomac, Alexandria, the DEQ and EPA, ATSDR concluded that short-term acute SO<sub>2</sub> exposures could pose a health hazard to vulnerable populations.<sup>310</sup> The agency, however, “cannot determine at this time if a public health hazard exists” and identified the need for additional information.<sup>311</sup>

Thereafter, and in response to that need, the ATSDR undertook an Exposure Investigation to measure ambient air concentrations of SO<sub>2</sub>, PM, and metals.<sup>312</sup> The agency also compared and analyzed emissions data it collected with emissions data Mirant Potomac had collected.<sup>313</sup> In December 2009, ATSDR submitted its health consultation for peer review.<sup>314</sup> In July 2010, ATSDR released for public comment a report based on its review of ambient air monitoring data for Potomac Station.<sup>315</sup>

Based on data collected before July 2008, the report concluded that (i) breathing SO<sub>2</sub>-contaminated air around Potomac Station could pose a health hazard to sensitive populations (e.g., people with asthma) with

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308. *See id.* at 7 (stating that on Jan. 24, 2006 the Alexandria Health Department sent a letter “requesting ATSDR’s review of existing environmental data related to Mirant PRGS’s operations, assessing the potential for health effects for nearby residents”).

309. *See id.* at app. B (reporting on an initial review of air dispersal modeling).

310. *See id.* (listing Mirant, City of Alexandria, the DEQ, and the EPA as groups that provided information for the report, and ATSDR conclusions).

311. *See id.* (“Because of the uncertainty in the air dispersal model and the need to collect additional monitoring data, we cannot determine at this time if a public health hazard exists. ATSDR’s evaluation has identified the need for . . . additional data.”).

312. *See id.* at 8 (noting that ATSDR conducted an “Exposure Investigation to measure at multiple locations near Mirant PRGS ambient air concentrations” of SO<sub>2</sub>, PM, and metals).

313. *See id.* at app. J (“The City of Alexandria negotiated with Mirant to obtain the facility’s more comprehensive set of sulfur dioxide monitoring data . . .”).

314. *See id.* at 8 (listing in the table that in December 2009 ATSDR submitted the health consultation for peer review).

315. *See* DEP’T OF HEALTH AND HUMAN SERVS.: AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY, HEALTH CONSULTATION: MIRANT POTOMAC RIVER GENERATING SYSTEM at iii (2010) [hereinafter 2010 MIRANT HEALTH CONSULTATION] (encouraging people to send questions or comments after reading the report) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT); *see also* Christy Goodman, *Alexandria, Arlington in Brief: Agency Says Air Near Mirant was a Concern*, WASH. POST (July 15, 2010), [http://www.washingtonpost.com/wp-dyn/content/article/2010/07/14/AR2010071402351\\_2.html](http://www.washingtonpost.com/wp-dyn/content/article/2010/07/14/AR2010071402351_2.html) (reporting that ATSDR is accepting public comments for the health assessment) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

elevated breathing rates (due to, *e.g.*, exercise);<sup>316</sup> (ii) breathing SO<sub>2</sub>-contaminated air would not pose a health hazard to the general population or to sensitive populations with normal breathing rates;<sup>317</sup> (iii) residents who breathe PM-contaminated air over many years could experience adverse health effects;<sup>318</sup> (iv) levels of metals in the air around the power plant, including those of arsenic and chromium, were less than anticipated, and concentrations of arsenic and chromium were consistent with “background” levels throughout the U.S.;<sup>319</sup> and (v) ATSDR could not assess the health effect of breathing combined pollutants (*e.g.*, SO<sub>2</sub> and PM).<sup>320</sup>

The report recommended that the DEQ continue efforts to reduce SO<sub>2</sub> emissions from Potomac Station and PM emissions in Alexandria.<sup>321</sup> The agency also recommended reducing exposure to PM and SO<sub>2</sub>.<sup>322</sup>

In March 2011, ATSDR issued its final health consultation for Potomac Station.<sup>323</sup> The conclusions and recommendations were consistent with the July 2010 report released for public comment.<sup>324</sup> The report, however, included a discussion of the smoke stack reconfiguration completed in January 2009.<sup>325</sup> The reconfiguration was “expected to enhance atmospheric dispersion of emissions but not expected to affect respective emissions rates.”<sup>326</sup> Like the prior report,<sup>327</sup> the final report

316. See 2011 MIRANT HEALTH CONSULTATION, *supra* note 315, at 40 (addressing the effects of breathing air polluted with SO<sub>2</sub> on “sensitive populations”).

317. See *id.* at 41 (“Breathing air around Mirant PRGS contaminated with sulfur dioxide is not expected to harm the health of the general population . . .”).

318. See *id.* (“ATSDR concludes that breathing for many years Alexandria, VA air contaminated with PM<sub>2.5</sub> could harm people’s health.”).

319. See *id.* at 41–42 (describing the metals tests and the level of metals in the air around Mirant).

320. See *id.* at 42 (noting that “ATSDR could reach no conclusion regarding” mixtures exposure).

321. See *id.* at 40–41 (recommending that the DEQ continue its efforts to reduce sulfur dioxide and PM emissions).

322. See 2011 MIRANT HEALTH CONSULTATION, *supra* note 315, at 42 (noting that “ATSDR recommends reducing exposure to sulfur dioxide . . . [and] to PM”).

323. See *generally id.* at 44 (referring to the 2011 health consultation as the final report). Alexandria and GenOn Energy, which acquired the plant from a merger with Mirant, have been working on agreements to upgrade the technology at the plant for reduced emissions). See *id.* at 42–44 (providing a timeline of emission reduction efforts).

324. See *id.* at app. J (noting that the additions from the 2011 final report “did not change the conclusions and recommendations published in the public comment version [2010] of the health consultation”).

325. See *id.* (listing the 2009 Mirant “stack merge project” as an addition to the 2011 report).

326. *Id.* at 1.

discussed PM emissions from automobiles but cautioned that the discussion “is not meant to imply that either mobile sources or [Potomac Station] sources are more important than the other.”<sup>328</sup>

### 3. PJM Reliability Assessments

The ongoing environmental and health assessments of Potomac Station coincided with ongoing assessments of the need for Potomac Station to ensure electric reliability for Washington, D.C. Responsible for electric reliability in Washington, D.C. and in the Mid-Atlantic region in general, PJM has for years kept a watchful eye on the sixty-year-old power plant along the Potomac River.<sup>329</sup> Even before the DEQ issued its shutdown order in August 2005, PJM had evaluated the need for Potomac Station to ensure electric reliability in the area to which PEPCO provides electric power.<sup>330</sup>

The evaluation assumed the shutdown of Potomac Station and analyzed the ability of existing transmission lines in the Mid-Atlantic region to import electric power to Washington, D.C. to replace the power lost from Potomac Station.<sup>331</sup> PJM concluded that “[t]he retirement of the Potomac River generation would result in insufficient import capability and several of the affected . . . [transmission lines] would be overloaded.”<sup>332</sup> In other words, the Mid-Atlantic transmission grid was inadequate to import enough power to Washington, D.C. to replace the power lost due to a Potomac River shutdown.<sup>333</sup>

The PJM RTEP for 2005, published in February 2006, reflected the proposed construction by PEPCO of two additional 230-kV transmission

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327. See 2010 MIRANT HEALTH CONSULTATION, *supra* note 315, at 36 (“Note that this section is not meant to imply that either mobile sources or Mirant PRGS sources are more important than the other.”).

328. *Id.* at 36.

329. See Paula KEPOS & THOMAS DERDAK, 6 INTERNATIONAL DIRECTORY OF COMPANY HISTORIES 553 (1992) (noting that the plant was built by PEPCO in 1949).

330. See generally PJM INTERCONNECTION, RELIABILITY EVALUATION FOR THE POTENTIAL RETIREMENT OF POTOMAC RIVER GENERATION [hereinafter 2005 RELIABILITY EVALUATION] (summarizing a PJM-completed study on the Potomac River plant) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

331. See *id.* at 1 (“The purpose of this system reliability evaluation is to identify any potential transmission system limitations that would violate PJM Reliability Planning Criteria for supply to the Potomac River load after the retirement of the Potomac River generation.”).

332. *Id.* at 2.

333. See *id.* (concluding that the closing of the Potomac River plant would overload several nearby transmission facilities).

lines to provide electric power to the central D.C. area.<sup>334</sup> The report highlighted, however, the uncertain future of Potomac Station.<sup>335</sup> “Both the interim status and the final status of the Mirant Potomac River plant remain in flux as various state and federal regulatory and legislative bodies pursue the legal due process options at their respective disposal.”<sup>336</sup> In addition, “[w]hile currently in question, the final retirement date of this plant has not yet been established, pending owner Mirant’s consideration of the plant upgrades needed to meet environmental standards.”<sup>337</sup>

The PJM RTEP for 2006, published in 2007, explained that the Southwestern PJM area in the Mid-Atlantic region encompassed the transmission facilities owned by PEPCO and by BGE.<sup>338</sup> “Expansion planning experience and results over the past decade has revealed that these two transmission owner zones warrant specific planning attention, because of shared issues regarding generation activity, load growth, generation deactivation, and reliance on transfers to meet load requirements.”<sup>339</sup>

The report also confirmed the uncertain future of Potomac Station:

Nonetheless, in addition to the [power plant] deactivations cited above, the potential shut-down of Mirant’s Potomac River generating plant near Washington, D.C., could mean an additional 482 MW of deactivated capacity . . . . The Potomac River plant remains available under certain circumstances through July 2007, the results of an order of the Secretary of Energy under section 202 of the FPA. Nevertheless, the plant’s shutdown in August 2005 immediately caused violations of reliability criteria, which will not be fully rectified until various RTEP upgrades are completed in 2008. The final status of the Mirant plant has not yet been established, pending the outcome of regulatory

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334. PJM INTERCONNECTION, PJM 2005 REGIONAL TRANSMISSION EXPANSION PLAN 36 (2006) [hereinafter 2005 RTEP] (describing the 230-kV transmission lines as “immediate transmission expansion upgrades needs”) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE AND THE ENVIRONMENT).

335. *See id.* (“While currently in question, the final retirement date of this plant has not yet been established . . .”).

336. *Id.*

337. *Id.*

338. *See* PJM INTERCONNECTION, PJM 2006 REGIONAL TRANSMISSION EXPANSION PLAN 69 (2007) [hereinafter 2006 RTEP] (designating the BGE and PEPCO systems as one Southwestern PJM area for expansion planning purposes) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

339. *Id.*

decisions on whether and to what extent the plant must be upgraded to meet environmental standards.<sup>340</sup>

The 2006 RTEP explained that “[t]he electricity needs of the Washington-Baltimore-Northern Virginia area are supplied not only by local generation, but also by significant energy transfers into those areas.”<sup>341</sup> Given this dependence on “bulk power transfers from western sources” in PJM, the report emphasized the need to ensure electric reliability in the area through a high-voltage transmission line from southwestern Pennsylvania to northern Virginia.<sup>342</sup> Such a line would accommodate large energy imports to serve the Washington region.<sup>343</sup> PJM observed, however, that “[i]n view of the considerable time required to build transmission to help meet load requirements with remote generation, planning and implementation of additional transmission capability must begin now in order ensure that it will be available when required.”<sup>344</sup>

In light of this urgency, PJM, in the RTEP for 2006, approved the construction of the 500-kV transmission line from the Junction 502 substation in southwestern Pennsylvania to the Mt. Storm substation in eastern West Virginia, to the Meadowbrook substation in Northern Virginia, and to the Loudoun substation in Northern Virginia.<sup>345</sup>

Finally, the report cautioned that additional power plant retirements would undermine electric reliability in the Washington-Baltimore-Northern Virginia area.<sup>346</sup>

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340. *Id.* at 71; *see also id.* at 222 (“The final status of the Mirant plant has not yet been established, pending the outcome of regulatory decisions on whether and to what extent the plant must be upgraded to meet environmental standards.”).

341. *Id.* at 75; *see also id.* at 216, 298 (addressing the power concerns of the Washington, D.C. suburban areas in Maryland and Virginia, and how these areas draw electricity from outside sources).

342. *See id.* at 75 (concluding that if another high voltage transmission line is not built to feed the Washington, D.C. area, then there will be overload on current transmission facilities); *see also id.* at 215 (“A new . . . transmission line is needed to avoid reliability criteria violations in 2011 and maintain power transfers to serve [the Washington, D.C. area].”).

343. *See id.* at 215 (addressing the need for a new high-voltage transmission line to serve the electricity needs of the Washington, D.C. area).

344. *Id.* at 125.

345. *See id.* at 8–9, 11, 92, 102 (noting PJM’s approval of the 502 Junction-Mt. Storm-Meadow Brook-Loudoun 500kV transmission line to increase the flow of electricity to the Washington, D.C. area).

346. *See id.* at 222 (“[T]he potential shut-down of Mirant’s Potomac River generating plant near Washington, D.C. . . . could mean an additional 482 MW of deactivated capacity.”).

More specifically, [DOE] has ordered the owner of the Potomac River plant . . . to keep the plant operational and to generate power under certain conditions through at least July 2007. *Environmental pressures may still require the plant to shut down permanently after PEPCO completes installation of two new 230 kV transmission circuits.*<sup>347</sup>

The PJM RTEP for 2007, published in February 2008,<sup>348</sup> was silent on the subject of Potomac Station but reiterated that the Trans-Allegheny Interstate Line (TrAIL) would provide “backbone” transmission to facilitate power transfers from western PJM to Washington, Baltimore, and Northern Virginia.<sup>349</sup> Published in February 2009,<sup>350</sup> the PJM RTEP for 2008 reflected a “retool” of the 2007 RTEP with revised assumptions regarding, e.g., energy demand forecasts, energy conservation, and power plant retirements.<sup>351</sup> The revised assumptions included the withdrawal by Potomac Station of a request for plant deactivation, *i.e.*, retirement.<sup>352</sup> The withdrawal appeared to be related to the July 2008 issuance by the DEQ of the operating permit and the agreement between Mirant Potomac and the City of Alexandria for measures to reduce PM emissions from Potomac Station.<sup>353</sup> The permit and agreement green-lighted the continued operation

347. *Id.* at 126 (emphasis added).

348. *See* PJM Interconnection, *2007 Regional Transmission Expansion Plan*, PJM, <http://www.pjm.com/documents/reports/rtep-documents/2007-rtep.aspx> (last visited Oct. 3, 2013) (stating that the 2007 Regional Transmission Expansion Plan report was dated Feb. 27, 2008) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

349. *See, e.g.*, PJM INTERCONNECTION, 2007 REGIONAL TRANSMISSION EXPANSION PLAN 127 (2008) [hereinafter 2007 RTEP], *available at* <http://www.pjm.com/~media/documents/reports/2007-rtep/2007-section3c.ashx> (stating that the “backbone transmission” will provide “critical support to energy transfers from western PJM into Northern Virginia, [and] the Baltimore/Washington D.C. area”) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

350. *See* PJM Interconnection, *2008 Regional Transmission Expansion Plan*, PJM, <http://www.pjm.com/documents/reports/rtep-documents/2008-rtep.aspx> (last visited Oct. 3, 2013) (noting that the 2008 report was issued on February 27, 2009) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

351. *See generally* PJM INTERCONNECTION, 2008 REGIONAL TRANSMISSION EXPANSION PLAN (2009) [hereinafter 2008 RTEP], *available at* <http://www.pjm.com/~media/documents/reports/2008-rtep/2008-rtep-report.ashx> (reviewing and analyzing RTEP expansions) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

352. *See id.* at 60 (noting that the unit deactivation request for Potomac River was withdrawn).

353. *See generally* VA DEP’T OF ENVTL. QUALITY, STATIONARY SOURCE PERMIT TO OPERATE, MIRANT POTOMAC RIVER, L.L.C. (2008) [hereinafter MIRANT PERMIT 2008], *available at* <http://alexandriava.gov/uploadedFiles/tes/info/07->

of the plant.<sup>354</sup> Thus there was no need for PJM to assume in its reliability assessments that the Potomac Station would be unavailable.

The PJM RTEP for 2009, published in February 2010,<sup>355</sup> confirmed that Potomac Station “previously identified for potential deactivation . . . [was] modeled in-service.”<sup>356</sup> PJM explained the revised assumptions regarding Potomac Station:

Changes in generation resource status has a significant impact on RTEP results. For example, the Potomac River generating facility in Virginia, a 482 MW facility that serves the D.C. area . . . has been modeled differently over the last few years. Potomac River was modeled as in-service in the 2006 RTEP because of its then-current operational status, was modeled as out-of-service in the 2007 and 2008 RTEPs due to a regulatory order requiring the station to shut down, and has again been modeled in-service during retool analyses in 2008 and 2009 as a result of efforts by the facility owner to remediate environmental issues . . . . Assuming that the Potomac River facility is able to satisfy environmental regulations, it will continue to be modeled in service.<sup>357</sup>

The PJM RTEP for 2010, published in February 2011,<sup>358</sup> was silent on the subject of Potomac Station but reported that TrAIL was expected to meet a required June 1, 2011 in-service date, and that Virginia, West Virginia, and Pennsylvania all had issued state certificates for the

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31%20PRGS%20Sate%20Operating%20Permit.pdf (providing Mirant Potomac the right to operate an electric generating facility) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

354. See *id.* at 1 (authorizing the Mirant to operate “in accordance with the Conditions of this permit”).

355. See PJM Interconnection, *2009 Regional Transmission Expansion Plan*, PJM, <http://www.pjm.com/documents/reports/rtep-documents/2009-rtep.aspx> (last visited Oct. 3, 2013) (noting that the 2009 Regional Transmission Expansion Plan was released on February 26, 2010) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

356. See PJM INTERCONNECTION, 2009 REGIONAL TRANSMISSION EXPANSION PLAN 95 (2010) [hereinafter 2009 RTEP], available at <http://www.pjm.com/~media/documents/reports/2009-rtep/2009-rtep-report.ashx> (noting that units, including Potomac River, were once on the list for deactivation, but were treated as being in-service for purposes of the 2009 generation model) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

357. *Id.* at 102.

358. See 2010 RTEP, *supra* note 65, at i–ii (explaining the release of the 2010 Regional Transmission Expansion Plan on Feb. 28, 2011).

construction of the transmission line.<sup>359</sup> The report observed that “[t]he TrAIL project itself was added to the RTEP in 2006 primarily [as] the result of overloads on the Mt. Storm to Doubs line.”<sup>360</sup>

In its 2005 reliability assessment, PJM had concluded that “[t]he retirement of the Potomac River generation would result in insufficient import capability and several of the affected [transmission lines] would be overloaded.”<sup>361</sup> One of those affected transmission lines was the 500-kV Doubs-Mt. Storm transmission line.<sup>362</sup>

The operation of TrAIL, designed to accommodate large energy imports to serve the Washington region,<sup>363</sup> would reduce the threat of overloads on the 500-kV Doubs-Mt. Storm transmission line and thus, it seemed, permit the shutdown of Potomac Station.<sup>364</sup> Indeed, in the 2009 RTEP, Potomac Station was modeled in-service,<sup>365</sup> but in the PJM RTEP for 2011, published in February 2012, Potomac Station was identified for anticipated deactivation.<sup>366</sup> The report indicated that a reliability assessment had confirmed that a plant shutdown would have no adverse impact of electric reliability.<sup>367</sup> Published in February 2013, the PJM RTEP for 2012 confirmed that Potomac Station was scheduled to be deactivated in October 2012.<sup>368</sup>

A review of eight successive PJM transmission expansion planning reports for PJM reveals shifting assumptions about the availability of

359. *See id.* at 9 (discussing the TrAIL in-service date, as well as state action on the project).

360. *Id.*

361. 2005 RTEP, *supra* note 334, at 2.

362. *See id.* (listing the Doubs-Mt. Storm transmission line as one of the affected transmission lines by the Potomac River retirement).

363. *See* Allegheny Energy, *Project Overview*, TRAIL: TRANS-ALLEGHENY INTERSTATE LINE, <http://www.aptrailinfo.com/index.php?page=overview> (last visited Oct. 3, 2013) (“The new line is necessary to meet the demand for electricity in the Mid-Atlantic region and prevent overloading on Allegheny Power’s transmission system.”) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

364. *See* 2010 RTEP, *supra* note 3585, at 9 (“The TrAIL project itself was added to the RTEP in 2006 primarily the result of overloads on the Mt. Storm to Doubs line.”).

365. *See* 2009 RTEP, *supra* note 356, and accompanying text.

366. *See* 2 PJM INTERCONNECTION, 2011 REGIONAL TRANSMISSION EXPANSION PLAN 295 (2012) [hereinafter 2011 RTEP], *available at* <http://pjm.com/documents/reports/rtep-documents/2011-rtep.aspx> (documenting “unit deactivation requests in Virginia”) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

367. *See id.* (noting that the Potomac River unit had no impacts identified in the reliability analysis).

368. *See* 5 PJM INTERCONNECTION, 2012 REGIONAL TRANSMISSION EXPANSION PLAN 428 (2013) [hereinafter 2012 RTEP], *available at* <http://www.pjm.com/~media/documents/reports/2012-rtep/2012-rtep-book-5.ashx> (listing October 12, 2012 as Potomac River’s scheduled deactivation date) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

Potomac Station to provide electric power for the Washington, D.C. region and thus to contribute to regional electric reliability. Ultimately, however, following the installation of the two additional 230-kV transmission lines to serve the metropolitan D.C. area, and the construction of TrAIL to facilitate bulk power imports into the Washington, D.C. area, PJM concluded that Potomac Station was not required to ensure electric reliability for Washington, D.C.<sup>369</sup>

### *C. Potomac Station Retirement*

In July 2011, within two months after TrAIL became operational, the PSC requested that PJM evaluate the potential impact on electric reliability of the deactivation (retirement) of Potomac Station.<sup>370</sup> PJM responded with a Deactivation Study for the plant that concluded that the plant's retirement would cause no violations of NERC reliability standards in 2012 but that transmission upgrades would be required to avoid an adverse impact on electric reliability by 2016.<sup>371</sup> The Deactivation Study detailed the required transmission upgrades, which could be completed by May 2016.<sup>372</sup>

Also in July 2011, New York City Mayor Michael R. Bloomberg used the Potomac Station for a backdrop to announce a \$50 million contribution by Bloomberg Philanthropies to the Sierra Club for its Beyond Coal campaign, a nationwide campaign to eliminate coal-fired power plants.<sup>373</sup> That same week, an analysis commissioned by the American Clean Skies Foundation concluded that Potomac Station was “no longer needed from a reliability point of view” and that its retirement would result

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369. *See id.* (noting that a “Reliability Analysis” of the Potomac River Station was completed and that no impacts were identified).

370. *See* Letter From Michael J. Kormos, Senior Vice President, Operations, PJM, to Betty Ann Kane, Chairman, PSC (Sept. 29, 2011), available at <http://www.pjm.com/~media/committees-groups/committees/teac/20111005/20111005-evaluation-of-the-potential-retirement-of-the-potomac-generating-station.ashx> (writing in response to the PSC's request for “PJM to evaluate the potential deactivation (retirement) of the Potomac River Generating Station”) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

371. *See id.* at 1 (explaining that a plant retirement would not cause any violations of NERC reliability standards but would require future plant upgrades).

372. *See id.* at 2 (outlining which transmission systems need to be upgraded by 2016 in order to avoid becoming overloaded).

373. *See* Christian Torres & Juliet Eilperin, *Mayor Bloomberg Gives \$50 Million to Fight Coal-Fired Power Plants*, WASH. POST, July 21, 2011, at A6 (stating that Mayor Bloomberg's donation was intended to eliminate stations like the Potomac Station).

in an overall reduction in pollutants that contribute to local and regional air quality problems.<sup>374</sup>

On August 29, 2011, GenOn and Alexandria executed an amendment to the July 2008 agreement between Mirant Potomac and the City of Alexandria for measures to reduce PM emissions from Potomac Station.<sup>375</sup> Under the amendment, GenOn agreed to retire Potomac Station in exchange for the return of the \$34 million that had been placed in an escrow account to be spent on plant modifications to reduce PM emissions and to control fugitive dust from the plant site.<sup>376</sup> The amendment provided that GenOn “agrees to Retire the Facility on October 1, 2012 subject to PJM finding that the Facility is no longer needed for reliability.”<sup>377</sup>

The decision to retire Potomac Station followed a prolonged campaign by environmental activists to close the power plant.<sup>378</sup> The stated reasons for the retirement were numerous and complex, however, and did not include political pressure from environmental activists.<sup>379</sup> GenOn explained that the decision was driven by economics and not activism.<sup>380</sup> The company attributed the retirement to “a stagnating demand for energy” associated with the U.S. economic downturn as well as the cost of compliance with new CAA regulations.<sup>381</sup> “GenOn says it wasn’t activism but the changing economics of running a 482-megawatt coal-fired plant that caused the closure.”<sup>382</sup> Those changing economics also included significant reductions in the price of natural gas, which make gas-fired electric power more attractive.<sup>383</sup> The next day, GenOn, in accordance with the PJM

374. See ANALYSIS GRP, INC., POTOMAC RIVER GENERATING STATION: UPDATE ON RELIABILITY AND ENVTL. CONSIDERATIONS 21 (2011) (“Our review . . . suggests that . . . the plant [is] no longer needed from a reliability point of view. . . . [Its retirement] would likely lead to overall reductions of pollutants . . . , in light of other more efficient and less-polluting plants replacing . . . PRGS . . .”).

375. See Mirant Cmty. Monitoring Grp., *Amendment to Project Schedule and Agreement*, at 3–6 (Aug. 29, 2011) (outlining the amendment to the 2008 Potomac Station agreement).

376. See *id.* at 4 (“Upon retirement of the Facility, all funds in the Escrow Account shall be distributed to GenOn . . .”).

377. *Id.*

378. See, e.g., Patricia Sullivan, *Accidental Activists Close to Seeing Coal Plant Shut*, WASH. POST, Sept. 4, 2011, at C1 (describing efforts by environmentally conscious citizens to shut down Potomac Station).

379. See *id.* (explaining GenOn’s rationale for closing Potomac Station).

380. See *id.* (“The prospect of increasingly expensive pollution controls, a looming deadline to commit to spending \$32 million, a stagnating demand for energy because of the world’s economic doldrums and the possibility of more rigorous Environmental Protection Agency regulations were all factors . . .”).

381. See *id.* (“It was a good business decision.” (quoting a spokeswoman)).

382. Patricia Sullivan, *Powering Down*, WASH. POST, Sept. 30, 2012, at C1.

383. See *id.* (explaining the other economic factors that are forcing the plant closure).

OATT,<sup>384</sup> advised PJM that it intended to retire Potomac Station.<sup>385</sup> In response, PJM advised GenOn that the plant's retirement would cause no violations of NERC reliability standards.<sup>386</sup> "Since there are no reliability violations associated with deactivation of this generating station . . . [Potomac Station] may be deactivated at any time."<sup>387</sup>

In September 2012, GenOn advised the DEQ that Potomac Station would close on October 1, 2012.<sup>388</sup> GenOn would work with the DEQ toward a mutual determination that Potomac Station is permanently shut before the end of 2012.<sup>389</sup> This determination would require, *inter alia*, the removal of coal, coal ash, and trona from the plant site.<sup>390</sup> In December, the DEQ concurred in a determination that Potomac Station had shut down permanently and thus revoked its July 2008 and July 2010 operating permits.<sup>391</sup>

#### IV. Lessons Learned and Conclusion

##### A. Environmental Activism and Electric Reliability

The case of the Potomac Station shutdown over clean air concerns, its restart under Section 202(c) due to electric reliability concerns, and ultimate retirement over clean air concerns offer several useful lessons relative to the current debate over clean air versus electric reliability.

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384. See PJM OATT, Part V, Generation Deactivation, Section 113, Notices ("When a Generation Owner desires to deactivate a generating unit located in the PJM Region, such Generation Owner, or its Designated Agent, must provide notice of such proposed Deactivation in writing to [PJM] no later than 90 days prior to the proposed Deactivation Date for the generating unit.").

385. See Letter From Michael J. Kormos, Senior Vice President, Operations, PJM, to Carrie Hill Allen, Assistant Gen. Counsel, GenOn Energy, Inc. (Sept. 29, 2011) (explaining that GenOn received PJM's notice requesting deactivation of Potomac Station and intended to comply) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

386. See *id.* (discussing the deactivation of Potomac Station).

387. *Id.*

388. See Sullivan, *supra* note 382 ("[A]s of midnight Sunday, the 63-year-old coal-fired power plant will permanently shut down.").

389. See *id.* (stating that the full shut down of Potomac Station would take until the end of the year).

390. See *id.* (outlining what materials will need to be removed from Potomac Station's land).

391. See Letter from Thomas A. Faha, Director, Northern Regional Office, DEQ, to William Lee Davis, President, GenOn Potomac River, LLC (Dec. 20, 2012) (explaining that GenOn and DEQ mutually determined that the Potomac River Generating Station will be permanently shut down).

Last December, following a prolonged campaign by environmental activists, Potomac Station was retired.<sup>392</sup> Local activists were aided by the Sierra Club, which has undertaken a nationwide campaign to eliminate coal-fired power plants, and the American Clean Skies Foundation.<sup>393</sup> The plant was permanently shut down, however, only after measures, some years in the making, were put into place to ensure electric reliability for Washington, D.C.<sup>394</sup> Undertaken by PJM, which is responsible for electric reliability in Washington, D.C. and in the Mid-Atlantic region in general, those measures included local transmission expansion as well as regional transmission expansion.<sup>395</sup>

In February 2006, in response to a FERC mandate, PJM and PEPSCO filed with FERC the Reliability Plan.<sup>396</sup> The plan proposed short-term and long-term local transmission construction that would “expedite upgrade of the transmission system for the particular local area served by the Potomac River Plant and substation.”<sup>397</sup>

The Reliability Plan explained, however, that “PJM is planning for the overall reliability of the greater Washington, D.C. area [and] will continue to review these larger matters through its Regional Transmission Expansion Planning (“RTEP”) process.”<sup>398</sup> Thus, the Reliability Plan assured FERC that “PJM is evaluating, and will continue to evaluate, within its RTEP process, the need for additional transmission facilities on the Pepco and neighboring systems that may be required to address the potential permanent loss of 482 MW of Potomac River Plant generation on the Pepco system.”<sup>399</sup>

The 2006 RTEP explained that “[t]he electricity needs of the Washington-Baltimore-Northern Virginia area are supplied not only by local generation, but also by significant energy transfers into those areas.”<sup>400</sup> Given this dependence on “bulk power transfers from western sources” in PJM, the report emphasized the need, to ensure electric reliability in the area, for a high-voltage transmission line from

392. See Sullivan, *supra* note 378 (describing the efforts by environmentally conscious citizens to shut down the Potomac Station).

393. See Torres & Eilperin, *supra* note 373 (explaining that reputable environmental organizations have joined efforts to retire the Potomac Station).

394. See Letter from Michael J. Kormos, to Betty Ann Kane, *supra* 3700, at 1–2 (describing the additions necessary to properly satisfy Washington D.C.’s electricity needs).

395. See *id.* at 2 (outlining the specific transmission expansion necessary to fulfill the Mid-Atlantic region’s electricity needs).

396. See Reliability Plan, *supra* note 197, at 1 (discussing the response of PJM and PEPSCO to the FERC mandate).

397. *Id.* at 3.

398. *Id.* at n.7.

399. *Id.* at 7.

400. 2006 RTEP, *supra* note 338, at 75.

southwestern Pennsylvania to northern Virginia.<sup>401</sup> Such a line would accommodate large energy imports to serve the Washington region.<sup>402</sup> Thus, PJM, in the RTEP for 2006, approved the construction of TrAIL.<sup>403</sup>

Environmental activism, therefore, did not force the shutdown of Potomac Station. Instead, local and regional transmission expansion planning, which ensured electric reliability for Washington, D.C., permitted the retirement of the power plant.<sup>404</sup>

The environmental activists that sought the shutdown of Potomac Station, however, did not support regional PJM transmission expansion.<sup>405</sup> Indeed, the Sierra Club was opposed to Potomac Station as well as to TrAIL, the construction of which supported the PJM determination that the retirement of Potomac Station would have no adverse consequences for electric reliability in the Washington, D.C. area.<sup>406</sup>

Approved by PJM in 2006, TrAIL would be a 244-mile, 500-kV transmission line from the Junction 502 substation in southwestern Pennsylvania to the Mt. Storm substation in eastern West Virginia, to the Meadowbrook substation in Northern Virginia, and to the Loudoun substation in Northern Virginia.<sup>407</sup> Thus, the construction of the transmission line would require state certificates from Virginia, West Virginia, and Pennsylvania.<sup>408</sup> “Under their traditional jurisdiction over land use, the states permit and site interstate electric power facilities that traverse their boundaries.”<sup>409</sup>

In West Virginia, for example, Trans-Allegheny Interstate Line Co., Inc. (TrAILCO) filed an application with the Public Service Commission of West Virginia (West Virginia PSC) in March 2007 for a

401. *See id.* (“PJM’s regional planning studies show that additional transmission capability is essential . . . . Unless a major new, high-voltage transmission circuit is constructed between . . . southwestern Pennsylvania and . . . Virginia by 2011, existing 500 kV transmission facilities serving this critical load center will become overloaded.”).

402. *See id.* (explaining that the proposed transmission line would fulfill Washington’s energy needs).

403. *See id.* at 69 (describing PJM’s acceptance of the TrAIL plan).

404. *See id.* at 75 (discussing how the shutdown of the Potomac Station would be impossible if the expansion plan had not been approved).

405. *See Sullivan, supra* note 378 (discussing environmentalists’ apprehensions about the PJM transmission expansion plan).

406. *See id.* (describing reputable environmental organizations’ apprehensions about TrAIL).

407. *See* 2006 RTEP, *supra* note 338, at 75 (explaining the details of the expanded transmission line).

408. *See id.* at 75 (outlining the necessary certification for the expanded transmission line).

409. James W. Moeller, *Interstate Electric Transmission Lines and States’ Rights in the Mid-Atlantic Region*, 40 B.C. ENVTL. AFF. L. REV. 77, 80 (2013).

certificate to construct and operate the West Virginia segment of TrAIL.<sup>410</sup> Several interested parties filed petitions to intervene in the certificate proceeding before the West Virginia PSC.<sup>411</sup>

In particular, the Sierra Club filed a petition that requested “an order denying the certificate.”<sup>412</sup> In an opening statement, the organization argued that the adverse environmental impacts of the proposed transmission line would outweigh the need for bulk energy imports from western PJM to the Washington-Baltimore-Northern Virginia area.<sup>413</sup> The adverse impacts would include those associated with the construction of the transmission line as well as with those associated with the coal-fired power plants that would generate the power for the bulk energy imports.<sup>414</sup>

In a subsequent brief, the Sierra Club argued that the application for a certificate to construct and operate TrAIL failed to demonstrate a need for the transmission line and that the economic and environmental costs of the transmission line would outweigh its benefits.<sup>415</sup> The brief, as well as a reply brief, argued that the need for bulk energy imports to the Washington-Baltimore-Northern Virginia area could be addressed with reduced demand for electric power through demand response programs, *i.e.*, energy conservation.<sup>416</sup>

In April 2008, TrAILCO, the Staff of the West Virginia PSC, the Consumer Advocate Division of the West Virginia PSC, and the West

410. See Application of Trans-Allegheny Interstate Line Company for a Certificate of Public Convenience and Necessity Under W. Va. Code 24-2-11a Authorizing the Construction and Operation of the West Virginia Segments of a 500 kV Electric Transmission Line and Related Facilities in Monongalia, Preston, Tucker, Grant, Hardy, and Hampshire Counties, and for Related Relief, In re Trans-Allegheny Interstate Line Co., No. 07-0508-E-CN (W.Va. P.S.C. 2007) (describing a TrAILCO application needed in order to construct the expanded transmission lines) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

411. See Petition to Intervene of the Sierra Club at 2, In re Trans-Allegheny Interstate Line Co., No. 07-0508-E-CN (2007) (explaining outside parties attempts to intervene in the expansion of the transmission line) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

412. *Id.*

413. See Opening Statement of the Sierra Club at 3, In re Trans-Allegheny Interstate Line Co., No. 07-0508-E-CN (Jan. 8, 2008) (describing the adverse impacts that the expanded transmission line will have on the environment) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

414. See *id.* at 2–3 (discussing why the adverse environmental impacts outweigh the need for another transmission line).

415. See Brief of the Sierra Club, Inc. in Opposition to Issuance of Certificate of Convenience and Necessity to Trans-Allegheny Interstate Line Company at 3–4, In re Trans-Allegheny Interstate Line Co., No. 07-0508-E-CN (2008) (explaining the Sierra Club’s main argument against the expansion of the transmission line) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

416. See *id.* at 17 (discussing other alternatives to the transmission line expansion).

Virginia Energy Users Group filed with the West Virginia PSC a proposed settlement in the certificate proceeding.<sup>417</sup> The Sierra Club opposed the settlement.<sup>418</sup> Nonetheless, following a hearing on the proposed settlement, the West Virginia PSC, in August 2008, granted a certificate for the West Virginian segment of TrAIL.<sup>419</sup>

The Sierra Club filed a petition for rehearing of the order granting the certificate.<sup>420</sup> The Sierra Club argued, *inter alia*, that the West Virginia PSC, in its review of the application for a certificate for the West Virginia segment of TrAIL, had ignored the adverse environmental impact of the coal-fired power plants that would generate the electric power transmitted over TrAIL.<sup>421</sup> In February 2009, the West Virginia PSC denied the Sierra Club petition.<sup>422</sup> The Sierra Club filed a petition for review of the West Virginia PSC orders with the Supreme Court of Appeals for West Virginia in March 2009.<sup>423</sup> In a one-page order, the court denied the petition in April 2009.<sup>424</sup>

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417. See Joint Stipulation and Agreement for Settlement, In re Trans-Allegheny Interstate Line Co., No. 07-0508-E-CN (Apr. 15, 2008) (describing the certification plan for the construction of the expanded transmission line) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

418. See The Sierra Club, Inc. Initial Brief in Opposition to April 15, 2008 Joint Settlement at 9, In re Trans-Allegheny Interstate Line Co., No. 07-0508-E-CN (May 16, 2008) (explaining that the Sierra Club is filing a brief in opposition to the proposed certification) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

419. See W.Va. P.S.C. Commission Order, at 1, In re Trans-Allegheny Interstate Line Co., No. 07-0508-E-CN (Aug. 1, 2008) (discussing how the West Virginia P.S.C. authorized the expansion of the transmission line) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

420. See Petition for Reconsideration Under Rule 19.3 of the Rules of Practice and Procedure Before the Public Service Commission, at 1, In re Trans-Allegheny Interstate Line Co., No. 07-0508-E-CN (Aug. 6, 2008) (stating that the Sierra Club wants the transmission line expansion to be reconsidered) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

421. See *id.* at 11 (explaining the environmental impacts of increased greenhouse gases that would arise because of TrAIL).

422. See W. Va. P.S.C. Commission Order, at 1, In re Trans-Allegheny Interstate Line Co., No. 07-0508-E-CN (Feb. 13, 2009) (“This order (i) denies the petitions for reconsideration filed by the Sierra Club . . .”) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

423. See Petition of Sierra Club, Inc. for Suspension and Review of Final Orders of the Public Service Commission, In re Trans-Allegheny Interstate Line Co., No. 07-0508-E-CN, Petition for Review denied, Sierra Club, Inc. v. Pub. Serv. Comm’n, No. 09-0379 (W. Va. Apr. 29, 2009) (filed Mar. 13, 2009) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

424. See Sierra Club, Inc. v. Pub. Serv. Comm’n of W. Va. & Trans-Allegheny Interstate Line Co., Inc., No. 09-0379 (W.Va. Apr. 29, 2009) (denying the petition in an

The Sierra Club thus lost its bid to thwart the construction of TrAIL.<sup>425</sup> Ironically, the ultimate construction of the transmission line contributed significantly to electric reliability in the Mid-Atlantic and thus allowed the retirement of Potomac Station, a sixty-year-old power plant whose pollution would exceed that of a modern coal-fired power plant that would transmit electric power over TrAIL. This irony suggests that the Sierra Club may have been working at cross-purposes. It seems that the organization, which actively sought the shutdown of the sixty-year-old Potomac Station, should have supported the construction of a transmission line that would ensure electric reliability for Washington, D.C. and thus permit the retirement of Potomac Station.

### *B. Amending Section 202(c)*

The foreseeable use by the DOE of Section 202(c) to thwart the shutdown of a coal-fired power plant unable to comply with new EPA regulations suggests the possible need to update the 75-year-old statute.

Indeed, concerns that the DOE could again use the statute to hinder the shutdown of coal-fired power plants unable to comply with new CAA requirements have prompted efforts in Congress to amend the statute.<sup>426</sup> For the past several years, Congress has attempted to amend Section 205 to provide that compliance with an order under the statute will not be considered a CAA violation.<sup>427</sup>

In August 2012, Representative Pete Olson (R-TX) introduced H.R. 4273,<sup>428</sup> the Resolving Environmental and Grid Reliability Conflicts Act of 2012, to “clarify that compliance with an emergency order under section 202(c) . . . may not be considered a violation of any Federal, State, or local environmental law or regulation.”<sup>429</sup> The legislation would have required DOE to ensure that an order under Section 202(c) “minimize any adverse environmental impacts.”<sup>430</sup> An environmental law violation that results

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unpublished decision) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

425. *See id.* (explaining that the West Virginia Supreme Court denied review of the P.S.C.’s certification, the last possible option in an effort to thwart the expanded transmission line).

426. *See, e.g.*, Resolving Environmental and Grid Reliability Conflicts Act of 2012, H.R. 4273, 112th Cong. pmb. (2012) (“An Act to clarify that compliance with an emergency order under section 202(c) of the Federal Power Act may not be considered a violation of any Federal, State, or local environmental law or regulation . . .”).

427. *See id.* (explaining that the law has finally been changed to not consider compliance with an order issued under the Federal Power Act a CAA violation).

428. *Id.*

429. *Id.* at pmb.

430. *Id.* § 2(a)(2).

from power generation under such an order, however, “shall not be considered a violation of such environmental law.”<sup>431</sup>

The Subcommittee on Energy and Power of the House Committee on Energy and Commerce held a hearing on H.R. 4273 on May 12, 2012.<sup>432</sup> DOE took no position on the bill but clarified that “Section 202(c) orders are not intended to provide a long-term alternative to environmental compliance. They are available only under limited emergency situations, and are temporary solutions to imminent reliability threats.”<sup>433</sup> The DOE also urged power plants to “start planning and working with” transmission planning organizations and other entities with ultimate responsibility for electric reliability “to resolve any reliability issues” that may arise in connection with CAA requirements.<sup>434</sup>

The EPA also took no position on the bill and testified that its new CAA regulations would not threaten electric reliability and thus created no particular need to amend Section 202(c).<sup>435</sup> A power plant forced into retirement because it is unable to comply with those regulations “is an average of more than fifty years old, relatively inefficient, and does not have modern pollution control equipment.”<sup>436</sup> Finally, the EPA observed that “[t]he Nation’s power grid is strong and resilient because numerous agencies and organizations fulfill their obligations to maintain the Nation’s electric reliability.”<sup>437</sup>

FERC testified that it supported the concept behind H.R. 4273.<sup>438</sup> “That is . . . generators of electricity should not be put in a position of having to choose whether to violate Section 202(c) of the Federal Power Act or whether to violate the Clean Air Act when certain generating facilities are needed for crucial electric reliability needs.”<sup>439</sup> The PSC supported the bill “[b]ecause the proposed legislation would enable

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431. *Id.*

432. *See The American Energy Initiative, Part 19, supra* note 1, at 1 (opening statement of Rep. Ed Whitfield) (describing the hearing held by the Subcommittee on Energy and Power of the House Committee on Energy and Commerce).

433. *Id.* at 43 (prepared statement of Patricia Hoffman, Assistant Secretary, Office of Electricity Delivery and Energy Reliability, DOE).

434. *See id.* at 44 (“Electricity generation owners must start planning and working with their grid operators, and if need be EPA, early on to identify and resolve any reliability issue arising in connection with EPA rules.”).

435. *See id.* at 50–59 (prepared statement of Regina A. McCarthy, Assistant Administrator of Air and Radiation, EPA) (explaining the EPA’s view that section 202(c) does not need to be amended).

436. *Id.* at 55.

437. *The American Energy Initiative, Part 19, supra* note 1, at 58.

438. *See id.* at 59–61 (presenting the prepared statement of FERC Commissioner Philip D. Moeller and elaborating on FERC’s reasons for supporting the amendment)

439. *Id.* at 63.

generation companies to operate electric plants without fear of penalties for violations of other laws when required to do so by emergency orders of FERC and DOE.<sup>440</sup>

After the subcommittee hearing on H.R. 4273, the House Committee on Energy and Commerce approved the bill.<sup>441</sup> On August 1, 2012, the House approved the bill.<sup>442</sup> Referred to the Senate, the bill died in committee.<sup>443</sup>

Last January, Rep. Olson introduced H.R. 271, the Resolving Environmental and Grid Reliability Conflicts Act of 2013, which is identical to H.R. 4273.<sup>444</sup> The House Committee on Energy and Commerce approved the bill on May 20th, the House approved H.R. 271 on May 22nd, and the bill has been referred to the Senate.<sup>445</sup>

The logic behind the support for the bill is compelling. If, to ensure electric reliability, the DOE orders the restart of a power plant shut down because it is unable to comply with new CAA requirements, then the plant should not be liable for violations of those requirements. Given recent concerns that new CAA regulations could force the shutdown of coal-fired power plants critical to electric reliability and given the foreseeable use by the DOE of Section 202(c) to thwart the shutdown of such power plants, an amendment to the statute should be enacted to clarify the legal liability of a power plant that complies with a DOE order under the statute and thus violates a CAA requirement.

### C. Conclusion

Clean air concerns forced the shutdown of Potomac Station in August 2005.<sup>446</sup> In December 2005, electric reliability concerns prompted the DOE to issue an unprecedented order under Section 202(c) to require its

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440. *Id.* at 119.

441. *See* H.R. 4273, *supra* note 426 (explaining that the bill was approved by the House Committee on Energy and Commerce).

442. *See id.* at 4 (stating that H.R. 4273 “[p]assed the House of Representatives August 1, 2012”).

443. *See id.* (stating that the bill was referred to committee).

444. *Compare* H.R. 271, 113th Cong. (1st Sess. 2013) (“To clarify that compliance with an emergency order under section 202(c) of the Federal Power Act may not be considered a violation of any Federal, State, or local environmental law or regulation.”), *with* H.R. 4273, 112th Cong. (2012) (clarifying that “compliance with an emergency order under section 202(c) of the Federal Power Act may not be considered a violation of any Federal, State, or local environmental law or regulation”).

445. *See* 159 CONG. REC. H2898 (daily ed. May 22, 2013) (stating that the Resolving Environmental and Grid Reliability Conflicts Act passed by a two-thirds majority).

446. *See* Smith, *supra* note 141 (discussing the 2005 shutdown of the Potomac Station).

restart.<sup>447</sup> In October 2012, Potomac Station was retired.<sup>448</sup> Environmental activism, it seems, had achieved its ultimate objective.<sup>449</sup> The power plant's retirement, moreover, raised no electric reliability concerns.<sup>450</sup>

Between August 2005 and October 2012, PJM, which is responsible for electric reliability in Washington, D.C. and in the Mid-Atlantic region in general, implemented local and regional measures, some years in the making, to ensure electric reliability for Washington, D.C.<sup>451</sup> Indeed, environmental activism did not force the shutdown of Potomac Station.<sup>452</sup> Instead, careful and farsighted transmission expansion planning permitted the retirement of the power plant.<sup>453</sup>

Testifying before a House subcommittee in 2012, Regina A. McCarthy, who in July 2013 became EPA Administrator, was correct. "The lights have not gone out in the past, due to Clean Air Act regulations, and . . . [EPA] rules won't cause them to go out in the future."<sup>454</sup> But not because the EPA itself will ensure that the lights will not go out, rather, PJM and other transmission planning organizations and entities with ultimate responsibility for electric reliability will provide that assurance.<sup>455</sup> Environmental activists opposed to aging coal-fired power plants should support the efforts of these organizations

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447. See DOE Order No. 202-05-3, *supra* note 21, at 6–10 (outlining the need for reliable electricity in our nation's capital as one of the many reasons for restarting Potomac Station).

448. See Sullivan, *supra* note 382 (describing the 2012 retirement of the Potomac Station).

449. See *id.* (explaining that environmentalists primarily wanted the Potomac Station retired).

450. See Kormos, *supra* note 3700, at 1-2315 (noting that Potomac Station's retirement would not raise any electric reliability concerns).

451. See *id.* (discussing additions that would need to be made to transmission lines to ensure that Washington D.C.'s electricity needs are met).

452. See Sullivan, *supra* note 3822 (noting that the decision to close Potomac Station was not made because of environmental concerns).

453. See Kormos, *supra* note 370, at 1-2315 (explaining that the Potomac Station retirement would not have been possible unless TrAIL could be expanded).

454. *The American Energy Initiative, Part 19*, *supra* note 1, at 50.

455. See Kormos, *supra* note 3700, at 1-2315 (noting that transmission expansion was required in order to create electric reliability).