

REPORT OF THE ENVIRONMENTAL REGULATION COMMITTEE

The following is the Report of the Environmental Regulation Committee. In this report, the Committee summarizes key developments in federal and state environmental regulation affecting the natural gas and electric industry from July 1, 2015, to June 30, 2016.*

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I. OIL & GAS

A. *Climate Change - Methane Emission Regulations*

As part of its *Climate Action Plan: Strategy to Reduce Methane Emissions*, the Obama Administration has taken several recent actions aimed at reducing methane emissions from the oil and gas industries. The Administration aims to reduce methane emissions levels from the oil and gas industry by 40% to 45% by 2025.¹ “[Methane is] second only to carbon dioxide in its role in the climate debate.”² Methane does not survive as long as carbon dioxide in the atmosphere, but it traps heat much more effectively.³ Even accounting for its shorter duration, methane is estimated to be “[twenty-five] times more potent in its effect on global warming than carbon dioxide.”⁴

Methane accounts for approximately 10% of human-created greenhouse gas emissions in the United States.⁵ The EPA recently revised its estimates for total methane emissions upward by 85.2 million metric tons (MMT) from 636.3 MMT to 721.5 MMT, driven primarily by a 57.7 MMT revision to oil and gas industry emissions that allegedly caused it to supplant agriculture as the leading source of methane emissions.⁶ Some environmental groups contend that EPA still underestimates these emissions, as seen in a recent complaint from NC WARN filed with EPA’s Inspector General on June 8, 2016.⁷ The complaint alleges that the Bacharach Hi-Flow Sampler, a device used to measure leaks and deliberate venting of methane emissions from the natural gas industry, severely underreports

1. *Fact Sheet, EPA’s Actions to Reduce Methane Emissions from the Oil and Natural Gas Industry: Final Rules and Draft Information Request*, EPA (May 12, 2016), <https://www3.epa.gov/airquality/oilandgas/may2016/nsps-overview-fs.pdf>. EPA issued its Endangerment Finding under Clean Air Act section 202(a) in 2009, finding that current, elevated levels of GHGs in the atmosphere may reasonably be anticipated to endanger the public health and welfare. *See also Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a)*, 74 Fed. Reg. 66,496 (Dec. 15, 2009).

2. Chris Mooney & Brady Dennis, *Obama Administration Announces Historic New Regulations for Methane Emissions from Oil and Gas*, WASH. POST at 1 (May 12, 2016).

3. *Id.* at 5-6.

4. KEN COSTELLO, ANSWERING QUESTIONS ABOUT METHANE EMISSIONS FROM THE NATURAL GAS SECTOR at 2 (2015), <http://nrri.org/wp-content/uploads/2016/04/2015-Jul-Ken-Costello-Methane-Emissions.pdf>; *see also* EPA, EPA 430-R-16-002, INVENTORY OF U.S. GREENHOUSE GAS EMISSIONS AND SINKS: 1990-2014 2016 at ES-13 (2016), <https://www3.epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2016-Main-Text.pdf>.

5. *Id.* at 2.

6. *Compare* EPA, EPA 430-R-15-004, INVENTORY OF U.S. GREENHOUSE GAS EMISSIONS AND SINKS: 1990-2013 at ES-6 (2015), <https://www3.epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2015-Main-Text.pdf>, *with* EPA 430-R-16-002, *supra* note 4, at ES-6. *See also* Chris Mooney, *The U.S. Has Been Emitting a Lot More Methane Than We Thought, Says EPA*, WASH. POST at 2 (Apr. 15, 2016).

7. JIM WARREN, NCWARN, COMPLAINT AND REQUEST FOR INVESTIGATION OF FRAUD, WASTE, AND ABUSE BY A HIGH-RANKING EPA OFFICIAL LEADING TO SEVERE UNDERREPORTING AND LACK OF CORRECTION OF METHANE VENTING AND LEAKAGE THROUGHOUT THE US NATURAL GAS INDUSTRY (2016) [hereinafter NCWARN COMPLAINT], http://www.ncwarn.org/wp-content/uploads/EPA-OIG_NCWARN_Complaint_6-8-16.pdf. *See also* Press Release, NCWARN, Whistleblower: EPA Official Covered Up Methane Leakage Problems Across US Natural Gas Industry, (June 8, 2016), <http://ncwarn.org/2016/06/whistleblower-epa-official-covered-up-methane-leakage-problems>.

methane emissions.⁸ Studies by EPA using this device have shown decreasing methane emissions, while other studies show increasing methane emissions.⁹

Meanwhile, EPA issued its first methane emissions regulation on May 12, 2016.¹⁰ The regulation is referred to in the industry as the “QuadOa” rule. This New Source Performance Standard (NSPS) sets methane emission limits for “certain new, modified, and reconstructed equipment, processes, and activities” in the oil and gas industry, including hydraulically-fractured wells and compressor stations.¹¹ It also requires owners or operators to find and repair leaks in oil-field equipment.¹² The final rule differs from the proposed rule in setting a fixed schedule for monitoring leaks, opting for an increased number of times per year that facilities must check for leaks, and eliminating exceptions for low-producing wells.¹³ The EPA expects the rule to reduce methane emissions by 510,000 short tons, equivalent to 11 MMT of carbon dioxide, by 2025 and net climate benefits of \$170 million.¹⁴ The Department of the Interior’s (DOI) Bureau of Land Management (BLM) issued a similar proposed rule to reduce methane emissions from oil and gas production wells located on federal land.¹⁵

At the same time, EPA released a draft Information Collection Request (ICR) to start the process for imposing similar requirements on existing oil and gas facilities.¹⁶ The ICR seeks information on emissions sources and equipment, devices, and processes used to control emissions from operators and facilities.¹⁷ Information collection is proposed to be in two parts: (1) an operator survey (Part 1) to obtain facility level information (i.e. name, location, contact information, and numbers of wells, tanks, and compressors) from all known onshore oil and gas production facilities to better understand the number and types of equipment at such facilities; and (2) a detailed facility survey seeking more in-depth information to be sent to a statistically selected sample of facilities across the different industry segments (production, gathering and boosting, compression/transmission, storage, and import/export facilities).¹⁸ The EPA also issued a voluntary ICR on July 8, 2016, to obtain information about “innovative strategies to accurately and cost-effectively locate, measure, and mitigate methane emissions.”¹⁹

8. NCWARN COMPLAINT, *supra* note 7, at 4.

9. *Id.* at 2-5.

10. 40 C.F.R. pt. 60, subpart OOOOa (2016).

11. Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources; Final Rule, 81 Fed. Reg. 35,824, 35,825 (June 3, 2016) (to be codified at 40 C.F.R. pt. 60)

12. *Id.* at 35,846.

13. *Fact Sheet*, *supra* note 1, at 3; Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources; Final Rule, 81 Fed. Reg. at 35,855-57, 35,861.

14. On July 28, 2016, several states petitioned the United States Court of Appeals for the District of Columbia Circuit to review EPA’s methane new performance standard for the oil and gas industry. *See, e.g., Texas v. EPA*, No. 16-1257 (D.C. Cir. filed July 28, 2016).

15. Proposed Rulemaking, Waste Prevention, Production Subject to Royalties, and Resource Conservation, 81 Fed. Reg. 6616 (Feb. 8, 2016) (to be codified at 43 C.F.R. pts. 2178-2179).

16. Proposed Information Collection Request; Comment Request; Information Collection Effort for Oil and Gas Facilities, 81 Fed. Reg. 35,763, 35,763-65 (June 3, 2016).

17. *Id.* EPA anticipates issuing information collection letters by October 30, 2016. *Id.* at 35,765.

18. *Id.* at 35,765-66.

19. *Fact Sheet*, *supra* note 1, at 5; *see also* Oil and Natural Gas Sector: Request for Information, Emerging Technologies, 81 Fed. Reg. 46,670 (July 18, 2016).

B. Natural Gas Construction

1. Developments in NEPA Review of LNG Export Terminals

During the report period, the D.C. Circuit decided cases involving the scope of the FERC's National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. §§ 4321-4370h (2012), review in LNG export terminal construction.²⁰ Specifically, these cases addressed FERC orders that had denied challenges to the FERC's environmental review of LNG export terminal construction, which challenges had alleged that the FERC should consider either as indirect or cumulative effects the alleged induced production of natural gas, increased domestic electric prices and higher carbon emissions resulting from LNG exports. The NEPA regulations require the FERC to consider "connected actions," "cumulative actions," and "similar actions" in its Environmental Assessment (EA) of proposed pipeline projects.²¹

For example, in *Sierra Club and Galveston Baykeeper v. FERC (Sierra Club (Freeport LNG))*,²² the D.C. Circuit rejected the NEPA arguments of two environmental groups challenging FERC orders²³ that had authorized Freeport LNG Development, L.P. to redesign its liquefied natural gas terminal in Texas in order to support natural gas exports.²⁴ Sierra Club and Galveston Baykeepers, the petitioners, claimed that the FERC had failed to properly consider the "indirect effects" and "cumulative impacts" of the project's FERC authorization. In addition to rejecting petitioner's "indirect effects" and "cumulative impacts" arguments, the court also rejected a third argument, regarding the units the FERC used to quantify emissions from the project's electric use, on the grounds that petitioners had failed to raise it both in their environmental comments and on rehearing.²⁵

20. *Sierra Club v. FERC (Freeport LNG)*, No. 14-1275, 2016 U.S. App. LEXIS 11744 (D.C. Cir. June 28, 2016); *Sierra Club v. FERC (Sabine Pass)*, No. 14-1249, 2016 U.S. App. LEXIS 11747 (D.C. Cir. June 28, 2016). The court decided a third appeal addressing similar issues just after the end of the report period. *EarthReports, Inc. v. FERC*, No. 15-1127, 2016 U.S. App. LEXIS 12982 (D.C. Cir. July 15, 2016). The court received briefs on a fourth appeal involving similar issues during the report period. *Corpus Christi Liquefaction, LLC*, 149 F.E.R.C. ¶ 61,283 (2014) (Corpus Christi, TX facility with 2.14 Bcf/d capacity), *reh'g denied*, 151 F.E.R.C. ¶ 61,098 (2015), *appeal docketed sub nom.*, *Sierra Club v. FERC*, No. 15-1133 (D.C. Cir. filed May 11, 2015).

21. 40 C.F.R. § 1508.25(a)(1) to (3)(2016). "Connected actions" include actions that are "interdependent parts of a larger action and depend on the larger action for their justification." *Id.* § (a)(1)(iii). "Connected actions" also include actions that "(i) [a]utomatically trigger other actions which may require environmental impact statements," and actions that "(ii) [c]annot or will not proceed unless other actions are taken previously or simultaneously." *Id.* § (a)(1)(i)-(ii). "'Cumulative impact' is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." 40 C.F.R. § 1508.7(2016). "Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." *Id.*

22. *Sierra Club (LNG Freeport)*, 2016 U.S. App. LEXIS 11744, at *1.

23. *Freeport LNG Development, L.P.*, 148 F.E.R.C. ¶ 61,076 (2014) (Freeport, TX facility with 1.8 Bcf/d capacity), *denying reh'g and clarifying* 149 F.E.R.C. ¶ 61,119 (Nov. 13, 2014), *dismissed sub nom.*, *Sierra Club v. FERC*, No. 14-1190, 2015 WL 1606900 (D.C. Cir. Mar. 16, 2015), *appeal denied*, *Sierra Club (Freeport LNG)*, 2016 U.S. App. LEXIS 11744.

24. *Sierra Club (Freeport LNG)*, 2016 U.S. App. LEXIS 11744, at *31.

25. *Id.* at *29-30.

The court rejected the Sierra Club and Galveston Baykeeper's argument that the FERC had failed to consider adequately the alleged indirect effect of inducing increased domestic natural gas production.²⁶ The NEPA requires federal agencies to consider in their environment reviews not only the direct environmental effects of the agency action but also the reasonably foreseeable indirect effects.²⁷ The NEPA's indirect effect consideration requires sufficient connection between the agency's action and the claimed indirect effect.²⁸ The court found that "the Commission's NEPA analysis did not have to address the indirect effects of the anticipated *export* of natural gas. That is, because the Department of Energy [(DOE)], not the Commission, has sole authority to license the export of any natural gas going through the Freeport facilities."²⁹ The court did not decide whether the indirect impacts arguments would prevail if raised in the DOE export authorization.³⁰ Nor did the court decide whether the FERC improperly failed to consider the DOE authorization in situations where it acts as the lead agency for NEPA review of both the facility and export authorizations.³¹

The court rejected petitioners' argument that the FERC should have performed a "nationwide analysis of cumulative impacts that included applications for several other liquefied natural gas export terminals that were pending or had already been granted across the United States."³² The NEPA cumulative impacts look to impacts in the same area. The FERC identified Brazoria County, Texas, the 1,600-square mile county in which the LNG project would be located and the majority of impacts would occur, as the relevant

26. *Id.* at *26.

27. *Id.* at *19.

28. *Id.* at *20.

29. *Sierra Club (Freeport LNG)*, 2016 U.S. App. LEXIS 11744, at *20

30. *Id.* at *17 ("We . . . express no opinion on whether (i) the Commission's environmental analysis would have been adequate to satisfy the Department of Energy's own independent NEPA obligation in authorizing Freeport to export natural gas; or (ii) the Commission's construction authorizations and the Department's export authorizations qualified as "connected actions" for purposes of NEPA review, *see* 40 C.F.R. § 1508.25(a)(1) (2012).").

31. *Sierra Club (Freeport LNG)*, 2016 U.S. App. LEXIS 11744, at *16 ("the Associations do not challenge the . . . interplay between the Commission and the Department of Energy when the former is acting as the 'lead agency' in reviewing the environmental effects of a natural gas export operation under NEPA Nor have the Associations argued that the Commission impermissibly 'segmented' its review of the Freeport ProjectsFalse"). The Natural Gas Act designates the FERC as the lead agency for coordinating National Environmental Policy Act (NEPA) review of onshore LNG exports under Natural Gas Act section 3. 15 U.S.C. § 717n(b)(1) (2012). Other agencies must "cooperate" with the FERC, and the FERC is required to promulgate NEPA-implementing regulations. 15 U.S.C. §§ 717n(b)(2), 717b-1(a) (2012). The Council on Environmental Quality also has pertinent regulations. 40 C.F.R. § 1502.16 (2014). DOE serves as a cooperating agency in these FERC processes and performs an independent environmental review in DOE export cases to determine if the FERC's NEPA efforts need to be supplemented. *See, e.g., Sabine Pass Liquefaction, LLC*, DOE/FE 3669 at 196 (June 26, 2015). The U.S. Coast Guard serves as the lead agency for coordinating environmental review of offshore LNG export facilities. Memorandum of Understanding Related to the Licensing of Deepwater Ports Among the U.S. Department of the Army, U.S. Department of Commerce, U.S. Department of Defense, U.S. Department of Energy, U.S. Department of Homeland Security, U.S. Department of the Interior, U.S. Department of State, U.S. Department of Transportation, U.S. Environmental Protection Agency, Federal Energy Regulatory Commission, Council on Environmental Quality at 4 (May 12, 2004), <http://www.ferc.gov/legal/mou/mou-23.pdf>.

32. *Sierra Club (Freeport LNG)*, 2016 U.S. App. LEXIS 11744, at *27-28.

geographic area for its cumulative impact analysis.³³ The court found that the petitioners had drawn the circle too wide given the “scant record evidence identifying any reasonably foreseeable and proximate effects of the Freeport Projects themselves (separate from their exports) on national energy markets or emission levels.”³⁴

Sierra Club v. FERC (Sierra Club (Sabine Pass)), issued on the same day as *Sierra Club (Freeport LNG)*, addressed similar NEPA challenges to FERC orders authorizing an increase in production capacity of a liquefied natural gas terminal operated by Sabine Pass Liquefaction, LLC and Sabine Pass LNG, LP in Cameron Parish, Louisiana.³⁵ Sierra Club alleged two indirect effects: increased induced domestic natural gas production and greater reliance on coal as an energy source for electricity generation.³⁶ The court rejected Sierra Club’s arguments, relying on the same rationale it expressed in *Sierra Club (Freeport LNG)*.³⁷ “The challenged Commission orders . . . are not the legally relevant cause of the indirect effects Sierra Club raises.”³⁸ As the court noted in *Sierra Club (Freeport LNG)*, DOE authorizes commodity exports, not the FERC.³⁹ The court noted, “Sierra Club, of course, remains free to raise these issues in a challenge to the Energy Department’s NEPA review of its export decision.”⁴⁰ The court also rejected Sierra Club’s cumulative impacts argument on jurisdictional and substantive grounds. On the merits, the court applied the same reasoning as it applied in *Sierra Club (Freeport LNG)*.⁴¹

In *Earth Reports, Inc. v. FERC*, the D.C. Circuit Court addressed another indirect effects issue as in *Sierra Club (Freeport LNG)* and applied the same reasoning.⁴² Several environmental organizations petitioned for review of the FERC’s conditional authorization of the conversion of the Cove Point LNG facility in Maryland’s western shore of the Chesapeake Bay from an import maritime terminal to a mixed-use, import and export terminal.⁴³ Petitioners raised a similar indirect effects argument as petitioners in *Sierra Club (Freeport LNG)*

33. *Id.* at *27.

34. *Id.* at *29.

35. *Cameron LNG, LLC*, 147 F.E.R.C. ¶ 61,230 (2014) (Hackberry, LA, facility with 1.7 Bcf/d capacity), *denying reh’g*, 148 F.E.R.C. ¶ 61,237 (2014) (rejecting rehearing request as untimely but nonetheless discussing the merits); and *Sabine Pass Liquefaction, LLC*, 146 F.E.R.C. ¶ 61,117 (2014) (SabinePass, LA, facility authorizing 2.76 Bcf/d amending 2012 export authorization), *denying reh’g*, 148 F.E.R.C. ¶ 61,200 (2014), *appeal denied sub nom. Sierra Club (Sabine Pass)*, 2016 U.S. App. LEXIS 11747 (D.C. Cir. June 28, 2016), *amended*, *Sabine Pass Liquefaction Expansion, LLC*, 151 F.E.R.C. ¶ 61,012 (2015) (authorizing an additional 1.40 Bcf/d).

36. *Sierra Club (Sabine Pass)*, 2016 U.S. App. LEXIS 11747, at *17.

37. *Id.* at *17-18.

38. *Id.* at *18 (also finding that the FERC adequately explained why it was not reasonably foreseeable that an increase in terminal production capacity would induce domestic production).

39. *Id.*

40. *Id.*

41. *Sierra Club (Sabine Pass)*, 2016 U.S. App. LEXIS 11747, at *22-23.

42. *Dominion Cove Point LNG, LP*, 148 F.E.R.C. ¶ 61,244 (2014) (Cove Point, MD, facility with 0.82 Bcf/d capacity), *reh’g denied*, 151 F.E.R.C. ¶ 61,095 (2015), *appeal denied*, *EarthReports, Inc.*, 2016 U.S. App. LEXIS 12982 (D.C. Cir. July 15, 2016).

43. *Earth Reports, Inc.*, 2016 U.S. App. LEXIS 12982, at *2-4.

and *Sierra Club (Sabine Pass)*.⁴⁴ The argument in those cases related to increased domestic production while the argument in *Earth Reports, Inc.* also applied to the associated transportation and consumption of natural gas.⁴⁵ The court applied the same lack of causation rationale as it had in the two June 28, 2016, decisions.⁴⁶ In addition, the court rejected petitioner's challenge to the FERC's decision not to use a "social cost of carbon analysis" to quantify the physical effects on the environment from the project's incremental contribution to greenhouse gas emissions.⁴⁷ The court also rejected Sierra Club's arguments that the FERC had not properly addressed several direct impacts, for example, adverse effect on local water quality.⁴⁸

2. NEPA Analysis of Related Pipeline Projects

The FERC continued to apply and, thereby, define, implications of *Delaware Riverkeeper Network v. FERC*,⁴⁹ during the 2015-2016 report year. In *Delaware Riverkeeper*, the D.C. Circuit found that the FERC had violated the NEPA by: (1) impermissibly segmenting its review of Tennessee Gas Pipeline's Northeast Upgrade Project, an interstate natural gas pipeline expansion of Tennessee's system in Pennsylvania and New Jersey, by not analyzing the project in conjunction with the three interrelated projects; and (2) failing to provide a meaningful analysis of the cumulative impacts of the four projects taken together.⁵⁰ The D.C. Circuit addressed the same issue of segmentation in two subsequent cases, *Minisink Residents for Environmental Preservation & Safety v. FERC*,⁵¹ and *Myersville Citizens for a Rural Community, Inc. v. FERC*,⁵² which preceded the report period but influenced the FERC's application of *Delaware Riverkeeper* during the report period.⁵³ During the July 2015 through June 2016

44. *Id.* at *10-11.

45. *Id.* at *10.

46. *Id.* at *12-13.

47. *Id.* at *17.

48. *Earth Reports, Inc.*, 2016 U.S. App. LEXIS 12982, at *15-16.

49. *Delaware Riverkeeper Network v. FERC*, 753 F.3d 1304 (D.C. Cir. 2014).

50. *Delaware Riverkeeper*, 753 F.3d 1304, at 1313-19.

51. *Minisink Residents for Env'tl. Pres. & Safety v. FERC*, 762 F.3d 97, 113 n.11 (D.C. Cir. 2014).

52. *Myersville Citizens for a Rural Cmty., Inc. v. FERC*, 783 F.3d 1301, 1325-26 (D.C. Cir. 2015).

53. During the July 2015 through June 2016 report year, the FERC addressed segmentation claims in a number of pipeline construction cases. See, e.g., *Dominion Transmission, Inc.*, 155 F.E.R.C. ¶ 61,234 at P 14 (2016) (rejecting segmentation claim on grounds that the two allegedly "connected" projects involved different pipelines, different geographic areas and would each proceed without the other); *Dominion Transmission, Inc.*, 155 F.E.R.C. ¶ 61,106 at P 60 (2016) (rejecting segmentation claim on grounds that the five allegedly "connected" projects "do not overlap spatially."); *Texas Gas Transmission, LLC*, 155 F.E.R.C. ¶ 61,099 at P 28 (2016) (rejecting segmentation claim on grounds that the two allegedly "connected" projects were neither functionally nor financially interdependent; and that each would be built without the other); *Rockies Express Pipeline LLC*, 155 F.E.R.C. ¶ 61,018 at P 16 (2016) ("The capacity of the two projects is subscribed by different shippers. Ultimately, each project would have occurred in the other's absence and the two projects are not functionally interdependent."); *Transcon. Gas Pipe Line Co., LLC*, 155 F.E.R.C. ¶ 61,016 at P 60-62 (2016) (finding no improper segmentation after considering the different purposes and locations, as well as fact that one of the allegedly connected project had not been a fully defined proposal during the FERC's consideration of the other projects in question); *Tennessee Gas Pipeline Co., LLC et al.*, 154 F.E.R.C. ¶ 61,184 at P 45-46 (2016) (finding projects not connected where each project could proceed without the other, and they involve different receipt and delivery points along different paths.); *Transcontinental Gas Pipe Line Co., LLC*, 154 F.E.R.C. ¶

report period, the FERC also issued its order on remand from *Delaware Riverkeeper*⁵⁴ and its order denying rehearing of its order on remand.⁵⁵

During the July 2015 to June 2016 report period, the FERC addressed temporal relationships and the “substantial independent utility test” discussed in *Delaware Riverkeeper*, to determine whether connected actions are improperly segmented.⁵⁶ In doing so, the FERC said, “[i]n evaluating whether multiple actions are, in fact, connected actions, courts apply a ‘substantial independent utility’ test.⁵⁷ The test asks ‘whether one project will serve a significant purpose even if a second related project is not built.’”⁵⁸

The FERC’s November 19, 2015, order on remand from *Delaware Riverkeeper* found: (1) no significant additive impacts from the three projects the FERC had initially not considered together with the Northeast Upgrade Project (i.e., no significant direct or indirect impacts from the four projects when considered as a single project); and (2) no significant cumulative impacts from the four interrelated projects when considered together.⁵⁹ The FERC’s supplemental environmental analysis in its order on remand also addressed “habitat fragmentation, edge effects, and deforestation; and hydrology impacts related to wetlands and groundwater,” which had been addressed in *Riverkeeper*.⁶⁰

In denying rehearing on July 1, 2016, the FERC rejected *Delaware Riverkeeper*’s argument that the FERC had failed to follow the court’s mandate by excluding three new Tennessee upgrade projects from its supplemental environmental analysis.⁶¹ These new projects were unknown to the FERC when Tennessee filed its original Northeast Upgrade Project application.⁶² The FERC explained that *Delaware Riverkeeper* had found Tennessee’s four upgrade projects “interdependent parts of a larger action . . . [which] when taken together, would result in ‘a single pipeline’ that was ‘linear and physically interdependent’ and where those projects were financially interdependent.”⁶³ The FERC held that “[b]ecause the 2015 Projects were not fully defined ‘proposals’ before the Commission during the time frame of the underlying proceeding for the Northeast Upgrade Project or the three other Upgrade Projects, these projects were not

61,166 at P 16-17 (2016) (finding no improper segmentation based upon findings that alleged connected projects were either not fully formed proposals or had a substantial independent utility).

54. *Tennessee Gas Pipeline Co., LLC*, 153 F.E.R.C. 61,215 (2015) (*Delaware Riverkeeper* remand order).

55. *Tennessee Gas Pipeline Co., LLC*, 156 F.E.R.C. 61,007 (2016) (remand rehearing order).

56. *See, e.g.*, 155 F.E.R.C. ¶ 61,234, at P 12-14; 155 F.E.R.C. ¶ 61,106, at P 48; 155 F.E.R.C. ¶ 61,099, at P 25; 155 F.E.R.C. ¶ 61,018, at P 11; 155 F.E.R.C. ¶ 61,016, at P 60, 63-64; 154 F.E.R.C. ¶ 61,184, at P 40, 47; 154 F.E.R.C. ¶ 61,166, at P 16-17.

57. 155 F.E.R.C. ¶ 61,099, at P 17.

58. *Id.* (citing *Coal. on Sensible Transp., Inc. v. Dole*, 826 F.2d 60, 69 (D.C. Cir. 1987) and *O’Reilly v. U.S. Army Corps of Eng’rs*, 477 F.3d 225, 237 (5th Cir. 2007) (defining independent utility as whether one project “can stand alone without requiring construction of the other [projects] either in terms of the facilities required or of profitability”)).

59. 153 F.E.R.C. 61,215, at P 32.

60. *Id.* at P 28.

61. 156 F.E.R.C. 61,007, at P 9.

62. *Id.* at P 9.

63. *Id.* at P 13.

improperly segmented from the Commission's supplemental environmental review in the Remand Order."⁶⁴

The FERC's remand rehearing order noted the court's reliance, in part, on the temporal aspect of the four interrelated projects considered in *Delaware Riverkeeper*.⁶⁵ Citing *Minisink Residents for Environmental Preservation & Safety*, the FERC said, "in considering a pipeline application, the Commission is not required to consider in its NEPA analysis other potential projects for which the project proponent has not yet filed an application, or the construction of which is not underway."⁶⁶ *Minisink*, which involved FERC orders approving construction of a pipeline compressor (i.e., the Minisink project), rejected a segmentation argument where the allegedly connected and/or cumulative projects were not yet formal projects at the time the FERC considered the Minisink project.⁶⁷ The court highlighted the emphasis placed in *Delaware Riverkeeper* on the time of the interrelated projects at issue there. Citing *Myersville Citizens for a Rural Community*, the FERC held that the three new Tennessee projects Delaware Riverkeeper Network wanted the FERC to include in its supplemental NEPA analysis of the Northeast Upgrade and related upgrade projects had not been "fully defined 'proposals'" during the time period when the FERC had initially considered the upgrade projects.⁶⁸

The FERC's remand rehearing order stated that the FERC's cumulative effects analysis in the proceedings involving the three new Tennessee projects would consider the Northeast Upgrade and three interrelated upgrade projects, as appropriate, if they are "within the region of influence."⁶⁹ The FERC, in the Environmental Assessments in the three new upgrade projects, said, "the Commission will consider past, present, and reasonably foreseeable actions in the cumulative impact analysis, as required by the Council on Environmental Quality's (CEQ) regulations."⁷⁰

C. *Wyoming, et al. v. United States DOI – Rejection of BLM Final Rule on Hydraulic Fracturing*

On March 26, 2015, the Bureau of Land Management (BLM) in the Department of the Interior adopted a final rule imposing certain standards on hydraulic fracturing conducted on federal and Indian lands.⁷¹ The Rule's focus was to establish wellbore construction standards, disclosure of chemicals

64. *Id.* at P 14 (citing *Myersville Citizens*, 783 F.3d at 1326).

65. *Id.* at P 13 ("The court put a particular emphasis on the four projects' timing, noting that, when the Commission reviewed the proposed project, the other projects were either under construction or pending before the Commission.")

66. 156 F.E.R.C. ¶ 61,007, at P 13.

67. *Id.* at P 14.

68. *Id.*

69. *Id.* at P 11.

70. *Id.* (citing 40 C.F.R. § 1508.7 (2015)). For further discussion of *Delaware Riverkeeper* and its impact, see Michael R. Pincus, *FERC Pipeline Siting Program Deals with Legal Challenges*, 30 NAT. RESOURCES & ENV'T, 44, 48-49 (2016).

71. Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands, 80 Fed. Reg. 16,128, 16,128-22 (March 26, 2015) (to be codified at 43 C.F.R. pt. 3160).

employed in the fracturing process, and management of waste water produced by fracturing operations.⁷²

Wyoming, Colorado, and several industry associations filed Petitions for Review challenging BLM's authority to adopt the Rule.⁷³ The district court agreed,⁷⁴ concluding that BLM lacked authority under the various statutes authorizing it to manage mineral resources on federal and Indian lands⁷⁵ as such authority had first been explicitly granted under the Safe Drinking Water Act⁷⁶ to the EPA and then explicitly withdrawn from it by the Energy Policy Act of 2005.⁷⁷ Therefore, the court declared the Rule unlawful, and set it aside.⁷⁸ The Obama Administration and a number of environmental groups have stated that it will appeal the decision.⁷⁹

II. ELECTRIC GENERATION

A. Climate Change

1. COP – 21

At the December 12, 2015, close of the 21st Conference of the Parties under the United Nations Framework Convention on Climate Change (UNFCCC)⁸⁰ held in Paris, France, all 196 countries that are parties to the Convention agreed to a treaty establishing a new approach to combating world climate change. The Paris Agreement, as the treaty is called, establishes a process for individual country commitments to reduce greenhouse gas emissions (GHG) involving both mandatory and voluntary actions.⁸¹ Its terms reflect UNFCCC party agreement

72. *Id.*

73. *Wyoming v. United States Dep't of the Interior*, 2016 U.S. Dist. LEXIS 82132 (June 21, 2016).

74. *Id.*

75. The Mineral Leasing Act of 1920, 30 U.S.C. §§ 181-287 (2012); Indian Mineral Leasing Act of 1938, 25 U.S.C. §§ 396a-396-g (2012); Indian Mineral Development Act of 1982, 25 U.S.C. §§ 2101-2109 (2012); Federal Land Policy and Management Act of 1976, 43 U.S.C. §§ 1701-1787 (2012).

76. Pub. L. No. 93-523, § 1451, 88 Stat. 1660 (1974).

77. Pub. L. No. 109-58, § 322, 119 Stat. 594 (2005).

78. *Wyoming*, 2016 U.S. Dist. LEXIS 82132, at *15-40.

79. Brian Scheid, *Enviros Plan Appeal of US Fracking Decision*, PLATTS GAS DAILY, Vol. 33, No. 123 (June 28, 2016).

80. See Conference of the Parties on its Twenty-first Session, Paris, France, Nov. 30-Dec. 15, 2015, *Report of the Conference of the Parties*, U.N. Doc. FCCC/CP/2015/10 (Jan. 29, 2016), <http://unfccc.int/resource/docs/2015/cop21/eng/10.pdf> [hereinafter Paris Agreement]. The Convention, to which the United States is a party, went into effect in 1994. See also *Towards a Climate Agreement*, UNITED NATIONS, <http://www.un.org/climatechange/towards-a-climate-agreement/> (last visited Oct. 21, 2016); *Paris Climate Agreement Q&A*, CTR. FOR CLIMATE & ENERGY SOLUTIONS, <http://www.c2es.org/international/2015-agreement/paris-climate-talks-qa> (last visited Oct. 21, 2016).

81. Paris Agreement, *supra* note 80. The new Agreement constitutes the second international treaty entered into by the parties to the UNFCCC to adopt a program to reduce GHG emissions and otherwise mitigate the increasing effects of climate change. The first such effort, the *Kyoto Protocol*, adopted in 1997, involved assigned, mandatory reductions in GHG emissions and an international trading program to assist in achieving those reductions. The *Protocol* entered into force in 2005 and applied only to "developed" countries. For this reason, the United States refused to be a party to the treaty. See *Towards a Climate Agreement*, *supra* note 80; *Paris Climate Agreement Q&A*, *supra* note 80. The *Kyoto Protocol* is in its second commitment period (2013-

on the need for Enhanced Action and a new approach to achieving climate change mitigation reached in 2011 (*The Durban Platform*), as well as the implementation of various mechanisms to use in such mitigation agreed to at UNFCCC Party Conferences in 2013 and 2014.⁸²

Some changes to the prior approach adopted in the Paris Agreement include imposing emission reductions and other responsibilities upon both “developed” and “developing” countries, as well as the imposition of reductions at a level defined “voluntarily” by the nation party.⁸³ Prior to the Paris Conference, and in compliance with the 2014 *Lima Call for Action*, UNFCCC Parties submitted their “intended nationally determined contributions” (INDCs) to climate change mitigation programs.⁸⁴ In article 2 of the Paris Agreement, the UNFCCC Parties agreed to a mitigation standard of “holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature’s increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change.”⁸⁵ The present commitments filed by the Parties, however, will not achieve this standard but will be sufficient to maintain a temperature increase of only approximately 2.7°C, achieving a reduction of 0.9°C.⁸⁶

The Paris Agreement includes a transparency program (referred to by some in the industry as “name and shame”) to encourage parties to propose mitigation programs that will achieve the desired 2°C limit.⁸⁷ For example, article 3 provides that: “[a]ll Parties are to undertake and communicate ambitious efforts . . . [defined in other Articles] . . . with the view to achieving the purpose of this Agreement as set out in Article 2. The efforts of all Parties will represent a progression over time . . .”⁸⁸ Article 4 then states that:

In order to achieve the long-term temperature goal set out in Article 2, Parties aim to reach global peaking of greenhouse gas emissions as soon as possible, recognizing that peaking will take longer for developing country Parties, and to take rapid reductions thereafter in accordance with best available science, so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of

2020), having completed a first commitment period (2008-2012) and after substantial amendments to its terms in 2012 (*The Doha Amendment*).

82. *Paris Climate Agreement Q&A*, *supra* note 80.

83. *Id.*

84. *Towards a Climate Agreement*, *supra* note 80; *COP 22 in Marrakech: The COP of Action*, COP22, <http://cop22.ma/en/cop22-marrakech-cop-action> (last visited Oct. 21, 2016); *Paris Climate Agreement Q&A*, *supra* note 80. Developed countries are encouraged to file “economy-wide” mitigation commitments, while developing countries are permitted to file less broad commitments which may involve reducing GHG emission or energy use intensity (per unit of GDP) or in per-capita emissions. Developing countries, however, are further encouraged to transition over time to economy-wide programs. *Paris Agreement*, *supra* note 80, art. 4(2).

85. *Id.* arts. 2(1a), (2). The 2°C standard was first agreed to by the UNFCCC Parties at Copenhagen in 2009. *Paris Climate Agreement Q&A*, *supra* note 80.

86. *Id.*

87. *Paris Agreement*, *supra* note 80, art. 13. (Further describes the information to be periodically reported to the UNFCCC to permit evaluation of a Member’s proposed mitigation program, national communications and biennial reports respecting emissions levels, support received or provided under the Agreement and efforts at adaptation. This program is identified as an “enhanced transparency framework” and is stated to be mandatory.)

88. *Id.* art. 3.

greenhouse gases in the second half of this century, on the basis of equity and in the context of sustainable development and efforts to eradicate poverty.⁸⁹

Article 4 continues to require each Party to communicate “successive nationally determined” contributions to the mitigation effort at least every five years, representing a progression beyond its then current INDC, developed “with the aim of achieving the objectives” of the Agreement.⁹⁰ These national communications and reports are to “undergo a technical expert review,” including program and reporting improvement suggestions.⁹¹ Moreover, every five years, beginning in 2023, the Parties shall engage in a “global stocktake,” i.e. “assess the collective progress towards achieving the purpose of this Agreement and its long-term goals.” The global stocktake is to inform the Parties in updating and enhancing the mitigation and/or adaptation programs pursued under the Agreement.⁹²

A special Committee is established “to facilitate implementation of and promote compliance” with the Agreement; robust accounting of emission reductions and avoidance of double accounting (especially as to reductions claimed through emission trading or in third-party host countries) is required; and rules for pursuing climate change adaptation (mitigation of the effects of climate change) and additional administrative provisions (including non-member observation of meetings) are set forth.⁹³ Existing funds and technology transfer agreements from developed to developing countries are extended from 2020 to 2025, and provision is made for wealthier developing countries to contribute voluntarily to the funding goal.⁹⁴

A signing ceremony at the United Nation’s (UN) New York Headquarters was held on April 22, 2016, at which 179 UNFCCC Parties signed the Paris Agreement.⁹⁵ Under article 21 of the Agreement, it does not enter into force until the thirtieth day after the date on which fifty-five UNFCCC Parties responsible for an estimated 55% of global GHG emissions ratify the treaty and deposit their ratification documents with the UN.⁹⁶ As of July 27, only twenty UNFCCC Members had deposited their ratification documents with the UN (covering only 0.6% of estimated GHG emissions), but an additional twenty-three Members have stated their intent to do so prior to the end of 2016. Such action would leave the

89. *Id.* art. 4. This language is representative of language throughout the Agreement that recognizes that developing countries have less resources to achieve mitigation and may require longer periods to do so, as well as that other UN sustainable objectives such as poverty reduction must also be balanced with climate change mitigation objectives in determining the pace of the mitigation effort.”

90. *Id.*

91. *Id.* art. 13.

92. *Paris Agreement*, *supra* note 80, at art. 14.

93. *Id.* arts. 4, 6-8, 15-19.

94. *Id.* arts. 9-10; *Outcomes of the U.N. Climate Change Conference in Paris*, CTR. FOR CLIMATE & ENERGY SOLUTIONS, <http://www.c2es.org/international/negotiations/cop21-paris/summary> (last visited Oct. 21, 2016).

95. *United Nations Paris Climate Agreement Signing Ceremony—22 April 2016*, UNITED NATIONS, <http://www.un.org/sustainabledevelopment/parisagreement22april/> (last visited Oct. 21, 2016).

96. *Paris Agreement*, *supra* note 80, art. 21; UNITED NATIONS, *THE PARIS AGREEMENT: NEXT STEPS* (2016), http://unfccc.int/files/meetings/paris_nov_2015/application/pdf/parisagreement_nextsteps_post_adoption.pdf.

Agreement just short of the necessary acceptance criteria to permit implementation to begin with COP 22 this year rather than next.⁹⁷

Several analyses have been done on the extent to which existing United States Climate Change Mitigation programs can be expected to achieve GHG mitigation sufficient to permit compliance with the U.S. INDC (26% to 28% emission reduction from 2005 levels by 2025) submitted to the UNFCCC.⁹⁸ These analyses have concluded that existing programs, including the Clean Power Plan and Methane Regulations described above, are not broad and restrictive enough to meet this commitment, but are only roughly 4% (i.e. of total existing emissions) below the level needed to meet the 2025 commitment.⁹⁹ The analyses conclude that this level of additional mitigation can be attained through expansion of existing programs, perhaps several new federal programs and State actions directed at renewables development.¹⁰⁰ However, as respects the post 2050 Paris Agreement objective of net neutrality in GHG emissions (i.e. removal by sinks equal to new emission production), the analyses conclude that additional legislation will be required to authorize development of the necessary additional mitigation programs.¹⁰¹

On June 2, 2016, the United States hosted the Seventh Clean Energy Ministerial and the inaugural Mission Innovation Ministerial (MI) in San Francisco. MI is a new effort to double public investment in clean energy launched at COP-21 by the United States, the European Union (EU), and nineteen other countries.¹⁰² The twenty nations and the EU announced at the MI Ministerial commitments to invest nearly \$30 billion per year in public clean energy research and development by 2021, an increase from their current investment levels of \$15 billion. The twenty-three countries attending the seventh Clean Energy Ministerial also announced a new, enhanced program, called CEM 2.0, to accelerate clean energy policy and technology deployment.

97. *Paris Agreement – Status of Ratification*, UNITED NATIONS, <http://unfccc.int/paris/agreement/items/9444.php> (last visited Oct. 21, 2016); Eliza Northrop, *Paris Agreement: Getting Closer to “Entering into Force” this Year*, WORLD RESOURCE INSTITUTE (July 28, 2016), <http://www.wri.org/blog/2016/07/paris-agreement-getting-closer-entering-into-force-year>.

98. Doug Vine, *US Can Reach its Paris Agreement Goal*, CTR. FOR CLIMATE & ENERGY SOLUTIONS (Apr. 16, 2016), <http://www.c2es.org/blog/vined/us-can-reach-its-paris-agreement-goal>.

99. *Id.*; DOUG VINE, CTR. FOR CLIMATE & ENERGY SOLUTIONS, *ACHIEVING THE UNITED STATES’ INTENDED NATIONALLY DETERMINED CONTRIBUTION* (2016), <http://www.c2es.org/publications/achieving-united-states-intended-nationally-determined-contribution>; NICHOLAS M. BIANCO ET AL., WORLD RES. INSTITUTE, *CAN THE U.S. GET THERE FROM HERE?* (2016), <http://www.wri.org/publication/can-us-get-there-here>.

100. *Id.*

101. *Id.*

102. Office of the Press Secretary, *Fact Sheet - U.S. Hosts World’s Energy Ministers to Scale Up Clean Energy and Drive Implementation of the Paris Agreement*, WHITE HOUSE (June 2, 2016), <http://www.whitehouse.gov/the-press-office/2016/06/02/fact-sheet-us-hosts-worlds-energy-ministers-scale-clean-energy-and-drive>; *Energy Secretary Moniz Hosts Gathering of World’s Energy Ministers in San Francisco to Advance Technology Solutions, Accelerate Clean Energy Deployment*, ENERGY.GOV (June 2, 2016, 5:47 PM), <http://www.energy.gov/articles/energy-secretary-moniz-hosts-gathering-world-s-energy-ministers-san-francisco-advance>.

2. North American Climate, Clean Energy, and Environment Partnership

On June 29, 2016, at the North American Leaders Summit in Ottawa, Canada, President Barack Obama, Canadian Prime Minister Justin Trudeau, and Mexican President Enrique Peña Nieto announced the above Partnership, describing its objectives as follows:¹⁰³

The Paris Agreement was a turning point for our planet, representing unprecedented accord on the urgent need to take action to combat climate change through innovation and deployment of low-carbon solutions. North America has the capacity, resources and the moral imperative to show strong leadership building on the Paris Agreement and promoting its early entry into force. We recognize that our highly integrated economies and energy systems afford a tremendous opportunity to harness growth in our continuing transition to a clean energy economy. Our actions to align climate and energy policies will protect human health and help level the playing field for our businesses, households, and workers. In recognition of our close ties and shared vision, we commit today to an ambitious and enduring North American Climate, Clean Energy, and Environment Partnership that sets us firmly on the path to a more sustainable future.

Among the specific actions to be taken include implementing a program to achieve 50% clean power generation (renewable, nuclear, and carbon capture & sequestration) by 2015; collaboration on cross-border transmission projects to permit greater development of renewable generation; enhancing government procurement to purchase more efficient and cleaner products; strengthening and aligning efficiency standards; expanding the use of clean vehicles across all countries; and phasing-out inefficient fossil fuel subsidies by 2025. Particular efforts are to be made to reduce emission of short-term climate pollutants such as methane, black carbon, and hydrofluorocarbons, including modifying the Montreal Protocol to expand use of less environmentally damaging hydrofluorocarbons.¹⁰⁴

The three leaders reaffirmed their commitment to ratify the Paris Agreement in 2016, calling for it to enter into force this year and to be robustly implemented.¹⁰⁵

3. EPA Clean Energy Plan

On October 3, 2015, President Obama and the EPA announced the Clean Power Plan (CPP), an EPA final rule applicable to existing power plants.¹⁰⁶ The EPA projects that the CPP will reduce carbon dioxide (CO₂) emissions from existing power plants, stated to be the nation's largest such emission source, 32%

103. *Leaders' Statement in a North American Climate, Clean Energy, and Environment Partnership*, WHITE HOUSE (June 29, 2016) [hereafter *Leaders' Statement*], <http://www.whitehouse.gov/the-press-office/2016/06/29/leaders-statement-north-american-climate-clean-energy-and-environment-partnership>.

104. *Id.*; *North American Climate Clean Energy, and Environment Partnership Action Plan*, WHITE HOUSE (June 29, 2016), <http://www.whitehouse.gov/the-press-office/2016/06/29/north-american-climate-clean-energy-and-environmental-partnership-action-plan>.

105. *Leaders' Statement*, *supra* note 103.

106. Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 80 Fed. Reg. 64,662 (Oct. 23, 2015) (to be codified at 40 C.F.R. pt. 60). *Factsheet - The Clean Power Plan: Cutting Carbon Pollution from Power Plants*, EPA (August 3, 2015), <https://www.epa.gov/cleanpowerplan/fact-sheet-overview-clean-power-plan>. A description of the proposed rules from which the Clean Power Plan was developed is provided in *Report of the Environmental Regulation Committee*, 36 ENERGY L.J. 101, 109–11 (2015).

below their 2005 levels by 2030.¹⁰⁷ The EPA also estimates that the quantified public health and climate benefits of the CPP will be between \$34 and \$54 billion, as compared to \$8.4 billion in estimated compliance costs.¹⁰⁸ The EPA has stated that CPP lays “the foundation for the long-term strategy needed to tackle the threat of climate change[,]” and that it “offers the power sector the ability to optimize pollution reductions while maintaining a reliable and affordable supply of electricity for ratepayers and businesses.”¹⁰⁹ The CPP was promulgated pursuant to section 111(d) of the Clean Air Act, under which EPA may require states to submit state implementation plans (SIP) that establish “standards of performance” for existing section 111 sources.¹¹⁰

Various states and industry representatives have challenged the CPP through petitions for review to the United States Court of Appeals for the District of Columbia Circuit.¹¹¹ On February 9, 2016, the petitioners also obtained a stay of the CPP from the United States Supreme Court pending the disposition of the challenges.¹¹² Thus, some of the initial deadlines within the CPP, including the obligation for states to submit initial SIPs by September 6, 2016,¹¹³ are not currently being enforced. Oral argument before a three judge panel at the D.C. Circuit was originally scheduled for June 2, 2016. However, the court, upon its own motion, ordered that oral argument be presented before the *en banc* court on September 27, 2016.¹¹⁴ Despite the stay and the ongoing litigation, EPA continues to move forward with developing aspects of the CPP. For example, on June 30, 2016, EPA published in the Federal Register a proposed rule titled *Clean Energy Incentive Program Design Details*.¹¹⁵ The Clean Energy Incentive Program (CEIP) is a voluntary aspect of the CPP that is intended to incentivize early reductions prior to the start of the CPP compliance periods in 2022. In the CEIP proposed rule, EPA acknowledges that “none of the [CPP]’s deadlines can be enforced while the stay remains in effect” but also notes that, at this time, “it is not clear whether and to what extent those deadlines will necessarily be tolled once the stay is lifted.”¹¹⁶ The EPA continues to maintain that the CPP will be upheld on the merits.¹¹⁷ In light of the postponed oral argument, a final decision from the D.C. Circuit is not expected until late 2016 or early 2017. Therefore, a final ruling on the merits for the CPP may not occur until late 2017 or early 2018.

107. Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 80 Fed. Reg. at 64,679.

108. *Id.*

109. *Factsheet - The Clean Power Plan: Cutting Carbon Pollution from Power Plants*, EPA (August 3, 2015), <https://www.epa.gov/cleanpowerplan/fact-sheet-overview-clean-power-plan>.

110. 42 U.S.C. § 7411(d) (2012).

111. *West Virginia v. EPA*, Case No. 15-1363 (2016).

112. *West Virginia v. EPA*, No. 15-1363 (D.C. Cir. filed Feb., 2016) (Feb. 9, 2016 order).

113. Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 80 Fed. Reg. at 64,669.

114. *West Virginia v. EPA*, No. 15-1363 (D.C. Cir. filed Feb., 2016) (May 16, 2016 order).

115. Clean Energy Incentive Program Design Details, 81 Fed. Reg. 42,940 (June 30, 2016) (to be codified at 40 C.F.R. pts 60, 62).

116. *Id.* at 42,945.

117. *Clean Power Plan for Existing Power Plants*, EPA, <https://www.epa.gov/cleanpowerplan/clean-power-plan-existing-power-plants> (last visited July 21, 2016) (“EPA firmly believes the Clean Power Plan will be upheld when the merits are considered. . .”).

On the same date as it issued the CPP, EPA issued an additional final rule establishing *Standards of Performance for Greenhouse Gas Emissions from New, Modified and Reconstructed Stationary Sources*¹¹⁸ under Clean Air Act section 111(b),¹¹⁹ and its proposed federal plan to limit GHG emissions from existing power plants should the states not adopt adequate programs under the Clean Power Plan.¹²⁰ This latter proposed rule also sets forth “model trading rules” for emissions trading as a means of complying with the CPP.

The Clean Power Plan comprises three major elements:¹²¹ (1) two CO₂ emission performance limits applicable to two EPA-defined categories of fossil-fired generation—steam generating units (limit of 1,305 lb. CO₂ per MWH produced) and stationary combustion turbines (limit of 771 lb. CO₂ per MWH produced); (2) EPA-generated, state-specific CO₂ emission goals based on the above limits and each state’s specific generating mix expressed both as a rate and a mass limit; and (3) guidelines for the development and submission of state plans to achieve CPP goals. The CPP emission reduction goals include an interim goal applicable to the period 2022 to 2029 and a final goal to be achieved by 2030.¹²² States may achieve their statewide goal by limiting power plant emissions or through other means, such as expanding renewable energy, demand response and energy efficiency, participating in emission trading programs or specified other means.¹²³ Expected strategies for achieving emission performance limits and compliance with state emission goals include: (1) improving heat rates at affected coal-fired steam generation; (2) substituting increased generation from lower-emitting generators (natural gas combined cycle) for higher emitting steam generation; and (3) substituting increased generation from new zero-emitting renewable energy generation for existing fossil-fired generation.

The EPA states that, in the final rules, it has enhanced tools for maintaining electric system reliability during the compliance period (2020 to 2030).¹²⁴ Actions taken include delaying the application of the interim emission limitations from 2020 to 2022 to permit greater time for development and implementation of

118. Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Elec. Util. Generating Units; Final Rule, 80 Fed. Reg. 64,510, 64,511-12, 64,527-28 (Oct. 23, 2015) (to be codified at 40 C.F.R. pts. 60, 70, 71). EPA has proposed a number of standards depending upon whether a generator is (1) a fossil fuel fired steam generating unit or a stationary combustion turbine and (ii) whether the generator is newly constructed, modified or reconstructed. The standards are based upon application of the “Best System of Emission Reduction” which, for steam generating units, includes the application of partial carbon capture and storage (CCS) technology. *Id.* at 64,511.

119. 42 U.S.C. 7411(b) (2012).

120. Federal Plan Requirements for Greenhouse Gas Emissions from Elec. Util. Generating Units Constructed on or Before January 8, 2014; Model Trading Rules; Amendments to Framework Regulations; Proposed Rule, 80 Fed. Reg. 64,966, 64,967, 64,975 (Oct. 23, 2015) (to be codified at 40 C.F.R. pts. 60, 62, 78). EPA summarizes the objective of this proposed Rule in its published “Summary” as follows: “The purpose of the proposed federal plan is to establish requirements directly applicable to a state’s affected EGUs (fossil fired generating units) that meet the emission performance levels, or the equivalent statewide goal, in order to achieve reductions in CO₂ emissions in the case where a state or other jurisdiction does not submit an approvable plan. The stringency of the emission performance levels established in the final EGS will be the same whether implemented through a state plan or a federal plan.” *Id.* at 64,966.

121. CPP *supra* note 106, at Introduction & Summary of Major Provisions.

122. *Id.*

123. *Id.*

124. *Id.*

compliance strategies, imposing a requirement for state plans to expressly demonstrate their consideration of maintaining reliability in plan development and adoption of a “reliability safety valve” to apply to conflicts between the state plan and the needs of system reliability.

RTO/ISOs were instrumental in analyzing the proposed Clean Energy Plan Rules and in obtaining adoption of protections for system reliability, including particularly the “reliability safety valve.”¹²⁵ They have also conducted analyses to assist their covered states in determining the best strategy to adopt (i.e. rate-based or mass-based standards) to comply with the CPP.¹²⁶

4. California Developments

During the 2015-2016 period, California is undertaking legislative and regulatory initiatives to move beyond environmental objectives originally set when California enacted Assembly Bill No. 32 (AB 32), the California Global Warming Solutions Act of 2006.¹²⁷ The California Legislature found in AB 32 that global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California.¹²⁸ The legislature designated the state’s Air Resources Board (CARB) to develop GHG emission reduction measures¹²⁹ that would reduce statewide GHG emissions to 1990 levels by 2020.¹³⁰ In 2011, the CARB adopted the California Cap on Greenhouse Gas Emissions and Market Based Compliance Mechanisms (Cap-and-Trade Regulation) to reduce GHG emissions to the 1990 level by 2020.¹³¹

Both the California Legislature and the California Executive Branch are attempting to extend the Cap-and-Trade Regulation to attain deeper GHG emission reductions beyond 2020.

a. Legislative Branch Initiatives to Extend AB 32

Senate Bill No. 32 (SB 32) was introduced at the beginning of the 2015-2016 California legislative session to adopt a statewide greenhouse emissions limit of

125. N. AM. ELEC. RELIABILITY CORP., POTENTIAL RELIABILITY IMPACTS OF EPA’S CLEAN POWER PLAN: PHASE II (2016), <http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/CPP%20Phase%20II%20Final.pdf>, Joint Comments of California Independent System Operator Corp., Midcontinent Independent System Operator, Inc., PJM Interconnection, L.L.C., and Southwest Power Pool, Inc. at 2, 6-8, 10, Docket No. EPA-HQ-OAR-2015-0199 (Jan. 21, 2016); Comments of the ISO/RTO Council at 2, 14-18, 25-27, Docket No. EPA-HQ-OAR-2013-0602 (Dec. 1, 2014); Comments of PJM Interconnection at 5, 7-11, 13-18, 20-21, 32-34, Docket No. EPA-HQ-OAR-2013-0602 (2014).

126. PJM INTERCONNECTION, PJM PHASE 1 LONG-TERM ECON. ANALYSIS OF THE EPA’S FINAL CLEAN POWER PLAN RULE (2016), <http://www.pjm.com/~media/documents/reports/20160506-111d-phase-1-long-term-economic-analysis.ashx>; SW. POWER POOL, SPP CLEAN POWER PLAN COMPLIANCE ASSESSMENT—STATE-BY-STATE (2015), http://www.spp.org/documents/29180/spp_state_by_state_compliance_assessment_report_20150727.pdf; MIDCONTINENT INDEP. SYS. OPERATOR, GHG REGULATION IMPACT ANALYSIS—INITIAL STUDY RESULTS (2014), http://www.eenews.net/assets/2014/09/18/document_ew_01.pdf.

127. A.B. 32, Reg. Sess. (Cal. 2006); CAL. HEALTH & SAFETY CODE § 38500 (2006).

128. *Id.* § 38501(a).

129. *Id.* § 38501(c), (h).

130. *Id.* § 38550.

131. CAL. CODE REGS. § 95840 (2012).

80% below the 1990 level by 2050 with the CARB being given authority to adopt interim emission targets to be reached by 2030 and 2040.¹³² SB 32 was amended and passed by the California State Senate in 2015 and in 2016 is pending in the California State Assembly.

As amended, SB 32 provides for the CARB to attain a more modest GHG limit equal to 40% below the 1990 level by 2030.¹³³ Additionally, SB 32 is politically more complex as the result of a provision permitting the bill, if enacted, to become operative only if another bill, Assembly Bill No. 197 (AB 197), is enacted before the end of the 2015-2016 legislative session.¹³⁴ AB 197 would require the CARB to consider measures that result in direct GHG reductions from, first, large stationary sources and the transportation sector and, second, from remaining sources,¹³⁵ and AB 197 would impose several structural reforms on the CARB.¹³⁶

b. Executive Branch Initiatives to Extend AB 32

The California Executive Branch is also undertaking initiatives to extend the GHG emission reductions beyond the current 2020 target. In 2005, Governor Arnold Schwarzenegger issued Executive Order S-3-05 to set an ultimate emission reduction target 80% below 1990 levels by 2050. On April 29, 2015, California Governor Edmund G. Brown Jr. issued an Executive Order to establish an interim California GHG reduction target of 40% below 1990 levels by 2030, as would SB 32 in its current form.¹³⁷

AB 32 stated that “the intent of the Legislature” was that California GHG emission limits should continue in existence beyond 2020 and “be used to maintain and to continue reductions in emissions of greenhouse gases beyond 2020.”¹³⁸ AB 32 also provided that the CARB should make recommendations to the Governor and the Legislature on how to continue reductions of GHG emissions beyond 2020.¹³⁹

The CARB began an informal rulemaking process in 2015 that led to a July 12, 2016, draft Staff Report containing a draft Initial Statement of Reasons (ISOR) and a draft revised cap-and-trade regulation that, as revised after comments, a hearing, and potentially further rounds of comments, are intended by the CARB staff to be scheduled for a Board vote in March 2017.¹⁴⁰

The CARB’s proposed amendments to its Cap-and-Trade Regulation would deepen GHG emission reductions beyond 2020, continue the linkage of the

132. S.B. 32, Reg. Sess. (Cal. 2015).

133. S.B. 32, as amended June 30, 2016.

134. A.B. 197, Reg. Sess. (Cal. 2016).

135. *Id.*

136. *Id.* § 4.

137. Executive Order B-30-15 (April 29, 2015); *See also* Press Release, Office of Governor Edmund G. Brown, Governor Brown Establishes Most Ambitious Greenhouse Gas Reduction Target in North America (Apr. 29, 2015), <https://www.gov.ca.gov/news.php?id=18938>.

138. CAL. HEALTH & SAFETY CODE § 38551(b) (2016).

139. *Id.* § 38551(c).

140. CAL. AIR RES. BD., PROPOSED REGULATIONS TO IMPLEMENT THE CALIFORNIA CAP-AND-TRADE PROGRAM: STAFF REPORT, INITIAL STATEMENT OF REASONS at II-26 (2010) [hereinafter 2010 ISOR], <http://www.arb.ca.gov/regact/2010/capandtrade10/capisor.pdf>.

CARB's program with Quebec, Canada, beyond 2020, and link the program with a new cap-and-trade program in Ontario, Canada, beginning in January 2018.¹⁴¹ Also, the amendments would continue an allocation of allowances to California electric and gas utilities on behalf of ratepayers and provide for California compliance with the federal CPP.¹⁴² The CARB's extension of its Cap-and-Trade Program would reach through 2031 so that emission caps will extend through the period for which emission goals are set under the CPP, enabling the post-2020 program to be California's compliance mechanism for the CPP.¹⁴³

The CARB projects that the cap on GHG emissions would decline about 3% per year, and would result in allowance prices that would have only a small impact on the California economy.¹⁴⁴

The CARB recognizes that emissions covered by the current 2012-2020 program are currently "well under the cap,"¹⁴⁵ resulting in the market for allowances being oversupplied. In the CARB's May 18, 2016, auction of allowances, the sale of current year allowances failed to clear for the first time, with approximately 67,675,591 allowances being available for sale but only approximately 7,260,000 being sold.¹⁴⁶ However, the CARB does not propose a step down in the amount of allowances made available at the transition to the revised Cap-and-Trade Regulation at the beginning of 2021. Instead, the CARB would adopt a straight-line decrease in allowances each year through 2031 and allocate allowances to the Allowance Price Containment Reserve (APCR), with that allocation reducing to zero by 2030.¹⁴⁷ Although refinements will be needed to achieve GHG emission reductions of 80% below the 1990 emission by 2050, the CARB staff noted that a linear statewide decrease of 6.7 million metric tons of carbon dioxide equivalent (MMTCO₂e) would achieve the statewide target by 2050.¹⁴⁸

c. Judicial Challenges to the Sale of Allowances

The CARB's sale of allowances was challenged in Sacramento Superior Court in *California Chamber of Commerce v. California Air Resources Board*, and a related case, *Morning Star Packing Company v. California Air Resources Board*,¹⁴⁹ primarily on the claim that the CARB's allowance auctions impose an invalid regulatory fee under California's *Sinclair Paint*¹⁵⁰ Doctrine. The Sacramento Superior Court upheld the CARB's auction,¹⁵¹ and the California

141. *Id.* at ES-4.

142. *Id.* at ES-5; 40 C.F.R. 60.5815 (2015).

143. *Id.* at 10.

144. *Id.* at ES-5, ES-7.

145. 2010 ISOR, *supra* note 140, at ES-3.

146. CAL. AIR RES. BD., MAY 2016 JOINT AUCTION REPORT #7, SUMMARY RESULTS REPORT (2016), https://www.arb.ca.gov/cc/capandtrade/auction/may-2016/summary_results_report.pdf.

147. 2010 ISOR, *supra* note 140, at 13, fig.2-1.

148. *Id.* at 14.

149. *Cal. Chamber of Commerce v. Cal. Air Res. Bd.*, No. 34-2012-80001313; *Morning Star Packing Co. v. Cal. Air Res. Bd.*, No. 34-2013-80001464 (Aug. 28, 2013).

150. *Sinclair Paint Co. v. State Bd. of Equalization*, 937 P.2d 1350, 1351, 1353-55, (Cal. 1997).

151. *Cal. Chamber of Commerce v. Cal. Air Res. Bd.*, No. 34-2012-80001313.

Chamber of Commerce and Morning Star Packing Company separately appealed to the California Court of Appeal.¹⁵² The appeal is pending.

5. RGGI Developments

The Regional Greenhouse Gas Initiative (RGGI), supported by nine New England and Mid-Atlantic states, initiated operation in 2009, and is stated to be the “first mandatory market based program in the United States to reduce Greenhouse Gas Emissions.”¹⁵³ The program, which auctions approximately 90% of emission allowances through quarterly emission auctions, has produced approximately \$2.4 billion in funds for investment by member states in regional clean energy or energy efficiency projects. RGGI is presently in its third control period, which will end in 2016.¹⁵⁴

RGGI uses a market-based cap-and-trade approach to emission reduction. In participating states, all fossil fuel-fired electric power generators with a capacity of 25 MW or more must acquire and hold allowances equal to their measured CO₂ emissions over a three year control period.¹⁵⁵ In addition to emission reduction at their generation plant, generators subject to RGGI may employ “offsets” (i.e. GHG emission reduction or carbon sequestration projects conducted outside the electricity sector) to achieve compliance for as much as 3.3% of their total emissions.¹⁵⁶

The 2016 RGGI Cap, the maximum GHG emissions permitted by regulated generation in the nine states, equals 86,506,875 short tons per year, reduced from 188 million short tons during the initial three year control period ending in 2011.¹⁵⁷ This cap, a significant factor in achieving emission reduction from the program, was adopted after a 2012 comprehensive program review following the end of the initial control period. A second comprehensive program review is to occur this year (2016) to establish future cap levels beginning in 2020.¹⁵⁸ A recent Duke

152. Cal. Chamber of Commerce v. Cal. Air Res. Bd., Case No. C075930 (Mar. 19, 2014); Morning Star Packing Co. v. Cal. Air Res. Bd., Case No. C075954 (Mar. 11, 2014).

153. POTOMAC ECONOMICS, ANNUAL REPORT ON THE MARKET FOR RGGI CO₂ ALLOWANCES: 2015 at 5 (2016), http://rggi.org/docs/Market/MM_2015_Annual_Report.pdf.

154. *The RGGI CO₂ Cap*, RGGI, <http://www.rggi.org/design/overview/cap> (last visited Sept. 12, 2016); POTOMAC ECONOMICS, *supra* note 153, at 5, 14. A CO₂ allowance represents a limited authorization to emit one short ton of CO₂ from a regulated source as issued by a participating state.

155. *Program Overview*, RGGI, <http://www.rggi.org/design/overview> (last visited Sept. 12, 2016); POTOMAC ECONOMICS, *supra* note 153, at 5.

156. POTOMAC ECONOMICS, *supra* note 153, at 15.; MODEL CO₂ BUDGET TRADING PROGRAM RULE § 89-137 (Reg’l Greenhouse Gas Initiative 2013), http://www.rggi.org/docs/ProgramReview/_FinalProgramReviewMaterials/Model_Rule_FINAL.pdf

157. *The RGGI CO₂ Cap*, *supra* note 154; REG’L GREENHOUSE GAS INITIATIVE, RGGI 2012 PROGRAM REVIEW: SUMMARY OF RECOMMENDATIONS TO ACCOMPANY MODEL RULE AMENDMENTS at 2 (2012), https://www.rggi.org/docs/ProgramReview/_FinalProgramReviewMaterials/Recommendations_Summary.pdf. The cap established as the result of the 2012 program review reduces by 2.5% per year through 2020. The RGGI Model Rule describes the current control program and procedures for its operation, and is available to be reviewed at the above website.

158. *2016 Program Review*, RGGI, <https://www.rggi.org/design/2016-program-review> (last visited Oct. 21, 2016); *RGGI Public Stakeholder Meetings*, RGGI, <http://www.rggi.org/design/2016-program-review/rggi-meetings> (last visited Oct. 21, 2016).

University-led study credits RGGI with achieving approximately 50% of the GHG emission reductions obtained in the United States Northeast Region.¹⁵⁹

6. State Programs to Support Retention of Nuclear Power

The CPP permits new nuclear power plant capacity to contribute to satisfaction of state-assigned rate or mass-based GHG emission limitations. However, no credit or financial assistance is provided to encourage retention in operation of existing nuclear power plants.¹⁶⁰ In this approach, nuclear power is treated comparably to existing renewable generation, both of which provide GHG emissions-free electricity generation. Because of their size and baseload operation (i.e. 90% capacity factor compared with 20% to 35% for renewables), nuclear generation is presently a far larger contributor to GHG emissions limitation, and a nuclear generator's loss could significantly increase the difficulty experienced by a state in achieving its EPA-assigned emission limitation target.¹⁶¹

A number of nuclear power plants have shut down in recent years due to their inability to operate profitably in RTO/ISO energy, capacity and other markets. A number of existing plant owners have asserted that their plants are also failing to operate profitably and are thereby threatened with the need for closure in the next several years.¹⁶² Owners of this generation have sought the adoption of state programs to enhance their revenues from RTO/ISO markets to achieve full cost recovery and thereby avoid the necessity to retire such plants. Major developments in these efforts occurred over the past year which, if ultimately successful, will benefit plants in New York, Ohio, and Illinois.

On July 8, 2016, the New York Public Service Commission released for public comment a "Clean Energy Standard Proposal" developed by its staff to value zero-emission attributes of upstate New York nuclear plants (i.e. Fitzpatrick, Ginna & Nine Mile Point).¹⁶³ The proposal is based on a Commission-approved method for establishing the societal value of carbon reduction. On March 31,

159. *Trading Program Linked to Significant Emissions Reductions*, PHYS.ORG (Aug. 24, 2015), <http://phys.org/news/2015-08-linked-significant-emissions-reductions.html> (last visited Sept. 11, 2016).

160. *Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*, 80 Fed. Reg. 64,662, 64,902 (2015) (to be codified at 40 C.F.R. pt. 60).

161. Jeffrey H. Wood et al., *Moving Targets: Nuclear Power as a Component of EPA's Clean Power Plan*, 30 NAT. RES. & ENV'T 1, 5-6 (2016).

162. *Id.* *Pacific Gas & Electric Company*, the owner of the Diablo Canyon nuclear plant, announced, in June 2016, that it had reached agreement with environmental groups opposing an extension in the Plant's operating license, that it would not request such an extension and would shut the Plant down in April 2025 when the current operating license expires. A factor in the Company's consideration was the effect upon operation and profitability of California's 50% renewable generation standard (which excludes nuclear) which could have limited plant operation to a 50% capacity factor (as compared to typical current capacity factors of 80 to 90%). Steven Mufson, *California Utility to Close Diablo Canyon Nuclear Reactors by 2025*, WASH. POST, (June 21, 2016), https://www.washingtonpost.com/business/economy/california-utility-to-close-diablo-canyon-nuclear-power-reactors-by-2025/2016/06/21/8fd13b62-37af-11e6-8f7c-d4c723a2becb_story.html.

163. PSC Seeks Public Comment on Clean Energy Standard Proposal – PSC Staff Issues Proposal to Value Zero-Emission Attributes of Upstate Nuclear Fleet; *See also* Press Release, N.Y. State Dep't Pub. Serv., Public Hearings Scheduled for Clean Energy Standard: Governor Cuomo's '50 by 30' Proposal to Expand Renewable Power in NYS (May 5, 2016), [http://www3.dps.ny.gov/pscweb/WebFileRoom.nsf/Web/3B3F90CBA801E82585257FEA006E68FF/\\$File/pr16042.pdf?OpenElement](http://www3.dps.ny.gov/pscweb/WebFileRoom.nsf/Web/3B3F90CBA801E82585257FEA006E68FF/$File/pr16042.pdf?OpenElement) & <http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterSeq=48235&MNO=15-E-0302>.

2016, the Ohio Public Utilities Commission decided a request filed by FirstEnergy Corp. to obtain non-market revenues needed to cover the cost of operating the Davis-Besse plant and certain coal plants in Ohio and thereby prevent their retirement.¹⁶⁴ The Commission concluded that the First Energy program would achieve financial benefits for Ohio retail consumers, serve as a financial hedge to stabilize Ohio retail rates, promote retail competition, promote renewable energy development and achieve other desirable objectives.¹⁶⁵ Also, on June 2, 2016, Exelon announced plans to shut down its Clinton and Quad Cities nuclear generation units in Illinois after failing to obtain legislation to establish a Clean Energy Standard that would provide State supported revenues for the plants. It noted that the plants had failed to recover their costs in the amount of \$800 million over the past seven years despite good operational performance.¹⁶⁶ Exelon will continue to seek passage of the legislation, although the legislation would need to be in effect prior to the retirement dates of the plants on June 1, 2017, and 2018, respectively.

B. Air

1. MATS Rule

On June 29, 2015, the United States Supreme Court issued its opinion in *Michigan v. EPA*, invalidating the Mercury and Air Toxics Standards (MATS Rule).¹⁶⁷ The Court ruled that EPA should have considered compliance costs in deciding whether promulgating the MATS Rule was “appropriate and necessary.”¹⁶⁸ The Court remanded to the D.C. Circuit for further proceedings.¹⁶⁹ On December 15, 2015, the D.C. Circuit ordered that the matter be remanded to EPA without vacatur of the rule.¹⁷⁰ On April 25, 2016, EPA published its final Supplemental Finding with regard to compliance costs resulting from the MATS Rule.¹⁷¹ The EPA concluded that a consideration of costs did not cause it to change its determination that the regulation of hazardous air pollutant emissions

164. *In re* Application of Ohio Edison Company for Authority to Provide for a Standard Service Offer Pursuant to Rv. 4928.143 in the Form of an Electric Security Plan, No. 14-1297-EL-SSO, 2016 Ohio PUC Lexis 270 (March 31, 2016) [hereinafter Ohio Edison].

165. *Id.* at 20-21, 182-185, 239-240, 260-266, 289-295. An application for rehearing filed by a number of parties has been granted. *In re* Application of Ohio Edison Company for Authority to Provide for a Standard Service Offer Pursuant to Rv. 4928.143 in the Form of an Electric Security Plan, No. 14-1297-EL-SSO, 2016 Ohio PUC Lexis 446 (May 11, 2016).

166. News Release, Exelon, Exelon Announces Early Retirement of Clinton and Quad Cities Nuclear Plants (June 2, 2016), <http://www.exeloncorp.com/newsroom/Pages/Clinton-and-Quad-Cities-Retirement.aspx>. More detailed descriptions of these State-based revenue proposals and FERC’s reaction to them is provided in the Energy Bar Association Committee Report of the Power Generation & Marketing Sub-Committee published in this same volume of the Energy Law Journal.

167. *Michigan v. EPA*, 135 S. Ct. 2699 (June 29, 2015).

168. *Id.* at 2711. A further discussion of the Supreme Court’s MATS decision is available at *Report of the Environmental Regulation Committee*, 36 ENERGY L.J. 101, 108–09 (2015).

169. *Michigan*, *supra* note 167, at 2712.

170. *White Stallion Energy Ctr. LLC v. EPA*, Case No. 12-1100 (Dec. 15, 2015) (ordering remand to EPA).

171. *Supplemental Finding That It Is Appropriate and Necessary To Regulate Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units*, 81 Fed. Reg. 24420 (2016).

from electric generating units is appropriate and necessary.¹⁷² To reach its decision, EPA compared the estimated \$9.6 billion in annual compliance costs to other industry metrics, such as revenues, capital expenditures and retail electricity rates.¹⁷³ The EPA found that MATS Rule compliance represented a small percentage of utility sector costs relative to those metrics.¹⁷⁴ The EPA then concluded that the cost of compliance with the MATS Rule is reasonable when compared to benefits such as addressing potential harms to public health and the environment.¹⁷⁵ The EPA also relied on a formal cost-benefit analysis.¹⁷⁶ The EPA estimated that the MATS Rule would yield total annual monetized benefits of between \$37 billion and \$90 billion.¹⁷⁷ Those numbers were based on monetizing projected human health benefits resulting from reduced emissions of pollutants regulated under MATS.¹⁷⁸ The EPA compared those figures to the projected \$9.6 billion in annual compliance costs and found that the benefits outweigh the costs.¹⁷⁹ The Supplemental Finding did not substantively amend any aspect of the MATS Rule. Similarly, a recent EPA rulemaking provided some technical corrections to, but did not substantively amend, the MATS Rule.¹⁸⁰ Because the MATS Rule remained in effect throughout the litigation, many existing power plants have already achieved compliance pursuant to the initial April 16, 2015, deadline.¹⁸¹

2. Cross-State Air Pollution Rule

In 2014, the United States Supreme Court ruled that parts of the Cross State Air Pollution Rule (CSAPR), EPA's effort to regulate interstate air pollution pursuant to the Clean Air Act's "good neighbor" provision,¹⁸² may be invalid to the extent the rule requires "an upwind State to reduce emissions by more than the amount necessary to achieve attainment in every downwind State to which it is linked."¹⁸³ The matter was remanded to the United States Court of Appeals for the District of Columbia Circuit to consider any as-applied challenges by "upwind" states to alleged over-control under the rule. On July 28, 2015, the D.C. Circuit held that the 2014 sulfur dioxide (SO₂) and nitrogen oxide (NO_x) emissions budgets for certain states were improper under the reasoning of the 2014

172. *Id.*

173. *Id.* at 24,424-25.

174. *Id.*

175. *Id.*

176. U.S. ENVTL. PROT. AGENCY, REGULATORY IMPACT ANALYSIS FOR THE FINAL MERCURY AND AIR TOXICS STANDARDS (Dec. 2011), <https://www.epa.gov/sites/production/files/2015-11/documents/matsriafinal.pdf>.

177. *Id.*

178. *Id.*

179. *Id.*

180. Final Rule; Technical Correction, *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*, 81 Fed. Reg. 20,172 (2016) (to be codified at 40 C.F.R. pts. 60 & 63).

181. National Emission Standards for Hazardous Air Pollutants, 40 C.F.R. § 63.9984 (2012).

182. 42 U.S.C. § 7410(a)(2)(D)(i) (1990).

183. *EPA v. EME Homer City Generation, L.P.*, 134 S. Ct. 1586, 1608–09 (2014).

Supreme Court opinion.¹⁸⁴ The D.C. Circuit remanded without vacatur to EPA for the agency to reconsider those emissions budgets.¹⁸⁵ The D.C. Circuit rejected all other claims, including facial challenges, with regard to CSAPR.¹⁸⁶ As promulgated in 2011, CSAPR regulates the interstate transport of ozone pollution under the 1997 ozone National Ambient Air Quality Standard (NAAQS). On December 3, 2015, EPA issued a proposed rule titled *Cross State Air Pollution Rule Update for the 2008 Ozone NAAQS* (CSPAR Update Rule).¹⁸⁷ The CSAPR Update Rule addresses interstate emission transport with respect to the 2008 ozone NAAQS. It also responds to the above-noted remand by replacing the invalidated NOx budgets.¹⁸⁸ The comment period for the CSAPR Update Rule ended on January 19, 2016, and a final rule is expected later this year.

3. Backup Generators Rule

On May 1, 2015, the D.C. Circuit invalidated a 2013 EPA rule¹⁸⁹ allowing backup generators to operate without emissions controls for up to 100 hours per year as part of an emergency demand-response program.¹⁹⁰ The court found that EPA acted arbitrarily and capriciously when it failed to respond to concerns raised during the comment period that the rule threatened the efficiency and reliability of the electrical energy grid.¹⁹¹ Further, the court held that EPA acted arbitrarily and capriciously because it relied upon “faulty evidence” in setting the maximum exemption period at 100 hours.¹⁹² Finally, the court found that EPA “too cavalierly sidestepped its responsibility to address reasonable alternatives.”¹⁹³ Accordingly, the D.C. Circuit remanded the 100-hour exemption back to EPA for further action, but the rest of the 2013 rule remains in effect.¹⁹⁴

C. Water

1. Effluent Limitations Guidelines and Standards for the Steam Electric

184. *EME Homer City Generation, L.P. v. EPA*, 795 F.3d 118, 132 (D.C. Cir. 2015). In particular, the court invalidated the 2014 SO₂ emission budgets for Texas, Alabama, Georgia, and South Carolina. It also invalidated the 2014 ozone-season NOx emission budgets for Florida, Maryland, New Jersey, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Texas, Virginia, and West Virginia. *Id.* at 124.

185. *Id.* at 138.

186. *Id.*

187. Proposed Rule, *Cross State Air Pollution Rule Update for the 2008 Ozone NAAQS*, 80 Fed. Reg. 75,706 (2015).

188. *Id.* at 75,716. The EPA intends to separately address the remand of the SO₂ emissions budgets. *Id.* at 75,717.

189. Final Rule, *National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines; New Source Performance Standards for Stationary Internal Combustion Engines*, 78 Fed. Reg. 6674 (2013) (to be codified at 40 C.F.R. pts. 60 & 63).

190. *Delaware Dep’t of Nat. Res. & Env’tl. Control v. EPA*, 785 F.3d 1 (D.C. Cir. 2015).

191. *Id.* at 13–14.

192. *Id.* at 14.

193. *Id.* at 18.

194. *Id.*

Power Generating Point Source Category

On November 3, 2015, EPA finalized a rule revising Clean Water Act standards applicable to certain power plants.¹⁹⁵ The rule establishes the first federal limits on the levels of toxic metals in wastewater that can be discharged from power plants.¹⁹⁶ The rule also creates additional requirements for wastewater streams from flue gas desulfurization, fly ash, bottom ash, flue gas mercury control, and gasification of fuels.¹⁹⁷ The EPA projects that the rule will reduce the amount of toxic metals, nutrients, and other pollutants that power plants are allowed to discharge by 1.4 billion pounds, and reduce water withdrawal by 57 billion gallons.¹⁹⁸ The EPA estimates compliance costs to be \$480 million, and quantified benefits to be between \$451 to \$566 million.¹⁹⁹ The EPA anticipates that about 12% of steam electric power plants and 28% of coal-fired or petroleum coke-fired power plants will incur some costs under the rule.²⁰⁰

2. Waters of the United States

On June 29, 2015, EPA published the Clean Water Rule, which further defines the scope of “waters of the United States” or waters that are protected under the Clean Water Act.²⁰¹ The Clean Water Rule has been litigated heavily, with states and industry alleging that the new definition impermissibly expands federal regulatory authority. A number of cases challenging the rule have been consolidated before the United States Court of Appeals of the Sixth Circuit. On October 9, 2015, the Sixth Circuit stayed implementation of the final rule nationwide pending further action of the court.²⁰² In issuing the stay, the court reasoned that the petitioners demonstrated a substantial possibility of success on the merits with regard to their claim that the rule’s treatment of tributaries, “adjacent waters,” and waters having a “significant nexus” to navigable waters is at odds with the United States Supreme Court’s ruling in *Rapanos v. United States*.²⁰³ The Sixth Circuit also found that “the rulemaking process by which the distance limitations were adopted is facially suspect.”²⁰⁴ A decision on the merits is still forthcoming, but the Sixth Circuit further ruled on February 22, 2016, that it has jurisdiction to hear the challenge.²⁰⁵

195. Final Rule, *Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category*, 80 Fed. Reg. 67,838 (2015) (to be codified at 40 C.F.R. pt 423).

196. *Id.* at 67,838.

197. *Id.* at 67,841.

198. *Id.*

199. *Id.*

200. 80 Fed. Reg. 67, 838 at 67,842.

201. Final Rule, *Clean Water Rule: Definition of “Waters of the United States,”* 80 Fed. Reg. 37,054 (2015) (to be codified at 33 C.F.R. pt. 328). Further information about the Clean Water Rule is available in the *Report of the Environmental Regulation Committee*, 36 ENERGY L.J. 101, 115–17 (2015).

202. *Ohio v. U.S. Army Corps of Eng’rs*, 803 F.3d 804 (2015) (Order of Stay).

203. *Id.* at 807.

204. *Id.*

205. *Murray Energy Corp. v. U.S. Dep’t of Def.*, 817 F.3d 261 (6th Cir. 2016).

III. OTHER

A. 2016 Reenactment and Revision of the 1976 Toxic Substances Control Act

The Frank R. Lautenberg Chemical Safety for the 21st Century Act was signed into law on June 22, 2016 (TSCA Reform Act).²⁰⁶ The Act was passed with bi-partisan support and with support from elements of both the chemical industry and public health and environmental groups.²⁰⁷ Key provisions of the TSCA Reform Act include the following: EPA is to establish safety standards to assure that no unreasonable risk of harm to health or the environment will result from exposure of covered chemicals;²⁰⁸ EPA is not to consider cost when making a determination about whether a chemical or use poses an unreasonable risk;²⁰⁹ EPA is to evaluate existing chemicals upon a prioritization schedule adopted after a risk-based review;²¹⁰ manufacturers must now wait for an express finding from EPA with regard to risk before proceeding with processing a new chemical,²¹¹ if EPA decides to restrict the use or availability of a chemical, such restrictions no longer need to be the “least burdensome” of those available to address the identified risks but costs must be considered in imposing restrictions;²¹² EPA’s ability to obtain information and its authority to order testing from chemical manufacturers is expanded;²¹³ and Confidential Business Information designations for data submitted to EPA must be substantiated and will only be valid for ten years.²¹⁴

B. Avian/Endangered Species

1. Endangered Species Act

On July 20, 2016, the U.S. Fish and Wildlife Service (FWS) issued a final rule that removes the lesser prairie-chicken as a threatened species under the Endangered Species Act (ESA). This delisting rule followed from a decision by the U.S. District Court for the Western District of Texas vacating the FWS rule listing the lesser prairie chicken as a threatened species in *Permian Basin Petroleum Association v. Department of the Interior*.²¹⁵ In its September 1, 2015, order, the court concluded that FWS’s listing decision was arbitrary and capricious because the agency failed to properly apply its Policy for Evaluation of

206. Toxic Substance Control Act, Pub. L. No. 1147-182, 130 Stat. 448 (2016) (to be codified as 15 U.S.C. § 2601). An EPA prepared summary of highlights of the new Act may be viewed at <http://www.epa.gov/assessing-and-managing-chemicals-under-tsca/highlights-key-provisions-frank-r-lautenberg-chemical>.

207. Juliet Eilperin, *Senate Approves Broad Overhaul of Chemical Regulations*, WASH. POST at A16 (June 8, 2016).

208. Pub. L. No. 1147-182, § 4.

209. *Id.*

210. *Id.* § 6.

211. *Id.* § 5.

212. *Id.* § 6.

213. Pub. L. No. 1147-182, § 14.

214. *Id.* § 11.

215. 127 F. Supp. 3d 700 (W.D. Tex. 2015).

Conservation Efforts When Making Listing Decisions (PECE Policy).²¹⁶ Pursuant to the PECE Policy, FWS committed to consider current and planned conservation efforts for a species prior to listing it.²¹⁷ According to the court, FWS failed to account for the range-wide conservation plan established across five states surrounding the Permian Basin (Texas, New Mexico, Oklahoma, Kansas, and Colorado) that was designed to improve habitat for and diminish threats to the lesser prairie-chicken.²¹⁸

Rather than pursue an appeal of the district court's decision, FWS issued the rule to delist the lesser prairie-chicken on July 20, 2016.²¹⁹ The delisting of the lesser prairie chicken took effect immediately. Despite this action, FWS has indicated that it will undertake a new review to determine whether the lesser prairie-chicken should be listed.²²⁰ FWS has also indicated that the lesser prairie-chicken will remain an eligible candidate for conservation agreements, which are private agreements with FWS that incentivize conservation efforts on public and private land.²²¹

2. Migratory Bird Treaty Act

On May 26, 2015, FWS announced it will be considering a proposal to create an incidental take program for migratory birds under the Migratory Bird Treaty Act (MBTA), but a final rule has not been issued.²²² In the absence of such a program, courts have wrestled with legal issues regarding what permitting obligations, if any, currently exist for activities that may incidentally take migratory birds. The Ninth and D.C. Circuits have both addressed this question in recent decisions.

The Ninth Circuit held in *Protect Our Communities Foundation v. Jewell*²²³ that “the MBTA does not contemplate attenuated secondary liability on agencies like the BLM that act in a purely regulatory capacity, and whose regulatory acts do not directly or proximately cause the ‘take’ of migratory birds.” In *Protect Our Communities*, the plaintiffs challenged the Bureau of Land Management's (BLM) grant of a right-of-way to a company to construct and operate a wind energy facility, arguing that the agency had to either obtain an MBTA permit from FWS or make its grant conditional on the company securing an MBTA permit.²²⁴ The Ninth Circuit rejected both arguments, concluding that a regulatory agency's authorization of a facility is not the proximate cause of a take under the MBTA,

216. *Id.* at 711-712.

217. *Id.* at 710, 714.

218. *Id.* at 712.

219. Final Rule, *Endangered and Threatened Wildlife and Plants; Lesser Prairie-Chicken Removed From the List of Endangered and Threatened Wildlife*, 81 Fed. Reg. 47,047 (2016).

220. Press Release, U.S. Fish & Wildlife Serv., U.S. Fish and Wildlife Service Removes Lesser Prairie-Chicken from List of Threatened and Endangered Species in Accordance with Court Order (July, 19, 2016), https://www.fws.gov/news/ShowNews.cfm?ref=u.s.-fish-and-wildlife-service-removes-lesser-prairie-chicken-from-list-o&_ID=35741.

221. *Id.*

222. Proposed Rulemaking, *Migratory Bird Permits; Programmatic Environmental Impact Statement*, 80 Fed. Reg. 30,032 (2015).

223. *Protect Our Cmty. Found. v. Jewell*, 825 F.3d 571, 585 (9th Cir. June 7, 2016).

224. *Id.*

and is also “too far removed from the ultimate legal violation to be independently unlawful under the APA.”²²⁵

The D.C. Circuit was presented with a nearly identical question in *Public Employees for Environmental Responsibility v. Hopper*, but it held that the question did not need to be resolved given the permittee’s representation that it would obtain a permit.²²⁶ In its decision, the D.C. Circuit recognized that Bureau of Ocean Energy Management’s “official position” is that a permittee constructing a wind energy facility is “obligated under federal law to get a [migratory bird] permit.”²²⁷ The court noted that FWS’s consideration of new regulations to authorize incidental take under the MBTA will likely result in a permitting regime allowing project operators to obtain the proper MBTA permits.

225. *Id.* at 586.

226. *Public Emps. for Envtl. Responsibility v. Hopper*, 2016 WL 3606363, at *7 n.11 (2016).

227. *Id.* (internal quotation marks omitted).

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