SUPREME COURT SHIFTS SUPREMACY DOCTRINE—PREEMPTING STATE SUSTAINABILITY?

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I. SUSTAINABLE PREEMPTION

The Supreme Court recently applied the Supremacy Clause of the Constitution to sustainable energy technology. Three recent decisions of the Supreme Court,[1] as well as subsequent decisions of the federal circuit courts and a federal adjudicatory commission,[2] reconfigured the constitutional doctrine preempting state regulation of sustainable power. Through these three decisions, the Court reduced *Chevron* deference afforded to regulatory agencies,[3] a venerated legal doctrine.[4]

Article VI, Clause 2, the Supremacy Clause, is a fundamental pillar of the Constitution, even more so now than ever, amid heightened friction between

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1. *See* discussion *infra* Sections III–V.

2. *See* discussion *infra* Section VI.

3. Chevron, U.S.A., Inc. v. Nat. Res. Def. Council, Inc., 467 U.S. 837, 842–43 (1984); *see also* United States v. Mead Corp., 533 U.S. 218, 228–29 (2001).

4. *Chevron* is the most cited precedent addressing administrative law by the Supreme Court each year, and one of the twenty most-cited Supreme Court cases in the history of the Court. *See* Shane Marmion, *Most Cited Supreme Court Cases in HeinOnline—Part II*, HEINONLINE BLOG (Feb. 16, 2009), https://home.heinonline.org/blog/2009/02/most-cited-u-s-supreme-court-cases-in-heinonline-part-ii/; Chris Walker, *Most Cited Supreme Court Administrative Law Decisions*, YALE J. REG.: NOTICE & COMMENT (Oct. 9, 2014), http://yalejreg.com/nc/most-cited-supreme-court-administrative-law-decisions-by-chris-walker.

the federal and state governments.[5] James Madison, in the Federalist Papers, noted that if the Supremacy Clause were not incorporated "it would have seen the authority of the whole society everywhere subordinate to the authority of the parts; it would have seen a monster, in which the head was under the direction of the members."[6] This article examines new Supreme Court decisions applying the Supremacy Clause to regulation of energy and affecting U.S. sustainability. Three recent Supreme Court decisions create a three-dimensional prism under the Constitution, implementing additional judicial restraints on state and federal regulation mandating use of particular forms of energy:

- Etching a "bright line" segregating state and federal regulatory authority[7]
- Moving that "bright line" in favor of the federal government and preempting state power[8]
- Grafting a new economic cost metric on the exercise of executive branch regulatory authority[9]

In addition to these three Supreme Court decisions, this article also examines recent lower federal circuit court decisions which reinforce these Constitutional re-interpretations,[10] as well as a Ninth Circuit decision allowing state discretion for state "laboratories of experimentation" on sustainable initiatives.[11] Section II examines why energy and environmental issues have been maneuvered as the fulcrum of Supremacy Clause conflicts in recent jurisprudence. Electricity is the core technology in the twenty-first century.[12] It powers every essential technology[13] and is the primary source of emissions which produce climate change, as shown in Figure 1.

Sections III through V analyze new Supreme Court Supremacy Clause determinations surrounding the regulation of electricity and climate change. Section III evaluates the significant impact of the first of two 2016 Supreme Court decisions which, rather than allowing states discretion in sculpting electric energy policy, reinforced an impenetrable preemptive "bright line"

5. U.S. CONST. art. VI, cl. 2.
6. THE FEDERALIST NO. 44, at 283 (James Madison) (Clinton Rossiter ed., 1961).
7. *See* Hughes v. Talen Energy Mktg., LLC, 136 S. Ct. 1288, 1298 (2016).
8. FERC v. Elec. Power Supply Ass'n, 136 S. Ct. 760, 777 (2016).
9. Michigan v. EPA, 135 S. Ct. 2699, 2711 (2015).
10. *See* discussion *infra* Section VI.
11. *See* Rocky Mountain Farmers Union v. Corey, 730 F.3d 1070, 1087 (9th Cir. 2013).
12. *See* Steven Ferrey, *Corporate Energy Responsibility: International and Domestic Perspectives on Supply and Demand in the New Millennium*, 25 FORDHAM ENVTL. L. REV. 84, 84–85 (2015).
13. James Fallows, *The Fifty Greatest Breakthroughs Since the Wheel*, ATLANTIC (Nov. 2013), https://www.theatlantic.com/magazine/archive/2013/11/innovations-list/309536/.

drawn by the Supremacy Clause. Section III examines this against prior Supreme Court Supremacy Clause decisions and analyzes the new opinion.

Section IV analyzes a second 2016 Supreme Court opinion which shifted this constitutional "bright line" separating federal from state authority to encompass a larger federal share. Section V analyzes a third Supreme Court opinion adding a new economic prerequisite to enactment of U.S. regulation on sustainable energy and the environment. This new requirement, created by the Court sua sponte for the first time in the history of administrative or constitutional law, creates and implements a fundamental legal change.

Section VI first takes one step away, examining recent federal circuit court decisions implemented in the shadow of the Supreme Court's Supremacy Clause doctrine. Section VI then takes a second step to examine 2017 district court decisions and track the legal changes in the exercise of government authority over power. Section VII joins these new Court threads of supremacy and preemption tying future regulation of sustainable resources and energy.

II. CONSTITUTIONAL PRINCIPLES WHICH SCULPT A SUSTAINABLE ENVIRONMENT

For more than eight decades, the Federal Power Act of 1935 has separated state and federal authority over the electric power market.[14] Regarding the environment, for more than four decades, federal statutes such as the Clean Air Act have created a "cooperative federalism" splitting state and federal authority over re-achievement and maintenance of clean air.[15] Key recent decisions of the Supreme Court reshape preemption, alter application of the Supremacy Clause of the Constitution with respect to energy, and implement a new federalism.

After the last 800,000 years of residual greenhouse gas ("GHG") levels hovering between approximately 175 and 250 parts per million ("ppm") in the atmosphere, these levels have recently increased to 400 ppm.[16] There are now atmospheric concentrations of greenhouse gases at levels that have not

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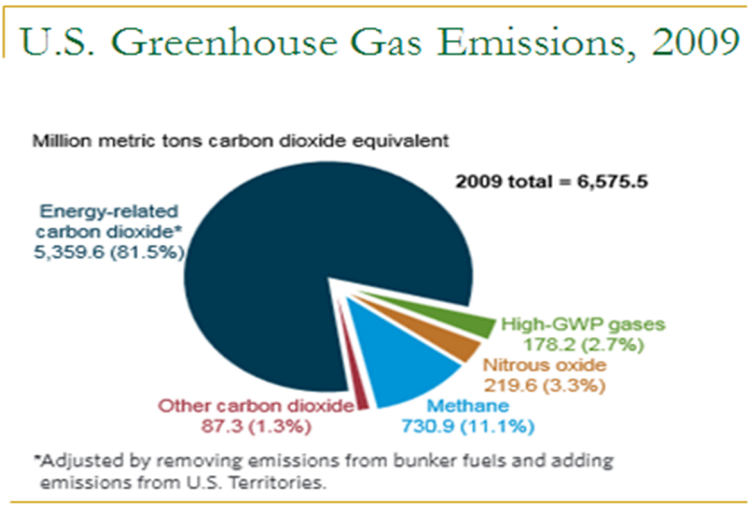
14. Federal Power Act, ch. 687, 48 Stat. 803 (1935) (codified as amended at 16 U.S.C. § 8244 (2012)).

15. Approval and Promulgation of Implementation Plans; California—South Coast Air Basin; Ozone and Carbon Monoxide Plans, 53 Fed. Reg. 49,494, 49,500 (proposed Dec. 7, 1988) (codified at 40 C.F.R. pt. 52).

16. Jessica Blunden, *State of the Climate: Carbon Dioxide Tops 400 ppm*, CLIMATE.GOV (July 13, 2014), http://www.climate.gov/news-features/understanding-climate/2013-state-climate-carbon-dioxide-tops-400-ppm; *see* AM. METEOROLOGICAL SOC'Y, STATE OF THE CLIMATE IN 2014, at xvi (Jessica Blunden & Derek S. Arndt eds., 2015).

been seen for almost a billion years.[17] Consequently, the Earth's atmosphere is warming and sea level is rising.[18] GHG annual emissions increased about seventy percent between 1970 and 2004; combustion of fossil fuels accounted for seventy percent of total GHG emissions, electric power generation was responsible for forty percent of these carbon dioxide emissions, and coal-fired electric power generation accounted for about seventy percent of the emissions in this electric sector.[19] The Congressional Research Service concluded that "in 2013, fossil fuels accounted for 78.5% of U.S. primary energy production."[20] Figure 1 illustrates that total energy-related carbon emissions represent more than eighty percent of U.S. GHG emissions.[21]

Figure 1[22]



The amount of global warming anthropogenic carbon dioxide emitted has corresponded directly with the combustion of those fossil fuels, as shown in

17. INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2013, at 11 (Thomas F. Stocker et al. eds., 2013), https://www.ipcc.ch/report/ar5/wg1/ (explaining that GHG is at its highest level in at least 800,000 years).

18. AM. METEOROLOGICAL SOC'Y, STATE OF THE CLIMATE IN 2016, at xvi (Jessica Blunden & Derek S. Arndt eds., 2017).

19. *See* Ferrey, *supra* note 12, at 85–86.

20. MOLLY F. SHERLOCK & JEFFREY M. STUPAK, CONG. RESEARCH SERV., R41953, ENERGY TAX INCENTIVES: MEASURING VALUE ACROSS DIFFERENT TYPES OF ENERGY RESOURCES 3 (2015), http://www.fas.org/sgp/crs/misc/R41953.pdf.

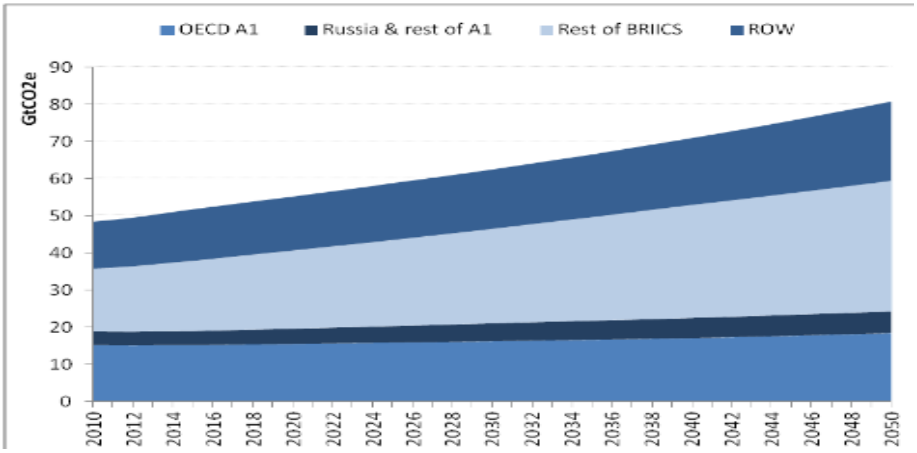
21. U.S. ENERGY INFO. ADMIN., EMISSIONS OF GREENHOUSE GASES IN THE UNITED STATES 2009, at 1 (2011), https://www.eia.gov/environment/emissions/ghg_report/pdf/0573%282009%29.pdf.

22. *Id.*

Figure 1. Energy-related emissions of carbon are expected to increase fifty-seven percent from 2005 to 2030.[23] At current rates of energy development worldwide, energy-related carbon dioxide emissions in 2050 would be 150% of their current levels, primarily due to increased energy use.[24] The Organization for Economic Cooperation and Development ("OECD") forecast is shown in Figure 2.[25] The Intergovernmental Panel on Climate Change ("IPCC") in 2014 concluded that in order to maintain world warming below two degrees Celsius ("C"), there must be a forty to seventy percent reduction of GHG emissions from 2010 levels by 2050.[26]

Figure 2[27]

GHG emissions by region (in $GtCO_2e$): *Baseline* scenario



Electric generating units are the largest U.S. source of greenhouse gas emissions, accounting for more than thirty percent of all anthropogenic GHG emissions, constituting the dominant source in Figure 3. Electricity is a

23. U.S. GOV'T ACCOUNTABILITY OFF., GAO-09-151, INTERNATIONAL CLIMATE CHANGE PROGRAMS: LESSONS LEARNED FROM THE EUROPEAN UNION'S EMISSIONS TRADING SCHEME AND THE KYOTO PROTOCOL'S CLEAN DEVELOPMENT MECHANISM 48 (2008), http://www.gao.gov/assets/290/283397.pdf.

24. ORG. FOR ECON. CO-OPERATION & DEV., THE OECD ENVIRONMENTAL OUTLOOK TO 2050: KEY FINDINGS ON CLIMATE CHANGE 5 (2012), http://www.oecd.org/env/cc/Outlook%20to%202050_Climate%20Change%20Chapter_HIGLIGHTS-FINA-8pager-UPDATED%20NOV2012.pdf.

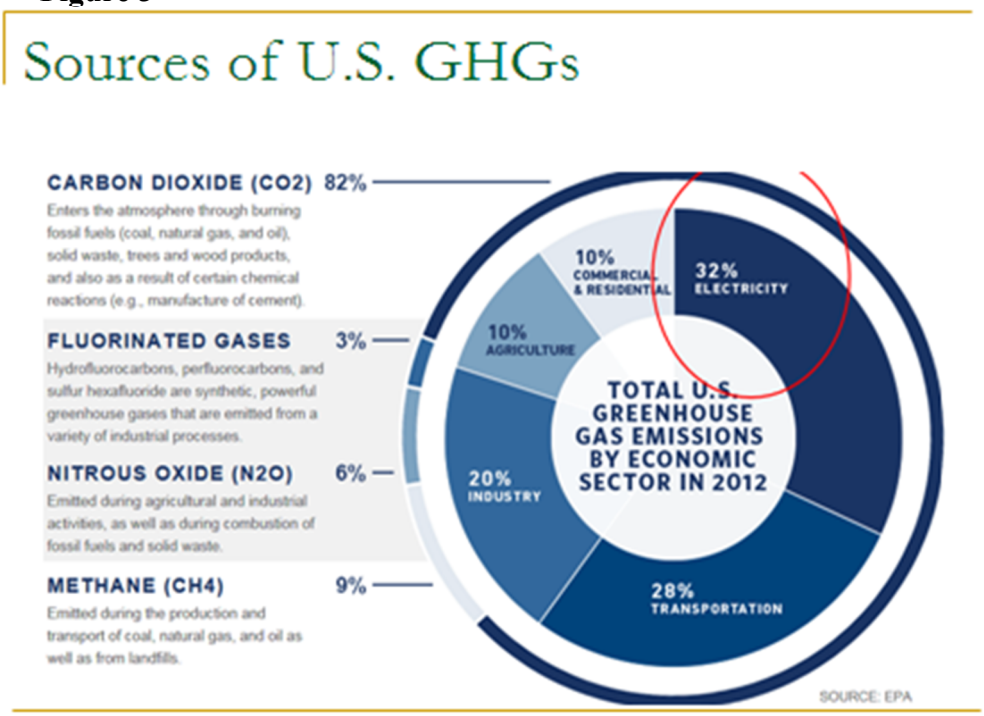
25. *Id.* at 1.

26. INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2014: SYNTHESIS REPORT 39 (Rajendra K. Pachauri et al. eds., 2014), https://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR_AR5_FINAL_full_wcover.pdf.

27. ORG. FOR ECON. CO-OPERATION & DEV., *supra* note 24, at 1 (noting that "ROW" refers to "rest of the world").

necessity: Without access to reliable power, all of the critical infrastructures are at risk and significant economic value can be lost.[28] All sixteen critical infrastructure sectors identified by the U.S. Department of Homeland Security have some dependence on the energy sector, specifically stable electric power.[29]

Figure 3[30]



28. QUADRENNIAL ENERGY REVIEW, TRANSFORMING THE NATION'S ELECTRICITY SYSTEM: THE SECOND INSTALLMENT OF THE QER 1–7 (2017), https://www.energy.gov/sites/prod/files/2017/02/f34/Quadrennial%20Energy%20Review--Second%20Installment%20%28Full%20Report%29.pdf. There are sixteen critical infrastructure sectors in the United States, including the communications, emergency services, energy, food and agriculture, health care and public health, transportation, and water and wastewater sectors. Press Release, Office of the Press Sec'y, The White House, Presidential Policy Directive—Critical Infrastructure Security and Resilience (Feb. 12, 2013), https://obamawhitehouse.archives.gov/the-press-office/2013/02/12/presidential-policy-directive-critical-infrastructure-security-and-resil.

29. *Energy Sector*, U.S. DEP'T HOMELAND SECURITY, https://www.dhs.gov/energy-sector (last visited Mar 10, 2018).

30. *See* James Conca, *Only One Loser in Obama's Clean Power Plan*, FORBES (Aug. 4, 2015), https://www.forbes.com/sites/jamesconca/2015/08/04/only-one-loser-in-obamas-clean-power-plan/#6bb673152841.

The U.S. has a federalist form of government, emulated by some other world countries, to allocate law-making power between federal and state levels of government.[31] There is bifurcated, deferential authority on many key matters of governance—and no more so than on energy and environment which are essential areas of focus to achieve a sustainable future.[32] The Supremacy Clause of the United States Constitution, Article VI, Clause 2, provides:

> This Constitution, and the Laws of the United States which shall be made in Pursuance thereof; and all Treaties made, or which shall be made, under the Authority of the United States, shall be the supreme Law of the Land; and the Judges in every state shall be bound thereby, any Thing in the Constitution or Laws of any State to the Contrary notwithstanding.[33]

And on these issues of constitutional preemption, the Supreme Court stepped forward in 2016 to reposition and reinforce preemption in American law.

III. THE "BRIGHT LINE" OF U.S. POWER PREEMPTION: 2016 *HUGHES* DECISION

In 2016, the Supreme Court re-etched the "bright line" preempting state authority over certain electric power transactions.[34] This unanimous opinion turns the Supreme Court's back on another circuit court opinion, which endorsed states as the experimental laboratory of innovation, somewhat insulated from the Supremacy Clause.[35] This Supreme Court opinion clearly

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31. The federalist governments include: the United States (fifty states, two commonwealths, and twelve territories primarily in the Pacific Ocean), Canada (ten provinces and three territories), Mexico (thirty-one states), Brazil (twenty-six states), Germany (sixteen states), Switzerland (twenty-six cantons), Argentina (twenty-three provinces), Australia (six states and two territories), and India (twenty-nine states and seven territories). This list includes the most significant and economically successful non-Communist countries on five continents: North America, Central America, South America, Europe, and Australia, as well as India in Asia. *See The World Factbook*, CENT. INTELLIGENCE AGENCY, https://www.cia.gov/library/publications/the-world-factbook/fields/2128.html (last visited Mar. 10, 2018); *Federalism*, CORNELL L. SCH., https://www.law.cornell.edu/wex/federalism (last visited Mar. 10, 2018).

32. *See* Richard L. Revesz, *Federalism and Environmental Regulation: A Public Choice Analysis*, 115 HARV. L. REV. 553, 583 (2001) (listing state regulations on environmental policy).

33. U.S. CONST. art. VI, cl. 2.

34. Hughes v. Talen Energy Mktg., LLC, 136 S. Ct. 1288, 1299 (2016).

35. The Ninth Circuit majority spoke of the history of California being able to experiment with regulation as a leader among states for "local autonomy." Rocky Mountain Farmers Union

voids state authority over certain decisions regulating electric power transactions affecting a sustainable future.[36]

In 1999, Maryland adopted competitive retail markets for electric power, and authorized its utilities to participate in the PJM Independent System Operator ("ISO"), the largest ISO in the country.[37] The federally regulated PJM market regulates and controls all wholesale sale of power and capacity payments for eligible power generation facilities through an interstate, federally-regulated power market.[38] PJM provides capacity payments to winning generation facilities for the siting of new power generation as needed throughout the thirteen states it covers.[39]

Operating within PJM, Maryland created and implemented a regulatory scheme to cause new power generation facilities to locate in Maryland or the District of Columbia in lieu of elsewhere in the thirteen-state PJM region.[40] To incentivize this, Maryland required its regulated electric utilities to enter into twenty-year long-term "contracts for differences" ("CfD") with certain independent power producers agreeing to locate within the state.[41] This CfD established the final wholesale rates that these in-state generators would receive for a twenty-year period capacity payment collectively from the PJM capacity auction with the state augmenting, as necessary, the rate.[42] If the capacity bid of the Maryland facility cleared the PJM capacity auction but that clearing price was below the guaranteed contract price, Maryland utilities and their ratepayers would pay the difference between the Maryland contract and clearing price.[43]

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v. Corey*,* 730 F.3d 1070, 1097 (9th Cir. 2013) ("Our conclusion is reinforced by the grave need in this context for state experimentation."). The amicus brief of some law professors also appealed for discretion for California's "genius" and "laboratories." *See* Steven Ferrey, *Can the Ninth Circuit Overrule the Supreme Court on the Constitution?*, 93 NEB. L. REV. 807, 825 (2014).

36. *Hughes*, 136 S. Ct. at 1297.

37. *See* PPL EnergyPlus, LLC v. Hanna, 977 F. Supp. 2d 372, 378–79 (D.N.J. 2013) (stating that PJM operates the "largest centrally dispatched power market . . . in the world, covering 60 million customers and 185,000 megawatts" of power generation, including the District of Columbia and all or part of thirteen states); *see also Who We Are*, PJM, http://pjm.com/about-pjm/who-we-are.aspx (last visited Mar. 10, 2018).

38. *Hughes*, 136 S. Ct. at 1292–94.

39. *Id.* at 1293.

40. *Id.* at 1294.

41. *Id.* at 1294–95.

42. *Id.* at 1295. If CPV's winning bid for capacity payments was less than the Maryland contract price, Maryland utilities would pay the difference; if the reverse, CPV would pay the Maryland utilities the difference. Consequently, CPV had no incentive to submit its true competitive auction bid with this state 'safety net.' PPL EnergyPlus, LLC v. Nazarian, 974 F. Supp. 2d 790, 813 (D. Md. 2013).

43. *PPL EnergyPlus, LLC*, 974 F. Supp. 2d at 832.

The Federal Power Act of 1935 provides that the Federal Energy Regulatory Commission ("FERC") has jurisdiction over interstate and wholesale power sales, however, its authority does not extend to "any other sale of electric energy."[44] Section 201(a) of the Act states that federal regulation under the statute shall "extend only to those matters which are not subject to regulation by the States."[45] Sections 205 and 206 of the Act[46] empower FERC exclusively to regulate the commerce and rates for the interstate and wholesale sale and transmission of electricity in the United States.[47]

Pursuant to the Supremacy Clause, the U.S. Supreme Court held that Congress meant to establish a "bright line" between federal and state jurisdiction: easily ascertained and not requiring case-by-case analysis.[48] The rates, terms and provisions of any wholesale sale or transmission of electricity in interstate commerce are solely within federal jurisdiction and control, not state authority:[49] "FERC has exclusive authority to set and to determine the reasonableness of wholesale rates."[50]

In the Maryland matter, the Supreme Court found that when the Maryland statute "tops off" the price received by certain in-state sited wholesale generation facilities for twenty years, it intrudes on exclusive FERC wholesale market authority.[51] The Supreme Court highlighted that the Maryland program presents the same legal constitutional problems that the Court identified three decades before in two seminal opinions, *Mississippi*

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44. 16 U.S.C. § 824(b)(1) (2012).

45. *Id.* § 824(a).

46. *Id.* § 824(d)–(e).

47. Pub. Util. Dist. No. 1 v. FERC, 471 F.3d 1053, 1058 (9th Cir. 2006), *aff'd in part, rev'd in part sub nom.* Morgan Stanley Capital Grp., Inc. v. Pub. Util. Dist. No. 1*,* 554 U.S. 527 (2008).

48. Fed. Power Comm*'*n v. S. Cal. Edison Co., 376 U.S. 205, 215–16 (1964).

49. New Eng. Power Co. v. New Hampshire, 455 U.S. 331, 340 (1982).

50. Miss. Power & Light Co. v. Mississippi *ex rel*. Moore, 487 U.S. 354, 371 (1988) ("FERC has exclusive authority to determine the reasonableness of wholesale rates."); *id.* at 377 (Scalia, J., concurring) ("It is common ground that if FERC has jurisdiction over a subject, the States cannot have jurisdiction over the same subject."); *accord Pub. Util. Dist. No. 1*, 471 F.3d at 1058, 1066–67.

51. Hughes v. Talen Energy Mktg., LLC, 136 S. Ct. 1288, 1297 (2016).

Power & Light and *Nantahala Power & Light Company*.[52] Justice Kagan, at oral argument, stated:

> I'm not sure why it is that when you say it was subject to FERC's jurisdiction, that doesn't end the case right there against you . . . . [It is FERC's authority] to set the rates and other terms of wholesale sales, and that's not for the states to do. So that means you're preempted.[53]

IV. SUPREME COURT REPOSITIONS THE "BRIGHT LINE" OF SUPREMACY

A. The Supreme Court 2016 EPSA Decision

In 2016, the Supreme Court repositioned the "bright line" articulated in *Hughes*, which bars state regulation of energy. In *FERC v. EPSA*,[54] the Court extended and expanded the share of federal authority over power.[55] The case originated when FERC issued its Order 745 in 2011,[56] requiring sustainable demand response resources to be allowed to compete in wholesale power markets.[57] The cost of implementing demand-response programs, a form of on-demand energy conservation implemented by energy consumers,

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52. *Id.* at 1298.

53. Transcript of Oral Argument at 9, Hughes v. Talen Energy Mktg., LLC, 136 S. Ct. 1288, 1297 (2016) (No. 14-614).

54. FERC v. Elec. Power Supply Ass'n, 136 S. Ct. 760 (2016).

55. *Id.* at 774.

56. Demand Response Compensation in Organized Wholesale Energy Markets, 76 Fed. Reg. 16,658, 16,658 (Mar. 24, 2011) (codified at 18 C.F.R. § 35.28) (explaining that the "Final Rule addresses compensation for demand response in Regional Transmission Organization (RTO) and Independent System Operator (ISO) organized wholesale energy markets"). Order 745 regulates the price that must be paid to demand response participants in RTO and ISO markets where a demand response program exists. *Id.* at 16,659. The Order establishes that demand response participants must be paid fair market price, determined by Locational Marginal Price ("LMP") when dispatched (i.e. when a retail customer curtails energy in response to a RTO/ISO signal). *Id.*

57. *Id.* at 16,658 ("[W]hen a demand response resource participating in an organized wholesale energy market administered by a Regional Transmission Organization (RTO) or Independent System Operator (ISO) [an RTO or ISO] has the capability to balance supply and demand as an alternative to a generation resource and when dispatch of that demand response resource is cost-effective . . . that demand response resource must be compensated for the service it provides to the energy market at the market price for energy, referred to as the locational marginal price (LMP).").

typically is less than the cost of building new generating facilities to supply additional power.[58]

Order 745 builds on previous FERC Order 719, requiring RTOs and ISOs[59] to accept bids from demand response resources in their markets for certain ancillary services on a basis comparable to treatment of other power generation resources.[60] FERC Order 745 allows for any state regulator to prohibit its customers from making demand response bids in the wholesale market.[61] In the interest of cooperative federalism, if state regulatory authorities with oversight of demand response transactions forbid market participation, wholesale power operators would be exempt from the acceptance requirement under Order 745.[62]

Demand-response conservation of energy on the customer side of the meter implicates neither the wholesale nor the interstate sale of power, and therefore there is no sale of power covered by the Federal Power Act.[63] By definition,[64] demand response is not a sale of energy at wholesale or power transmission, which FERC has jurisdiction to regulate under § 201 of the Federal Power Act.[65] Order 745 did not regulate demand response as a "sale" of power under § 201. Instead, FERC relied on its remedial authority under

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58. *See* Douglas Norland, *Comprehensive Assessment of a Conservation and Load Reduction Program: Results of the General Public Utilities Case Study*, *in* 6 NATIONAL AND REGIONAL CONSERVATION PROGRAMS 6.166, 6.175 (1988).

59. *See Regional Transmission Organizations (RTO)/Independent System Operators (ISO)*, FERC, https://www.ferc.gov/industries/electric/indus-act/rto.asp (last updated Apr. 23, 2018). RTOs, or regional transmission organizations, are independent of all generation and power marketing entities and manage a larger interstate transmission market in power for in-state utilities, subject to FERC authority. *Id.* ISOs, or independent system operators, manage the regional operation of a wholesale power sale market and the interstate transmission system on behalf of all power market participants, subject to FERC oversight. *Id.* ISOs were created by FERC Orders Nos. 888, 889, and 2000, as one way for existing power pools to provide non-discriminatory access for all stakeholders to transmission.

60. Wholesale Competition in Regions with Organized Electric Markets, 74 Fed. Reg. 37,776, 37,777 (July 16, 2009) (codified at 18 C.F.R. 35.28).

61. Demand Response Compensation in Organized Wholesale Energy Markets, 76 Fed. Reg. at 16,675; *see also* FERC v. Elec. Power Supply Ass'n, 136 S. Ct. 760, 772 (2016).

62. Demand Response Compensation in Organized Wholesale Energy Markets, 76 Fed. Reg. at 16,675.

63. *See* STEVEN FERREY, UNLOCKING THE GLOBAL WARMING TOOLBOX 193–95 (2010) (explaining that the Federal Power Act, as interpreted by the U.S. Supreme Court, empowers the FERC to regulate only wholesale power transactions, interstate power transactions, and transmission of power).

64. 18 C.F.R. § 35.28(b)(4) (2018).

65. 16 U.S.C. § 824(b)(1) (2012).

§§ 205 and 206 as the basis for its Order 745 jurisdiction,[66] which direct FERC to regulate "practices . . . affecting" the rates for such sales if it finds these practices are "unjust, unreasonable, unduly discriminatory or preferential."[67] The Court has long held that §§ 205 and 206 confer on FERC jurisdiction to regulate "practices . . . affecting" wholesale rates, even when the agency's actions also impact retail customers.[68]

The Court in *EPSA* held that payments to demand response participants do directly impact wholesale electricity rates within the reach of the Federal Power Act.[69] Second, despite regulating retail demand response participant markets, the Commission did not move to regulate retail rates themselves.[70] The Court reversed the D.C. Circuit's holding that Order 745 violated the Administrative Procedure Act by instituting arbitrary and capricious compensation rates, based on its plain language interpretation of the Federal Power Act.[71]

The Supreme Court found demand response to be a factor "directly affecting" wholesale power markets and rates when wholesale power was bid into ISO capacity markets.[72] The *EPSA* case did not reinforce the "bright line" separating state and federal power, but rather moved that line to allow more federal authority. The majority opinion in *EPSA* held "we afford great deference to the Commission in its rate decisions," for "[t]he disputed question here involves both technical understanding and policy judgment."[73] The Supreme Court in *EPSA* acknowledged that *Chevron* recognizes that Congress can be found to have implicitly delegated discretionary authority to an administrative agency.[74]

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66. Demand Response Compensation in Organized Wholesale Energy Markets, 76 Fed. Reg. at 16,677.

67. *Id.* Section 205 mandates that all jurisdictional rates must be just and reasonable. 16 U.S.C. § 824d(a). Section 206 of the FPA requires FERC to fix "just and reasonable" rates whenever it finds that any "practices . . . affecting" jurisdictional rates make such rates unjust or unreasonable. § 824e(a).

68. *See, e.g.*, Fed. Power Comm'n v. Conway Corp., 426 U.S. 271, 276–81 (1976); *see also* Miss. Power & Light Co. v. Mississippi *ex rel.* Moore, 487 U.S. 354, 370–72 (1988) (recognizing FERC remedial jurisdiction over the terms of agreements to integrate power supply resources between utilities, even though FERC does not itself have jurisdiction over the affected generation assets).

69. FERC v. Elec. Power Supply Ass'n, 136 S. Ct. 760, 773 (2016).

70. *Id.*

71. *Id.* at 782, 784.

72. *Id.* at 784.

73. *Id.* at 782, 784 (quoting Morgan Stanley Capital Grp. v. Pub. Util. Dist. No. 1, 554 U.S. 527, 536 (2008)).

74. *Id.* at 785 (Scalia, J., dissenting); *see also* United States v. Mead Corp., 533 U.S. 218, 226–27 (2001) (explaining that deference is only afforded where "it appears that Congress

B. The Supreme Court Moves Preemptive "Bright Line"

The Supreme Court repositioned the jurisdictional line of authority favoring federal regulation in another way. In *Arlington v. FCC*, the majority held that *Chevron* deference applies to an agency's interpretation of the scope of its own statutory jurisdiction: "[s]tatutory ambiguities will be resolved, within the bounds of reasonable interpretation, not by the courts but by the administering agency."[75] There is no difference between deference afforded to the agency by an agency's "jurisdictional" or "non-jurisdictional" interpretations:[76] "[i]f 'the agency's answer is based on a permissible construction of the statute,' that is the end of the matter."[77]

A federal agency, and particularly independent utility regulatory agencies like the FCC and FERC, through the *Arlington* decision, are now allowed to determine the jurisdictional scope of their own authority, both substantively and procedurally.[78] For example, the demand reduction of power, addressed by FERC Order 745, is within FERC authority to determine whether its authority over wholesale market transactions includes such things as demand reduction transactions.[79] In a separate 6–2 opinion, the Supreme Court held that federal agencies are entitled to deference to agency discretion in devising regulations, as per *Chevron*.[80]

So through decisions in *Arlington* and *EPSA*, the "bright line" has increased the federal field of jurisdiction and added broader scope. *EPSA* clearly extended federal authority over indirect electric energy matters—particularly applying to demand-response and conscious use of energy is a foundation of a sustainable environment. *Arlington* increased traditional *Chevron* deference to the federal agency to not only exercise deference on the substantive rule of law, but also to decide on what matters its jurisdiction

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delegated authority to the agency generally to make rules carrying the force of law, and that the agency interpretation claiming deference was promulgated in the exercise of that authority").

75. City of Arlington v. FCC, 569 U.S. 290, 296 (2013) (citing Chevron, U.S.A., Inc. v. Nat. Res. Def. Council, Inc., 467 U.S. 837, 842 (1984)); *see also* AT&T Corp. v. Iowa Utils. Bd., 525 U.S. 366, 397 (1999).

76. There is no exception to the normal deferential standard of review applied to jurisdictional and legal questions. *See* NLRB v. City Disposal Sys. Inc., 465 U.S. 822, 830 n.7 (1984). "[T]here is no principled basis for carving out some arbitrary subset of such claims as 'jurisdictional.'" *City of Arlington*, 569 U.S. at 298; *see, e.g.*, Nat'l Cable & Telecomms. Ass'n v. Gulf Power Co., 534 U.S. 327, 342 (2002).

77. *City of Arlington*, 569 U.S. at 307 (quoting *Chevron*, 467 U.S. at 843); *see also* United States v. Eurodif S.A., 555 U.S. 305, 316 n.7 (2009).

78. *See City of Arlington*, 569 U.S. at 297–98.

79. *See* Demand Response Compensation in Organized Wholesale Energy Markets, 76 Fed. Reg. 16,658, 16,658–60 (Mar. 24, 2011) (codified at 18 C.F.R. § 35.28).

80. EPA v. EME Homer City Generation, L.P., 134 S. Ct. 1584, 1609–10 (2014).

extends, and to interpret this broadly. This Supreme Court extension of substantive and procedural deference enlarges the field of federal authority under the Constitution.

V. NEW REQUIREMENTS FOR SUSTAINABLE REGULATORY AUTHORITY

A. Supreme Court Michigan *Decision*

The third key decision of the Supreme Court, sua sponte fundamentally reshaped the law by injecting a new prism of economics in the federal exercise of power on sustainability decisions. In *Michigan v. EPA*,[81] the Supreme Court, for the first time, elevated economic calculation as a newly required dimension prerequisite to certain federal regulations. The Obama Administration Environmental Protection Agency ("EPA") promulgated its Mercury and Air Toxics Standards ("MATS") rule as part of its sustainability initiatives to reign-in coal use.[82] The final rule set standards for all hazardous air pollutants emitted by coal-fired and oil-fired electric generating units with a generation capacity of twenty-five megawatts or greater.[83] MATS is specifically aimed at reducing power plants' emissions only of hazardous air pollutants, including arsenic, chromium, nickel, hydrochloric acid and hydrofluoric acid, in addition to mercury.[84]

EPA estimated the MATS rule would impose approximately $9.6 billion in costs annually on the U.S. economy while realizing direct public hazardous pollutant benefits of $4–5 million annually.[85] The costs of complying with

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81. 135 S. Ct. 2699 (2015).

82. *Mercury and Air Toxics Standards: Basic Information About Mercury and Air Toxics Standards*, EPA, https://www.epa.gov/mats/basic-information-about-mercury-and-air-toxics-standards (last updated June 8, 2017) [hereinafter *Mercury and Air Toxics Standards*].

83. National Emission Standards, 77 Fed. Reg. 9304, 9309 (Feb. 16, 2012) (codified at 40 C.F.R. pts. 60 & 63); *Mercury and Air Toxics Standards*, *supra* note 82.

84. ENVTL. PROT. AGENCY, REDUCING TOXIC POLLUTION FROM POWER PLANTS: FINAL MERCURY AND AIR TOXICS STANDARDS (MATS) 2 (2011), https://www.epa.gov/sites/production/files/2015-11/documents/20111216matspresentation.pdf.

85. *Michigan*, 135 S. Ct. at 2705–06 (citing National Emission Standards, 77 Fed. Reg. at 9326); s*ee IPM Analysis of the Final Mercury and Air Toxics Standards (MATS)*, EPA, https://www.epa.gov/airmarkets/ipm-analysis-final-mercury-and-air-toxics-standards-mats (last visited Mar. 10, 2018); *MATS Policy Case*, EPA, https://www.epa.gov/sites/production/files/2015-08/mats_policy_case_0.zip (last visited Mar. 10, 2018). According to the result of EPA's IPM data run, the total cost to the power industry without the MATS rule is $144.25 billion in 2015, $155.32 billion in 2020, and $201.35 billion in 2030. *MATS Base Case*, EPA, https://www.epa.gov/sites/production/files/2015-08/mats_base_case_0.zip (last visited Mar. 10, 2018). With the MATS rule in place, the cost to

the regulation were somewhere in the vicinity of 2000 times more than its estimated *direct* benefits of reducing coal-power plants' hazardous air pollution.[86] During oral arguments before the Supreme Court, several members of the Court were critical of EPA cost-benefit analysis which attributed most of these annual public health benefits to reduction of fine particulate matter and other pollutants which were not considered hazardous pollutants nor regulated under these MATS mercury standards.[87] The narrow majority in *Michigan* stated that "[n]o regulation is 'appropriate' if it does significantly more harm than good."[88]

In *Michigan v. EPA*,[89] the Supreme Court had to interpret what needed to be part of the federal executive branch process when promulgating an "appropriate and necessary" standard for regulation of certain traditional carbon-emitting steam-cycle power generators.[90] The Supreme Court ruled this regulation to be illegal because the agency failed to quantify or consider the costs that the regulation imposed on the U.S. economy.[91] The Court sua sponte injected a new "cost" metric, even where the legislature did not expressly require any consideration of cost:[92]

> One would not say that it is even rational, never mind "appropriate," to impose billions of dollars in economic costs in return for a few dollars in health or environmental benefits. [EPA] must consider cost—including . . . cost of compliance—before deciding whether regulation is appropriate and necessary . . . .[93]

In defining what was a cost, the Supreme Court held that "[i]n addition, 'cost' includes more than the expense of complying with regulations; any

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the power generator industry is $153.63 billion in 2015, $163.96 billion in 2020, and $208.74 billion in 2030. *Id.* The difference in cost with and without MATS was approximately $9.6 billion in 2015. Supplemental Finding That It Is Appropriate and Necessary to Regulate Hazardous Air Pollutants from Coal- and Oil-Fired Electric Utility Steam Generating Units, 60 Fed. Reg. 24,419, 24,426 (Apr. 25, 2016) (codified at 40 C.F.R. pt. 63).

86. *Michigan*, 135 S. Ct. at 2706.

87. *Id.* at 2706–07.

88. *Id.* at 2707.

89. *Id.* at 2699.

90. 42 U.S.C. § 7412(n)(1)(A) (2012); *Michigan*, 135 S. Ct. at 2706–08.

91. *Michigan*, 135 S. Ct. at 2711–12.

92. *Id.* at 2711.

93. *Id.* at 2707, 2711. The Court in *Michigan* relied at several places on *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29 (1983), for the assertion that an agency can't entirely ignore an important aspect of the problem Congress tasked it with considering, citing *State Farm* numerous times in refusing to defer to the state agency. *Id.* at 2706–07. The author notes that this reemergence of a *State Farm*-type court review of agency rules will require a more substantial record to defend executive agency determinations.

disadvantage could be termed a cost."[94] EPA is required to "consider cost—including, most importantly, cost of compliance—before deciding whether regulation is appropriate and necessary"[95] The Court found that it will never be found "appropriate" if the return on the investment of billions of dollars is worth only a "few dollars" in health benefits.[96]

EPA stated in *Michigan v. EPA* that it did not consider cost on the record while reaching its conclusion that regulation of coal-fired power plants is "appropriate and necessary."[97] In its final Regulatory Impact Analysis ("RIA") for the MATS rule, EPA noted that the cost of the program is about $9.6 billion a year while the total direct *and* indirect benefits and ancillary "co-benefits" (from reduction of sulfur dioxide, nitrogen oxides, and particulate matter that were not the subject of the MATS regulation), is about $37 to $90 billion per year.[98] Almost all of the total benefits are from indirect so-called "co-benefits" totally unrelated to the regulated mercury and other hazardous chemical under MATS.[99] In order to reduce mercury, operation of high-emission coal-fired power plants is suppressed by the MATS regulation, which also reduces emission of other pollutants.[100]

However, opponents of the rule claimed that EPA's consideration of any co-benefit was faulty because this is double-counting the indirect benefits added to the actual direct benefits expressly addressed by the rule.[101] EPA admitted that the overwhelming majority of the total estimated MATS benefits—99.9%—are due to reduction of non-hazardous particulate matter and sulfur dioxide when the MATS rule forces coal-fired plants to shut down, which as criteria pollutants are not regulated by the MATS rule which only regulates mercury and hazardous pollutants.[102] The Supreme Court has not yet determined the issue of "double-counting."

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94. *Michigan*, 135 S. Ct. at 2707.

95. *Id.* at 2711.

96. *Id.* at 2707.

97. *Id.* at 2709–10.

98. ENVTL. PROT. AGENCY, REGULATORY IMPACT ANALYSIS FOR THE FINAL MERCURY AND AIR TOXICS STANDARDS 5-103 (2011), https://www3.epa.gov/ttnecas1/regdata/RIAs/matsriafinal.pdf.

99. *See id.* at ES-3.

100. *Mercury and Air Toxics Standards: Cleaner Power Plants*, EPA, https://www.epa.gov/mats/cleaner-power-plants (last visited Mar. 10, 2018).

101. *IER President Releases Statement on New EPA Regs*, INST. FOR ENERGY RES. (Dec. 21, 2011), http://instituteforenergyresearch.org/press/ier-president-statement-on-new-epa-regs/.

102. *See, e.g.*, DIANA FURCHTGOTT-ROTH, THE MANHATTAN INST., THE ENVIRONMENTAL PROTECTION AGENCY'S FLAWED COST-BENEFIT ANALYSIS METHODOLOGY 4 (2015) (stating that the EPA often double-counts benefits).

VI. THE 2017 SCOPE OF ALTERED PREEMPTION

The *Hughes* decision was not the first time that the Supreme Court had established a preemptive "bright line" separating federal and state regulatory authority regarding energy. Four times before, separately in 1986,[103] 1988,[104] 2003,[105] and 2008,[106] the Supreme Court had held that the Supremacy Clause negated state energy regulatory authority over wholesale transactions otherwise subject to FERC's exclusive authority. In each of these cases,[107] the Court held that wholesale power sales fall "on the federal side of the [bright] line" created by the Federal Power Act.[108] Coming forward since 2016's Supreme Court *Hughes* and *EPSA* decisions, this bright line has proved resilient in both the circuit courts and before FERC.

A. The Circuits

Subsequently, the state of North Dakota challenged the constitutionality of a Minnesota statute restricting the import of coal-fired power into Minnesota, as part of its sustainability program for reducing the state's greenhouse gas emissions by eighty percent.[109] In 2007, Minnesota passed a law regulating emissions from power plants, which did not apply to Minnesota power plants.[110] Rather, it regulated coal importation and emissions from power plants outside the state which sold power into the state, which is part of the regional mid-American ("MISO") grid.[111]

In the MISO grid, a federally regulated ISO as is the adjacent PJM ISO implicated in the *Hughes* case, "electrons flow freely without regard to state

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103. Nantahala Power & Light Co. v. Thornburg, 476 U.S. 953, 955 (1986).

104. Miss. Power & Light Co. v. Mississippi *ex rel.* Moore, 487 U.S. 354, 373–74 (1988).

105. Entergy La., Inc. v. La. Pub. Serv. Comm'n, 539 U.S. 39, 46–47 (2003).

106. *See* Morgan Stanley Capital Grp., Inc. v. Pub. Util. Dist. No. 1, 554 U.S. 527, 544–48 (2008).

107. *See* discussion *supra* Sections III–V.

108. Pub. Util. Dist. No. 1 v. FERC, 471 F.3d 1053, 1066 (9th Cir. 2006), *aff'd in part, rev'd in part sub nom.* Morgan Stanley Capital Grp., Inc. v. Pub. Util. Dist. No. 1, 554 U.S. 527 (2008) (citing the separate Supreme Court opinions in *Nantahala Power & Light Co.*, 476 U.S. at 966; and then citing *Mississippi Power & Light Co.*, 487 U.S. at 371).

109. Amended Complaint for Declaratory & Injunctive Relief at 93, North Dakota v. Heydinger, 15 F. Supp. 3d 891 (D. Minn. 2014) (No. 11 Civ. 3232).

110. MINN. STAT. § 216H.03 (2007), *invalidated by* North Dakota v. Heydinger, 825 F.3d 912 (8th Cir. 2016). This Minnesota statute provided "no person shall import or commit to import from outside the state power from a new large energy facility that would contribute to statewide power sector carbon dioxide emissions." § 216H.03 subdiv. 3.

111. North Dakota v. Heydinger, 15 F. Supp. 3d 891, 896, 909 (D. Minn. 2014).

borders, entirely under MISO's [federally approved] control."[112] North Dakota alleged that Minnesota's statute interferes with the interstate transmission and wholesale marketing of electric power in the integrated interstate region.[113] The opinion of the Eighth Circuit, as well as the trial court's, distinguished the flow of electricity as a unique thing in America.[114]

Two of these Eighth Circuit judges found that the Minnesota statute violated the Supremacy Clause of the Constitution and was preempted.[115] All judges on the Circuit panel and the trial judge agreed that the Minnesota statute was unconstitutional and struck it.[116] Judge Murphy concluded that the statute is preempted by the Federal Power Act, which grants the federal government exclusive authority over all terms for all wholesale sales of power.[117] This is consistent with the *Hughes* Supreme Court opinion.

Citing the new *EPSA* decision of the Supreme Court, the Eighth Circuit noted that federal law "'leaves no room either for direct state regulation of the prices of interstate wholesales' or for regulation that 'would indirectly achieve the same result.'"[118] There is exclusive jurisdiction at the federal level because "the price of capacity is indisputably a matter within the Commission's exclusive jurisdiction."[119]

Judge Colloton agreed with Judge Murphy that the Minnesota "statute bans wholesale sales of electric energy in interstate commerce" and therefore is preempted by the Federal Power Act.[120] Judge Colloton concluded that to the extent that the statute is not totally preempted by the Federal Power Act, it is also wholly preempted by the federal Clean Air Act.[121] The Clean Air Act promotes a cooperative federalism approach "designed so that each

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112. *Heydinger*, 825 F.3d at 921.

113. *See id.*

114. *Id.* at 921.

115. *Id.* at 923 (Murphy, J., concurring); *id.* at 928 (Colloton, J., concurring).

116. *Id.* at 922–23 (Murphy, J., concurring); *id.* at 928 (Colloton, J., concurring).

117. *Id.* at 923 (Murphy, J., concurring).

118. *Id.* at 926 (quoting FERC v. Elec. Power Supply Ass'n, 136 S. Ct. 760, 780 (2016)).

119. *Id.* at 927 (quoting New Eng. Power Generators Ass'n v. FERC, 757 F.3d 283, 290 (D.C. Cir. 2014)); *see also* Hughes v. Talen Energy Mktg., LLC, 136 S. Ct. 1288, 1292 (2016).

120. *Heydinger*, 825 F.3d at 928 (Colloton, J., concurring). Judge Colloton sought to work up from what he deemed non-constitutional claims before reaching the Commerce Clause claim and stop if he determined that the statute was preempted. *Id.* at 927–28. He considered preemption as a statutory claim which should be decided first, rather than after a constitutional claim. *Id.* at 927 (first citing Douglas v. Seacoast Prods., Inc., 431 U.S. 265, 271–72 (1977); then citing Ariz. Dream Act Coal. v. Brewer, 818 F.3d 901, 913 (9th Cir. 2016); and then citing C.E.R. 1988, Inc. v. Aetna Cas. & Sur. Co., 386 F.3d 263, 272 n.13 (3d Cir. 2004)). Judge Colloton found the Minnesota statute doubly preempted by two federal statutes, including the Federal Power Act. *Id.* at 928 (citing *Hughes*, 136 S. Ct. at 1297).

121. *Id.*

operator of a pollution source need look to only one sovereign—the State in which the source is located—for rules governing emissions."[122] Judge Colloton found Minnesota's statute to be unconstitutional and preempted by two separate federal laws governing electric power and clean air.[123]

The third judge on the Eighth Circuit panel, Judge Loken, found the Minnesota statute unconstitutional as a violation of the dormant Commerce Clause and thereby did not reach the Supremacy Clause issue.[124] Because of the unconstitutionality, Judge Loken affirmed the award of attorneys' fees for plaintiffs to be paid by the state,[125] which the entire panel affirmed.[126] Therefore, state carelessness in crossing the preempted line imposes an additional cost of attorneys' fees on state taxpayers.

A decision of the Second Circuit was in accord.[127] Approximately contemporaneously with the Maryland complaint, Vermont was challenged as to its attempt to regulate the ongoing permissions to operate an already-licensed independent electric power producer located in the state and to sell its power output wholesale in interstate commerce.[128] Vermont sought by statute and regulation to deny a license to this existing independent generation project.[129] The federal trial court held that this Vermont regulation of electric energy violated the Supremacy Clause in two different regards and was preempted by the Supremacy Clause, although in a third regard one of the preemption claims was moot.[130] The state of Vermont regulation was preempted and could not directly influence the sale of power in wholesale interstate transactions.[131]

The federal trial court held that the Federal Power Act invests FERC with "exclusive authority to regulate the transmission and sale at wholesale of electric energy in interstate commerce[,]" and struck down the state regulation as unconstitutional.[132] On appeal, the Second Circuit concurred that it was ripe to find the Vermont statute preempted on one of the three

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122. *Id.*

123. *Id.*

124. *Id.* at 913–14 (Loken, J.). Judge Loken did not address either of the preemption arguments that also were not addressed by the trial decision on appeal.

125. *Id.* at 923.

126. *Id.*

127. Entergy Nuclear Vt. Yankee, LLC v. Shumlin, 838 F. Supp. 2d 183, 190 (D. Vt. 2012), *rev'd in part, aff'd in part*, 733 F.3d 393 (2d Cir. 2013).

128. *Id.* at 189.

129. *Id.*

130. *Id.* at 242.

131. *Id.* at 243.

132. *Id.* at 233 (first quoting New Eng. Power Co. v. New Hampshire, 455 U.S. 311, 340 (1982); then citing 16 U.S.C. § 824(b)(1) (2012)).

federal claims, finding two of the three claims not yet ripe, and struck the statute as unconstitutional.[133]

B. 2016 FERC Regulatory Orders

Two parallel FERC 2016 decisions were announced shortly after the Supreme Court decisions in *Hughes*[134] and *EPSA*.[135] In addition to the Article III federal courts, FERC has quasi-judicial authority to issue binding decisions on the scope and application of federal energy jurisdiction. The challengers in these two FERC matters challenging state regulatory orders were the same named complainants in the *Hughes* and *EPSA* cases.[136] These disputes involved two multi-state electric utilities in two separate cases involving the Public Utilities Commission of Ohio ("PUCO") orders.[137] Because of length limitations, this section focuses just on one of these two parallel decisions.

Several of the Ohio investor-owned retail utilities, including First Energy and American Electric Power Company, proposed a state program where they would purchase power from their sister-wholesale market participant companies, sell that power into the PJM wholesale power market, and then purchase power from that same PJM wholesale market for their retail power customers.[138] Any loss or gain on these "in"/"out" sales would be credited or billed to retail customer bills in Ohio.[139] The mechanism approved in Ohio by the OPUC in March 2016 had significant legal parallels to what Maryland did in *Hughes*.[140]

Energy regulations have financial consequences. The office of the Ohio Consumers' Counsel estimated that if the involved generation unit output cleared the annual PJM capacity auction, the cost to Ohio's typical customers would be approximately $800 per customer, with a cumulative total cost for all customers of approximately $3.786 billion over the proposed eight-year

133. Entergy Nuclear Vt. Yankee, LLC v. Shumlin, 733 F.3d 393, 433–34 (2d Cir. 2013).

134. Hughes v. Talen Energy Mktg., LLC, 136 S. Ct. 1288 (2016).

135. FERC v. Elec. Power Supply Ass'n, 136 S. Ct. 760 (2016).

136. In the group of complainants to FERC was EPSA, the party before the Supreme Court months before in 2016 in *FERC v. Electric Power Supply Ass'n*, and Talen Energy, which in *Hughes v. Talen Energy Marketing, LLC*, was successful before the Supreme Court. *Hughes*, 136 S. Ct. at 1288; *Elec. Power Supply Ass'n*, 136 S. Ct. at 761.

137. Elec. Power Supply Ass'n, 155 FERC ¶ 61,101, 1 (2016).

138. *Id.* at 4–5.

139. *Id.* at 7. Any losses from the PJM sales under the affiliate power sales contract would be recoverable through an electric distribution service rate rider ("PPA Rider"). *Id.* at 2.

140. *Id.* at 11; s*ee also In re* Application Seeking Approval of Ohio Power Co.'s Proposal, 328 Pub. Util. Rep. (PUR) 4th 175, 175–77 (Ohio Pub. Util. Comm'n Mar. 31, 2016).

term. If the involved generation does not clear the auction, the Consumers' Counsel estimated the cost to Ohio customers at $1,100 per customer and approximately $5.15 billion cumulatively for all ratepayers over the proposed eight-year term.[141] Concern was raised that this OPUC order could undermine the operation of the FERC-approved PJM wholesale energy and capacity markets.[142]

This Ohio plan not only involved an exclusively wholesale transaction, but it was doubly wholesale: The first wholesale sale was from the utility-affiliated generation plants to their sister regulated FirstEnergy retail utility; the second wholesale sale was from those retail utilities into the PJM wholesale market.[143] FERC's decision in April 2016 upheld the challengers' complaint[144] and rescinded any application of its prior 2008 FERC waiver granted to the utility without additional FERC approval, which was not given.[145] This decision of FERC[146] parallels key aspects of the Supreme Court decision in *Hughes*:[147] Ohio's program utilizes a "contract for differences" mechanism as did Maryland in the *Hughes* matter and as did New Jersey in its similar program stricken by the Third Circuit[148] and referred to in the *Hughes* opinion.[149]

California, after enacting a feed-in-tariff requiring California state utilities to make wholesale power purchases from cogeneration facilities of less than 20 MW in size, at well in excess of market wholesale rates for power and in excess of avoided costs, was challenged before FERC.[150] The question was whether this violated the Federal Power Act and was preempted by the Supremacy Clause of the U.S. Constitution.[151] This was part of California's

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141. Elec. Power Supply Ass'n, 155 FERC ¶ 61,101, 7; *see also Federal Regulators Protect Electric Consumers*, CONSUMERS' CORNER, Aug. 2016, at 1, 3, http://online.fliphtml5.com/xdnf/ahyx/#p=1.

142. Elec. Power Supply Ass'n, 155 FERC ¶ 61,101, 15.

143. *Id.* at 14–15.

144. *Id.* at 2.

145. *Id.* at 21–22.

146. *Id.* at 2.

147. Hughes v. Talen Energy Mktg., LLC, 136 S. Ct. 1288, 1290–91 (2016).

148. PPL EnergyPlus, LLC v. Solomon, 766 F.3d 241, 246 (3d Cir. 2014).

149. *Hughes*, 136 S. Ct. at 1296 n.8.

150. 18 C.F.R. § 292.302(e)(1) (2018) ("Any data submitted by an electric utility under this section shall be subject to review by the State regulatory authority which has ratemaking authority over such electric utility."). Avoided cost is defined as "the incremental costs to an electric utility of electric energy or capacity or both which, but for the purchase from the qualifying facility or qualifying facilities, such utility would generate itself or purchase from another source." *Id.* § 292.101(b)(6).

151. Cal. Pub. Utils. Comm'n, 132 FERC ¶ 61,047, 1–2 (2010).

sustainable energy program promoting more efficient cogeneration.[152] FERC found that in-state renewable wholesale generators could receive no more than the federally-prescribed fair wholesale market prices under federal law.[153] FERC reiterated that only the federal government can regulate commerce between the states.[154] FERC, also consistent with the *Hughes* decision, held that California could have subsidized and provided financial incentives for the development of certain kinds of power with more tax subsidies,[155] or more renewable portfolio standards,[156] but not with alteration of the wholesale price of energy subject to preemptive federal authority.

The California and Ohio decisions are consistent with the "bright line" reasoning that was punctuated again by the Supreme Court in 2016 in *Hughes*.[157] The principle of the *EPSA* decision was recognized by the federal courts after it was issued.[158]

C. 2017 District Courts and Ongoing Appeals

1. New York ZECs

In 2016, the state of New York adopted the Clean Energy Standard ("CES"), an executive order by Governor Andrew Cuomo requiring that fifty percent of New York's electricity come from renewable energy sources by

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152. *Id.* at 13.

153. *Id.* at 1.

154. *Id.* at 25–26. FERC, in a later order, also reaffirmed that since a state cannot add a bonus or "adder" to the tariff that is not real and actually incurred by the buying utility, a bonus can be supplied "outside the confines of, and, in addition to the PURPA avoided cost rate, through the creation of renewable energy credits (RECs)." Cal. Pub. Utils. Comm'n, 133 FERC ¶ 61,059, 15 (2010).

155. Cal. Pub. Utils. Comm'n, 132 FERC ¶ 61,059, 29. For information on tax subsidies, see STEVEN FERREY, LAW OF INDEPENDENT POWER §§ 3:54 tbl. 3.13, 3:57 tbl. 3.15, 3:59 tbl. 3.19 (Thomson Reuters ed., 43d ed. 2017).

156. *See* Steven Ferrey, *Threading the Constitutional Needle with Care: The Commerce Clause Threat to the New Infrastructure of Renewable Power*, 7 TEX. J. OIL, GAS & ENERGY L. 59, 61–62 (2012).

157. Hughes v. Talen Energy Mktg., LLC, 136 S. Ct. 1288, 1299 (2016).

158. *Id.*; El Paso Elec. Co. v. FERC, 832 F.3d 495, 512–13 (5th Cir. 2016); North Dakota v. Heydinger, 825 F.3d 912, 927 (8th Cir. 2016) (Murphy, J., concurring); U.S. Telecomm. Ass'n v. FCC, 825 F.3d 674, 706 (D.C. Cir. 2016); Waldon v. Ariz. Pub. Serv. Co., 642 F. App'x 667, 669–70 (9th Cir. 2016); Allco Fin. Ltd. v. Klee, No. 3:15-CV-608 (CSH), 2016 WL 4414774, at *25 (D. Conn. Aug. 18, 2016); FERC v. City Power Mktg., LLC, 199 F. Supp. 3d 218, 241–43 (D.D.C. 2016); Jindeli Jewelry, Inc. v. United States, No. 14-CV-0314 (NG), 2016 WL 2593926, at *4 (E.D.N.Y. May 4, 2016); FERC v. Silkman, 177 F. Supp. 3d 683, 708–09 (D. Mass. 2016).

the year 2030.[159] According to the state, "[t]he CES is designed to fight climate change, reduce harmful air pollution, and ensure a diverse and reliable low carbon energy supply."[160] The CES requires utilities to purchase Zero Emission Credits ("ZECs"), which only apply to nuclear power generators located in the state.[161]

In an ongoing challenge, the United States District Court held that New York's ZEC program was not preempted by the Federal Power Act.[162] Indirect impacts on wholesale rates were held to be beyond the scope of FERC's authority.[163] Plaintiffs argued that, like *Hughes*, New York's ZEC program was "tethered" to the wholesale power auction.[164] The court rejected this argument, stating that the use of forecast wholesale prices to calculate the price of a ZEC credit does not constitute an unconstitutional "tether."[165] The court declared that the wholesale rate and retail rate of electricity are not entirely independent of one another.[166] While this statement about no independence of wholesale and retail power is true sequentially in terms of the flow of electric power, it is not true in terms of federal or constitutional jurisdiction. The wholesale rate and retail rate of electricity are totally, exclusively legally separated from each other by a "bright line" pursuant to the Federal Power Act and several Supreme Court decisions.[167]

As to the "tether," under this New York regulation, the ZEC prices are calculated by the utility commission using the federal estimate of the social cost of carbon and a forecast of wholesale electricity prices.[168] This mechanism directly links the ZEC subsidy value to the value of wholesale power traded through the FERC-regulated New York ISO (NYSIO) to achieve the state-specified final price—when the wholesale price of

159. *See* Press Release, Governor Andrew M. Cuomo, Governor Cuomo Announces Establishment of Clean Energy Standard that Mandates 50 Percent Renewables by 2030 (Aug. 1, 2016), https://www.governor.ny.gov/news/governor-cuomo-announces-establishment-clean-energy-standard-mandates-50-percent-renewables.

160. *Clean Energy Standard*, N.Y. ST., https://www.nyserda.ny.gov/All-Programs/Programs/Clean-Energy-Standard (last visited Mar. 9, 2018).

161. *See* Coalition for Competitive Elec., Dynegy Inc. v. Zibelman, 272 F. Supp. 3d 554, 561–62 (S.D.N.Y. 2017).

162. *See id.* at 571.

163. *Id.* at 567–68.

164. *Id.* at 570–71.

165. *Id.* at 569.

166. *Id.* at 572.

167. *See* discussion *supra* Sections III, IV.A, V.A.

168. *Zibelman*, 272 F. Supp. 3d at 562. "Specifically, for a two-year period, the price of each ZEC is the social cost of carbon less the generator's putative value of avoided greenhouse gas emissions less the amount of the forecast energy price." *Id.*

electricity increases, the value of a ZEC decreases.[169] Thus, "each qualifying nuclear generator will get an additional $17.48 for each MWh of electricity it generates (subject to a possible cap), in addition to the price the facility receives for the sale of the electricity and capacity in the [NYSIO] market."[170]

Each day, as wholesale prices in New York change, the value of the ZEC now changes to subsidize eligible nuclear projects to a state-set value above the price these privately-owned plants earn in the wholesale energy market.[171] At current wholesale prices, for every megawatt hour of energy the upstate nuclear plants sell into the FERC-jurisdictional wholesale market, according to plaintiffs, the nuclear units will receive a more than eighty percent premium over the wholesale power price attributable to the New York ZECs.[172] The Trump Administration is now on the verge of administratively changing its valuation of the social cost of carbon that is used in the formula, which would cause the New York ZEC formula to increase to top-off wholesale power prices for its nuclear reactors' power output in the FERC-regulated wholesale market.[173]

What the New York trial court does not address, is that New York made the election, as a matter of state law, to cause or compel its electric utilities to sell their old nuclear power plants to the best outside bids.[174] This transferred the ownership of these plants to unregulated companies which had and have no retail power service territory or customers to serve.[175] Therefore, whether each of these independent companies sells its nuclear power plant output back to New York utilities or to the owner's related retail sale companies, 100% of the nuclear plant output proceeds through a wholesale sale.[176] And each second of the day, 365 days per year, each of these

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169. *Id.*

170. *Id.* at 563 (quoting Complaint at 32, *Zibelman*, 272 F. Supp. 3d 554 (No. 1:16-CV-08164)). For the first two years of the ZEC program, the PSC set the ZEC price at $17.48 per MWh. *Id.* at 562–63.

171. If the wholesale market price of electricity decreases over the first two years, the bonus payments to the subsidized nuclear plants will increase above the current $17.48 per Mwh level; decreasing, in turn, if wholesale market prices increase to specified levels equated with the cost of operating the nuclear plants. *Id.*

172. Complaint, *supra* note 170, at 3–4.

173. Plaintiffs allege that because the ZEC program allows the eligible nuclear generators to participate in the NYISO auctions when they otherwise would have gone out of business, New York "is using the ZEC subsidy to exert a large depressive effect on energy and capacity prices, which one group of experts estimated at $15 billion over 12 years." *Zibelman*, 272 F. Supp. 3d at 563 (citing Complaint, *supra* note 170, at 21–22).

174. *Id.* at 560.

175. *See id.* at 574.

176. *See id.* at 573.

wholesale sales exclusively is subject only to federal authority, as is NYISO through which the sales eventually proceed.[177]

Although the ZECs may have an effect on the wholesale auction of power by creating an "adder" only for New York-sited nuclear power generation, the court held that plaintiffs did not meet their burden in showing that ZECs *directly* affect wholesale rates to an extent that clearly intrudes upon federal jurisdiction.[178] The New York district court also found that the ZEC program was not preempted under theories of conflict preemption "when the State is legitimately regulating a matter of state concern, 'FERC's exercise of its authority must accommodate' that state regulation '[u]nless clear damage to federal goals would result.'"[179] However, since New York regulators chose to have New York regulated utilities sell their nuclear power plants to unregulated exclusively wholesale market companies active in New York, while the current owners are not required by state regulation to engage in wholesale sales, this is the only option for the owners of these plants. Moreover, the district court quotes a natural gas opinion for which authority is created by the Natural Gas Act, which was enacted in a different Presidential term than, and is distinct from, the Federal Power Act which establishes federal authority over wholesale electric power, and over which the Supreme Court held that FERC authority is exclusive without accommodating coincident state regulation.[180]

New York and other states routinely attempt to dismiss any complaint regarding their energy regulation on procedural grounds and avoid a decision on the merits of the claim.[181] The Supreme Court in 2016 also refined standing requirements, underscoring that injury must be particularized personally and individually to the plaintiff, and also must be a "'concrete' injury . . . '*de facto*,' [and] must . . . exist[,]" even if not "tangible."[182] Risk of injury, even if not yet present, can be sufficient to establish standing where the risk is "certainly impending," and "fairly traceable" to the challenged action or statutes.[183] In New York State's motion to dismiss, it stated that neither the

177. *See id.* at 560.

178. *Id.* at 571–72.

179. *Id*. at 564 (quoting Nw. Cent. Pipeline Corp. v. State Corp. Comm'n of Kan., 109 S. Ct. 1262, 1280 (1989)).

180. *See supra* notes 48–51, 104–107.

181. *See* Steven Ferrey, *Solving the Multimillion Dollar Constitutional Puzzle Surrounding State "Sustainable" Energy Policy*, 49 WAKE FOREST L. REV. 121, 147 (2014); Steven Ferrey, *Carbon Outlasts the Law: States Walk the Constitutional Line*, 41 B.C. ENVTL. AFF. L. REV. 309, 333 (2014).

182. Spokeo, Inc. v. Robins, 136 S. Ct. 1540, 1548–49 (2016) (quoting *Standing*, BLACK'S LAW DICTIONARY (9th ed. 2009)).

183. Clapper v. Amnesty Int'l USA, 568 U.S. 398, 401–02 (2013).

Federal Power Act nor the Supremacy Clause provide for a private right of action,[184] therefore arguing that plaintiffs did not have standing in this case.[185] The district court found no field or conflict preemption.[186]

That said, there are issues one could raise with this decision: It characterized *Mississippi Power* as a conflict (rather than field) preemption case,[187] which it is not. Second, it leans on the concurring opinion of Justice Sotomayor in the *Hughes* case.[188] In Justice Sotomayor's concurrence, she is the only Justice categorizing the facts in *Hughes* as *conflict* preemption, with all other eight Justices in this unanimous decision of the Supreme Court finding either field preemption or express preemption.[189] Justice Sotomayor's opinion thus is isolated from all the other Justices in *Hughes* who made a field preemption holding.[190] These distinctions matter.

2. Illinois ZECs

Two nuclear plants in Illinois were in the process of shutting down permanently due to economic competition from natural gas and other alternative electric generation technologies when the owner of the two plants threatened to close them unless there were subsidies from ZECs.[191] A similar 2017 decision, involving Illinois creation and award of its own ZECs to its in-state nuclear plants, found the *Hughes* case inapposite to state RECs and ZECs.[192] The Illinois district court found that ZECs are separated from wholesale pricing, and thus from FERC rules or preemption.[193] The district court seems to elevate the assumed motive presented by the state on brief:

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184. *See* Armstrong v. Exceptional Child Ctr., Inc., 135 S. Ct. 1378, 1383 (2015) (holding that the Supremacy Clause does not create a private right of action); Mont.-Dakota Utils. Co. v. Nw. Pub. Serv. Co., 341 U.S. 246, 251 (1951) (holding the Federal Power Act provides no private right of action).

185. *Zibelman*, 272 F. Supp. 3d at 559. The state cited *Montana-Dakota Utilities Co.*, which held that the Act authorizes FERC to govern in this field, leaving "no right which courts may enforce." Reply in Support of Defendants' Motion to Dismiss Complaint Pursuant to Fed. R. Civ. P. 12(b)(6) at 10–11, *Zibelman*, 272 F. Supp. 3d 554 (No. 1:16-CV-8164) (quoting *Mont.-Dakota Utils. Co.*, 341 U.S. at 251, 254 (internal citations omitted)).

186. *Zibelman*, 272 F. Supp. 3d at 563.

187. *Id.* at 575.

188. *Id.* at 576 (citing Hughes v. Talen Energy Mktg., LLC, 136 S. Ct. 1288, 1300 (2016) (Sotomayor, J., concurring)).

189. *See Hughes*, 136 S. Ct. at 1299–1300 (Sotomayor, J., concurring).

190. *See id.*

191. Village of Old Mill Creek v. Star, Nos. 17-CV-1163, 17-CV-1164, 2017 WL 3008289, at *7 (N.D. Ill. July 14, 2017).

192. *Id.* at *9.

193. *Id.* at *7.

"the ZEC program is aimed at a certain type of electricity generation facilities. Although the ZEC program will affect wholesale electricity rates, those rates were not its target."[194]

The Illinois ZEC program employs a "price collar" causing the ZEC subsidies to decrease whenever wholesale market prices increase, and vice versa, within the limits of the "price collar."[195] Plaintiffs allege that the Illinois ZECs, by providing added payments per Mwh transacted in the FERC-regulated wholesale market, and linked to increase the prices that are set by that market, effectively supersede and replace the wholesale auction clearing price.[196] Plaintiffs note that the Supreme Court decision in *Hughes* is not distinguishable because each nuclear facility's receipt of ZEC premiums is conditioned on its participation in the FERC-approved wholesale market auction to sell its power output.[197] Plaintiffs alleged that at current wholesale prices, for every megawatt hour of energy the subsidized nuclear plants sell into the FERC-jurisdictional PJM ISO market, the nuclear units will receive a premium of more than seventy percent from Illinois ratepayers through ZECs.[198] Moreover, by placing this added ZEC cost in the Illinois retail distribution charges, even though it has nothing to do with distribution and instead is a cost of generation of power for those who choose to consume that power, all of the utilities' retail customers, including customers who elected to purchase electricity supply from competitive suppliers, have the cost of the ZEC subsidies shifted to them as a distribution charge even though they do not consume the power subsidized.[199]

Notwithstanding *Hughes*, ultimately, the trial court held that the ZEC program did not suffer the "fatal defect" in *Hughes* since there is no express condition on wholesale energy auctions, and to hold such a regulation as unlawful would intrude on states' authority to regulate energy and the environment.[200] The trial court in the Illinois ZEC challenge concluded that Illinois's ZEC program was properly severed from wholesale transactions, leading to its conclusion that the program was not preempted under principles

194. *Id.* at *10.

195. *Id.* at *16.

196. *Id*. at *33. Plaintiffs also argue that the Supreme Court's *EPSA* decision should not be read to limit FERC's jurisdiction only to those transactions that establish the amount of money a wholesale market power purchaser pays for the power.

197. *Id*. at *36–37. "*Hughes* '[cannot] be read to allow state measures that in reality intrude on exclusive federal jurisdiction just because they do not contain express language to that effect. A *de facto* implicit requirement is enough.'" *Id.* at *12 (internal citations omitted).

198. Complaint at 4, *Village of Old Mill Creek*, 2017 WL 3008289 (No. 17-CV-01164).

199. 220 ILL. COMP. STAT. 5/16-108(k) (2018); Complaint, *supra* note 198, at 20.

200. *Village of Old Mill Creek*, 2017 WL 3008289, at *13.

of field preemption.[201] This decision relies on *EPSA* recognizing "that wholesale and retail markets in electricity cannot be 'hermetically sealed' from one other. . . . [U]nder *EPSA*, a state regulation that substantially affects the quantity and terms of wholesale sales is not necessarily preempted."[202] This Illinois decision reaches back to *Hughes* as well as *EPSA*:

> Read together, *EPSA* and *Hughes* stand for the proposition that preemption applies whenever a tether to wholesale rates is indistinguishable from a direct effect on wholesale rates. The qualifier "direct" is important; influencing the market by subsidizing a participant, without subsidizing the actual wholesale transaction, is indirect and not preempted.[203]

The Illinois district court granted the state's and benefited utility's motions to dismiss the complaint, due to lack of subject-matter jurisdiction and plaintiff's failure to state a claim.[204] The court stated that when bringing a preemption claim against a state regulation under the Federal Power Act, FERC is the entity that has jurisdiction to bring a case to a federal district court, rather than private party litigants.[205] The court stated that Congress intentionally limited the private cause of action available in the Act.[206]

Again here, the complaint was dismissed for procedural grounds without reaching the merits conclusively. *Hughes* was not extended to invalidate state laws that do not include an express condition for energy source subsidy on the utility participating and clearing the wholesale auction of the interstate ISO. While this is a narrow and ultimately procedural holding, it is the most recent lower court interpretation of the application of the preemptive rulings of the Supreme Court.

3. Massachusetts Renewable Power

In 2016, the United States District Court in Massachusetts ruled that the State of Massachusetts was preempted by the Federal Power Act and its Public Utility Regulatory Policies Act ("PURPA") amendments, which establish terms and pricing principles for certain Qualifying Facilities

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201. *Id.*

202. *Id.* at *12 (citation omitted); *see also id.* ("[W]hen the state regulates what takes place in the retail market, in furtherance of its charge to improve that market, then the effect on wholesale rates is irrelevant.").

203. *Id.* at *13.

204. *Id.* at *18.

205. *Id.* at *8.

206. *Id.* at *10.

("QFs") making wholesale sales of renewable and waste-derived power to utilities.[207] Those regulations require that the QF is able to choose either a price set at the time it sells that power over a multi-year period, or the price established at the time the contractual commitment is made reflecting current and future avoided costs during the term commitment.[208] Massachusetts had a complying state regulatory policy during the 1990s, however, the state changed it to not afford the forward-looking option to QFs.[209]

The district court in 2016, after the *Hughes* and *EPSA* decisions, held that Massachusetts energy policy was preempted by these provisions of the Federal Power Act, and the non-conforming state regulation was illegal.[210] However, while ordering the Massachusetts Department of Public Utilities to change its regulations to be consistent with federal requirements, the court did not take any additional action to cause either the state or the noncomplying utility to pay any damages to the plaintiff QF, Allco, for whom both had refused any relief to for six years since it filed its original complaint.[211] As this article is written, it is approaching two years since the district court order, and Massachusetts has not reissued a complying version of its prior QF energy regulation. In the mid-1990s, a similar suit by a renewable QF to force the state energy regulatory agency to comply with the preemptive PURPA amendments to the Federal Power Act resulted in a favorable ruling by the Massachusetts Supreme Judicial Court, requiring the Massachusetts DPU to require the regulated utility to provide the QF the required twenty year contract at full avoided cost over the contract period.[212] The Massachusetts DPU and the utility took no action during the succeeding two years, until the QF project died.[213]

In each of these three recent federal district court opinions, there are issues regarding whether or not the trial court correctly applied the law.

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207. Allco Renewable Energy, Ltd. v. Mass. Elec. Co., 208 F. Supp. 3d 390, 398 (D. Mass. 2016).

208. 16 U.S.C. § 824a-3(f)(1) (2012); *Allco*, 208 F. Supp. 3d. at 393.

209. *See* 220 MASS. CODE REGS. 8.03(1)(b) (1994).

210. *Allco*, 208 F. Supp. 3d at 400.

211. *Id.* at 397.

212. Plymouth Rock Energy Assocs. v. Dep't of Pub. Utils., 648 N.E.2d 752, 756–57 (1995). The QF was a 5 MW QF facility, which the SJC determined was entitled under PURPA and the state 220 CMR 8.00 regulations, to a twenty-year QF contract at twenty-year full avoided cost (set by the most recent Massachusetts power auction in which Altresco, Inc. was the winning bidder) to be provided by a contract with the Massachusetts utility. *See* 220 MASS. CODE REGS. 8.00–8.08 (2018).

213. *See* Order Adopting Final Regulations, Mass. D.P.U. 16-64-C (July 15, 2016).

VII. NEW DIMENSIONS OF SUPREMACY

A common theme in the recent Supreme Court, circuit court, and district court energy opinions discussed above is the interpretation of the immutable "bright line" of the Federal Power Act strictly separating exclusive state retail and federal wholesale regulatory jurisdiction. However, the presence of each transaction has shifted and changed substantially in the last fifteen years. State electric restructuring and deregulation of the electric power sector dramatically altered power transactions in one-quarter of the states.[214] Massachusetts and Rhode Island adopted competition and partial deregulation of retail power in 1997,[215] and the policy then spread to thirteen states,[216] as shown in Figure 4.

As a result, there are two models, with one-quarter of states deregulated, and three-quarter of the states conventionally regulated retaining traditionally regulated monopoly retail electric sectors.[217] In most of the thirteen deregulated states, states order their regulated monopoly utilities to sell their power generation units to independent power companies to spur competition in power generation.[218] For more than a decade now, more new power generation is constructed each year by independent power ("merchant") companies than by the regulated monopoly utilities.[219] With this deregulation

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214. ELEC. ENERGY MKT. COMPETITION TASK FORCE, REPORT TO CONGRESS ON WHOLESALE AND RETAIL COMPETITION MARKETS FOR ELECTRIC ENERGY 23 (2016), http://www.ferc.gov/legal/staff-reports/competition-rpt.pdf.

215. STEVEN FERREY, ENVIRONMENTAL LAW: EXAMPLES AND EXPLANATIONS 616 (7th ed., 2016); STEVEN FERREY, LAW OF INDEPENDENT POWER, *supra* note 155, at §§ 10:12, 10:13; STEVEN FERREY, THE NEW RULES: A GUIDE TO ELECTRIC MARKET REGULATION ch. 8, app. B (Pennwell Publishers, 2000).

216. FERREY, ENVIRONMENTAL LAW, *supra* note 214, at 616; FERREY, THE NEW RULES, *supra* note 214, at ch. 8.

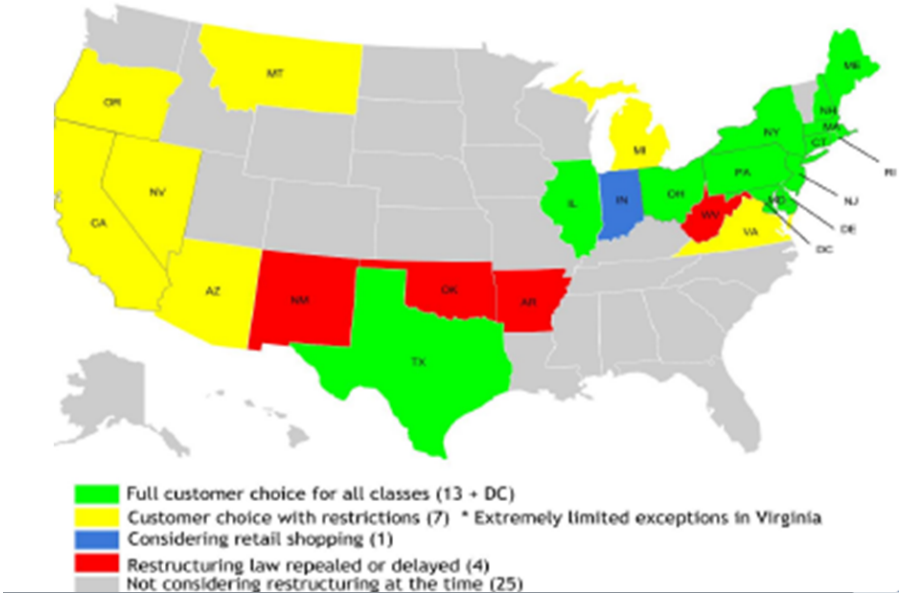
217. *See* FERREY, ENVIRONMENTAL LAW, *supra* note 214, at 616; Steven Ferrey, *Sale of Electricity*, *in* THE LAW OF CLEAN ENERGY: EFFICIENCY AND RENEWABLES 217, 218–19 (Michael B. Gerrard ed., 2011).

218. ENERGY INFO. ADMIN., THE CHANGING STRUCTURE OF THE ELECTRIC POWER INDUSTRY 2000, at 106 (2000), http://webapp1.dlib.indiana.edu/virtual_disk_library/index.cgi/4265704/FID1578/pdf/electric/056200.pdf.

219. ELEC. ENERGY MKT. COMPETITION TASK FORCE, REPORT TO CONGRESS 31 (2007), https://energy.gov/sites/prod/files/oeprod/DocumentsandMedia/EPAct_sec_1815_rpt_transmittal_letter_-_Epact_sec_1815_rpt_to_Congress.pdf ("In the 1970s, vertically integrated utility companies (investor-owned, municipal, or cooperative utilities) controlled over 95 percent of the electric generation in the United States. . . . [B]y 2004 electric utilities owned less than 60 percent of electric generating capacity. Increasingly, decisions affecting retail customers and electricity rates are split among federal, state, and new private, regional entities."); *see also* Ferrey, *Sale of Electricity*, *supra* note 216, at 217–18.

in several states,[220] along with divestiture of utility power generation capacity[221] and new power generation capacity additions now dominated by independent companies, power is now sold wholesale from merchants to divested utilities without generation capacity.[222] These are wholesale sales not subject to state retail regulatory authority. This shifts power jurisdiction from the state to the federal level under the Federal Power Act regarding these now-wholesale sales.

Figure 4. Deregulation of Retail Power



For example, an increasing share of recent power generation capacity additions is wind power, in the United States typically installed by non-utility generators. As illustrated in Figure 5, in two of the last four years on record, wind power generation has constituted forty percent of total annual power generation capacity additions in the United States.[223] Figure 6 shows that the vast majority of these new wind units are independent generation projects which engage in wholesale power transactions regulated exclusively by the

220. *See* FERREY, LAW OF INDEPENDENT POWER, *supra* note 155, § 8.3 nn.7–8.

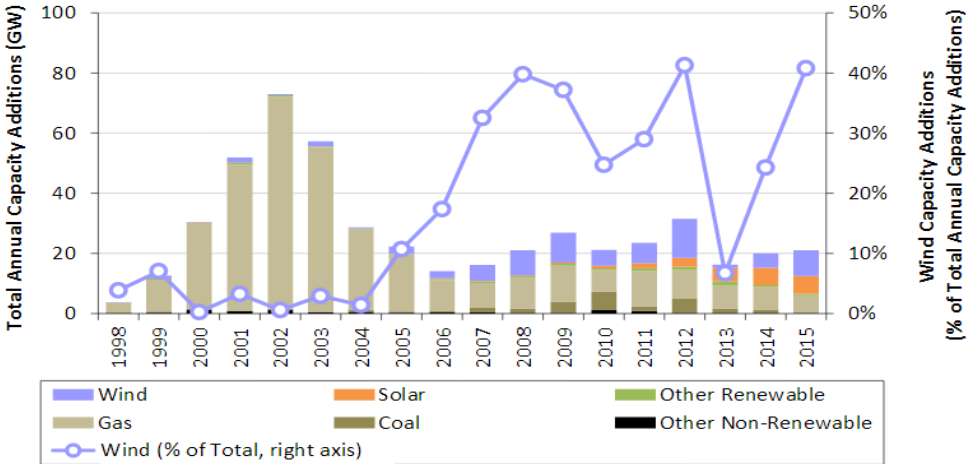
221. *See* FERREY, NEW RULES, *supra* note 214, at 280–86, 298–301.

222. *See* FERREY, LAW OF INDEPENDENT POWER, *supra* note 155, §§ 8.3, 8-16, 8-17.

223. RYAN WISER & MARK BOLINGER, U.S. DEPT. OF ENERGY, WIND TECHNOLOGIES MARKET REPORT 4 (2015), https://energy.gov/sites/prod/files/2016/08/f33/2015-Wind-Technologies-Market-Report-08162016.pdf.

federal government.[224] Independent companies, engaged in federally regulated wholesale power transactions, in 2015 built 7,290 MW, or eighty-five percent of the 8,598 MW of new sustainable wind capacity installed in the United States.[225] Of the cumulative wind power capacity installed by the end of 2015, independent developers engaged in wholesale transactions owned eighty-three percent of the capacity, while retail utilities engaged in retail sales owned fifteen percent.[226]

Figure 5: Renewable Energy Additions as Percentage of All Power Capacity Additions over Last Eighteen Years[227]



The *Hughes* opinion, construing Maryland state energy law, recognized these realities, observing that "[o]ver the past few decades, many States, including Maryland, have deregulated their energy markets" and utilities "purchase that electricity from independent power generators."[228] The Court notes that the electricity market has evolved to become a "competitive

224. *Id.*

225. *Id.* at 26.

226. *Id.* at 27. Of the fifteen percent owned by utilities, thirteen percent is owned by private investor-owned utilities which are subject to state regulation, and two percent is owned by public utilities, which generally aren't subject to state regulation. *Id.*

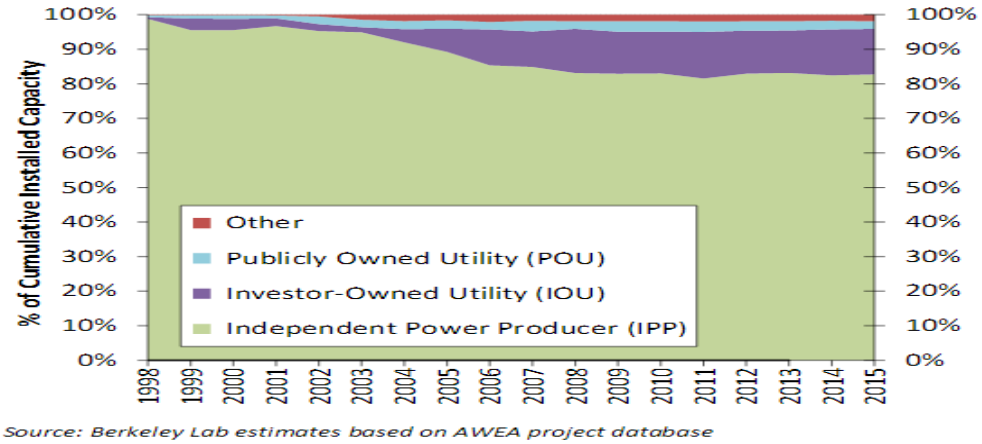
227. *Id.* at 4 fig.2.

228. Hughes v. Talen Energy Mktg., LLC, 136 S. Ct. 1288, 1292 (2016); *see* FERREY, LAW OF INDEPENDENT POWER, *supra* note 155, § 10:13.

interstate business, and FERC's role has evolved accordingly."[229] As held by the federal court of appeals in the case:

> Local utilities now obtain power largely through wholesale contracts subject to FERC's exclusive regulation, rather than through self-generated and transmitted power. . . . Although state regulators formerly took an extremely active role so as to ensure the just and reasonable retail power rates, FERC has exclusive jurisdiction over the wholesale rates that now drive the electric power market and, as a practical matter, largely determine the rates ultimately charged to the public.[230]

Figure 6. Cumulative U.S. Wind Power Capacity by Owner[231]



Source: Berkeley Lab estimates based on AWEA project database

The legal implications of this shift given increased wholesale sales of power are profound:

> When combined with federal preemption law, one crucial result of these energy market regulatory reforms has been 'a massive shift in regulatory jurisdiction from the states to FERC.' . . . The upshot of these federal and state innovations in electricity regulation is that state regulators, despite their continued authority over rates charged directly to consumers, have much less actual authority over those rates than they did.[232]

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229. *Hughes*, 136 S. Ct. at 1292 (quoting FERC v. Elec. Power Supply Ass'n, 136 S. Ct. 760, 768 (2016)).

230. Pub. Util. Dist. No. 1 v. FERC, 471 F.3d 1053, 1066–67 (9th Cir. 2006), *aff'd in part and rev'd in part sub nom.* Sempra Generation v. Pub. Utils. Comm'n of Cal., 554 U.S. 931 (2008); *see also* Entergy Nuclear Vt. Yankee, LLC v. Shumlin, 733 F.3d 393, 422 (2d Cir. 2013).

231. Data obtained from WISER & BOLINGER, *supra* note 223, at 27 fig.27.

232. *Pub. Util. Dist. No. 1*, 471 F.3d at 1066.

The confluence of these recent Supreme Court decisions on supremacy—reflecting changes in state deregualtion, divestment of utility ownership of generation facilities, and the domination of independent new generation immune from state regulation—alters the scope of application of the Supremacy Clause and power preemption. Three Supreme Court opinions, and several additional federal court opinions, have widened the penumbra of preemption as the nation navigates to more sustainable energy deployment.