SUPREME COURT ARRESTS REGULATORY LAW ON CLIMATE AND SUSTAINABLE POWER

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I. RENEWABLE POWER, THE COURTS, COMMON LAW

The Supreme Court is empowered to restrict the exercise of legal action by the other two co-equal branches of government. The Court recently issued four successive decisions that stopped the Executive Branch in its tracks: holding that federal common law was federally displaced and could not address climate, then restricting Executive Branch regulatory "tailoring," then blocking executive branch power due to failure to consider costs of its regulation, and finally enjoining executive branch regulatory authority over climate. Amid the current sprint to reduce carbon emissions by any means to preserve the climate, the Court's legal restraints truncated federal government action regarding climate change.

What the Court taketh away, an inverted common law reaction now giveth and is replacing. U.S. federal statutes in 1970 became the powerful legal mechanism for shaping environmental policy for the last half century, and therefrom common law was demoted to serving as a secondary, even minor, legal mechanism to address environmental issues. Common law has recently risen to fill voids left by these recent Court restrictions on EPA addressing climate. Most recently in a fifth climate decision addressing common law and climate, the Supreme Court in 2021 remanded and resorted how the Third Branch of government handles climate issues. This article deconstructs these several successive Supreme Court decisions

flattening federal executive branch power and addresses a significant second wave of newly empowered common law litigation now filling the courts.

Power and climate: Electric power is the preeminent U.S. technology that makes possible other essential technologies.[1] All sixteen infrastructure sectors considered "critical" by the U.S. Department of Homeland Security each require reliable electric power to function.[2] Electricity is identified as the second-most important invention since the wheel.[3] Electricity is the only invention in history which also is indispensable to operate seven of the other "top 50" technology inventions of all time.[4] Without reliable electric energy, the U.S. economy, and that of the developed world, will not function.[5]

Notwithstanding its value, more than one-quarter of global warming emissions in the United States comprised of carbon dioxide and methane emissions are from the traditional production of electricity as shown in Figure 1.[6] Disproportionately, the electric power sector, which is responsible for

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1 U.S. DEP'T OF ENERGY, QUADRENNIAL ENERGY REVIEW: TRANSFORMING THE NATION'S ELECTRICITY SYSTEM: THE SECOND INSTALLMENT OF THE QER 1–7 (2017), https://perma.cc/G3GD-2DMC (last visited May 23, 2020). 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 [https://perma.cc/6EH3-9KB5] (last visited May 23, 2020).

2 *Energy Sector*, U.S. DEP'T OF HOMELAND SEC., https://www.dhs.gov/energy-sector; [https://perma.cc/32VF-64GS] (last visited May 23, 2020).

3 James Fallows, *The 50 Greatest Breakthroughs Since the Wheel*, THE ATLANTIC (Nov. 2013), https://www.theatlantic.com/magazine/archive/2013/11/innovations-list/309536/ [https://perma.cc/NQ2B-54AN] (stating that electricity finished behind only the movable type printing press; electricity is essential to operate seven other "top 50" inventions of all time: The Internet, computers, air-conditioning, radio, television, the telephone, and semiconductors). Electronic books and messaging, displayed only through electricity, are now significantly replacing use of the movable-type press, which was invented in China in 1041. Robert Lechene, *Printing Publishing,* ENCYC. BRITANNICA, http://www.britannica.com/EBchecked/topic/477017/printing/36836/The-invention-of-typography-Gutenberg-1450 [https://perma.cc/8RY4-PRLA] (last visited June 1, 2020). After this, movable print presses were invented in Korea and by Gutenberg in Europe in approximately 1450.

4 Fallows, *supra* note 3.

5 MICHAEL BRUCH ET AL., POWER BLACKOUT RISKS: RISK MANAGEMENT OPTIONS 4 (Markus Aichinger ed., 2011), https://www.thecroforum.org/wp-content/uploads/2012/09/CRO-Position-Paper-Power-Blackout-Risks-1-1.pdf [https://perma.cc/4M8X-8C5A] (last visited May 23, 2020).

6 For more on the underestimation of the recent methane emissions on the environment domestically and internationally, respectively, *see* Steven Ferrey, *The Second Element, First Priority*, 24 B.U. J. SCI. & TECH L. 41 (2018); Steven Ferrey, *Unforced Errors, Legal Fulcrum & International Climate*, 20 MINN. J.L. SCI. & TECH. 115 (2019).

27% of global warming carbon emissions, has been asked to shoulder more than two-thirds of total U.S. responsibility for reduction of global warming emissions.[7] The first wave of Supreme Court restriction of the executive branch was initiated by four Supreme Court decisions on climate which closed-off and displaced all federal common law climate litigation and restricted the power of the federal EPA to exercise its regulatory discretion on various climate change issues:

- the Supreme Court barred federal common law litigation regarding climate change as displaced by executive branch regulation;[8]
- the Supreme Court held impermissible EPA climate change "tailoring" by regulation;[9]
- the Supreme Court restricted EPA climate change regulations for failure to consider cost;[10]
- the Supreme Court indefinitely enjoined the Obama EPA's climate change regulations[11] and six years later stuck them as in violation of the major questions doctrine.[12]

7 *Fulfilling America's Pledge*, BLOOMBERG PHILANTHROPIES 5–6, 19 (2018), https://www.bbhub.io/dotorg/sites/28/2018/09/Fulfilling-Americas-Pledge-2018.pdf [https://perma.cc/TEH2-MSMZ]; Sources of Greenhouse Gas Emissions, EPA, https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions [https://perma.cc/4EHE-R8A2] (last visited May 23, 2020).

8 Am. Elec. Co., Inc. v. Connecticut, 564 U.S. 410, 411 (2011).

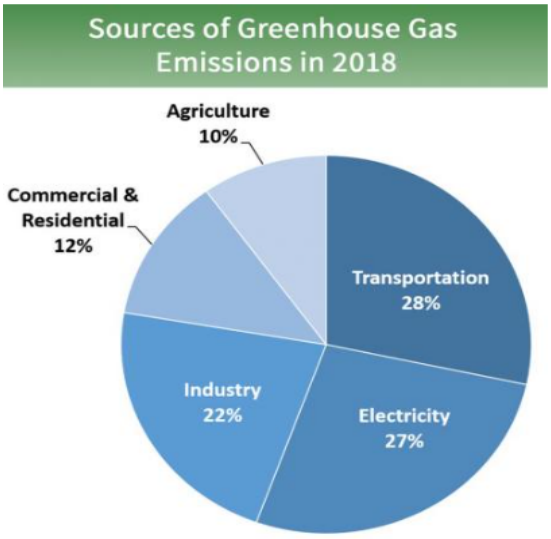
9 Util. Air Regul. Grp. v. EPA, 573 U.S. 302, 332 (2014).

10 Michigan v. EPA, 576 U.S. 743 (2015).

11 West Virginia v. EPA, 136 S. Ct. 1000 (2016).

12 West Virginia v. EPA, 142 S. Ct. 2587, 2616 (2022).

FIGURE 1[13]



Since these four Supreme Court opinions restricting both EPA climate regulation and federal common law, the composition of the Court changed. In the Supreme Court's 2015 *Michigan* decision bulleted above reversing the D.C. Circuit,[14] the pre-Justice-Kavanaugh Supreme Court majority reversed the D.C. court of appeals by citing and upholding the lone dissent of Judge Kavanaugh as a member of the Circuit panel in the circuit decision.[15] Justice Kavanaugh is now elevated to the Supreme Court along with two other recently confirmed appointees, altering the future judicial landscape.[16] This article analyzes these four Court decisions embalming and then indirectly

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13 EPA, INVENTORY OF U.S. EMISSION SOURCES AND SINKS (2020), https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks [https://perma.cc/R6X7-VJ7V].

14 *Michigan*, 576 U.S. at 758.

15 White Stallion Energy Ctr., LLC v. EPA, 748 F.3d 1222 (D.C. Cir. 2014), *rev'd*, Michigan v. EPA, 135 S. Ct. 2699 (2015); Fatima Hussein, *Kavanaugh Touts Court Loss Among His Highest Accomplishments*, BLOOMBERG L.: ENV'T REP. (July 24, 2018 6:15 PM) ("In my view, it was unreasonable—and therefore unlawful under the Administrative Procedure Act—for EPA not to consider the costs imposed by regulations in determining whether such regulations were 'appropriate and necessary' . . . . All nine Justices agreed with my position that the statute requires consideration of costs."). Judge Kavanaugh during his confirmation to the Court expressly singled out his dissent in *White Stallion* to be one of his ten most important opinions, stating "the Supreme Court's majority opinion agreed with and cited my dissent" in the 2015 case, *Michigan v. EPA*." *Id.*

16 Steven Ferrey, *Phantom Regulation: New Supreme Court Algorithm Changing Executive Power*, 3 U. PA. J.L. & PUB. AFFS. 107, 110 (2019).

resuscitating common law tort litigation to challenge the sale of fossil fuels to generate electric power and confront climate change.

Section II starts by examining climate change law and the mechanics and deployment of renewable wind power which is responsible for the largest additions to U.S. power generation each year during the last decade. Section II analyzes the unique federal/state/local split of legal jurisdiction over electric power in U.S. law, with the Supreme Court creation of a "bright line" separating the authority of each level of government. Section II analyzes local land-use zoning law that recently has frustrated siting and deployment of renewable wind power to mitigate climate change.

Section III undertakes a deeper dive distinguishing the legal line separating state from local land-use control affecting the siting of new sustainable wind power development. Notwithstanding that cities derive power from their states, there is nothing more traditionally local under the U.S. system of law than the local police power over uses of land. Section III analyzes a disparate state checkerboard:

- the authority and mechanisms of municipalities to discourage wind power through local land-use law regulation;
- states retention of the power to 'take' land for the provision of electric power lines;
- different eminent domain legal power as implemented in each of the fifty states;
- mechanisms states use to preempt the legal authority of their local communities.

On the constitutional separation of power, Section IV analyzes the recent legal void created by the Supreme Court enjoining federal executive branch regulation regarding climate. Section IV examines the new resuscitation and elevation of common law and human rights litigation claiming alleged climate change injuries. Section IV analyzes the key Supreme Court decision which displaced any legal access point through which common law remedies could address issues of climate change. Section IV also analyzes three cases in close succession in which the Supreme Court arrested federal regulation of climate matters, indirectly opening a new "back door" for common law climate litigation to enter and occupy. Also highlighted is the recent change in Court composition and the most recent 2021 Court decision on common law climate change litigation.

Section V analyzes the resulting legal resuscitation of traditional common law remedies superseding federal climate regulation as the world nears its climate "tipping points . . . that will alter regional and global environmental balances . . . irreversible within the time span of our current civilization."[17] Section V highlights how plaintiffs have not yet strategically seized on the presented legal opportunity. At stake is whether the world teeters over the "tipping" point of unmanageable climate change and its repercussions.

The next section addresses a warming climate, sustainable energy technology, and the "bright line" of exclusive bifurcated federal/state jurisdiction over the key electric power sector.

II. CLIMATE STRADDLES THE SUPREME COURT "BRIGHT LINE" OF JURISDICTION OVER THE POWER SECTOR

A. International Climate

This significant and rapid move to renewable power production is deemed essential to abate climate warming of the Planet.[18] The amount of global warming anthropogenic carbon dioxide (CO_2) emitted to the atmosphere has corresponded directly with the combustion of fossil fuels.[19] Electricity traditionally has been predominantly produced from burning fossil fuels, which currently fuel 63% of all U.S. power generation, as shown Table 1.[20] Fossil fuel combustion causes the emission of greenhouse gases which are fueling rapid climate change.[21]

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17 *New Science and Developments in Our Changing Environment*, 2009 UNEP Y.B., 21, U.N. Doc. UNEP/GC.25/INF/2.

18 NAT'L AERONAUTICS & SPACE ADMIN., *The Causes of Climate Change*, https://climate.nasa.gov/causes [https://perma.cc/FE48-3NE3] (last visited May 25, 2020).

19 *Id.*

20 *Id.*

21 *Id.*

TABLE 1[22]

U.S. utility-scale electricity generation by source, amount, and share of total in 2019[1]

Energy source	Billion kWh	Share of total
Total - all sources	4,118	
Fossil fuels (total)	2,580	62.7%
Natural Gas	1,582	38.4%
Coal	966	23.5%
Petroleum (total)	19	0.5%
Petroleum liquids	12	0.3%
Petroleum coke	7	0.2%
Other gases	14	0.3%
Nuclear	809	19.7%
Renewables (total)	720	17.5%
Hydropower	274	6.6%
Wind	300	7.3%
Biomass (total)	58	1.4%
Wood	40	1.0%
Landfill gas	10	0.2%
Municipal solid waste (biogenic)	6	0.1%
Other biomass waste	2	0.1%

22 *What is U.S. Electricity Generation by Energy Source?*, U.S. ENERGY INFO. ADMIN.: FREQUENTLY ASKED QUESTIONS (2019), https://www.eia.gov/tools/faqs/faq.php?id=427&t=3 [https://perma.cc/Y7XG-NHUG] (last visited June 1, 2020).

U.S. utility-scale electricity generation by source, amount, and share of total in 2019[1]

Energy source	Billion kWh	Share of total
Solar	72	1.8%
Photovoltaic	69	1.7%
Solar thermal	3	0.1%
Geothermal	16	0.4%
Pumped storage hydropower[3]	-5	-0.1%
Other sources[3]	13	0.3%

After 800 years of greenhouse gas (GHG) levels hovering in the atmosphere at 175–250 parts per million (ppm), levels have rapidly increased to well over 400 ppm today.[23] The United Nations International Panel on Climate Change found that there must be a 40–70% reduction of GHG emissions from 2010 levels by no later than 2050 to maintain world warming below no more than an additional 2°C.[24] And electric power is in the key technology that will or will not make this possible to achieve.

The United Nations member countries successively entered the Framework Convention on Climate Change, the Kyoto Protocol, and the Paris Agreement.[25] In 1997, the Kyoto Protocol was enacted by 192 ratified nation parties, to achieve specific commitments to reductions in greenhouse gas emissions,[26] applicable only to three dozen developed countries among

23 *See Global Carbon Dioxide Growth in 2018 Reached 4th Highest on Record*, NAT'L OCEANIC & ATMOSPHERIC ADMIN., https://www.noaa.gov/news/global-carbon-dioxide-growth-in-2018-reached-4th-highest-on-record [https://perma.cc/U79D-9Q6R] (last visited May 25, 2020); *Trends in Atmospheric Carbon Dioxide*, NAT'L OCEANIC & ATMOSPHERIC ADMIN., http://www.esrl.noaa.gov/gmd/ccgg/trends [https://perma.cc/VZ22-AE9A] (last updated June 5, 2019).

24 RAJENDRA K. PACHAURI ET AL., IPCC, CLIMATE CHANGE 2014 SYNTHESIS REPORT (2015), https://www.ipcc.ch/site/assets/uploads/2018/02/SYR_AR5_FINAL_full.pdf [https://perma.cc/DRB3-SYKH].

25 UNITED NATIONS, *Climate Change*, GLOBAL ISSUES [https://perma.cc/HS72-P7CU] (last visited Nov. 30, 2019) [hereinafter UNITED NATIONS, *Climate Change*].

26 *See id.* The Kyoto Protocol was adopted as a legally binding agreement, between the 192 ratified parties, to achieve specific reductions in greenhouse gas emissions. However, these legally mandated targets were only applicable to developed countries.

the world's 200 countries.[27] The Kyoto Protocol employed no common metric for making greenhouse gas reduction pledges, making it hard to compare the disparate and differently configured pledges made by various signatory nations.[28] Only 37 of 196 world countries, responsible collectively for less than 40% of world carbon emission, were subject to these pledges—roughly 130 other nations including large emitters China, India, and Indonesia which each are among the four most populous nations in the world categorically were not required to make any reductions in carbon emissions, and continued to increase emissions.[29]

The 2015 Paris Agreement was executed by 186 participating countries to "mobilize stronger and more ambitious climate action"[30] to keep the "global temperature rise . . . well below 2 degrees Celsius above pre-industrial levels."[31] None of these agreements contain any binding GHG emissions or financial commitments.[32] The United Nations Intergovernmental Panel on Climate Change ("IPCC") generates scientific assessments regarding climate change providing the scientific foundation of the Kyoto Protocol, and the Paris Agreement.[33] More than 100 countries have pledged to have economies that are carbon-neutral by 2050, with China, the world's most significant contributor to climate change, making that pledge a decade later by 2060.[34]

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27 Steven Ferrey, *Changing Venue of International Governance and Finance: Exercising Legal Control Over $100 Billion Per Year Climate Fund?*, 30 WIS. INT'L L.J. 26, 36 (2012).

28 *Id.* at 37–38 (emphasizing the unenforceable nature of pledges proposed in the Kyoto Protocol).

29 *Id.*

30 UNITED NATIONS, *Report of the Conference of the Parties on Its Twenty-First Session, Held in Paris From 30 November to 13 December 2015*, FCCC/CP/2015.10/Add. 1, 3 (Jan. 29, 2016) [hereinafter UNITED NATIONS, *Report of the Conference*]; UNITED NATIONS, *Climate Change*, *supra* note 25.

31 UNITED NATIONS, *Report of the Conference*, *supra* note 30, at 22.

32 *Paris Climate Agreement Q&A*, CTR. FOR CLIMATE & ENERGY SOLUTIONS, https://www.c2es.org/content/paris-climate-agreement-qa [https://perma.cc/YX7P-VL8Q] (last visited May 25, 2020); U.S. CONG. RSCH. SERV., R46204, THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE, THE KYOTO PROTOCOL, AND THE PARIS AGREEMENT: A SUMMARY (2020), https://sgp.fas.org/crs/misc/R46204.pdf [https://perma.cc/9KPC-UL3Q] (noting that the Paris Agreement and other agreements are not binding, and that the United States never ratified the Kyoto Protocol so as to be binding).

33 *See History of the IPCC*, INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (Oct. 12, 2019), https:/www.ipcc.ch/about/history/ [https://perma.cc/B2ZC-7C49]; *see also* THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, *Global Warming of 1.5ºC* (Oct. 12, 2019) (discussing the 1.5ºC temperature threshold necessary to stabilize temperature increases for the remainder of the twenty-first century).

34 Laura Millan Lombrana & Jess Shankleman, *Hitting Net Zero Emissions by 2050*, BLOOMBERG L. (Mar. 26, 9:19 AM), https://www.bloomberg.com/news/storythreads/2021-02-01/can-countries-hit-their-net-zero-emissions-goals-and-stop-climate-change [https://perma.cc/8KFQ-6JL2].

A 2019 report found that 75% of the 184 Paris Agreement pledges were "insufficient to slow climate change," and some of the pledges had yet to be implemented.[35] As of 2018 "[n]o single EU country [was] performing sufficiently in both ambition and progress in reducing carbon emissions."[36] As of 2021, despite a number of broad commitments to cut dramatically greenhouse gas emissions, an analysis of nineteen policies of developed countries concluded that these countries were not delivering on their Paris Climate Agreement goals.[37] Notwithstanding the depressive effect of the Covid pandemic, world climate emissions declined by only seven percent in 2020.[38]

The November 2021 Glasgow Conference of Parties 26 (COP26) did not commit to what was required to arrest destabilizing climate change before it's too late, according to the leader of the United Nations.[39] There were warnings more than ten years before:

- In 2008, Dr. John Holdren, Director of the White House Office of Science and Technology Policy during the Obama Administration and an expert on climate warming, warned that unless GHG emissions were made to plateau by 2015, we would already have reduced our chances of avoiding climate catastrophes by fifty percent;[40]
- In 2009, the United Nations forecasted coming "tipping points that are irreversible within the time span of our current civilization."[41]

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35 Stuart Braun, *Paris Climate Pledges 'Far Too Little, Too Late'*, DEUTSCHE WELLE: ENVIRONMENT (Nov. 5, 2019), https://www.dw.com/en/paris-climate-pledges-far-too-little-too-late/a-51110205 [https://perma.cc/UE6P-P8BS].

36 CLIMATE ACTION NETWORK EUROPE, *Off Target: Ranking of EU Countries' Ambition and Progress in Fighting Climate Change*, at 4 (June 17, 2018), https://caneurope.org/off-target-ranking-of-eu-countries-ambition-and-progress-in-fighting-climate-change [https://perma.cc/5HFN-CK2L]; *see also* Dave Keating, *Winners and Losers in the Race to Meet the Paris Climate Goals*, DEUTSCHE WELLE: ENVIRONMENT (June 16, 2018), https://www.dw.com/en/winners-and-losers-in-the-race-to-meet-the-paris-climate-goals/a-44277459 [https://perma.cc/U5DT-3HTC] (quoting Climate Action Network Europe's director Wendel Trio that "[w]hile all European Union countries signed up to the Paris Agreement, most are failing to work towards delivering on its objectives").

37 Will Mathis, *Biggest Economies' Climate Policies Fall Short of Paris Goals*, BLOOMBERG L. (Feb. 1, 2020 8:00 AM EST), https://www.bloomberg.com/news/articles/2021-02-01/biggest-economies-climate-policies-fall-short-of-paris-goals [https://perma.cc/SJ2Y-Y9ZZ].

38 Lombrana & Shankleman, *supra* note 34.

39 Laura Quiñones, *COP26 Closes With 'Compromise' Deal on Climate, but It's Not Enough, Says UN Chief*, UNITED NATIONS: UN NEWS (Nov. 13, 2021), https://news.un.org/en/story/2021/11/1105792 [https://perma.cc/77CD-VCMG].

40 Robin Chase, *Get Real on Global Warming Goals*, BOSTON GLOBE, Apr. 22, 2008, at 15A.

41 *New Science and Developments in Our Changing Environment*, *supra* note 17, at 21.

Instead, COP26 did agree on several "soft" agreements:[42]

- The Glasgow Climate Pact calls on 197 countries to report their progress towards more climate ambition a year later in late 2022 at COP27 in Egypt;[43]
- An amendment sponsored by China and India replaced proposed language to "phase-out. . . . unabated coal power and of inefficient subsidies for fossil fuels," replacing it with language about "phasing down" coal use;[44]
- More than 40 of the world's 200 countries, including major coal-users Poland, Vietnam and Chile, agreed to shift away from coal use with no firm time line;[45]
- 120 countries pledged to halt and reverse world deforestation, but not until 2030;[46]
- More than 100 countries agreed to cut emissions of methane by 2030.[47]

B. Wind Power Advance

The primary renewable energy technology deployed in the past decade is wind power,[48] and it remains the dominant new power generation technology in the United States. For each year in the last decade, wind power is the principal newly constructed power source, constituting 30% of all new power capacity constructed.[49] The increase in its usage has tripled previous estimates of U.S. wind power potential, as a majority of states are able to generate more than 1,000 Mw of potential capacity.[50]

When wind blows, the turbine blades capture the kinetic energy and rotate, turning that energy into mechanical energy: "A turbine takes the kinetic energy of a moving fluid, air in this case, and converts it to a rotary

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42 Quiñones, *supra* note 39.

43 *Id*.

44 *Id*.

45 *Id*.

46 *Id*.

47 *Id*.

48 Wind Energy Technologies Office, *Advantages and Challenges of Wind Energy*, OFFICE OF ENERGY EFFICIENCY & RENEWABLE ENERGY, https://www.energy.gov/eere/wind/advantages-and-challenges-wind-energy [https://perma.cc/3EUA-4LWD] (last visited May 23, 2020).

49 *Id*.

50 *NREL Triples Previous Estimates of U.S. Wind Power Potential*, NAT'L RENEWABLE ENERGY LAB'Y (July 2011), http://www.nrel.gov/docs/fy11osti/51555.pdf [https://perma.cc/XS9P-QWLE] (last visited May 25, 2020).

motion."[51] Wind turbines produce energy from very basic mechanical processes. Two or three rotor blades are attached to a rotor,[52] on a tall tower[53] via a nacelle containing the turbine.[54] Gears increase the rotational speed to produce electricity[55] through a turning generator.[56] This rotation turns an internal shaft connected to a gearbox, which increases the speed of rotation by a factor of 100, which then spins a generator to produce alternating current electricity.[57]

Wind power generates electricity for about 17.5 million U.S. homes.[58] Conventional regulated utilities have been supplanted as the primary sponsors and owners of newly added power generation facilities in each year of the last decade. In 2017, U.S. investor-owned electric utilities companies provided only 37.8% (1,516,629 Gwh) of total U.S. electricity generation; independent non-utility-owned facilities produced 44.3% (1,852,598 Gwh) of total electricity generation in the United States.[59] In 2014, nearly 40% of U.S. electricity was produced by independent power producers,"[60] a 400% increase from two decades before.[61] Additionally, the cost of generating

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51 *Wind Turbine*, MUSEUM OF SCI. & INDUS. CHI., https://www.msichicago.org/science-at-home/hands-on-science/wind-turbine/ - :~:text=A wind turbine transforms the,These blades turn a generator [https://perma.cc/R9DN-8H33] (last visited June 24, 2022).

52 Wind Energy Technologies Office, *How a Wind Turbine Works*, OFFICE OF ENERGY EFFICIENCY & RENEWABLE ENERGY, https://www.energy.gov/eere/wind/inside-wind-turbine [https://perma.cc/6TNC-PRXJ] (last visited June 24, 2022).

53 *Id.*; *see* Chris Martin, *Some of Tallest Wind Turbines in the U.S. Are Going Up in Texas*, BLOOMBERG (Apr. 11, 2019), https://www.bloomberg.com/news/articles/2019-04-11/some-of-tallest-wind-turbines-in-the-u-s-are-going-up-in-texas [https://perma.cc/WK5E-Z5PM] (discussing a 590-foot windmill in Texas).

54 Wind Energy Technologies Office, *supra* note 52 (explaining that a low-speed shaft attached to the rotor rotates at approximately thirty to sixty rotations per minute).

55 *Id.*

56 *Id.*

57 *See id.* (finding a typical modern turbine generates usable amounts of power over 90% of the time).

58 *See* AM. CLEAN POWER ASSOC., *U.S. Number One in the World in Wind Energy Production* (Feb. 29, 2016), https://cleanpower.org/news/u-s-number-one-in-the-world-in-wind-energy-product/ [https://perma.cc/5F2V-6RZ9] (last visited June 25, 2022).

59 Raymond L. Gifford et al., *The Breakdown of the Merchant Generation Business Model*, WILKINSON BARKER KNAUER, (June 2017), https://www.wbklaw.com/uploads/file/Articles-%20News/2017%20articles%20publications/WBK-PRG%20Merchant%20Generation%20White%20Paper(1).pdf [https://perma.cc/N2B7-ZQHG].

60 U.S. ENERGY INFO. ADMIN., ELECTRIC POWER MONTHLY WITH DATA FOR AUGUST 2015, at tbls. 1.2, 1.3, 1.4. 1.5, 1.6a (Oct. 2015) http://www.eia.gov/electricity/monthly/archive/October2015.pdf [https://perma.cc/U5UZ-YLT6].

61 Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities, 61 Fed. Reg. 21,540, 21,545, 21,549 (May 10, 1996) (to be codified at 18 C.F.R. pts. 35, 385).

electricity with wind is now approximately 5.5 cents per kWh; wind power will soon be the cheapest form of energy consumption.[62] Between 2008 and 2015, the average cost of building generating capacity for land-based wind in the United States decreased by 41%.[63]

Electric energy is the core technology that powers the American economy.[64] Power dynamics operate at the speed of light[65] pursuant to Kirchoff's Law.[66] The electric power grid must be kept in balance with its supply meeting instantaneous demand every second.[67] Electricity must be produced at just the right frequency and voltage to be compatible to be fed into the controlled transmission and distribution network.[68]

C. Exclusive Federal Authority Over Certain Power Sector Legal Elements

1. Supreme Court "Bright Line" Authority

There is a fundamental bifurcated split in U.S. law between federal and state authority over electric power that is replicated nowhere else in the American legal system or in the world. The federal government, through the Federal Energy Regulatory Commission (FERC), exercises sole legal jurisdiction over wholesale and interstate transactions involving electric

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62 *See* Eric Williams et al., *If We Keep Subsidizing Wind, Will the Cost of Wind Energy Go Down?*, PBS: SCIENCE (Aug. 6, 2017 10:39 AM), https://www.pbs.org/newshour/science/keep-subsidizing-wind-will-cost-wind-energy-go [https://perma.cc/BF96-LVPN] (discussing how much more economically competitive wind energy is in comparison to fossil fuels) (last visited May 25, 2020).

63 Dep't of Energy, *Revolution Now: The Future Arrives for Five Clean Energy Technologies—2016 Update* (Sept. 2016), at 1. *See also* Int'l Energy Agency, *Next Generation Wind and Solar Power: From Cost to Value* (2016) at 10; Mark Bolinger & Joachim Seel, *Utility-Scale Solar 2015: An Empirical Analysis of Project Cost, Performance, and Pricing Trends in the United States*, LAWRENCE BERKELEY NAT'L LAB'Y (Aug. 2016).

64 CRO Forum, POWER BLACKOUT RISKS: RISK MANAGEMENT OPTIONS, at 2 (Nov. 2011), http://www.thecroforum.org/cro-forum-positioning-on-power-blackout-risks/ [https://perma.cc/9XDH-WRSM] [hereinafter "CRO Forum"].

65 *See* Steven Ferrey, *Inverting Choice of Law in the Wired Universe: Thermodynamics, Mass, and Energy*, 45 WM. & MARY L. REV. 1839 (2004) (describing Kirschoff's law).

66 This law is also called Kirchhoff's first law, Kirchhoff's point rule, Kirchhoff's junction rule, and Kirchhoff's first rule. The principle of conservation of electric charge that at any point in an electrical circuit where charge density is not changing in time, the sum of currents flowing towards that point is equal to the sum of currents flowing away from that point. *See Kirchhoff's Law*, ISAAC PHYSICS, https://isaacphysics.org/concepts/cp_kirchhoffs_laws [https://perma.cc/YQD5-UX7Y] (last visited May 25, 2020).

67 STEVEN FERREY, ENVIRONMENTAL LAW: EXAMPLES & EXPLANATIONS 605 (8th ed. 2019).

68 *See How Wind Energy Works*, UNION OF CONCERNED SCIENTISTS (Oct. 21, 2013), http://www.ucsusa.org/clean-energy/renewable-energy/how-wind-energy-works#.WgfJuhNSw00 [https://perma.cc/ZHV9-JZV5] (relaying that since the wind speed varies, the speed of a generator could vary, producing fluctuations in the electricity).

power.[69] The Federal Power Act of 1935 provides that FERC has jurisdiction over interstate and wholesale power sales; however, its authority does not extend to "any other sale of electric energy"[70] and shall "extend only to those matters which are not subject to regulation by the States."[71] Sections 205 and 206 of the Act[72] grant to the federal government exclusively jurisdiction over to interstate and wholesale sale and transmission of electricity in the United States.[73]

FERC has exclusive authority to regulate these financial transactions[74] as well as transmission of electricity.[75] As the U.S. Supreme Court noted, it is now "possible for a customer in Vermont [to] purchase electricity from an environmentally friendly power producer in California or a cogeneration facility in Oklahoma."[76] All transmission tariffs are exclusively within FERC jurisdiction rather than within state jurisdiction,[77] extending to "transmission of electric energy in interstate commerce" and over "all facilities for such transmission or sale of electric energy."[78]

The U.S. Supreme Court has several times held that Congress meant to draw a "bright line," easily ascertained and never requiring case-by-case analysis, between state and federal jurisdiction.[79] In such situations, local and state regulation is preempted under the Supremacy Clause of the

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69 16 U.S.C. §§ 824(d), 824(e).

70 *Id.* § 824(b)(1).

71 *Id.* § 824(a).

72 16 U.S.C. §§ 824(d), 824(e).

73 *See* Pub. Util. Dist. No. 1 of Snohomish Cty. Wash. 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 of Snohomish Cty., 554 U.S. 527 (2008).

74 16 U.S.C. §§ 824(d), 824(e); Public Utility District No. 1 v. FERC, 471 F.3d 1053, 1058 (9th Cir. 2006).

75 Federal Power Act §§ 202, 209, 16 U.S.C. §§ 824a, 824a-2, 797 (2012).

76 New York v. FERC, 535 U.S. 1, 7 (2002) (internal quotation marks omitted).

77 *See* Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities (Order 1000), 76 Fed. Reg. 49,842 (Aug. 11, 2011) (to be codified at 18 C.F.R. pt. 35),

78 16 U.S.C. § 4(b); *e.g.*, Penn. Power & Light Co., 23 FERC ¶61,006, at ¶61,018, (1983); S. Co. Servs., Inc., 37 FERC ¶61,256, at ¶61,652 (1986); Fla. Power & Light Co., 40 FERC ¶61,045, at ¶61,120–21, (1987); Houlton Water Co., 60 FERC ¶61,141, at ¶61,515 (1992); N. Ind. Pub. Serv. Company, 66 FERC ¶61,213, at ¶61,488 (1994); Conn. Light and Power Co., 70 FERC ¶61,012, at ¶61,030 (1995); Cent. Vt. Pub. Serv. Corp., 84 FERC ¶61,194, at ¶61,973–75 (1998); Progress Energy, Inc., 97 FERC ¶61,141, at ¶61,628 (2001); Armstrong Energy Limited Partnership, 99 FERC ¶61,024, at ¶61,104 (2002); Niagara Mohawk Power Corp., 100 FERC ¶61,019 at ¶61,017 (2002); Barton Village, Inc., 100 FERC ¶61,244 at ¶12 (2002); Virginia Elec. & Power Co., 103 FERC ¶61,109 at ¶ 6 (2003); S. Cal. Edison Co., 106 FERC ¶61,183 at ¶ 14, 19 (2004); Midwest Indep. Transmission Sys. Operator, Inc., 106 FERC ¶61,337 at ¶ 14 & n.17 (2004); Entergy Servs., Inc., 120 FERC ¶61,020, at ¶61,028 (2007); Aquila Merch. Servs., Inc., 125 FERC ¶61,175, at ¶ 17 (2008).

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

Constitution.[80] "It is common ground that if FERC has jurisdiction over a subject, the states cannot have jurisdiction over the same subject."[81] FERC jurisdiction preempts state law if FERC is granted exclusive authority.[82] FERC has no authority over the construction of transmission facilities themselves, only tariffs for their use.[83]

Several FERC orders over the past quarter century, and federal court endorsements of these orders, have further enunciated this "bright line." FERC Order 888 created open-access transmission access for electricity by independent power producers.[84] FERC Order 2003 extended interconnection to the grid on a nondiscriminatory basis, prohibiting transmission facility owners from discriminating in their exercise of eminent domain power available to independent power developers.[85]

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80 New Eng. Power Co. v. New Hampshire, 455 U.S. 331, 338 (1982). The Supreme Court overturned an order of the New Hampshire Public Utilities Commission which restrained within the state, for the financial advantage of in-state ratepayers, low-cost hydroelectric energy produced within the state: "Our cases consistently have held that the Commerce Clause of the Constitution precludes a state from mandating that its residents be given a preferred right of access, over out-of-state consumers, to natural resources located within its borders or to the products derived therefrom." *Id.* at 338 (citation omitted). *See also* Entergy La., Inc. v. La. Pub. Serv. Comm'n, 539 U.S. 39 (2003); Miss. Power & Light Co. v. Miss. *ex rel.* Moore, 487 U.S. 354 (1988); Nantahala Power & Light Co. v. Thornburg, 476 U.S. 953 (1986); Mont.-Dakota Utils. Co. v. Nw. Pub. Serv. Co., 341 U.S. 246 (1951).

81 Miss. Power & Light Co., 487 U.S. 353, 377 (Scalia, J., concurring).

82 New Eng. Power Co. v. New Hampshire, 455 U.S. 331 (1982). The Supreme Court overturned an order of the New Hampshire Public Utilities Commission that restrained within the state, for the financial advantage of in-state ratepayers, low-cost hydroelectric energy produced within the state. It held this to be an impermissible violation of the Dormant Commerce Clause of the U.S. Constitution, Article 1, Section 8, clause 3 and the Federal Power Act: "Our cases consistently have held that the commerce clause of the Constitution precludes a state from mandating that its residents be given a preferred right of access, over out-of-state consumers, to natural resources located within its borders or to the products derived therefrom." *Id.* at 338. *See also* Montana-Dakota Co. v. Pub. Serv. Comm'n, 341 U.S. 246, 251 (1951), Nantahala Power & Light Co. v. Thornburg, 476 U.S. 953 (1986); Miss. Power & Light Co. v. Mississippi ex rel. Moore, 487 U.S. 354 (1988); Entergy Louisiana, Inc. v. La. Pub. Serv. Comm'n, 539 U.S. 39 (2003).

83 *See* Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities (Order 1000), 76 Fed. Reg. 49,842 (Aug. 11, 2011) (requiring nondiscriminatory access by all parties to transmission infrastructure). This pertains only to Commission-jurisdictional tariffs or agreements and does not require removal of references to such state or local laws or regulations from Commission-approved tariffs or agreements. *See id.* at 49,885 n.231. FERC noted that Order 1000 does not address the prudence of investment decisions nor determine which particular entity should construct any particular transmission facility, but merely to allow more entities to be considered for potential construction responsibility. *Id.* at 49,891.

84 Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities; 21,540 to 21,541.

85 Nat'l Ass'n of Regul. Util. Commr's v. FERC, 475 F.3d 1277, 1279 (D.C. Cir. 2007).

Pursuant to the Federal Power Act, FERC exercises exclusive authority over all aspects to operate power transmission facilities. FERC Order 888 creates greater competition in transmission services.[86] FERC Order 1000 provides any party an opportunity to apply to operate a transmission system and requires ISOs to eliminate discrimination regarding transmission tariffs.[87] FERC does not limit who might build the physical transmission facilities.

Independent System Operators (ISOs) and Regional Transmission Organizations (RTOs) are encouraged by FERC to manage wholesale power markets and regional transmission systems.[88] ISOs/RTOs include within their responsibilities the design and operation of wholesale power markets, transmission planning processes, and assignment of transmission investment obligations to existing or new transmission owners.[89] ISOs manage regional power transmission entities pursuant to ISO-filed tariffs that must be approved by FERC.[90] FERC Order 1000 bans certain discriminatory tariff

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86 Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities (Order 888), 61 Fed. Reg. at 21,541; *see also* STEVEN FERREY, THE NEW RULES: A GUIDE TO ELECTRIC MARKET REGULATION 41–42 (2000).

87 Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities (Order 1000), 76 Fed. Reg. at 49,842.

88 *RTOs and ISOs*, FERC: POWER SALES AND MARKETS, https://www.ferc.gov/power-sales-and-markets/rtos-and-isos [https://perma.cc/4A7C-VHB6] (last updated May 3, 2022). To view the geographic territories for each RTO and ISO, see *Power Market Structure*, U.S. ENV'T PROT. AGENCY, https://www.epa.gov/green-power-markets/power-market-structure, [https://perma.cc/B45J-CQZ8] (last visited Nov. 16, 2022). In the PJM ISO, which serves multiple Eastern states, there are two retail energy markets, a real-time (spot) and a day-ahead (forward) market. The basis of calculating the electricity price in either market is Locational Marginal Pricing. PJM's capacity-market model, the Reliability Pricing Model, was implemented in 2007 as the successor to its Capacity Credit Market design, as a series of auctions for a delivery year approximately three years in the future. PJM's demand curve, the Variable Resources Requirement, defines the price for a given capacity commitment relative to the applicable reliability requirement, defined for each constrained Locational Delivery Area. *See Electric Power Markets: National Overview*, FED. ENERGY REGUL. COMM'N (July 20, 2021), https://www.ferc.gov/electric-power-markets [https://perma.cc/GL55-5R8D] (discussing how PJM manages the electrical power grid).

89 ISOs include ISO-New England, New York ISO (NYISO), PJM, California ISO (CAISO), Midcontinent ISO (MISO), and the Southwest Power Pool (SPP). Each ISO does not own electric power assets, are non-profit, and have independent boards responsible for operating their own short-term wholesale markets.

90 Regional Transmission Organizations (RTOs) or Independent System Operators (ISOs) are FERC-approved and regulated entities that facilitate commercial electricity transfers, through a private corporation that functions as a tariff administrator. RTOs are responsible for managing both electrical and financial transactions, including scheduling transmission transactions, dispatching generation, and managing the entire accounting for the grid capacity and energy

provisions, such as state incumbent utility Rights of First Refusal (ROFRs) for new transmission facilities.[91]

2. Federal NEPA Environmental Authority

Energy projects, such as wind turbines, can trigger application of related environmental law that requires federal agency consideration of impacts. The National Environmental Policy Act (NEPA) creates, as a matter of procedural law, a requirement for every federal agency to examine potential environmental effects of any major federal action before initiating a final plan or granting permits.[92] Federal actions typically include the adoption of official policies such as rules, regulations, treaties, international conventions, and formal documents establishing or altering an agency's policies, as well as the adoption of formal plans, upon which future agency actions will be based, the adoption of official programs, or the approval of specific projects in a defined geographic area, including by permit or other regulatory decision, as well as federal and federally assisted activities.[93]

NEPA requires that an agency "withhold its decision to proceed with an action until it has taken a 'hard look' at the environmental consequences,"[94] and "adequately considered and disclosed the environmental impact of its actions" in an Environmental Impact Statement (EIS) or an Environmental Assessment (EA) that addresses whether to prepare an EIS,[95] unless such impacts are categorically excluded by law.[96] The courts continue to require

charges and transmission fees. *See* STEVEN FERREY, LAW OF INDEPENDENT POWER §§ 8:10, 10:87, 10:91 (56th ed. 2021); FERREY, THE NEW RULES, *supra* note 86, at 49–50.

91 Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities (Order 1000), 76 Fed. Reg. 49,842, 49,885 (Aug. 11, 2011); *see also* Steven Ferrey, *State Refusal Triggers Constitutional Crisis: Past is Prologue on Energy and Infrastructure*, 34 REV. LITIG. 423 (2015) (discussing some of the constitutional challenges to the FERC orders).

92 FERREY, ENVIRONMENTAL LAW, *supra* note 67, at 121–23. NEPA is a "procedural statute that mandates a process rather than a particular result." Stewart Park & Reserve Coal., Inc. v. Slater, 352 F.3d 545, 557 (2d Cir. 2003); *see also* Strycker's Bay Neighborhood Council, Inc. v. Karlen, 444 U.S. 223, 227–28 (1980) (per curiam) ("[O]nce an agency has made a decision subject to NEPA's procedural requirements, the only role for a court is to insure that the agency has considered the environmental consequences; it cannot interject itself within the area of discretion of the executive as to the choice of the action to be taken.") (internal quotation marks omitted).

93 40 C.F.R. § 1508.18(b) (2020).

94 *Stewart Park*, 352 F.3d at 557; *see also, e.g.*, Constitution Pipeline Co. v. N.Y. State Dep't of Env't Conservation, 868 F.3d 87, 100 (2d Cir. 2017) (quoting Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 350 (1989) (explaining that "'through a set of action-forcing procedures,' NEPA 'require[s] that agencies take a hard look at environmental consequences'" of a planned course of action)).

95 Balt. Gas & Elec. Co. v. Nat. Res. Def. Council, 462 U.S. 87, 98 (1983).

96 40 C.F.R. § 1508.4 (2020).

that an agency "withhold its decision to proceed with an action until it has taken a 'hard look' at the environmental consequences."[97] Council on Environmental Quality (CEQ) regulations require federal agencies to consider and balance environmental considerations and to use all means to avoid and minimize environmental harm,[98] as well as all practical means to avoid and minimize environmental harm among alternatives.[99] The Code of Federal Regulations §§ 1508.18(a), (b)(2) defines "major federal action" to encompass the "adoption of official policy," including "formal documents establishing an agency's policies which will result in or substantially alter agency programs."[100]

A federal circuit court split exists as to whether "major" action and "significant" impacts are synonymously interrelated.[101] When deciding whether a federal action is "major" and the impacts "significant," some courts have adopted a "dual standard" that considers both the scope of a federal agency's involvement in a project as well as the project's environmental impact; other courts have instead chosen to adopt a "unitary standard" in which an action that has a significant impact on the environment is inherently a "major" one.[102]

In *Hanly v. Mitchell*, plaintiffs sued to stop the construction of a federal prison prior to an EIS being prepared, and the court held that there was a dual standard regarded major federal actions compared to significant effects

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97 *See, e.g.*, *Constitution Pipeline Co.*, 868 F.3d at 100 ("'[T]hrough a set of action-forcing procedures,' NEPA 'require[s] that agencies take a hard look at environmental consequences'" of a planned course of action (quoting *Robertson*, 490 U.S. at 350)).

98 40 C.F.R. § 1505.2(b)–(c) (2010).

99 40 C.F.R. § 1505.2(c); *see* 42 U.S.C.A. § 4332(C) (2018) (detailing requirements for reports on proposed actions, including analysis of the likely impact to the environment, environmental impacts that cannot be mitigated, and alternatives).

100 40 CFR § 1508.18(a), (b)(2) (2020).

101 Some circuits will only require an EIS for federal actions that are *both* "major" and, separately, "significant" (the dual standard), while others find that "major" merely reinforces "significant" (the unitary standard). *See* FERREY, ENVIRONMENTAL LAW, *supra* note 67, at 105. The CEQ regulations defining "major federal action" adopted this second standard, stating that "[m]ajor reinforces but does not have a meaning independent of significantly." 40 C.F.R. § 1508.18. Under the unitary standard, a wind project can avoid EIS treatment if actions related to it are major federal actions but do not significantly affect the environment, or if they significantly affect the environment but are not major federal actions.

102 *Cf.* NAACP v. Med. Ctr., Inc., 584 F.2d 619 (3d Cir. 1978) (adopting the dual standard approach); Minn. Pub. Int. Rsch. Grp. v. Butz, 498 F.2d 1314 (8th Cir. 1974) (rejecting the *Hanly* standard and instead adopting the unitary standard).

of the action.[103] The appellate court granted a preliminary injunction against further construction pending a proper determination under NEPA, and then remanded the case for further proceedings.[104] In *NAACP v. Medical Center, Inc.*, the Third Circuit also adopted the dual standard,[105] as did the Seventh Circuit.[106]

In contrast, other courts find that if a federal agency is involved with a project, and the project will "significantly affect the quality of the human environment," the project is by implication a "major" one for purposes of triggering NEPA's legal provisions. Such courts construe the adjectives "major" and 'significantly" as linked when they modify their respective nouns "effects" and "impacts," which nouns as employed in the regulations are deemed synonymous; effects include ecological, aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative.[107] In *Minnesota Public Interest Research Group v. Butz*, the Eighth Circuit rejected the dual standard.[108] The CEQ regulations endorse a unitary standard, specifying that "major reinforces but does not have a meaning independent of significantly."[109]

The two prototypical "major federal actions" that could be present with a wind turbine project, pursuant to the CEQ regulations, are a federal permit required for a project and/or federal funding for the project. If the federal funds or involvement are a minor part of a project, NEPA requirements may not be triggered under the so-called "Small Handle Doctrine."[110] Under the

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103 Hanly v. Mitchell, 460 F.2d 640, 644 (2nd Cir. 1972) (adopting a dual standard, where "major" federal actions and "significant" effects were different concepts, with "major" requiring a consideration of cost, amount of planning, and time invested in the project).

104 *Id.* at 649.

105 NAACP v. Med. Ctr., Inc., 584 F.2d at 627 (3rd Cir. 1978) (explaining that a two-pronged approach would more faithfully follow the statutory language than the unitary approach and not negate the statutory word "major").

106 Scherr v. Volpe, 466 F.2d 1027, 1032 (7th Cir. 1972).

107 "*Effects* include:
(a) Direct effects, which are caused by the action and occur at the same time and place.
(b) Indirect effects, which are caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems." 40 C.F.R. § 1508.8 (2020) (emphasis in original).

108 Minn. Pub. Int. Rsch. Grp. v. Butz, 498 F.2d 1314, 1321–22 (8th Cir. 1974) ("To separate the consideration of the magnitude of federal action from its impact on the environment does little to foster the purposes of the Act . . . if the action has a significant effect, it is the intent of NEPA that it should be the subject of the detailed consideration mandated by NEPA . . . .").

109 40 C.F.R. § 1508.18 (2020).

110 *See* FERREY, ENVIRONMENTAL LAW, *supra* note 67, at 127–128.

unitary standard, there is no inquiry as to the substantive size of federal action, and the only question is whether there is significant impact on the environment from the project that has some federal involvement.[111] Under the dual standard, there must be federal action that is truly major, and there must be significant environmental impact from the project.[112]

The existence of a NEPA violation does not create a presumption that injunctive relief is available and should be granted, unless the facts present unusual circumstances.[113] That said, courts have issued permanent injunctions to halt completed projects based on violations of NEPA. The D.C. Circuit ruled that the Army Corps of Engineers had not completed a required environmental-impact statement for a 500,000-volt power transmission line by Dominion Energy across James River on 17 new towers as tall as 300 feet high each.[114]

Wind projects of less than 80 Mw in capacity[115] typically seek FERC certification as a Qualifying Facility (QF) pursuant to the Public Utility Regulatory Policies Act ("PURPA") in order to realize and benefit from various federal regulatory benefits.[116] In *Sugarloaf Citizens Association v. Federal Energy Regulatory Commission*, a community organization challenged the Federal Energy Regulatory Commission's certification of a facility as a small power producer Qualifying Facility.[117] The court noted that, in some cases, non-federal private projects can be considered "federal actions" if they "cannot begin or continue without prior approval by a federal agency" and "the agency possesses authority to exercise discretion over the outcome."[118] The plaintiffs argued that, but for FERC's certification of the facility, the

111 *See, e.g.*, City of Davis v. Coleman, 521 F.2d 661 (9th Cir. 1975).

112 *See* NAACP v. The Med. Ctr., Inc., 584 F.2d 619, 623 (3d Cir. 1978) (explaining that the court must determine both whether the agency action is "major" and whether it has significant effects on the environment, pursuant to the express language of NEPA); Landmark West! v. United States Postal Service, 840 F. Supp. 994 (S.D.N.Y. 1993) (arguing that the Postal Service contribution of $9.8 million toward a $250 million project was not a major federal action).

113 Monsanto Co. v. Geertson Seed Farms, 561 U.S. 139 (2010) (explaining that for a permanent injunction, there is a four-factor test: irreparable injury, remedies available at law are inadequate, the balance of hardships favors the party seeking relief', and the public interest favors a permanent injunction).

114 Ocean Advocates v. U.S. Army Corps of Eng'rs, 402 F.3d 846 (9th Cir. 2005).

115 16 U.S.C. 824a-3; 18 C.F.R. 292.204.

116 18 C.F.R. Section 292.207; *see also* FERREY, ENVIRONMENTAL LAW, *supra* note 67, at 631, Exhibit 12.8.

117 Sugarloaf Citizens Ass'n v. FERC, 959 F.2d 508 (4th Cir. 1992)

118 *Id.* at 512 (citing Maryland Conservation Council, Inc. v. Gilchrist, 808 F.2d 1039, 1042 (4th Cir. 1986)).

project could not continue under the existing agreement.[119] In instances where an agency's actions are judged to be mere "ministerial acts" however, the preparation of an environmental impact statement will not be required. FERC in rebuttal argued that if a project meets the size, fuel, and ownership requirements, it did not have discretion to not grant QF certification.[120]

The court relied on other circuits that had held that when an agency does not have "discretion to consider environmental values implementing a statutory requirement, its actions are ministerial and not subject to NEPA."[121] PURPA, describes a Qualifying Facility as one "which the Commission determines, by rule, meets such requirements (including requirements respecting project fuel use, fuel efficiency, and reliability) as the Commission may, by rule, prescribe."[122] The court noted that FERC had not included consideration of environmental factors in its PURPA QF requirements, but instead focused on objective criteria including fuel use, size, and ownership.[123] As a result, the court concluded that once a facility met these criteria, it was automatically eligible for certification, and that FERC did not have discretion to deny certification to any facility that met the relevant criteria.[124]

The court further held that FERC did not have enough control over the project to render it a "federal" action.[125] Because the facility could have disregarded the PURPA criteria for QF certification and still legally have continued the project without FERC certification or PURPA benefits, FERC did not "possess actual power to control the nonfederal activity" which was necessary for a federal action to exist.[126] Thus, federal FERC certification of the QF project status was "merely a ministerial act," and not a NEPA "major Federal action" requiring prior preparation and consideration by the agency of an environmental impact statement.[127]

When an EIS is required, it will address the proposed action's environmental impacts;[128] unavoidable adverse impacts;[129] and alternatives

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119 *Id.* at 512–13.
120 *Id.* at 513.
121 *Id.*
122 *Id.* (citing 16 U.S.C. §796(17)(C)).
123 *Id.*
124 *Id.*
125 *Id.*
126 *Id.* (citing Sierra Club v. Hodel, 848 F.2d 1068 (10th Cir. 1988)).
127 *Id.*
128 42 U.S.C. § 4332(2)(C)(i).
129 42 U.S.C. § 4332(2)(C)(ii).

to the proposed action.[130] NEPA implicitly requires federal agencies to discuss mitigation measures in their impact statements with discussion of "any adverse environmental effects which cannot be avoided."[131] Similar to the federal NEPA requirements, similar state law such as the Massachusetts analogue, MEPA, in certain circumstances requires state agencies to prepare an environmental impact report (EIR) that is certified as complete by the Massachusetts Executive Office of Environmental Affairs (EOEA).[132] Nonetheless, where NEPA is triggered, non-compliance has significant consequences. Courts have issued permanent injunctions to halt completed projects based on NEPA violations.[133]

In *Union Neighbors United, Inc. v. Jewell*, conservancy groups brought legal action challenging the adequacy of the U.S. Fish and Wildlife Service's (FWS's) mitigation measures prescribed for an Ohio wind facility.[134] The plans included relocating certain turbines,[135] operational restrictions,[136] and additional habitat preservation and conservation funding.[137] The plaintiff environmental group, Union Neighbors, contended that the FWS failed to give due consideration to other options that would have reduced the burden imposed by the project on the Indiana bat population.[138]

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130 42 U.S.C. § 4332(2)(C)(iii).

131 42 U.S.C.A. § 4322(2)(C)(ii).

132 *See* 310 CMR 11.00 *et seq*. The EIR describes "the nature and extent of the proposed project and its environmental impact; all measures being utilized to minimize environmental damage; any adverse short-term and long-term environmental consequences which cannot be avoided should the project be undertaken; and reasonable alternatives to the proposed project and their environmental consequences." M.G.L. c. 30, § 62B.

133 Ocean Advocates v. U.S. Army Corps of Eng'rs, 402 F.3d 846 (9th Cir. 2005) (explaining that the plaintiff did not ask the court to order demolition of a completed dock but asked the court to enjoin use pending NEPA compliance).

134 Union Neighbors United, Inc. v. Jewell, 831 F.3d 564, 571–72 (D.C. Cir. 2016).

135 *Id*. at 572 ("Specifically, the Conservation Plan moves the Action Area to a location 8 km (5 miles) away from a 2008 discovery of Indiana bats. Additionally, turbines are sited in already-developed lands where turbines would pose a reduced risk to the bats, and no turbine is sited within 2.9 km of known maternity roost trees discovered in 2009. Finally, only 10 of the 100 turbines are sited within habitat where the turbines would pose the greatest risk of impact to the Indiana bats.").

136 *Id*. ("reduc[tion in] the blade angle to the wind to slow or stop the turbine from spinning[ ] until a designated cut-in speed is reached. . . . Cut-in speeds are the wind speed at which rotors begin rotating and producing power. . . . The HCP varies the cut-in speeds up to 6.0 m/s based on the location of the turbine, the season, and the time of day.").

137 *Id*. ("Buckeye intends to acquire and protect 217 acres of suitable habitat, and to restor[e] and/or enhance . . . suboptimal habitat, . . . Buckeye has also committed $200,000 to funding research and conservation efforts.").

138 *Id*. Plaintiffs also contended that the FWS failed to ensure that the wind project "'will, to the maximum extent practicable, minimize and mitigate the impacts of such taking'" as is mandated by the ESA. *Id*. at 577 (quoting 16 U.S.C. § 1539(a)(2)(B)(ii)).

The FWS was found by the court to be aware of "more viable measures that would still take fewer bats than Buckeye's proposal—Union Neighbors repeatedly suggested using a cut-in speed higher than 6.0 m/s."[139] The court ultimately was receptive to plaintiff's arguments, noting that in considering a reasonable range of alternatives, "an analysis of a realistic mid-range alternative with a cut-in speed that would take materially fewer bats than Buckeye's proposal while allowing the project to go forward would suffice."[140] The court held that "because the Service in these circumstances did not consider any other reasonable alternative that would have taken fewer Indiana bats than Buckeye's plan, it failed to consider a reasonable range of alternatives and violated its obligations under NEPA."[141]

A similar concern was raised in *Public Employees for Environmental Responsibility v. Hopper*, where environmental groups recommended a mitigation measure "to temporarily turn off the windmills during poor visibility periods to reduce the risk of collision by birds flying through the wind farm—a process ironically called feathering the turbines."[142] The FWS declined this remedy because "feathering would modif[y] the scope of the project in a manner that is adverse to the project's stated purpose and need, have a deleterious [e]ffect on anticipated revenues, financing, and power purchasing agreements, and ultimately have a steep enough economic cost to make the measure not feasible."[143] While the court refused to decide whether the FWS was obligated to consider in more detail the plaintiff's contentions, on a technicality, the record was reopened after the lower court's ruling, and the FWS was obligated by the court to reconsider plaintiff's submissions as part of that reopened record.[144]

In the Alta East Project, planned turbines were down-sized to a lower size and relocated in response to FWS concerns.[145] However, there also are suggestions that the wind project developer was reluctant to surrender significant generation capacity as well as high-ground locations for its

139 *Id.* at 576.

140 *Id.* at 577.

141 *Id.*

142 Pub. Emps. for Env't. Resp. v. Hopper, 827 F.3d 1077, 1088–89 (D.C. Cir. 2016) (internal quotation marks omitted).

143 *Id.* at 1089 (internal quotation marks omitted).

144 *Id.* at 1089–90.

145 *Id.*

turbines.[146] All modifications were done "to optimize generation capacity while minimizing turbines located in areas posing a relatively higher risk to eagles as identified in resource studies."[147] Once the turbine modifications were discussed, Alta East states that "All other project features have been located away from the higher elevation and rugged topography that are associated with the eagle use documented to the north, west, and central areas of the project."[148]

However, the actual exercise of federal regulation through NEPA is limited. Preparing and submitting EISs is not the norm. Approximately 99% of the many thousands of federal actions each year with potentially significant environmental impacts are either excluded from consideration as "categorical exclusions" to NEPA requirements or are handled by a less-demanding "environmental assessment," either of which is much more abbreviated agency consideration compared to an EIS.[149] NEPA requires that if no EIS will be prepared, that the Finding of No Significant Impact be made "available to the public as specified in § 1506.6 . . . for 30 days before the agency makes its final determination whether to prepare an EIS and before the action may begin."[150]

The total number of all government EISs prepared and filed by federal government agencies declined from a high of 277 in 2008 to about 190 by 2014 and 2015.[151] Today, the federal government prepares less than 200

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146 "Raptors are known to concentrate along ridge tops, upwind sides of slopes, and canyons to take advantage of wind currents that are favorable for hunting and traveling, as well as for migratory flights," and these same wind currents prove the most attractive for turbine citing. NAT'L WIND COORDINATING COLLABORATIVE, WIND TURBINE INTERACTIONS WITH BIRDS, BATS, AND THEIR HABITATS 4 (2010), https://www1.eere.energy.gov/wind/pdfs/birds_and_bats_fact_sheet.pdf [https://perma.cc/3TMB-A5AA].

147 U.S. FISH & WILDLIFE SERV., FINAL EAGLE CONSERVATION PLAN FOR THE ALTA EAST WIND PROJECT 2–4 (2016).

148 *Id.* at 2–5.

149 U.S. GOV'T ACCOUNTABILITY OFF., GAO-14-370, NATIONAL ENVIRONMENTAL POLICY ACT: LITTLE INFORMATION EXISTS ON NEPA ANALYSES 8–9 (2014). The GAO estimates that approximately 94% of NEPA decisions are disposed under CEs, about 5% are covered by EAs, and less than 1% are reviewed through EISs. *Id.* at 8. If one includes draft, supplemental, and final NEPA documents government-wide, this translates to the preparation of an average of roughly 137,750 CEs, 6,820 EAs, and about 435 EISs annually for the period 2008 through 2015.

150 40 C.F.R. § 1501.6 (2021).

151 FERREY, ENVIRONMENTAL LAW, *supra* note 67, at 101. EPA data were downloaded from the EIS Database for the period January 1, 2012 through December 31, 2015, which is available at: https://cdxnodengn.epa.gov/cdx-enepa-public/action/eis/search. These results are roughly consistent with other work finding that EPA reported 253 (standard deviation of twenty-six) EISs annually during the period 1987 through 2006. Piet deWitt & Carole A. deWitt, *How Long Does It Take to Prepare an Environmental Impact Statement*, 10 ENV'T PRAC. 164, 171 (2008).

EISs annually, with less than 100 NEPA cases challenging these determinations filed in a federal district court annually by aggrieved plaintiffs; half of these cases are a challenge to the substantive elements of an EIS.[152] The FWS accounted for ten of the EISs issued by the federal government, while FERC as of 2015 was comparable to the FWS in numbers issued (at approximately seven annually).[153]

D. Residual State Authority Over the "Bright Line"

Distribution of power[154] is exclusively regulated by the states.[155] Examining state authority over retail power, every state except Nebraska has sanctioned, maintained, and regulated private companies' monopolies that distribute electric service on a retail basis. However, distribution of power is not the transmission of power[156]: Distribution is exclusively regulated by states; transmission is exclusively regulated by FERC.[157]

There is no federal authority over any siting of power generation facilties,[158] with the exception of hydroelectric facilities located on federally navigable waters of the United States.[159] Energy facility siting jurisdictionally is the province exclusively of the states plus 11 territories and two commonwealths. The "[n]eed for new power facilities, their economic feasibility, and rates and services, are areas that have been characteristically

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152 U.S. GOV'T ACCOUNTABILITY OFF., GAO-14-370, at 8. The GAO found that the "Department of Energy (DOE) reported that 95 percent of its 9,060 NEPA analyses from fiscal year 2008 to fiscal year 2012 were CEs, 2.6 percent were EAs, and 2.4 percent were EISs or supplement analyses." *Id.*; *cf.* LINDA LUTHER, U.S. CONG. RSCH. SERV., R42479, THE ROLE OF THE ENVIRONMENTAL REVIEW PROCESS IN FEDERALLY FUNDED HIGHWAY PROJECTS: BACKGROUND AND ISSUES FOR CONGRESS 5 (2012) ("The majority of FHWA-approved projects (approximately 96%) involve no significant environmental impacts and, hence, require limited documentation, analysis, or review under NEPA.").

153 The U.S. Department of Energy accounted for 2–3% of the EISs issued from 2012 through 2015 according to EPA data. *See* EPA EIS database, *supra* note 151.

154 FERREY, LAW OF INDEPENDENT POWER, *supra* note 90, at § 5:10; FERREY, ENVIRONMENTAL LAW, *supra* note 67, at 626–27; FERREY, THE NEW RULES, *supra* note 86, at 23–24, 46–47.

154 Pub. Util. Dist. No. 1 v. FERC, 471 F.3d 1053, 1058 (9th Cir. 2006); Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities, 136 FERC ¶ 61051 (2011); FERREY, ENVIRONMENTAL LAW, *supra* note 67, at 627.

156 FERREY, LAW OF INDEPENDENT POWER, *supra* note 90, at § 5:10; FERREY, ENVIRONMENTAL LAW, *supra* note 67, at 586; FERREY, THE NEW RULES, *supra* note 86, at 23–24, 46–47.

157 *What FERC Does*, FED. ENERGY REGUL. COMM'N, https://www.ferc.gov/what-ferc-does (last updated Mar. 30, 2022); FERREY, ENVIRONMENTAL LAW, *supra* note 67, at 626–627.

158 *See infra* Part III.

159 FERREY, LAW OF INDEPENDENT POWER, *supra* note 90, at § 5:47–5:58.

governed by the States."[160] And states authorize the actual construction of transmission facilities, but not their terms of operation, which is an area exclusively within federal authority.

States effectively reallocate this authority to their cities and towns, pursuant to traditional police power over local land use, when states do not create separate state siting power facility authority. When a particular land usage is authorized by a municipal statute but for limiting or monitoring purposes requires further review, a special use permit, sometimes called a conditional use permit, can additionally be required.[161] Special permits may be very broad in scope, detailed in their imposed conditions as part of the permit, and qualitative in nature. Some by-laws require a super-majority to issue a special use permit, such as a four-fifths majority vote of the issuing board.[162]

Courts generally give wide latitude to local boards on the denial of special permits, the grounds for the denial, and/or any further conditions imposed in order to obtain the permit.[163] Once a wind project developer secures a special (or conditional) use permit from the local zoning authority, the developer stands on fairly strong legal footing, particularly where the local zoning authority grants the conditional use permit consistent with a local wind energy system ordinance.[164] There is reserved discretion of local zoning boards in deciding whether to issue a conditional special use permit to an

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160 Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n, 461 U.S. 190, 205 (1983); *see also* Frost v. Corp. Comm'n, 278 U.S. 515, 534 (1929) (noting that "the Federal Constitution imposes no limits upon the State's discretion" in giving a franchise to operate a public utility).

161 Coastal Ready-Mix Concrete Co. v. Bd. of Comm'rs of Town of Nags Head, 265 S.E.2d 379, 381 (N.C. 1980).

162 *See* PATRICIA SALKIN, AMERICAN LAW OF ZONING § 14:4 (5th ed. 2020) (explaining that a finding of a special permit application is sometimes subject to local government approval, and the local government in question may have imposed a supermajority voting requirement).

163 *See, e.g.*, Manning v. Bos. Redev. Auth., 509 N.E.2d 1173, 1179 (Mass. 1987) (noting that "substantial deference" must be granted to boards' interpretation of local zoning code); Fitzsimonds v. Bd. of Appeals of Chatham, 484 N.E.2d 113, 116 (Mass. 1985) (explaining that a local board's interpretation of a by-law is valuable because of its intimate knowledge of the by-law); Berkshire Power Dev., Inc. v. Zoning Bd. of Appeals of Agawam, 686 N.E.2d 1088, 1091 (Mass. Ct. App. 1997) (explaining that substantial deference should be given to local authority, unless persuasive argument is put forth to the contrary).

164 Wind developers who work with the community and secure support from the neighbors are more likely to succeed than those developers who fail to work with residents. For an example of a case in which a wind developer worked to secure community members' support for a project, see George Petrisek, *Virginia Company Looking to Build Wind Farm in Potter Co.*, BRADFORD ERA (Oct. 16, 2006), https://www.windaction.org/posts/5243-virginia-company-looking-to-build-wind-farm-in-potter-co [https://perma.cc/FHQ9-JRXY].

applicant, and once issued, a court "will not substitute [its] discretion for that of the Board."[165]

Moreover, decisions of local boards are presumed correct and thereafter any project opponent or developer "has the burden of showing" that permit conditions are otherwise.[166] One example of how a local ordinance can specifically impact a proposed wind energy project was illustrated in Savoy, Massachusetts. Minuteman Wind, a Massachusetts wind developer, proposed a 12.5 Mw wind project in and around Savoy, Massachusetts.[167] While the developer prepared the special permit application, the community considered a by-law that would thereafter limit the height of wind turbines to 350 feet.[168] Given that the developer was proposing five 420-foot turbines, this proposed ordinance, if passed, could frustrate the development.[169]

III. PREEMPTION OF LOCAL LAND-USE POWER

Since the emergence of modern environmental law in the 1970s[170] and enactment between the two OPEC oil embargoes in the 1970s of federal statutes promoting renewable energy,[171] for the last half-century statutory-regulatory law has superseded and displaced common law in energy and environmental law. Before looking at the recent inversion of regulatory authority by common law litigation, the next section examines local land-use control as a legal tool relative to renewable power addressing climate change.

A. State Preemption of Land Use for Power Siting

The majority of U.S. states still allow decisions on the siting of wind projects to be handled at the local level by their municipal governments. A few states have passed legislation that limits the local government's ability to prevent wind projects or have created a system that allows such wind power

165 Roberts v. Manitowoc Cnty. Bd. of Adjustment, 721 N.W.2d 499, 502–503 (Wis. Ct. App. 2006).

166 MASS. HOUS. P'SHIP, CHAPTER 40B HANDBOOK FOR ZONING BOARDS OF APPEAL 4 (Mar. 2017), https://www.mass.gov/doc/chapter-40b-handbook-for-zoning-boards-of-appeal-march-2017/download [https://perma.cc/MU2L-XPWQ].

167 Larry Parnass, *Timeline of Wind Turbine Project in Savoy*, BERKSHIRE EAGLE (May 29, 2018), https://www.wind-watch.org/news/2018/05/30/timeline-of-wind-turbine-project-in-savoy/ [https://perma.cc/UAF4-EX4U].

168 Patrick G. Rheaume, *Turbine Project Exempt?*, BERKSHIRE EAGLE (July 6, 2006), https://www.windaction.org/posts/3379 [https://perma.cc/TL62-ZASB].

169 *Id.*

170 *See* FERREY, ENVIRONMENTAL LAW, *supra* note 67, at 43, tbl. 2.1 (explaining history of modern environmental law).

171 *Id.* at 631.

developers to appeal directly to the state siting board and thereby bypass the decision made by the local government. Only three states, California, Nevada, and Wisconsin, have legislation that preempts local ordinances to promote small wind power development and streamlines the regulatory process.[172] Six states, including Vermont, have state zoning rules that act as a default when a locality lacks regulations relevant to small wind projects.[173]

Vermont adopted a unique bifurcated state/local mechanism for siting wind power. Vermont employs two separate statutes which determine whether state or local jurisdiction, respectively, applies to energy facilities siting. Vermont Act 250 provides county government with authority over some siting decisions.[174] Vermont Act 248 exercises state preemption on certain other energy project siting.[175]

Traditionally, Vermont's large-scale utility projects have been regulated by the state under Act 248 which authorizes the Public Utility Commission (PUC) to issue a Certificate of Public Good (CPG) for its preemptive approval.[176] Projects coming under the purview of Act 248 are exempt from local zoning and any other review under Act 250.[177] Under Act 248, the PUC evaluates the public good to determine whether a project will have an undue adverse effect on natural resources, aesthetics or scenic beauty, and other things.[178]

While Act 250 does somewhat mirror elements of Act 248, the Vermont district commissions do not consider the larger public good when they evaluate a proposed project's undue adverse effect.[179] The state utility commission ultimately determined that Act 248 is the appropriate governmental mechanism exercising state authority for reviewing commercial wind proposals.[180] The state commission, when analyzing a wind project proposal's adverse effects[181] considers cumulative impact of wind development on an area, Federal Aviation Administration-required

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172 STEVEN FERREY, *Gone with the Wind: State Preemptive Power*, 79 ALB. L. REV. 1479, 1530–33 (2017).

173 *Id.* (discussing states' zoning rules).

174 VT. STAT. ANN. tit. 10, § 6001 et seq. (West 2022).

175 VT. STAT. ANN. tit. 30, § 248 (West 2022).

176 *Id.* § 248(a)(1)(B); formerly, the PUC was known as the Public Service Board.

177 VT. STAT. ANN. tit. 10, § 6001(3)(D)(ii) (West 2022).

178 VT. STAT. ANN. tit. 30, § 248(b)(5) (West 2022).

179 *See* VT. STAT. ANN. tit. 10, § 6086 (West 2022).

180 VT. COMM'N ON WIND ENERGY REGUL. POL'Y, FINDINGS AND RECOMMENDATIONS 4–14 (2004).

181 *Id.* at 4–20. *See generally* James W. Patterson, Jr., U.S. FED. AVIATION ADMIN., DEVELOPMENT OF OBSTRUCTION LIGHTING STANDARDS FOR WIND TURBINE FARMS (2005) (describing FAA lighting standards for wind projects).

lighting impacts, and the creation of end-of-life project decommissioning funds.[182]

Only Minnesota has passed legislation that completely preempts local rule.[183] Minnesota enacted the Minnesota Wind Siting Act in 1995, and wind projects over 5 Mw in size require only a state permit.[184] This state permit process preempts all local regulation.[185] If the wind power facility in Minnesota is less than 5 Mw is size, local regulations still control.[186] In 2007, the Minnesota legislature amended the Wind Siting Act to allow county boards to take over the permitting process for projects under 25 Mw following strict guidelines; six counties chose to assume this responsibility.[187]

In 2008, Ohio enacted legislation that allowed the Ohio Power Siting Board (OPSB) to oversee the development of wind facilities greater than 5 Mw and up to 50 Mw.[188] This process is only for "an economically significant wind farm" and does preempt all local regulations.[189] The application process has certain height and noise guidelines, guidelines for the design of the wind turbine as well as lot set-back regulations.[190] The OPSB decides whether or not to issue a Certificate of Environmental Compatibility and Public Need for a project to proceed.

In Oregon if the facility is a photovoltaic solar facility or an average electric generating capacity of less than 50 megawatts produced from wind energy it is not subject to state siting and is typically only local review, Energy Facility Siting Council (EFSC).[191] The EFSC site certificate preempts local regulation, and if the certificate has been issued, all applicable state and local agencies are required to issue a permit as well.[192]

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182 *Id.*

183 FERREY, LAW OF INDEPENDENT POWER, *supra* note 90, at § 6:133.80.

184 MINN. STAT. §§ 216F.01–216F07 (2021).

185 *Id.* The Wind Siting Act states, "a permit under this chapter is the only site approval required for the location of an LWECS. The site permit supersedes and preempts all zoning, building or land use rules, regulations, or ordinances adopted by regional, county, local and special purpose governments." *Id.* at § 216F.07. The process allows for a 180-day deadline for a decision from the Public Utilities Commission once any application has been determined to be complete.

186 *Id.*

187 MINN. STAT. § 216F.08 (2021).

188 OHIO REV. CODE ANN. § 4906.20 (West 2022).

189 OHIO REV. CODE ANN. § 4906.20(A) (West 2022).

190 OHIO REV. CODE ANN. § 4906.20(B)(2)(a) (West 2022).

191 OR. REV. STAT. ANN. § 4906.20(A)(8)(a) & (c) (West 2022). The EFSC in Oregon is composed of seven members who all are appointed by the governor. *Id.*

192 *See* OR. DEP'T OF ENERGY, A PUBLIC GUIDE TO ENERGY FACILITY SITING IN OREGON 6 (JULY 2020), https://www.oregon.gov/energy/facilities-safety/facilities/Documents/Fact-

In Washington, wind facilities are exempt from statewide review and are permitted through local review. However instead, the developer can choose to opt into the Washington State EFSC) review.[193] The EFSC consists of a representative from the municipality where the wind facility is proposed, but also includes a representative from five state agencies and an appointee of the governor.[194] Although the board is directed to examine any project using the applicable local land-use laws, the final decision lies with the EFSC board and preempts local rule.[195] In Washington, "a county Wind Farm Resource Overlay Zone ordinance was deemed preempted by the state's Energy Facility Site Locations Act so that the county ordinance did not bar the project."[196]

In Iowa, any project over 25 Mw requires review by the Iowa Utilities Board for a consolidated permit that preempts local zoning.[197] The board will hold a hearing on the proposed project where any local agency can comment about applicable local regulations.[198] The rules provide where a proposed project does not meet local regulations, it can still be approved by the state board.[199]

The substantive and procedural aspects of wind energy siting in the New England states are set forth in Table 2. Only two of these New England states, Connecticut and Vermont, regulate all wind power facilities siting at the state level, rather than with substantial local control. The other states pick up wind project siting authority only if the projects exceed an installed capacity of 30-100 Mw, depending on the state. So aside from the Vermont and Connecticut which preempt at the state level most wind facility siting, the other states exercise state siting authority only for energy generation

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Sheets/EFSC-Public-Guide.pdf [https://perma.cc/CU9T-BSBM] (last visited June 20, 2022) (noting that the Council's decision is binding on all state and local entities); *see also* OR. REV. STAT. § 469.401(3) (2020) (noting that a certificate binds all state entities, counties, and cities to the approval of the site).

193 WASH. ADMIN. CODE § 463–43 (2022).

194 *Id*. § 463-06-20.

195 *Id*. § 463-43-050.

196 Uma Outka, The Renewable Energy Footprint, 30 Stan. Env't. L.J. 241, 279 (2011) (discussing Residents Opposed to Kittias Turbines v. State Energy Facility Site Evaluation Council, 197 P.3d 1153 (Wash. 2008)); *see also* Rachel Rawlins & Robert Paterson, *Sustainable Buildings and Communities: Climate Change and the Case for Federal Standards*, 19 CORNELL J.L. & PUB. POL'Y 335, 382 (2010) (reviewing current state and local efforts to reduce greenhouse gas emissions in the building, land use, and transportation sectors which constitute approximately 83% of total U.S. greenhouse gas emissions, and advocating a mandatory federal building code).

197 IOWA ADMIN. CODE r. 476A.

198 *Id*. at r. 476A.5.

199 *Id*.

projects of certain larger scale of generation capacity or size of the involved land parcel in Maine's case.

One of the six New England states profiled in Table 2, Rhode Island, has preemptive state-level wind siting regulation only for large wind projects. One other state, Maine, can preempt municipal land-use if more than one municipality is involved. The other four New England states do not have always applicable preemptive authority. Table 2 compares the details of these six proximate state programs. Table 3 profiles wind siting in four other states, two with preemptive wind energy siting and two without.

TABLE 2

WIND ENERGY FACILITY PERMITTING AND SITING MATRIX FOR NEW ENGLAND[200]

State	**Connecticut**	**Maine**	**Massachusetts**
State-level Wind Regs	YES	NO	NO
Primary Siting Agency	Siting Council (Dept of Public Utility Control) – 9 member multi-agency body	Dept of Environmental Protection	Energy Facilities Siting Board – 9 member multi-agency body
State Review Trigger	Renewable energy resources generating more than 1 MW	Projects occupying more than 20 acres, large structures and subdivisions, and oil terminal facilities.	Projects 100 MW or more at gross capacity. Small scale projects address local permitting issues.
State-Level Opt-In or Preemption	UNCLEAR	PREEMPTION – if potentially significant environmental impact; effect; or more than one municipality affected.	PREEMPTION – only in special circumstances.due to delays, inconsistencies, or conditions imposed. date, only done twice.
Primary Permits Required	Certificate of Environmental Compatibility, Public Need Certificate	Planning Permit	Certificate of Environmental Impact and Public Need
Other State or Local Regulatory Requirements	Municipal zoning and inland wetland agencies may regulate and restrict.	Approval under the Natural Resources Protection Act; Noise regulated at the municipal level	MEPA certification issued; DEP permits; Office of Coastal Zone Management approval

200 Jaclyn Kahn & Laura Shields, *State Approaches to Wind Facility Siting*, NAT'L CONF. OF STATE LEGISLATURES (Sept. 2, 2020), https://www.ncsl.org/research/energy/state-wind-energy-siting.aspx#statutes [https://perma.cc/D3RM-ZQDZ].

Review Process	Final decision 12 months of acceptance of application; extendible by 180 days upon consent of applicant.		Procedural, evidentiary, decision phase at project and facility level.
Siting Guidelines	General Statutes § 16-50i (a) (2) Technical specifications	Maine Site Law Standards for development: §484.	Renewable Energy and Distributed Generation Guidebook
State (cont'd)	**Connecticut**	**Maine**	**Massachusetts**
Public Participation	Contested cases and include a hearing with full opportunity for due process by all members of the public.	Public hearings at the discretion of the DEP. Developer bears the burden of proof.	TEFSB will within 60 days conduct public hearing in locality where facility would be located and 180 days of filing conduct public evidentiary hearings.

State	**New Hampshire**	**Rhode Island**	**Vermont**
State-level Wind Regs	NO	NO	YES
Primary Siting Agency	Energy Facility Site Evaluation Committee (incl. 8 state agencies)	Energy Facility Siting Board – 3 member multi-agency body	Public Service Board (Dept of Public Service)
State Review Trigger	All generating facilities exceeding 30 MW capacity.	"Major Energy Facility" capable of operating at gross capacity of 40 MW or more.	All proposals to build wind power facilities except operated solely for on-site consumption by owner
State-Level Opt-In or Preemption	OPT-IN – at request of applicant, public or local selectmen	PREEMPTION – State level review preempts local review	UNCLEAR
Primary Permits Required	Certificate for Site and Facility with conditions	Board approval	Certificate of Public Good
Other State or Local Regulatory Requirements	N/A	Licenses issued by the Dept of Environmental Management and the Coastal Resources Management Council	The agency of natural resources shall appear as a party in any proceedings.
Review Process	Entire siting process must occur within 9 months of complete accepted application.	Final decision no later than 120 days after commence-ment of final hearings or 60 days after all testimony and	investigation within 120 days of its notice of investigation. No decision within 120 days deems approval of investment.

		evidence received, whichever is shorter	
Siting Guidelines	NH's 10-year State Energy Plan, Chapter 4: Energy Facility Siting in NH	N/A	Wind Energy Planning Resources for Utility-Scale Systems in Vermont (Oct 2002)
Public Participation	One public hearing in the county where facility located. Future hearings are adversarial.	Board holds public hearing held in one or more affected towns todetermine whether facility impact requires preliminary hearing.	PUC will hold non-technical public hearing on each petition in at least one county in which facility is proposed.

Four of these six New England and New York exercise their state authority over wind siting through dedicated energy facility siting boards, rather than through more generic utility regulatory or environmental siting agencies. This state authority preempts all local authority only in the cases of Rhode Island and Maine. In Massachusetts, state siting authority adds an additional layer, but under normal circumstances does not preempt coincident local siting authority pursuant to local ordinances unless the applicant requests preemption by either the state Energy Facilities Siting Board or the Department of Public Utilities, and such a petition is granted by the time a completed application is either acknowledged as complete or is filed.

TABLE 3

WIND ENERGY FACILITY PERMITTING AND SITING MATRIX FOR OTHER STATES

State	**New York**	**Minnesota**	**Oregon**	**Pennsylvania**
State-level Wind Regs	NO	YES	YES	NO
Primary Siting Agency	Board on Electric Generation Siting and the Environment – 7 member multi-agency body	Environmental Quality Board (multi-agency)	Energy Facility Siting Board (Office of Energy) – citizen volunteers	Local zoning boards
State Review Trigger	Electric generating facility with a capacity of 80 MW or more.	Any combination of wind turbines and associated facilities with a generating capacity of 5 MW or more	Wind energy facilities with a nominal generating capacity of 105 MW or more	N/A

State-Level Opt-In or Preemption	UNCLEAR	PREEMPTION – LWECS review preempts other environmental reviews	OPT-IN - for smaller facilities PREEMPTION local review	N/A
State (cont'd)	**New York**	**Minnesota**	**Oregon**	**Pennsylvania**
Primary Permits Required	Certificate for Environmental Compatibility and Public Need	Site Permits for Large Wind Energy Conversion Systems (LWECS)	Site Certificate	N/A
Other State or Local Regulatory Requirements	Environmental assessment under State Environmental Quality Review ; DEC air and water permit process is separate	N/A	Federal Permits – NPDES, ACnCounty road permits	Land use permits through the Department of Environmental Protection
Review Process	Decision made within 14 months of application filing;	Final decision 180 days after acceptance of application.	Contested case proceeding is mandatory under Oregon law.	
Siting Guidelines	Wind Energy Development: A Guide for Local Authorities in New York, Chapter 4:	Wind Rules as Adopted: Chapter 4401, February 7, 2002.	Oregon Siting Standards for wind facilities; OAR Chapter 345, Division 24	N/A
Public Participation	An applicant is expected to hold public meetings; Certain state and other public agencies are parties in any case.	EQB must schedule at least one public information meeting prior to end of 30 day public comment period. EQB may establish a Citizens Advisory Task Force.	Public hearing: an issue not raised at a public hearing is waived	DEP process public comment and participation

B. Eminent Domain to "Take" Energy Property

States retain two other important realms of legal authority relevant to siting new electric power technology. First, state energy regulatory commissions have exclusive authority over all siting of distribution lines

necessary to distribute electric power to consumers.[201] To date, electric power requires power distribution lines made of conductive metals to deliver the moving electrons which are electric power.[202] This authority was reviewed above.[203] Below we review conflict preemption and its operation under U.S. law.[204]

Second, states, not cities and towns, are empowered to exercise eminent domain powers within their states. Eminent domain—the ability of a public authority to take in fee simple or in easement the use of private land to serve a public purpose[205] is an essential legal mechanism when implementing any electric technology that requires a physical land-based wire extension to every consumer in the United States, regardless of where populations move or migrate, and regardless of changing land-use patterns. Both of these are inherently state power. Nuances of both aspects of state jurisdiction are examined below.

1. Conflict Preemption

Where plenary state or federal regulation is present, regulation by a lower level of government can create an effective veto of the higher-level standards. In *California Coastal Commission v. Granite Rock Co.*, Granite Rock sought declaratory and injunctive relief on the ground that California's new permit requirement was preempted by federal Forest Service regulations, the Mining Act of 1872, and the Coastal Zone Management Act.[206] The Supreme Court articulated the principle of conflict preemption, although in this particular case found no express nor conflict with federal law preemption of inferior state environmental law and state land-use planning.[207]

Under the doctrine of conflict preemption, municipal legislation may be preempted if it expressly contradicts state law or if it would undermine state legislative policies.[208] A state could preempt certain local discretion over

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201 Conn. Light and Power Co., 70 FERC ¶61,012, at ¶61,030 (1995); Cent. Vt. Pub. Serv. Corp., 84 FERC ¶61,194, at ¶61,973–75 (1998) (explaining that the federal government only regulates transmission, not distribution).

202 WiTricity, a company in Watertown, Massachusetts, invented wireless electricity, however its application to date has been extremely limited to such things as charging batteries in electric cars or similar appliances and is unsuited to the mass distribution of electricity. *See generally* WITRICITY, http://witricity.com (last visited June 1, 2020).

203 *See supra* notes 154–157.

204 *See infra* Section III.B.1.

205 Kelo v. City of New London, 545 U.S. 469, 477–78 (2005).

206 480 U.S. 572 (1987).

207 *Id.* at 584–89.

208 Thayer v. Town of Tilton, 861 A.2d 800, 804 (N.H. 2004).

wind siting expressly or impliedly.[209] Preemption of local control over wind energy siting would help promote further development of wind resources by expediting the permitting process through a single state permit rather than through various local permits.[210]

In a limited subset of situations, there also can be federal preemption of local land-use permitting decisions. Federal preemption may serve to overrule state and local control over certain types of development proposals, including telecommunications towers providing personal wireless services to local areas.[211] The federal government controls all permitting for development on federal lands, however, electric power generation on federal lands can be complicated by challenges to connections to the electric grid over adjacent lands under state and local governmental control.[212]

2. Eminent Domain

The authority to control and allocate the confiscatory power of eminent domain to private companies was recognized by the D.C. Circuit Court of Appeals to be within exclusive state discretion.[213] In *Kelo v. City of New London*, the Supreme Court broadly interpreted the required "public purpose" necessary for the use of eminent domain, holding that private development can constitute "public use."[214] Here, the Court allowed a city to exercise eminent domain power to take private property to develop an office, retail, and parking complex, and where an objective was to increase tax revenues.[215] The Court held that "public use" meant "public purpose."[216] The majority found New London's purpose to re-develop an economically distressed area was constitutionally permissible.[217]

State supreme courts have determined that no transmission lines could be sited nor could eminent domain be exercised unless there were palpable

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209 For a discussion of preemption principle, see FERREY, ENVIRONMENTAL LAW, *supra* note 67, at ch. 4.

210 *Id*. at 627.

211 *See* Telecommunications Act of 1996, 47 U.S.C. § 332(c)(7)(B)(II) (2000) (disallowing states and local government from prohibiting provisioning of wireless services).

212 Jeffery S. Dennis, Suedeen G. Kelly, Robert R. Nordhaus & Douglas W. Smith, *Federal/State Jurisdictional Split: Implications for Emerging Electricity Technologies* 8 (Lawrence Berkeley Nat'l Lab'y, 2016), https://doi.org/10.2172/1342948.

213 Nat'l Ass'n of Regul. Util. Comm'rs v. FERC, 475 F.3d 1277, 1283 (D.C. Cir. 2007).

214 545 U.S. 469 (2005).

215 *Id*. at 472.

216 *Id*. at 480.

217 *Id*. at 490.

benefits for in-state ratepayers.[218] Some states allow a utility to petition a state utility regulatory commission for an exemption from local zoning by-laws.[219] States typically may utilize eminent domain power to obtain property necessary for the production and distribution of electric power.[220]

There is a substantial difference between the degree of deference that is given to "private entities such as utilities" and public governmental bodies, in their exercise of the power of eminent domain.[221] The states exercise sovereign powers, while the power of utilities is granted by legislative act and can be revoked by the state legislature.[222] State public utility commissions often have the power to condemn private land that is not voluntarily surrendered for transmission and other utility purposes; however, utilities

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218 *See, e.g.*, Mississippi Power & Light Co. v. Conerly, 460 So. 2d 107, 113 (Miss. 1984). Courts in the same state a few years earlier had held that PURPA amendments to the Federal Power Act were an unconstitutional exercise of the Commerce Clause and a violation of the Act. FERC v. Mississippi, 456 U.S. 742, 752 (1982).

219 Such states include Massachusetts, New Jersey, and Pennsylvania. *See, e.g.*, Mass. Gen. Laws ch. 40A, § 3 (2017). To obtain this exemption in Massachusetts, a company must show: (1) that it is a public service corporation, (2) that it requires exemption from local zoning by-laws, and (3) that there is a necessity for the public convenience or welfare to use specific land or structures. Re New England Power Co., D.P.U. 89-163, 1993 WL 343567 (June 25, 1993). A "public service corporation" is a corporation that is "private in its ownership but having an appropriate franchise from the state to provide for a necessity or convenience of the general public incapable of being furnished through the ordinary channels of private competitive business and dependent for its exercise upon eminent domain or some agency of government." Att'y Gen. *ex rel.* Corp. Comm'r v. Haverhill Gaslight Co., 101 N.E. 1061, 1063 (Mass. 1913). Where the company providing the electric infrastructure is serving a public need, it can be deemed a public service corporation. Save the Bay, Inc. v. Dep't of Pub. Utils., 322 N.E.2d 742, 753 (Mass. 1975). Demonstrating the need for the exemption from location restrictive by-laws is generally not difficult. Demonstrating a reasonable necessity for convenience or welfare of the public involves a balancing test of the interest of the public versus the local interest. New York Cent. R.R. Co. v. Dep't of Pub. Utils., 199 N.E. 2d 319, 325 (Mass. 1964) (stating that the agency "is empowered and required, not only to consider the effect of a new facility upon the local community and upon persons living near by, but also to weigh the public effects of the requested exemption in the State as a whole and upon the territory served by the applicant.").

220 *See* 26 AM. JUR. 2D *Eminent Domain* § 79 (2022) ("Property may be condemned and/or transferred for redevelopment to a private entity as long as the acquisition of the property is deemed to be for a public purpose."). Eminent domain can be exercised to provide property for the generator of electric power or an intermediate company that distributes power. Id. Where the use is public, such a taking is allowed.

221 Potomac Edison Co. v. Jefferson Cnty. Plan. & Zoning Comm'n, 512 S.E.2d 576, 581 (W. Va. 1998) (citing Charleston Urb. Renewal Auth. v. Courtland Co., 509 S.E.2d 569, 578 n.6 (W. Va. 1998)).

222 West Virginia Bd. of Regents v. Fairmont, Morgantown & Pittsburgh R.R. Co., 189 S.E.2d 40, 43 (W. Va. 1972).

cannot condemn public land that is not turned over by local governments in many jurisdictions.

3. States Compared

Below, this section compares the eminent domain power exercised within six contiguous states, all of which are part of the same electric transmission grid, ISO-New England. Therefore, they share wholesale power transactions and transmission through a centralized, federally regulated authority. However, each state has a fundamentally different concept allocating eminent domain power for the siting of these facilities in their states.

Massachusetts. The 1966 "Home Rule Amendment" to the Massachusetts Constitution provides an extensive scope of powers to cities and towns to fashion local laws for the protection of public health, safety, and welfare.[223] The amendment provides that the state legislature "shall have the power to act in relation to cities and towns" as long as the statute will apply to at least two towns or more.[224] The court construction of this is that "[t]he Legislature's zoning power may be used where the interests of the public require such action and where the means employed are reasonably necessary for the accomplishment of the purpose."[225]

A Massachusetts court held that the authority of the state's Department of Public Utilities to exempt utility projects from local zoning regulations may be exercised "independently of a proceeding" decision to allow a utility to use eminent domain power.[226] Other states' courts hold that although a utility has eminent domain powers, it is not exempt from local zoning laws,[227] and local zoning ordinances are binding on a public

223 Mass. Const. art. LXXXIX (amending Mass. Const. amend. art. II); Bd. of Appeals v. Hous. Appeals Comm., 294 N.E.2d 393, 408–09 (Mass. 1973).

224 Mass. Const. art. II, § 8.

225 *Bd. of Appeals*, 294 N.E.2d at 424 (quotation omitted) (holding that state statute promoting construction of low- and moderate-income housing and preempting local zoning restrictions is constitutional).

226 Town of Framingham v. Dept. of Pub. Utils., 244 N.E.2d 281, 284–85 (Mass. 1969); see also Fort Worth & D.C. Ry. Co. v. Ammons, 215 S.W.2d 407 (Tex. Civ. App. 1948); Gulf, C. & S.F. Ry. Co. v. White, 281 S.W.2d 441 (Tex. Civ. App. 1955); Porter v. Sw. Pub. Serv. Co., 489 S.W.2d 361, 364 (Tex. Civ. App. 1972).

227 *See generally* Potomac Edison Co. v. Jefferson Cnty. Plan. & Zoning Comm'n, 512 S.E.2d 576 (W. Va. 1998) (holding "that a privately-owned public utility, which may exercise the power of eminent domain . . . is subject to land use regulations enacted by a local unit of government . . . .").

utility.[228] In Massachusetts, upon approval from the state Department of Public Utilities, any electric company may exercise eminent domain for the benefit of the public in the transmission of electricity.[229]

Vermont. Vermont, among New England states, distinctly allows any independent companies under the jurisdiction of its energy regulatory board to exercise eminent domain powers.[230] An independent power company can petition to be subject to the Public Service Board's regulation, if it chooses.[231] Vermont authorizes companies under its jurisdiction to use eminent domain,

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228 *See, e.g.*, Commonwealth Edison v. County of Lake, 540 N.E.2d 6 (Ill. App. Ct. 1989) (holding that a statute exempting poles, towers, wires, cables and conduits from zoning restrictions did not exempt public utility from county zoning ordinance); Porter, 489 S.W.2d (holding that for construction of power substation, utility must comply with ordinances because the city through its police powers can inquire into the reasonableness of the exercise of eminent domain); New York State Elec. & Gas Corp. v. Statler, 122 N.Y.S.2d 190 (N.Y. Sup. Ct. 1953) (holding that a public utility has the right to condemn property where necessary, but these rights do not exempt it from complying with the local zoning ordinances).

229 Mass. Gen. Laws ch. 164, § 72 (2004) ("Any electric company, distribution company, generation company, or transmission company or any other entity providing or seeking to provide transmission service may petition the department for authority to construct and use or to continue to use as constructed or with altered construction a line for the transmission of electricity for distribution in some definite area or for supplying electricity to itself or to another electric company or to a municipal lighting plant for distribution and sale, or to a railroad, street railway or electric railroad, for the purpose of operating it, and shall represent that such line will or does serve the public convenience and is consistent with the public interest . . . . *The department may by order authorize an electric company, distribution company, generation company, or transmission company or any other entity to take by eminent domain* under chapter 79 such lands, or such rights of way or widening thereof; or other easements therein necessary for the construction and use or continued use as constructed or with altered construction of such line along the route prescribed in the order of the department." (emphasis added)).

230 Vermont legislation makes this distinction by employing in the statute the term "public service company" (PSC), in which a company is acting to provide[] public service; this definition is in contrast to what other states may designate as a "Public Utility Company" (PUC). VT. STAT. ANN. tit. 30, § 201(a) ("As used in this chapter, the word 'company' or 'companies' means and includes individuals, partnerships, associations, corporations and municipalities, owning or conducting any public service business or property used in connection therewith and covered by the provisions of this chapter. The term 'company' or 'companies' also includes electric cooperatives organized and operating under chapter 81 of this title, the Vermont public power supply authority to the extent not inconsistent with chapter 84 of this title, and the Vermont Hydro-electric Power Authority to the extent not inconsistent with chapter 90 of this title. In the context of actions requiring prior approval under section 107 of this title, the term 'company' shall also mean any individual, partnership, association, corporation, group, syndicate, operating division, joint stock company, trust, other entity, or municipality which would be defined as a company pursuant to this section if such approval were to be granted.").

231 Vermont's statutory definition of "company" is broad and includes ". . . any individual, partnership, association, corporation, group, syndicate, operating division, joint stock company, trust, other entity, or municipality which would be defined as a company pursuant to this section if such approval were to be granted." VT. STAT. ANN. tit. 30, § 201(1) (West 2003).

"so that it may render adequate service to the public in the conduct of its business."[232]

Grice v. Vermont Electric Power Company, Inc. expanded on what constitutes "public service" for permitting eminent domain takings.[233] The court held that the right to condemnation is not invalidated if an incidental non-public purpose may result from the taking.[234] The court reasoned that it is not necessary that a public use apply to the whole public or any considerable portion of the public in order to render the taking to be sufficiently "public."[235] Vermont eminent domain was extendable to an independent private company notwithstanding that its planned public use is not extensive.[236]

Maine. The Maine legislature allows private companies to utilize the eminent domain power if the state PUC approves.[237] In Maine, a private unregulated independent power producer qualifies as a "public utility" under Maine's legislative code.[238] If an independent power producer is able to qualify as a "transmission and distribution utility," it may petition the PUC to approve any eminent domain taking.[239] In the matter of *In re Bangor Hydro-Electric*,[240] the court held that as long as the public benefitted, the state could

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232 VT. STAT. ANN. tit. 30, § 110 (West 1988) ("When it is necessary for a corporation formed under this chapter or a foreign corporation under the jurisdiction of the public service board to acquire property within this state, or some easement or other limited right in such property in order that it may render adequate service to the public in the conduct of its business, it may condemn such property or right, as provided in sections 111–124 of this title. All other companies, as defined in sections 201 and 501 of this title, which are within the scope of sections 203 and 501 of this title, shall have the same power of condemnation and be subject to the same procedure as hereinafter provided for condemnation by corporations subject to the jurisdiction of the Public Utility Commission.").

233 Grice v. Vermont Elec. Power. Co., Inc., 956 A.2d 561, 563 (Vt. 2008).

234 *Id.* at 564. *See also* Kelo v. City of New London, 545 U.S. 469, 477–78 (2005) (broadening the definition of "public purpose" under federal common law).

235 *Grice*, 956 A.2d at 571.

236 *Id.*

237 ME. REV. STAT. ANN. tit. 35-A, §3136 (West 2007).

238 ME. REV. STAT. ANN. tit. 35-A, §102 (West 2021) ("'Transmission and distribution utility' means a person, its lessees, trustees or receivers or trustees appointed by a court, owning, controlling, operating or managing a transmission and distribution plant for compensation within the State, except where the electricity is distributed by the entity that generates the electricity through private property alone solely for that entity's own use or the use of the entity's tenants and not for sale to others.").

239 The Maine statute defines "transmission and distribution utility" within the definition of a "public utility." *Id.* Correspondingly, a "public utility" has the ability upon PUC-approval to use eminent domain power. ME. REV. STAT. ANN. tit. 35-A, §3136 (West 2007).

240 *In re* Bangor Hydro-Electric Co., 314 A.2d 800 (Me. 1974).

grant to a private for-profit company the eminent domain power enjoyed by regulated utility company.[241]

Connecticut. Connecticut has no statute which specially authorizes its Public Utilities Regulatory Authority (PURA) to be able to grant eminent domain power to a public service or private company.[242] While the legislature has not granted the state Siting Council or PURA any eminent domain authority, the legislature did provide in §16-50k of the state statute a description of the process that must be followed before rights of eminent domain can be used by any party.[243] In Connecticut, the legislature has declared that an exempt independent power wholesale generator is not a public service company.[244] The Connecticut Siting Council is charged with the siting of energy sources exceeding one megawatt, even if they involve renewable energy.[245] The Supreme Court of Connecticut declared preemption of local land-use decisions by the state siting council:[246] "The trial court determined, based upon its reading of §§ 16-50x (a) and 16-50i(a)(6), in conjunction with General Statutes § 16-50p (b)(1)(B) and (b)(2), that the legislature intended to give the council exclusive jurisdiction over telecommunication towers . . . ."[247]

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241 *Id.* at 803.

242 Christopher Reinhart, EMINENT DOMAIN STATUTES, CONN. OFFICE OF LEGIS. RSCH. REP. 2008-4-0193 (2008), https://www.cga.ct.gov/2008/rpt/2008-R-0193.htm [https://perma.cc/L9ZM-XAJZ].

243 CONN. GEN. STAT. ANN. §16-243 (West 2011) ("The Public Utilities Regulatory Authority shall have exclusive jurisdiction and direction over the method of construction or reconstruction in whole or in part of each system used for the transmission or distribution of electricity, with the kind, quality and finish of all materials, wires, poles, conductors and fixtures to be used in the construction and operation thereof, and the method of their use, including all plants and apparatus used for generating").

244 CONN. GEN. STAT. ANN. § 16-1 (West 2015).

245 Conn. Siting Council, FAQ, https://portal.ct.gov/CSC/Custom-Webpages/Home-Page-Specials/Frequently-Asked-Questions [https://perma.cc/4HRJ-VENB] ("The Council has jurisdiction over . . . (3)(a) a facility owned and operated by a private power producer that is determined by the Council to be for the producer's own use and has a generating capacity of 1 megawatt or less if utilizing renewable energy sources or a generating capacity of 25 megawatts or less if utilizing cogeneration technology."); Am. Law. Zoning § 37:9 (5th ed.). Connecticut law §16-50X states ". . . the council shall have exclusive jurisdiction over the location and type of facilities and over the location and type of modifications of facilities subject to the provisions of subsection (d) of this section." The provisions of subsection (d) permit a municipality to regulate and restrict the location of a private power producer of one megawatt or less, or of electric substations of more than 69 kilowatts. However, subsection (d) also provides for an aggrieved party to appeal to the council, "which shall have jurisdiction, in the course of any proceeding on an application for a certificate or otherwise, to affirm, modify or revoke such order or make any order in substitution thereof by a vote of six members of the council."

246 Town of Westport v. Connecticut Siting Council, 796 A.2d 510, 513–14 (Conn. 2002).

247 *Id.* at 515.

New Hampshire. New Hampshire, by statute, extended eminent domain the 'taking' power only extends to a "public utility."[248] A public utility also must be "eligible for regional cost allocation, for either local or regional transmission tariffs, - by ISO New England or its successor regional operator."[249] A "public utility," in New Hampshire must qualify as "owning, operating or managing any plant or equipment or any part of the same for the conveyance . . . in the generation, transmission or sale of electricity ultimately sold to the public."[250] Excluded from such definition is an exempt wholesale generator (EWG), or any other energy "person" or recognized "energy facility."[251] An Electric Wholesale Generator pursuant to federal law or "energy facility" has a path to request that the state commission confer on it "public utility" status.[252]

Pursuant to its 2006 state constitutional amendment to limit a private energy company from exercising eminent domain, the amendment provided "No part of a person's property shall be taken by eminent domain and transferred, directly or indirectly, to another person if the taking is for the purpose of private development or other private use of the property." [253] During New Hampshire's successful resistance defeating the Northern Pass, transmission lines proposed to carry Canadian renewable power through New Hampshire on its way to Boston, Massachusetts, to utilize eminent domain a public utility must be eligible for regional cost allocation of transmission tariffs to provide a financial benefit to New Hampshire.[254]

Rhode Island. Rhode Island gives final approval over zoning laws affecting all public utilities to the state Public Utilities Commission. In Rhode Island, the legislature extended the use of eminent domain to electric companies.[255] The legislature defines an electric company as "a company engaging in the transmission of electricity or owning, operating or controlling transmission facilities."[256] In Rhode Island, an independent power producer may be granted the authority to exercise powers of eminent domain if it functions as an "electric transmission company."[257]

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248 N.H. REV. STAT. ANN. § 371:1 (2012).

249 *Id.*

250 N.H. REV. STAT. ANN. § 362:2 (2016).

251 N.H. REV. STAT. ANN. § 362:4-c.

252 *Id.*

253 N.H. CONST. ART. 12-a.

254 N.H. REV. STAT. ANN. § 371:1.

255 R.I. GEN. LAWS ANN. §39-1-2(13) (West 2006).

256 *Id.*

257 R.I. GEN. LAWS ANN. §39-1-30 (West 2006).

IV. Common Law Creating a "Back-Door" Entré FOR SUSTAINABLE RENEWABLE POWER

The bifurcated and diversified authorities of federal, state, and local governments can constitute significant barriers, particularly for the siting of on-shore wind power projects in some states and in many municipalities. However, there is recently a "back door" deployment of traditional common law litigation that is allowing sustainable wind power to enter a regulatory gap and fill a void in power supply. Common law tort nuisance actions recently are used to attempt to push governments and companies to arrest the use of fossil fuels. This creates a void for sustainable renewable energy technologies to fill. The next sections analyze (A) the Supreme Court decision that initially displaced use of federal common law to contest U.S. climate change regulation and policy, and thereafter (B) the legal 'back door' that four more recent decisions of the Supreme Court that re-opened deployment of common law to compel government action or to enjoin energy company operations related to climate change.

A. The Supreme Court Decisions That Closed, and Indirectly Then Reopened, Common Law

The Supreme Court in 2011 in *American Elec. Power Co., Inc. v. Connecticut ("AEP")* took judicial notice of EPA regulatory actions regarding climate.[258] Between when the Second Circuit in 2009 held that there was no displacement of common law nuisance claims,[259] and the Supreme Court took *certiorari* in December 2010 and rendered its opinion in 2011, the Obama Administration Environmental Protection Agency began the process of developing regulations, that eventually became the later stricken "Tailoring Rule,"[260] to regulate carbon emissions from power generation plants, including those owned by the defendant companies that the states sued in *AEP*.[261]

Circa 2022, we have passed through a legally significant change in the key predicate facts supporting the 2011 *AEP* Supreme Court holding: The Supreme Court announced four subsequent decisions on energy and environmental law related to climate change jurisdiction of the branches of government, in 2014, 2015, 2016, and 2022 that dynamically change the key

258 Am. Elec. Power Co. v. Connecticut, 564 U.S. 410 (2011).

259 Connecticut v. Am. Elec. Power Co., 582 F.3d 309, 392 (2d Cir. 2009).

260 *See* Util. Air Regul. Grp. v. EPA, 573 U.S. 302, 325 (2014).

261 *Am. Elec. Power Co.*, 564 U.S. at 418.

fact supporting the Supreme Court's federal displacement underlying its 2011 reversal of the Second Circuit in *AEP*:

- In 2014, the Supreme Court held impermissible the EPA's "Tailoring Rule" that was the triggering federal displacement action undertaken by the EPA immediately prior to the 2011 Supreme Court *AEP* decision, through which the EPA began regulating electric power plant GHG emissions[262] and on which the *AEP* decision relied to find the executive branch's displacement action eliminating use of common law.
- In 2015, the Supreme Court restricted EPA from promulgating climate change regulations without considering their cost, even when Congressional statute, the Clean Air Act, did not mandate that,[263] thus restricting executive branch discretion and deference on climate change regulation.
- In 2016, the Supreme Court indefinitely enjoined for the next six years the major Obama Administration climate change regulation, the Clean Power Plan (CPP), even though no substantive decision on any of the specific claims had been reached or issued by the Court of Appeals .[264]
- In a final decision ending its 2021-2022 term, the Supreme Court took up the lingering multi-state challenge to the CPP, the since-mooted regulation, and broadly restricted power of the EPA even indirectly to regulate electric power operations and emissions affecting climate.[265]

Each and all of these four subsequent Supreme Court decisions changes key facts and judicial deference that supported the 2011 Supreme Court decision in *AEP*. The Supreme Court *AEP* decision, reversing the prior Second Circuit decision that common law nuisance actions were preserved, found that such federal common law claims were displaced, precisely because EPA in the interim had undertaken its "Tailoring Rule" and other measures to address climate change emissions from existing electric power generation plants.[266] Three years later, the Supreme Court found EPA's "Tailoring Rule" itself to violate the command of the Congress:

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262 *Util. Air Regul. Grp.*, 573 U.S. at 325–28.

263 Michigan v. EPA, 135 S. Ct. 2699, 2704–2712 (2015).

264 West Virginia v. EPA, 136 S. Ct. 1000, 1000 (2016).

265 West Virgina v. EPA, 142 S. Ct. 2587, 2608 (2022) (citing Nat'l Fed'n of Indep. Bus. v. Dep't of Lab., Occupational Safety & Health Admin., 142 S. Ct. 661 (Gorsuch, J., concurring)).

266 Am. Elec. Power Co. v. Connecticut, 564 U.S. at 419.

> Agencies exercise discretion only in the interstices created by statutory silence or ambiguity; they must always "'give effect to the unambiguously expressed intent of Congress.'" *National Assn. of Home Builders v. Defenders of Wildlife*, 551 U.S. 644, 665 (2007) (quoting *Chevron*, 467 U.S., at 843).[267]

The court proceeded to hold that "EPA's interpretation is also unreasonable because it would bring about an enormous and transformative expansion in EPA's regulatory authority without clear congressional authorization," where a court should demand clear congressional authorization.[268]

In its 2015 decision, the Supreme Court held that "no regulation is 'appropriate' if it does significantly more harm than good."[269] Chief Justice Roberts called the challenged EPA climate change regulation an "end-run" around the statutory language which "raises the red flag."[270] The Supreme Court thereafter found improper the EPA climate change regulation because:

> The Agency must consider cost—including, most importantly, cost of compliance—before deciding whether regulation is appropriate and necessary . . . . 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.[271]

The Obama Administration's October 2015 Clean Power Plan was a 460-page executive branch rule targeting CO_2 emissions from large electric power generation facilities[272] designed to achieve its required 32% reduction of annual CO_2 emissions from new and existing power plants[273] by 2030,

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267 *Util. Air Regul. Grp.*, 573 U.S. at 326. EPA estimated that the burden of adhering to a strict application of the Congressionally specified statutory emission thresholds for "major" stationary sources would increase the number of required air pollution permits under the Prevention of Significant Deterioration Program "more than 140-fold," from 280 to more than 40,000 per year. 74 Fed. Reg. at 55301. Pursuant to Title V of the Clean Air Act this would increase the number of covered facilities from approximately 15,000 to around six million. *Id.* at 55295.

268 *Util. Air Regul. Grp.*, 573 U.S. at 324 (citing FDA v. Brown & Williamson Tobacco Corp., 529 U.S. 120, 160 (2000)). *See also* Steven Ferrey, *A Legal Jurisdictional Trainwreck*, 59 SANTA CLARA L. REV. 1, 42–43 (2019).

269 *Michigan v. EPA*, 135 S. Ct. at 2707; s*ee also* Steven Ferrey, *Phantom Regulation: New Supreme Court Algorithm Changing Executive Power*, 3 U. PA. J.L. & PUB. AFF. 107, 163 (2018).

270 Transcript of Oral Argument at 60, 62, Michigan v. EPA, 135 S. Ct. 2699 (2015) (No. 14-46).

271 *Michigan v. EPA*, 135 S. Ct. at 2707, 2711.

272 Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 80 Fed. Reg. 64,661 (Oct. 23, 2015) (to be codified at 40 C.F.R. pt. 60).

273 EPA, FACT SHEET: OVERVIEW OF THE CLEAN POWER PLAN, https://19january2017snapshot.epa.gov/cleanpowerplan/fact-sheet-overview-clean-power-

measured against a baseline of 2005 carbon emission levels from that year's power generation plants.[274] EPA received 2.5 million public comments on these proposed regulations.[275] After a challenge had barely started in the federal courts, in February 2016, the Supreme Court indefinitely stayed the entire Clean Power Plan, which shifted the balance of power on climate change law from the executive branch to the courts.[276]

In this 2016 action,[277] the Supreme Court did something that it had never done before: indefinitely enjoined an entire federal regulation prior to any substantive federal Circuit Court decision regarding specific challenged provisions of the law reached the Supreme Court on appeal.[278] No party in the litigation was able to document any previous case in which the Supreme Court had stayed an entire agency rule before any court had reviewed it on its merits and such a specific decision was before the Supreme Court.[279]

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plan_.html [https://perma.cc/7FME-5K2H]. Between the rule's promulgation in 2014 and final rule issuance in 2015, the EPA delayed implementation. Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 80 Fed. Reg. at 64,665 (states would be allowed to choose renewable and other measures beyond the fence lines of plants regulated under the Clean Air Act in order to achieve carbon emission reductions to offset the individual plants' emissions).

274 Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 80 Fed. Reg. at 64,665; *see also* Juliet Eilperin & Steven Mufson, *EPA Proposes Cutting Carbon Dioxide Emissions from Coal Plants 30% by 2030*, WASH. POST (June 2, 2014), https://www.washingtonpost.com/national/health-science/epa-to-propose-cutting-carbon-dioxide-emissions-from-coal-plants-30percent-by-2030/2014/06/01/f5055d94-e9a8-11e3-9f5c-9075d5508f0a_story.html [https://perma.cc/9RTG-FBE4].

275 OFF. OF AIR QUALITY PLANNING & STANDARDS, EPA, EPA-452/R-13-003, REGULATORY IMPACT ANALYSIS FOR THE PROPOSED STANDARDS OF PERFORMANCE FOR GREENHOUSE GAS EMISSIONS FOR NEW STATIONARY SOURCES: ELECTRIC UTILITY GENERATING UNITS 1–1 (2013), https://www.epa.gov/sites/default/files/2020-07/documents/utilities_ria_proposed-nsps-egus_2013-09.pdf [https://perma.cc/L2KJ-5RTX].

276 *See* Steven Ferrey, *The "Green New Deal": Constitutional Limitations; Rerouting Green Technology*, 44 VT. L. REV. 777, 795 (2020); Steven Ferrey, *Black Swan Reconfiguration: Legal Separation of American Powers*, 43 VT. L. REV. 29, 31 (2018).

277 West Virginia v. EPA, 136 S. Ct. 1000 (2016); *see also* Jonathan H. Adler, *Opinion: Supreme Court Puts the Brakes on the EPA's Clean Power Plan*, WASH. POST (Feb. 9, 2016), https://www.washingtonpost.com/news/volokh-conspiracy/wp/2016/02/09/supreme-court-puts-the-brakes-on-the-epas-clean-power-plan/?utm_term=.dd512a870f71 [https://perma.cc/QH98-27YG].

278 The first application for a stay was filed on January 21, 2016; the Court granted the stay on February 9, 2016. This stay before a court of appeals decision on the merits was deemed by the Congressional Research Service as "unusual." U.S. CONG. RSCH. SERV., *supra* note 152, at 15.

279 *See* Robert Percival, *In Blocking EPA Clean Power Plan, Is the Supreme Court Wading Deeper Into Politics?*, THE CONVERSATION (Feb. 12, 2016), http://theconversation.com/in-blocking-epa-clean-power-plan-is-the-supreme-court-wading-deeper-into-politics-54513 [https://perma.cc/6SL7-HR2E] ("This is the first time ever that the Supreme Court has intervened to stay, or temporarily block, an agency's regulation before a court has heard legal challenges to it.").

After this stay, on remand the D.C. Circuit found that the Supreme Court stay relieved EPA of its statutory duty to regulate carbon from stationary source electric power plants for the indefinite future.[280]

That indefinitely enjoined future of the CPP was punctured at the end of the 2022 term of the Court. Revisiting this matter again in *West Virginia v. EPA*, the Supreme Court invoked its new major questions doctrine to restrict federal regulatory power with regard to the electric energy sector and climate change.[281] The Court held that existing federal law does not permit the EPA to attempt to regulate what or how facilities in the states generate electricity.[282]

The majority opinion highlights that Congress did not grant the EPA any authority to change the U.S. energy delivery system, and the EPA admitted that it had no expertise in this area.[283] The concurring opinion by Justice Gorsuch and joined by Justice Alito reinforces state "sovereign immunity" to make these electric power operating decisions without federal "'unintentional, oblique, or otherwise unlikely' intrusions on state interests."[284] The concurrence finds that the EPA "seeks to 'intrud[e] into an area that is the particular domain of state law.'"[285]

It is notable that since the 2011 *AEP* decision, the makeup of the court has changed. Since the opinion in *AEP*, Justices Scalia and Kennedy are no longer on the Court. Justices Gorsuch and Kavanaugh have replaced them. Of note, in what became the *Michigan* opinion, the pre-Kavanaugh Supreme Court majority cited the dissent of Judge Kavanaugh as a member of the D.C. Circuit decision then denominated as W*hite Stallion Energy Ctr. LLC v. EPA*,[286] which on appeal to the Supreme Court became *Michigan v. EPA*.[287] Judge Kavanaugh during his confirmation to the Court expressly singled out his dissent in *White Stallion* to be one of his ten most important opinions, stating "the Supreme Court's majority opinion agreed with and cited my

280 Order at 2, West Virginia v. EPA, No. 15-1363 (D.C. Cir. Aug. 8, 2017) (determining the effect of the stay of the Clean Power Plan).

281 West Virginia v. EPA, 142 S. Ct. 2587, 2616 (2022).

282 *Id.* at 2616.

283 *Id.* at 2612 (majority opinion).

284 *Id.* at 2619–20 (Gorsuch, J., concurring) (quoting NFIB v. OSHA, 142 S. Ct. 661, 669 (2022)).

285 *Id.* at 2621 (quoting Ala. Ass'n of Realtors, 141 S. Ct. at 2489).

286 748 F.3d 1222 (D.C. Cir. 2014).

287 135 S. Ct. 2699 (2015).

dissent" in *Michigan v. EPA.*[288] Justice Kavanaugh is now a member of the Supreme Court.[289]

Justice Kavanaugh since joining the Supreme Court signaled in a separate explanation of a denial of certiorari that he may scale back delegations of authority to executive agencies.[290] Justice Gorsuch prior to joining the Supreme Court also criticized the doctrine of administrative deference when he served as a circuit court judge on the Tenth Circuit.[291]

Subsequent to the *Michigan* decision, a federal court reviewing EPA action held that "we must also ensure that the agency 'examine[d] the relevant data and articulate[d] a satisfactory explanation for its action,' and assess 'whether the [agency's] decision was based on a consideration of the relevant factors[.]'"[292] Reasoning that the *Michigan* decision in 2015 articulates the applicable legal standard and regulatory action must be founded on logical and rational consideration of all relevant factors, another federal court went so far as to hold that agencies are required pursuant to a cost-benefit analysis to monetize the forgone benefits of a rescinded regulation to show that the cost of compliance is monetarily greater than the benefits of environmental emission limitations.[293]

In addition, in the 2011 *AEP* opinion, Justices Alito and Thomas wrote a separate opinion concurring only in part with the majority opinion. Justice Sotomayor who was part of the Second Circuit decision in *AEP*, which held that common law nuisance actions could continue contrary to the later *AEP* Supreme Court opinion, since her elevation to the Supreme Court no longer is recused from future Supreme Court decisions on these matters.

After these changes, there is now an inverted re-assertion of common law litigation that could facilitate wind and other renewable energy

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288 Fatima Hussein, *Kavanaugh Touts Court Loss Among His Highest Accomplishments*, BLOOMBERG LAW, (July 24, 2018) ("In my view, it was unreasonable—and therefore unlawful under the Administrative Procedure Act—for EPA not to consider the costs imposed by regulations in determining whether such regulations were 'appropriate and necessary' . . . All nine Justices agreed with my position that the statute requires consideration of costs.").

289 Steven Ferrey, *Phantom Regulation: New Supreme Court Algorithm Changing Executive Power*, 3 U. PA. J.L. & PUB. AFF. 107, 131 (2018).

290 Paul v. United States, 140 S. Ct. 342, 342 (2019) (Kavanaugh, J., concurring in the denial of certiorari).

291 Gutierrez-Brezuela v. Lynch, 834 F.3d 1142, 1155 (10th Cir. 2016).

292 Sw. Elec. Power Co. v. EPA, 920 F.3d 999, 1013 (5th Cir. 2019) (quoting Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins., 463 U.S. 29, 43 (1983)).

293 California v. Barnhardt, 472 F. Supp. 3d 573, 616 (N.D. Cal. 2020) (holding that BLM had a duty to justify the recission of a prior regulation by showing economical, cost-effective, and reasonable requirements).

development.[294] Nongovernmental organizations, city governments, and other plaintiffs are applying tort negligence law claims to attempt to arrest effects from the burning of fossil fuels. International disputes that challenge use of fossil fuels[295] and multilateral development bank (MDBs) decisions that finance fossil-burning power production[296] are raising tort law claims. If ultimately successful, this will block use of fossil fuels and this void logically would be filled by renewable energy.

A plethora of legal issues arise: In these suits, there are fundamental procedural issues of standing, ripeness, redressability, causal nexus, displacement, preemption, and non-justiciability, even before reaching the merits. The following sections analyze claims based on deprivation of human rights both internationally and in the United States, and a tsunami of litigation by major U.S. cities and states against the companies which extract and sell fossil fuels.

B. Basic Human Climate Rights and International Multilateral Development Banks

1. Human Rights and the Public Trust Doctrine

In *Urgenda v. The Kingdom of Netherlands*, challenging the failure of the Netherlands to ambitiously alter the emission of greenhouse gases (GHGs) from the combustion of fossil fuels, the District Court of the Hauge held that the Netherlands was "acting negligently towards society in the content of hazardous climate change" because the government had not moved forcefully enough to reduce carbon emissions.[297] Notably, applying traditional negligence principles, the District Court of the Hauge also concluded that the Kingdom of Netherlands had exercised insufficient action to fulfill its obligations.[298]

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294 *See* Juliana v. United States, 947 F.3d 1159, 1164 (9th Cir. 2020).

295 *See infra* Section V.B.

296 *See infra* Section V.A.

297 Keely Boom, Stephen Leonard & Julie-Anne Richards, *Climate Justice: The International Momentum Towards Climate Litigation*, CLIMATE JUSTICE PROGRAMMER REPORT 17, at 28 (2016) (explaining that this case is "the first time that tort law has been successfully relied upon to hold a state liable for failing to adequately mitigate climate change."). The court declared that climate change is a "global problem and therefore require[d] global accountability." *Id.* at 29 (citing Rb.'s-Gravenhage 24 juni 2015, AB 2015, 336 m.nt. Ch.W. Backes ¶ 4.79 (Stichting Urgenda/Staat der Nederlanden) [hereinafter *Urgenda*].

298 *See Urgenda*, at ¶ 4.79 (stating that although the amount of Dutch GHG emissions is relatively small compared to other E.U. countries, the Netherlands must still exercise greater efforts to mitigate GHG emissions).

In *Juliana v. United States*, commencing in 2015, young citizens not of legal age in the United States initiated litigation against the federal government for violation of the Fifth Amendment Due Process Clause for not preserving a "climate system capable of sustaining human life."[299] Plaintiffs Our Children's Trust and Earth Guardians sued on behalf of twenty-one children against the U.S. government, arguing that governmental policies and programs about climate change contravene their constitutional rights to life, liberty, property, equal protection, and public trust resources. The plaintiffs challenged "continuing to 'permit, authorize, and subsidize' fossil fuel use despite long being aware of its risks," resulting in injurious climate-related risks.[300] The complaint argued that this was caused by government funding and execution of policies and programs that cause or contribute to an unstable climate system and therefore violated plaintiffs' constitutional rights.[301]

The path of this case over five years made two trips to the Supreme Court, created three decisions of the Ninth Circuit, and several remands. In 2020 the Ninth Circuit dismissed the case on lack of standing and because injuries were not "redressable" by the court due to a lack of judicially discoverable and manageable standards for addressing climate change:

> The plaintiffs have made a compelling case that action is needed; it will be increasingly difficult in light of that record for the political branches to deny that climate change is occurring, that the government has had a role in causing it, and that our elected officials have a moral responsibility to seek solutions. We do not dispute that the broad judicial relief the plaintiffs seek could well goad the political branches into action. We reluctantly conclude, however, that the plaintiffs' case must be made to the political branches or to the electorate at large, the latter of which can change the composition of the political branches through the ballot box. That the other branches may have abdicated their responsibility to remediate the problem does not confer on Article III courts, no matter how well-intentioned, the ability to step into their shoes.[302]

Although, the *Juliana* court agreed with plaintiffs that a:

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299 *See* Juliana v. United States, 947 F.3d 1159 (9th Cir. 2020); *see also* Juliana v. United States, 217 F. Supp. 3d 1224, 1233 (D. Or. 2016).

300 *See* Juliana, 217 F. Supp. 3d, at 1233 (quoting First Am. Comp. ¶ 1) (alleging that the defendants have "known for more than fifty years that the carbon dioxide ('CO_2') produced by burning fossil fuels was destabilizing the climate system in a way that would 'significantly endanger plaintiffs, with the damage persisting for millennia[.]'").

301 *Id.*

302 Juliana v. United States, 947 F.3d 1159 (9th Cir. 2020) (citations omitted).

> substantial evidentiary record documents that the federal government has long promoted fossil fuel use despite knowing that it can cause catastrophic climate change, and that failure to change existing policy may hasten an environmental apocalypse . . . . Absent some action, the destabilizing climate will bury cities, spawn life-threatening natural disasters, and jeopardize critical food and water supplies.[303]

The Ninth Circuit majority acknowledged that "these [alleged] injuries are not simply 'conjectural' or hypothetical."[304] However, on the merits of the claims, the Ninth Circuit majority held that the requested relief was beyond the court's authority to remediate and essentially non-justiciable.[305] The dissent in *Juliana* in response opined that "when fundamental rights are at stake, individuals 'need not await legislative action.'"[306] In 2021, the Ninth Circuit denied the plaintiffs' motion for rehearing en banc, thus allowing the 2-1 circuit panel decision to stand dismissing the case for lack of standing.[307]

Domestically, in *Foster v. Washington*, a group of climate change organizations and citizens brought suit for violation of the public trust doctrine, alleging violation of the state constitution.[308] The court held that the state "has asserted a 'mandatory duty' to 'preserve, protect, and enhance the air quality for the current and future generations,'" and required the Washington Department of Ecology to consult with the plaintiffs during the rulemaking process.[309]

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303 *Id.*

304 *See id.* ("[A]t least some of the plaintiffs have presented evidence that climate change is affecting them now in concrete ways and will continue to do so unless checked."); *see id.* (highlighting that "the government affirmatively promotes fossil fuel use in a host of ways, including beneficial tax provisions, permits for imports and exports, subsidies for domestic and overseas projects, and leases for fuel extraction on federal land.").

305 *See id.*

306 *See id.* (citing Obergefell v. Hodges, 135 S. Ct. 2584, 2598 (2015)). The dissenter would have ruled for the plaintiffs, citing the urgent threat posed by the climate crisis to Americans. Juliana v. United States, 947 F.3d 1159 (9th Cir. 2020).

307 Juliana v. United States, 217 F. Supp. 3d 1224, 1233 (D. Or. 2016), *rev'd*, 947 F.3d 1159 (9th Cir. 2020).

308 *See* Boom et al., *supra* note 297 (stating that the Washington Department of Ecology denied the plaintiffs' original rulemaking petition, which resulted in this subsequent appeal).

309 *Id.* at 34–35 (citing Foster v. Washington Dep't of Ecology, No. 14-2-25295-1 SEA, 2015 WL 7721362, at *1 (Wash. Super. Ct. Nov. 19, 2015) (declaring that this case served as a mechanism to facilitate state legislative action through the rulemaking process, by ordering the Washington Department of Ecology to work with the plaintiffs to promulgate and aid in providing recommendations to the state legislature on the basis of the public's interest in natural recourses held in trust). *See also* Marc Z. Goldbrug, *Could Foreign Judicial Climate Action Victories Influence American*

A second international case to arrest the use of fossil fuels asserted that such fuel use deprives plaintiffs of their fundamental human rights.[310] Such theory was presented in Pakistan by farmer Ashgar Leghari against the Pakistan government for it not complying with an internal policy to respond to climate change.[311] The Pakistan court held that the Pakistan Constitution granted the right to its citizens to a healthy and clean environment."[312]

2. International Multilateral Development Bank Restrictions

The Supreme Court held that international organizations like the World Bank Group can be named as defendants in U.S. courts related to their negative impacts on climate change from their decisions deploying international moneys to build more fossil-fuel-fired power plants.[313] The case involved socio-economic impacts on the local community near the power plant.[314] The plaintiffs originally attempted to raise their concerns internally through the IFC's internal grievance mechanism, however when the IFC's leadership ignored the grievance body's conclusions, they filed suit.[315] The

Legal Perspectives?, 25 CARDOZO J. INT'L & COMP. L. 287, 312–13 (highlighting "[t]he subsequent victory of Foster's petitioners means the language of the decision accepting plaintiff's public trust argument is no longer mere dicta, but law persuasive to (albeit non-binding on) other state courts.").

310 *See* Leghari v. Fed'n of Pakistan, (HC Lahore) (2015) PLD No. 25501 (Pak.) (holding that the court had jurisdiction to regulate required action of the Pakistan government).

311 *See* Goldbrug, *supra* note 309, at 293.

312 *See id.* at 293 (citing Leghari (Lahore High Court) at 1).

313 Jam v. Int'l Fin. Corp., 139 S. Ct. 759 (2019). Justice Breyer was the sole dissenter, arguing that a "broad exposure to liability" for international organizations runs counter to Congress' original purpose in providing immunity.

314 *Id.* The case involved an IFC-financed power plant in Gujarat, India. The plaintiffs are members of local fishing and farming communities whose livelihoods, air quality, and drinking water were affected by the project, alleging that the IFC and the project developers knew about these risks in advance. Thermal pollution harmed the local marine environment and the fish populations. Although a 2015 law required all plants to install cooling towers to minimize thermal pollution by the end of 2017, the Tata plant failed to do so. Some air pollutants, including particulate matter, were present at levels dangerous to human health, in violation of Indian air quality standards and the conditions of IFC funding. It was alleged that construction of the plant destroyed vital sources of water used for drinking and irrigation. Coal ash has contaminated crops and fish laid out to dry; air pollutants are at levels dangerous to human health. *Id.* Of note, World Bank procedures now required it to carefully consider and mitigate environmental and social impacts, such as personal displacement, before proceeding with projects. WORLD BANK, *Environmental and Social Policies*, https://www.worldbank.org/en/projects-operations/environmental-and-social-policies [https://perma.cc/PB2S-WQBV] (last visited June 20, 2022).

315 Valentina Stackl, *Historic Supreme Court Win: World Bank Group Is Not Above the* Law, EARTHRIGHTS INT'L (D.C.) (Feb. 27, 2019), https://earthrights.org/media/historic-supreme-court-win-world-bank-group-is-not-above-the-law/ [https://perma.cc/87WX-LVZD]. The IFC's own internal compliance mechanism, the Compliance Advisor Ombudsman (CAO), issued a report in 2013

U.S. Departments of Justice and State submitted an amicus curiae brief in support of the plaintiffs' position, as did members of Congress from both parties.[316]

International organizations like the World Bank IFC had claimed they are entitled to "absolute" immunity, even as they engage in commercial activities, such as providing funds to construct more coal-fired power plants. It was held that the charter of the IFC did not grant the organization absolute immunity, only providing the IFC the same immunity as foreign governments enjoy under U.S. law when they engage in commercial activities: "The International Finance Corporation is therefore not absolutely immune from suit."[317] Another case against the IFC involved IFC projects that have been linked to murders, torture, and other violence by paramilitary groups and death squads in Honduras.[318]

C. United States Climate Tort Litigation

1. State Negligence Claims Against Private Companies.

a. Connecticut v. American Electric Power Company

Prior to the *Juliana* litigation, in *American Electric Power v. Connecticut*, common law nuisance claims were brought by the City of New York and eight states including New York[319] against five large electric power companies[320] seeking injunctive relief to require five defendant utility companies (operating outside of the plaintiffs' states) to reduce fossil fuel emissions contributing to climate change.[321] The Court was asked to address

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confirming that the IFC had failed to ensure the Tata Mundra project complied with the environmental and social conditions of the IFC's loan at most stages of the project and asking the IFC to take remedial action. IFC's management responded to the CAO by rejecting or ignoring most of its findings. In a follow-up report in early 2017, the CAO observed that the IFC remained out of compliance and had failed to take any meaningful steps to remedy the situation.

316 *Id.*

317 *Id.*

318 Doe v. IFC Asset Mgmt. Co., No. 17-1494-JFB-SRF, 2019 WL 2549962 (D. Del. June 14, 2019).

319 In the AEP case, the plaintiffs were the City of New York and eight states, including: California, Connecticut, Iowa, New Jersey, New York, Rhode Island, Vermont, and Wisconsin. Am. Elec. Power Co. v. Connecticut, 564 U.S. 410, 411 (2011).

320 The defendants were electric power companies American Electric Power Service Corp., Cinergy Co., Southern Co. Inc. of Georgia, and Xcel Energy Inc. of Minnesota, and the federal Tennessee Valley Authority. *Id.*

321 *See id.* (holding that the Clean Air Act vests in the EPA the jurisdiction regarding climate change regulation, and any claim would be brought only against the EPA for violation of the Act, and displaced common law jurisdiction to sue private companies that could be regulated by the EPA).

standing, whether the federal common law claim was displaced by the Clean Air Act after EPA began to regulate carbon emissions, and whether state nuisance law thereafter remained as an available claim.[322] The Court split 4-4 on standing, upholding the circuit court ruling that states have standing to challenge injury from climate change notwithstanding federal regulation of greenhouse gas emissions.[323]

The Supreme Court "held that the Clean Air Act, when coupled with the EPA's discretionary authority recognized in *Massachusetts v. EPA*," under the doctrine of displacement transfers authority to regulate pollutants to the executive branch of government, as opposed to the court.[324] Because Congress intended to preempt federal common law claims by giving regulatory authority to the EPA to regulate air pollutants, the plaintiff's common law claim was displaced by the Executive Branch's preemptive authority to regulate air pollutants.[325] The Supreme Court unanimously, 8-0, reversed the decision of the Second Circuit panel which had included circuit Judge Sotomayor, with Justice Sotomayor not participating in the *AEP* decision of the Supreme Court because of her participation in the case before the Second Circuit.[326]

The key legal distinction between displacement and preemption is that displacement replaces federal common law with executive branch action, while preemption invalidates inferior state law, replacing it with federal law. Displacement concerns the horizontal balance of power among federal branches of government, while preemption concerns the vertical balance of power between federal and state governments. Displacement concerns only federal common law, while preemption concerns both the statutory and common law of states. Displacement asks "whether the field has been occupied," while preemption requires "clear and manifest [congressional] purpose."[327]

The global warming-based nuisance claims asserted in the *AEP* and *Kivalina* litigation were displaced because the Clean Air Act spoke directly to

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322 *Id*.

323 *Id.*

324 *Id.* at 427 (concluding that the "EPA may not decline to regulate carbon-dioxide emission from powerplants if refusal to act would be 'arbitrary and capricious, an abuse of discretion, or otherwise not in accordance with law.' 7607(d)(9)(A)."). *See also* FERREY, ENVIRONMENTAL LAW, *supra* note 67 (citing a court noting that "its ruling does not affect state common law causes of action, which would be subject to a more exacting demonstration of congressional intent.").

325 564 U.S. at 427.

326 *Id.* at 429.

327 City of Milwaukee v. Illinois, 451 U.S. 304, 324, 317 (1981).

domestic emissions of greenhouse gases.[328] In *AEP*, the Supreme Court held that Congress had "displace[d] federal common law" by "delegating to the EPA the decision whether and how to regulate carbon-dioxide emissions."[329] The Court explained that, as a result, federal courts "have no warrant to employ the federal common law of nuisance to upset the agency's expert determination" regarding the reasonable level of greenhouse gas emissions.[330]

The Court in *AEP* never addressed the remaining viability of state rather than federal nuisance law regarding climate change impacts.[331] While the Supreme Court never decided this final issue, the Third Circuit held that similar common law claims aren't preempted.[332] Citing the same precedent, the Fourth Circuit held that such claims are preempted on the basis of field and conflict preemption.[333] The extent of preemption and displacement remains not fully clarified and still not resolved. In the interim, states as plaintiffs attempt to raise state common law claims.

b. Rhode Island v. Chevron

The state of Rhode Island initiated suit in state court in 2018 against oil companies for damages from selling fossil fuels that were alleged to be responsible for current and future climate change injuries.[334] Defendant Shell Oil Company successfully removed the case to federal court because Rhode Island's claims should be governed by federal common law, arguing that they "implicate uniquely federal interests" such as nationwide economic development, international relations, and national security, and there was federal question jurisdiction because the lawsuit "necessarily raises disputed and substantial federal questions" and because federal law completely preempts Rhode Island's claims.[335]

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328 *See* Am. Elec. Power Co. v. Connecticut, 564 U.S. 410, 424–26 (2011); Native Vill. Kivalina v. ExxonMobil Corp., 696 F.3d 849, 857 (9th Cir. 2012).

329 564 U.S. at 426.

330 *Id.*

331 *Id.*

332 Bell v. Cheswick Generating Station, 734 F.3d 188, 196–97 (3d Cir. 2013) (citing Int'l Paper Co. v. Ouellette, 479 U.S. 481, 507 (1987)).

333 North Carolina v. Tennessee Valley Authority, 615 F.3d 291, 303 (4th Cir. 2010) (citing *Ouellette*, 479 U.S. at 507).

334 Rhode Island v. Chevron Corp., 393 F. Supp. 3d 142, 146 (D.R.I. 2019). Of note, not named as defendants were Rhode Island's own residents, a substantial number of whom commute an hour or more to Boston every day for work, but against the supplier of oil for their cars and furnaces.

335 Notice of Removal by Def., 1, Rhode Island v. Chevron Corp., 393 F. Supp. 3d 142 (July 13, 2018) at ¶¶ 5,6.

Rhode Island filed a motion to remand the case to state court asserting that federal common law necessarily governed its claims and when an ordinary preemption defense was raised by the defendants, that did not confer federal jurisdiction.[336] Rhode Island also contested the oil company defendants' contention that climate change tort claims must be exclusively pleaded under federal common law; it argued that its state common law claims fell outside the scope of federal common law, and disputed the contentions that its claims necessarily raised substantial, disputed federal questions or that the Clean Air Act completely preempted its claims.[337]

The federal court granted Rhode Island's motion to remand to state court, finding that the defendant companies had not carried their burden of showing that the case belonged in federal court.[338] The court rejected the defendant companies' arguments that the state artfully pleaded its claims to avoid federal jurisdiction, determining that federal common law—which the defendants claimed necessarily governed the state's claims—could not completely preempt the state's public nuisance claim "absent congressional say-so."[339] The court also was not persuaded that the Clean Air Act or the foreign affairs doctrine completely preempted the state-law claims.[340]

In addition, the court found that the issues of foreign affairs, federal regulations, and navigable waters raised by the defendant companies were not disputed and were substantial federal issues that the federal court could entertain "without disturbing any congressionally approved balance of federal and state judicial responsibilities."[341] The court held that the federal issues were issues that the defendants "may press in the course of this litigation, but that are not perforce presented by the State's claims."[342] The court did stay the remand order for 60 days to allow the parties to brief whether a stay pending appeal was warranted.[343] The federal court thereafter denied the motion to stay its remand order to state court.[344]

On remand, the U.S. Department of Justice (DOJ) filed an amicus brief in the Rhode Island Superior Court. In a written decision, the court

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336 Pl. Mem. Of Law in Supp. Of its Mot. To Remand to State Ct., 1, Rhode Island v. Chevron Corp., 393 F. Supp. 3d 142 (Aug. 17, 2018), at 2.

337 *Id.*

338 Rhode Island v. Chevron Corp., 393 F. Supp. 3d 142, 147, 152 (D.R.I. 2019).

339 *Id.*at 149.

340 *Id.*at 152.

341 *Id.*

342 *Id.* At 151.

343 *Id.* At 152.

344 Rhode Island v. Chevron Corp., 393 F. Supp. 3d 142, 152 (D.R.I. 2019).

permitted the DOJ to address whether the State of Rhode Island's claims "are preempted by the Clean Air Act."[345] The decision allows for the DOJ's Environment and Natural Resources Division attorneys to participate in the submission process of the Amicus Curiae Brief.[346]

2. City/State Nuisance Claims Against Fossil Fuel Companies

In recent years, there has been a host of pending cases filed and many still pending against private fossil fuel companies alleging nuisance from selling fossil fuels and seeking damages and remedies is disgorgement of profits due to climate change challenges posed by GHG emissions.

a. San Francisco & Oakland, California

Notwithstanding *American Electric Power* displacement of federal nuisance claims related to climate issues, San Francisco and Oakland, California, unsuccessfully sued the major oil companies seeking large financial compensation for the cities' expenses in adapting to sea level rise, arguing that the greenhouse gases emitted from the companies was created a nuisance in these cities. Because federal common law was displaced, it becomes key in the two dozen or more similar government suits against oil and gas companies for climate change damages whether the case is tried in federal court with displacement, or in state court regarding state common law claims which were not addressed in the *AEP* decision. In *City of Oakland v. BP P.L.C.*, the cities and states plaintiffs amended their complaint to add a public nuisance claim pursuant to federal common law based solely on the oil companies' conduct occurring outside the United States and not implicating any conduct by or in California or U.S. consumers.[347] The federal district court stated:

> The problem deserves a solution on a more vast scale than can be supplied by a district judge or jury in a public nuisance case . . . All of us have benefited. Having reaped the benefit of that historic progress, would it really be fair to now ignore our own responsibility in the use of fossil fuels and place the blame for global warming on those who supplied what we demanded?[348]

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345 State v. Chevron Corp., C.A. No. PC-2018-4716 (R.I. Super. Ct. Aug. 13, 2020).

346 Jeffrey S. Brenner & Justin S. Smith, *The Rhode Island Superior Court Accepts Amicus Curiae Brief from the United States Department of Justice as Offering a Specialized Perspective in Climate Change Litigation*, Nixon Peabody (May 01, 2020), https://www.nixonpeabody.com/en/ideas/articles/2020/05/01/the-rhode-island-superior-court-accepts-amicus-curiae-brief-from-the-united-states-doj [https://perma.cc/M38J-DWG4].

347 City of Oakland v. BP P.L.C., 325 F. Supp. 3d 1017, 1021–22 (N.D. Cal. 2018).

348 *Id.* at 1029 (granting a motion to dismiss).

The court found the common law claim displaced by federal law: "Federal common law does not provide relief here because, in addition to other defects, Plaintiffs' global warming-based tort claims—whether framed as targeting greenhouse gas emissions, oil and gas extraction and production, or fossil-fuel product promotion—have been displaced by federal statute."[349] Recently, the Ninth Circuit vacated the district court's dismissal holding the cities' state-law nuisance claims were not completely preempted by the Clean Air Act. The court remanded the case to the district court.[350]

b. New York City

New York City's effort to bring a similar suit asserting both federal and state common-law nuisance claims against major domestic and foreign oil companies for their marketing of fossil fuels, which when burned contributed to climate change also were dismissed in 2018 and held that global warming was an issue reserved for the Congress and preempted: "the [federal] Clean Air Act displaces such federal common law claims under *American Electric Power Co. v. Connecticut* . . . and *Native Village of Kivalina v. ExxonMobil Corp.*, . . . because the Clean Air Act has spoken 'directly to the question' of domestic greenhouse gas emissions, the City's claims are displaced."[351] The federal court held that New York's federal and state common-law claims against five oil companies alleged to be responsible for more than 11% of all the atmospheric carbon and methane pollution since the Industrial Revolution were preempted by the Clean Air Act, and that global warming was an issue reserved for the Congress:

> The City's global-warming tort claims are based on Defendants' worldwide fossil fuel production and 'the use of their fossil fuel products [which] continue[] to emit greenhouse gases and exacerbate global warming . . . 'However, the City has not sued under New York law for claims related to the production of fossil fuels in New York. . . . because the Clean Air Act has spoken "directly to the question" of domestic greenhouse gas emissions, the City's claims are displaced . . . . Global warming and solutions

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349 *Id.*; City of Milwaukee v. Illinois, 451 U.S. 304, 314 (1981) (citation omitted); *see also BP P.L.C.*, 325 F. Supp. 3d at 1029; *Native Vill. Kivalina*, 696 F.3d 849, 856 (9th Cir. 2012); Am. Elec. Power. Co. v. Connecticut, 564 U.S. 410, 411 (2011) (stating that the test is "simply whether the 'statute speaks directly to the question' at issue.").

350 City of Oakland v. BP P.L.C., 969 F.3d 895, 911–12 (9th Cir. 2020) (remanding plaintiff's appeal to district court).

351 City of New York v. BP P.L.C., 325 F. Supp. 3d 466, 472–74 (S.D.N.Y. 2018); *see also* City of New York v. Chevron Corp., 993 F.3d 81, 86-87 (2d Cir. 2021) (City's state common law claims against Chevron, ConocoPhillips, Exxon Mobil, Shell, and BP were displaced by the federal common law).

> thereto must be addressed by the two other branches of government . . . .[352]

In essence, for the court, New York's claims do not present a justiciable case or controversy. Before a grievance can be litigated, a plaintiff must show that it has presented "a 'case' or 'controversy' that is, in James Madison's words, 'of a Judicial Nature.'"[353] Courts are "without competence" to address matters "of high policy for resolution within the legislative process."[354]

New York's claims presented non-justiciable political questions to be addressed by the other branches of government. There was no "manageable method of discerning the entities that are creating and contributing to the alleged nuisance" because "there are multiple worldwide sources of atmospheric warming across myriad industries and multiple countries."[355] Therefore, "the allocation of fault—and cost—of global warming is a matter appropriately left for determination by the executive or legislative branch."[356] Plaintiff's claims "would require the court to balance the competing interests of reducing global warming emissions and the interests of advancing and preserving economic and industrial development," which is "the type of initial policy determination to be made by the political branches."[357] The court should not be dragged "into precisely the geopolitical debate more properly assigned to the coordinate branches."[358]

Of historic note of where things began, another panel of the Second Circuit previously held in the *AEP* case,[359] before it advanced to the Supreme Court, that nuisance claims brought by the City of New York and eight states

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352 *Id.* at 471, 474–75.

353 DaimlerChrysler Corp. v. Cuno, 547 U.S. 332, 342 (2006).

354 Diamond v. Chakrabarty, 447 U.S. 303, 317 (1980).

355 People v. Gen. Motors, No. C06–05755, 2007 WL 2726871, at *15 (N.D. Cal. Sept. 17, 2007); *see also* Native Vill. Kivalina v. ExxonMobil Corp., 663 F. Supp. 2d 863, 875–76 (N.D. Cal. Sept. 30, 2009) ("Plaintiffs . . . fail to articulate any particular judicially discoverable and manageable standards that would guide a factfinder in rendering a decision that is principled, rational, and based upon reasoned distinctions."). And on the question of remedies, there is no "guidance" for "determining who should bear the costs associated with the global climate change that admittedly result from multiple sources around the globe." *Gen. Motors*, 2007 WL 2726871, at *15.

356 *Native Vill. Kivalina*, 663 F. Supp. 2d at 877; *see also Gen. Motors*, 2007 WL 2726871, at *16 ("However, because the Court has already determined that the complaint raises non-justiciable political questions, it need not and does not reach the issue of whether the federal common law recognizes Plaintiff's global warming nuisance claim.").

357 *Gen. Motors*, 2007 WL 2726871, at *8; *see also* Comer v. Murphy Oil USA, Inc., 839 F. Supp. 2d 849, 864 (S.D. Miss. Mar. 20, 2012) ("Our country, this Court, and even the plaintiffs themselves rely on the products the defendants produce.").

358 *Gen. Motors*, 2007 WL 2726871, at *10.

359 *See supra* Section V.B.2.a.

including New York[360] against five electric utilities consuming fossil fuels were not barred by the political question doctrine, which decision was later reversed by the Supreme Court.[361] There are some differences between New York in the *AEP* matter and the City of New York's more recent dispute: In *AEP*, the plaintiffs sought only "to limit emissions from six domestic coal-fired electricity plants," whereas in the New York litigation, plaintiffs named as defendants three U.S. and two foreign major companies engaged in fossil fuel production and sought damages that could potentially cripple the defendants.[362] Thus, unlike in the former *AEP* matter where the requested relief "applie[d] in only the most tangential and attenuated way to the expansive domestic and foreign policy issues raised by Defendants," the relief sought by New York city directly intrudes and potentially interferes with national and international global climate policies.[363]

New York in this most recent matter did not explain how it had "suffered its own individual harm apart from the general harm caused by climate change."[364] In the earlier *AEP* litigation brought by New York, the Second Circuit found standing for plaintiff, which was affirmed when the Supreme Court split 4-4 on the standing question, thus not overturning the standing decision of the Second Circuit.[365] In the most recent matter, plaintiff also did not demonstrate that its climate change claims were ripe,[366] or that there was sufficient nexus between the defendants' actions and plaintiffs' injury.[367]

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360 In the *AEP* case, the plaintiffs were the City of New York and eight states, including California, Connecticut, Iowa, New Jersey, New York, Rhode Island, Vermont, and Wisconsin. The defendants were electric power companies American Electric Power Service Corp., Cinergy Co., Southern Co. Inc. of Georgia, and Xcel Energy Inc. of Minnesota, and the federal Tennessee Valley Authority. *See supra* note 258.

361 City of New York v. BP P.L.C., 325 F. Supp. 3d 466 (S.D.N.Y. 2018) (citing Am. Elec. Power Co. v. Connecticut, 582 F.3d 309, 321–32 (2nd Cir. 2009)); *rev'd*, Am. Elec. Power Co. v. Connecticut, 564 U.S. 410 (2011).

362 Am. Elec. Power Co. v. Connecticut, 582 F.3d at 325.

363 *Id*.

364 Ctr. for Biological Diversity v. U.S. Dep't of Interior, 563 F.3d 466, 477 (D.C. Cir. 2009). Although plaintiff alleged it had taken "proactive steps" relating to global warming, it "cannot manufacture standing by incurring costs in anticipation of non-imminent harm." Clapper v. Amnesty Int'l USA, 568 U.S. 398, 422 (2013).

365 *See* Am. Elec. Power Co. v. Connecticut, 582 F.3d 309, 420 (2d Cir. 2009) ("We therefore affirm, by an equally divided Court, the Second Circuit's exercise of jurisdiction and proceed to the merits.").

366 City of New York v. BP P.L.C., 325 F. Supp. 3d 466 (S.D.N.Y. 2018).

367 *See id.* at 471 (noting that plaintiff admitted that "greenhouse gas molecules cannot be traced to their source," making attribution and traceability impossible). *See also* Wash. Env't Council v. Bellon, 732 F.3d 1131, 1143–44 (9th Cir. 2013) (holding that "a vast multitude of emitters worldwide" emit greenhouse gases that "mix quickly, stay in the atmosphere for centuries, and, as a result, are undifferentiated in the global atmosphere").

Plaintiffs did not sustain their burden to demonstrate redressability of their alleged injuries could be accomplished by any judicial action or order.[368]

The defendant energy companies' brief[369] argued that any claim based on domestic greenhouse gas emissions was displaced by the U.S. Clean Air Act and also that federal common law had never been applied "to hold manufacturers of lawful products liable merely because the *users* of those products create interstate pollution" or to supply "a remedy where the causal chain connecting the defendant's conduct to the alleged harms extends back several decades, includes billions of intervening actors, and depends on complex phenomena that scientists continue to study."[370] The defendants also contended that the City did not state viable state law claims because causation requirements were not satisfied and because the doctrine of *in pari delicto* barred the City's claims, since the City and its residents "have long consumed Defendants' products and have thus willingly contributed to" the emission that allegedly caused the City's injuries.[371] Finally, the companies argued that the claims were preempted by the foreign affairs doctrine and the Clean Air Act and were barred by Commerce Clause, Due Process, and the Takings Clauses.[372]

A non-justiciable political question is present when there is either a textually demonstrable constitutional or congressional commitment of the issue to another branch of government, thereby distinguishing the separation of power, or there is no judicially discoverable and manageable standard for resolving the controversy. In April 2021, the Second Circuit rejected New York City's state law claims against Chevron, ConocoPhillips, Exxon Mobil, Shell, and BP:

> Even though every single person who uses gas and electricity—whether in travelling by bus, cab, Uber, or jitney, or in receiving home deliveries via FedEx, Amazon, or UPS—contributes to global warming, the City asserts that its taxpayers should not have to should the burden of financing the City's preparations to mitigate the effects of global warming.[373]

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368 *Wash. Env't Council*, 732 F.3d at 1135. The court could not redress Plaintiff's injuries through monetary or equitable relief. Even if Defendants were to cease their extraction activities, Plaintiff's alleged injuries would likely "continue unabated" because greenhouse gas "emissions are not a localized problem . . . but a global occurrence." *Id.* at 1147.

369 Brief of Defendants-Appellees, City of New York v. Chevron Corp., No. 18-2188 (2d Cir. Feb. 7, 2019), ECF No. 168.

370 *Id.* at 11.

371 *Id.* at 12.

372 *Id.* at 13.

373 City of New York v. Chevron Corp., 993 F.3d 81, 86 (2d Cir. 2021).

Unlike some other climate nuisance cases brought by cities, New York was pursuing its state law claims in federal court under diversity jurisdiction.[374]

c. Baltimore

The city of Baltimore also sued large oil and gas companies for selling GHG-emitting fossil fuels. The federal district court for the District of Maryland remanded the City of Baltimore's climate change lawsuit against oil and gas companies to state court.[375] The court concluded that federal question jurisdiction did not exist and rejected alternative bases for federal jurisdiction.[376]

First, the court rejected the defendants' argument that federal common law governed Baltimore's state law nuisance claim as a "cleverly veiled preemption argument."[377] The court stated that ordinary preemption was merely a defense and did not permit it to treat the claim as if it had been pleaded under federal law for jurisdictional purposes.[378] The court further concluded that federal common law would not support removal even under the complete preemption doctrine because the defendants had not shown that any federal common law claim for public nuisance was available and case law suggested that the Clean Air Act displaced any such claim.[379]

Second, the court found that the case did not fall within the "slim category" of cases in which federal question jurisdiction exists for state law claims that raise substantial and disputed federal issues.[380] Although the court acknowledged that there were "federal *interests* in addressing climate change," the court stated that the defendants had not established that "a federal issue" such as foreign policy or a federal regulatory scheme was a necessary element of Baltimore's claims.[381] Third, the court rejected the argument that the

374 *See* Pedro Cisterna-Gaete & Maria Antonia Tigre, *Guest Commentary: Inter-American Commission on Human Rights' First Resolution on the Climate Emergency: Implications for Climate Litigation*, SABIN CENTER FOR CLIMATE CHANGE LAW: CLIMATE LAW BLOG (Apr. 11, 2022), https://blogs.law.columbia.edu/climatechange/2022/04/11/guest-commentary-inter-american-commission-on-human-rights-first-resolution-on-the-climate-emergency-implications-for-climate-litigation/ [https://perma.cc/S4QK-FE3C].

375 Mayor of Baltimore v. BP P.L.C., 388 F. Supp. 3d 538, 549 (D. Md. 2019).

376 *Id.* at 555.

377 *Id.*

378 *Id.*

379 *Id.* at 557.

380 *BP P.L.C.*, 388 F. Supp. at 558–61.

381 *Id.* at 561.

foreign affairs doctrine or the federal Clean Air Act completely preempted Baltimore's claims.[382]

Fourth, the court found no basis for federal jurisdiction based on defendants' activities occurring on federal enclaves.[383] Regarding the alternative bases for removal jurisdiction, the court found that the defendants did not demonstrate that jurisdiction existed under the Outer Continental Shelf Lands Act, or that the claims were removable under the federal officer removal statute, the bankruptcy removal statute, or admiralty jurisdiction.[384] Pursuant to a stipulation by the parties, the remand order was temporarily stayed. The defendants appealed, but the Fourth Circuit affirmed.[385]

However, the Supreme Court granted certiorari and in May 2021, the Court in a 7-1 decision reversed the Fourth Circuit and held, in a procedural decision regarding the City of Baltimore's lawsuit against twenty-six oil and gas companies, that the Fourth Circuit was wrong that it could not fully review a district court order which remanded the case to state court rather than granting defendant oil companies' motion to remove the matter to federal court.[386] The Supreme Court held that the Fourth Circuit erred in holding that it lacked jurisdiction to consider all of the oil company defendants' grounds for removal to federal court[387] and must consider all grounds for removal when an appeal is taken pursuant to 28 U.S.C. § 1447(d).[388]

This Supreme Court decision had an impact on approximately two dozen other similar cases by government agencies suing large oil and gas companies: Later that same month, the Supreme Court summarily vacated and remanded appellate court decisions in three other pending climate change cases to cause similar appeals to reconsider the implications of their

382 *Id.* at 561–63.

383 *Id.* at 563–64.

384 *Id.* at 566–74.

385 Mayor of Baltimore v. BP P.L.C., 952 F.3d 452, 457 (4th Cir. 2020).

386 *See* B.P. P.L.C. v. Mayor of Baltimore, 141 S. Ct. 1532 (2021) (Alito, J., recused).

387 *Id.* at 1533, 1537–38 (2021) (explaining that although an order remanding a case to state court is ordinarily unreviewable on appeal, appellate review is available for those orders "remanding a case to the State court from which it was removed pursuant to section 1442 or 1443 of [Title 28]." 28 U.S.C. §1447(d). The Fourth Circuit therefore erroneously held that it lacked jurisdiction to review the district court's rejection of the defendants' other removal grounds, which it does have authority to review).

388 *Id. See also* 28 U.S.C. § 1447(d) (authorizing interlocutory appeal of an order remanding a case removed pursuant to the federal officer removal statute).

remand order in *Mayor of Baltimore*.[389] Thereafter, the Supreme Court later in 2021 granted certiorari to consider and strike in 2022 as impermissible the CPP, which had been enjoined for the prior five years by the Supreme Court.[390]

V. INVERTING GOVERNMENT REGULATION AND COMMON LAW

At center stage is the mounting common law litigation by U.S. cities and counties against some of the largest fossil fuel companies as well as litigation by youth and other citizens against governments alleging that they have not acted to stop ongoing climate change.[391] *Time* magazine named Greta Thunberg as their 2019 "person of the year," noting that she represented the "power of youth" to raise concerns about insufficient government action on climate change.[392] There has been some citizen plaintiff success raising citizen claims internationally.[393]

Simultaneously, the legal landscape in the United States now is shifting: The active EPA regulation of CO_2 emissions during the Obama Administration, which was the legal predicate for Supreme Court "displacement" of federal common law remedies in the landmark *AEP* decision in 2011,[394] ceased to exist once the Trump administration took office in 2017. With Trump Administration cessation of active executive branch regulatory action on climate, common law litigation in United States courts should have been no longer displaced by actions of the other branches of the federal government.

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389 The Court vacated and remanded Boulder, Colorado's suit to the Tenth Circuit, various California cities' suits to the Ninth Circuit, and Rhode Island's suit to the First Circuit: *Chevron Corp. v. County of San Mateo*, No. 20-884 (U.S. May 24, 2021); *Suncor Energy (U.S.A.) Inc. v. Board of County Commissioners of Boulder County*, No. 20-783 (U.S. May 24, 2021); *Shell Oil Products Co., L.L.C. v. Rhode Island*, No. 20-900 (U.S. May 24, 2021).

390 *See* West Virginia v. EPA, No. 20-1530 (U.S. argued Feb. 28, 2022).

391 *See, e.g.*, Juliana v. United States, 947 F.3d 1159, 1164 (9th Cir. 2020).

392 *See* Charlotte Alter, Suyin Haynes & Justin Worland, *Greta Thunberg: TIME's Person of The Year 2019*, TIME, https://time.com/person-of-the-year-2019-greta-thunberg/ [https://perma.cc/WW49-2397].

393 Urgenda Foundation v. The State of the Netherlands, HAZA C/09/00456689 (June 24, 2015); *aff'd*, District Court of the Hague (Oct. 9, 2018) *and* The Hague Court of Appeal (on appeal); *aff'd sub nom*. The State of the Netherlands v. Urgenda Foundation, Supreme Court of the Netherlands (Dec. 20, 2019); *see also* Leghari v. Federation of Pakistan, WP No. 25501/2015 (Sept. 4, 2015) (Pak.), *available at* https://delawarelaw.widener.edu/files/resources/pakistanashgarleghari.pdf [https://perma.cc/9463-43J3].

394 Am. Elec. Power Co. v. Connecticut, 564 U.S. 410, 425–26 (2011).

Moreover, the discretion of the executive branch to initiate new climate change-related regulatory actions was thereafter enjoined by the Supreme Court for the remaining duration of the Obama and Trump administrations, and in 2022 struck by the Supreme Court pursuant to the major questions doctrine.[395] In 2014, EPA climate regulatory discretion and deference were determined by the Supreme Court to not permit executive branch "tailoring" of statutory provisions.[396] Three Supreme Court decisions during the Obama Administration each year between 2014 and 2016 and then in 2022 arrested EPA climate change regulation, resulting in no longer was there ongoing federal executive branch progress or regulatory action displacing common law regarding climate change.[397]

Climate change plaintiffs did not appear to have capitalized on this 5-year cessation of federal displacement of common law remedies. Instead, plaintiffs became mired in procedural state court versus federal court disputes regarding state common law left in limbo and not addressed in the *AEP* Supreme Court decision.[398] With both the Clean Air Act[399] and the Clean Water Act[400] recognizing common law, prior Supreme Court precedent preserved state common law claims against displacement notwithstanding whether there was ongoing federal agency regulation of the field,[401] and was followed since by the lower federal courts.[402]

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395 West Virginia v. EPA, 577 U.S. 1126 (2016).

396 Util. Air Regul. Grp. v. EPA, 573 U.S. 302, 325 (2014).

397 *See* Steven Ferrey, *A Legal 'Jurisdictional Trainwreck'*, 59 SANTA CLARA L. REV. 1, 58–63 (2019).

398 *See supra* Section IV B.; Am. Elec. Power Co. v. Connecticut, 564 U.S. 410, 425–26 (2011) (stating that state common law claims would be subject to a more exacting measure of Congressional intent to find implied preemption or displacement).

399 42 U.S.C. § 7604(e) ("Nothing in this section shall restrict any right which any person (or class of persons) may have under any statute or common law to seek enforcement of any emission standard or limitation or to seek any other relief . . . ."); 42 U.S.C. §7416 ("Except as otherwise provided . . . nothing in this chapter shall preclude or deny the right of any State or political subdivision thereof to adopt or enforce (1) any standard or limitation respecting emissions of air pollutants or (2) *any requirement* respecting control or abatement of air pollution . . . .") (emphasis added).

400 33 U.S.C. § 1365(e) ("Nothing in this section shall restrict any right which any person (or class of persons) may have under any statute or common law to seek enforcement of any effluent standard or limitation or to seek any other relief . . . .").

401 Int'l Paper Co. v. Ouellette, 479 U.S. 481, 507 (1987) (preserving state nuisance claims regarding water contamination, notwithstanding water emissions satisfying permit requirements pursuant to the federal Clean Water Act); Silkwood v. Kerr-McGee Corp., 464 U.S. 238, 251–52 (1984) (holding that common law injury claims related to workplace exposure to nuclear material remained, notwithstanding regulation of nuclear safety by the Nuclear Regulatory Commission under the Atomic Energy Act).

402 *See* Bell v. Cheswick Generating Station, 734 F.3d 188, 196 (3d Cir. 2013) (citing *Ouellette*, 479 U.S. 481 (1987)); North Carolina v. Tenn. Valley Auth., 615 F.3d 291, 303 (4th Cir. 2010) (citing *Ouellette*, 479 U.S. 481 (1987)).

Circa 2022: Since the four 2011–2016 Supreme Court opinions restricting executive branch climate regulation, the composition of the Court changed notably:

- The Supreme Court's 2015 *Michigan* decision reversed the D.C. Circuit[403] opinion in which then D.C. Circuit Court of Appeals Judge Kavanaugh's dissent was followed by the Supreme Court.[404] Justice Kavanaugh is now elevated to the Supreme Court and signaled that he may scale back delegations of authority to federal executive agencies.[405]
- Justice Gorsuch prior to joining the Supreme Court criticized the doctrine of administrative deference when he served as a circuit court judge on the Tenth Circuit.[406]

As its final decision in its 2022 term, the Supreme Court chose to revisit *West Virginia v. EPA* which resulted in a decision that surprised many observers. However, it follows the thread sewn in the three Supreme Court decisions on climate change regulation made annually between 2014-2016. What is new is the Court's 2022 use of the major questions doctrine to negate federal executive branch authority over major questions. That major questions doctrine had not emerged in the 2014-2016 period, only appearing in the year before the 2022 *West Virginia* decision.[407]

In 2022, the Supreme Court held that the circuit courts had short-changed the defendant oil companies by refusing to hear and dismissing

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403 Michigan v. EPA, 576 U.S. 743 (2015).

404 White Stallion Energy Ctr., LLC v. EPA, 748 F.3d 1222 (D.C. Cir. 2014), *rev'd*, Michigan v. EPA, 576 U.S. 743 (2015). Then-Judge Kavanaugh during his confirmation to the Court expressly singled out his dissent in *White Stallion* to be one of his ten most important opinions, stating "the Supreme Court's majority opinion agreed with and cited my dissent" in *Michigan v. EPA*. Fatima Hussein, *Kavanaugh Touts Court Loss Among His Highest Accomplishments*, BLOOMBERG L. NEWS (July 24, 2018, 6:15 PM) ("In my view, it was unreasonable—and therefore unlawful under the Administrative Procedure Act—for EPA not to consider the costs imposed by regulations in determining whether such regulations were 'appropriate and necessary' . . . . All nine Justices agreed with my position that the statute requires consideration of costs).

405 Paul v. United States, 140 S. Ct. 342 (2019) (Kavanaugh, J., concurring in the denial of certiorari).

406 Gutierrez-Brizuela v. Lynch, 834 F.3d 1142, 1156–57 (10th Cir. 2016).

407 *See* Ala. Ass'n of Realtors v. Dep't of Health and Hum. Servs., 141 S. Ct. 2485, 2489 (2021) (holding the CDC's action was of major national significance because it covered 80% or more of the nation and interfered with the landlord-tenant relationship, which the Court upheld as "the particular domain of state law"); NFIB v. OSHA, 142 S. Ct. 661, 665 (2022) (halting enforcement of the Occupational Safety and Health Administration's (OSHA) COVID-19 vaccination and testing temporary emergency standard applying to all employers with 100 or more employees in their work force, as "[t]here can be little doubt that OSHA's mandate qualifies as an exercise" of "powers of vast economic and political significance" (quoting *Ala. Ass'n of Realtors*, 141 S. Ct. at 2489)).

certain of their claims for removal of the case against them.[408] While this was a procedural issue, it fundamentally determines where the plaintiff cities' claims will be prosecuted—in federal courts which must follow Supreme Court precedent on federal claims or in the independent state court systems regarding state common law claims which the Court's *AEP* decision left unresolved. While this 2021 Supreme Court decision is only procedural regarding what claims may be brough in which courts, in an area of law as novel and evolving as climate change liability, the forum where claims are adjudicated and what claims can be heard both become foundational determinations affecting the ultimate merits.

The 2021 Supreme Court *Baltimore* opinion may be a precursor for the direction of Supreme Court jurisprudence with three new Justices confirmed to the Court since the four key Court decisions highlighted above between 2011–2016.[409] For some of the most significant and challenging legal issues of this century that involve the runaway warming of the climate, the legal implications are substantial.

408 BP P.L.C. v. Mayor of Baltimore, 141 S. Ct. 1532 (2021).

409 Since 2016, Justices Gorsuch, Kavanaugh, and Barrett have been confirmed and are members of the Supreme Court. *See* SUPREME COURT OF THE UNITED STATES, *Justices 1789 to Present*, https://www.supremecourt.gov/about/members_text.aspx [https://perma.cc/6WXQ-DG7Y] (last visited May 6, 2022).