TRANSMISSION: A NEW HOPE: THE IMPLICATIONS OF THE BIDEN INFRASTRUCTURE ACT ON CORRIDOR DESIGNATION

BY

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The Energy Policy Act of 2005 amended Section 216 of the Federal Power Act and permitted federal agencies to designate an area of land as a National Interest Electric Transmission Corridor (NIETC). Designating an NIETC was meant to give federal agencies the authority to preempt state siting law and issue construction permits to build new transmission lines. The new transmission lines could then create high value connections that might otherwise be blocked by third parties, e.g. transmission lines running from State A to State C through State B. The corridor program received swift political backlash and was all-but eliminated by two important federal circuit court decisions. To this day, no federal agency has successfully designated an NIETC using Section 216.

In the recent past, extreme weather events have demonstrated how the ongoing climate crisis is wreaking havoc throughout the United States. The Biden Administration has responded to these climate issues, in part, by passing legislation to prioritize the protection and construction of new electrical transmission. The so-called Infrastructure Investment and Jobs Act explicitly amended Section 216 and indicates Congress's willingness to revitalize the NIETC program. This Note explores how the Biden Administration's new legislation could finally empower federal agencies to designate and site new transmission corridors under Section 216. It also explores challenges with and new alternatives to the siting process, including internal agency reformation through rulemaking and standardized state takings laws.

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I. INTRODUCTION

The summer of 2021 was a banner year for climate disasters. June of 2021 was the hottest on the record for the United States, surpassing the previous June of 2020 by 0.9 of a degree.[1] July 2021 was one of the hottest months on earth in recorded history.[2] Simultaneously, the Pacific Northwest experienced heat waves and temperature spikes up to 116 degrees Fahrenheit, killing hundreds across Oregon, Washington, and British Columbia.[3] California lost two million acres of land to wildfires before the Fall of 2021's "fire season," 150,000 acres short of 2020's all-time record.[4] In August, Category 4 storm Hurricane Ida made landfall in Louisiana, displacing thousands and killing at least twelve people.[5] Though New Orleans avoided a worst-case scenario, Ida swept across the Northeast and into major cities like New York and Philadelphia where it

[1] *June 2021 Was the Hottest June on Record for U.S.*, NAT'L OCEANIC & ATMOSPHERIC ADMIN. (Jul. 9, 2021), https://perma.cc/JVN9-349A.

[2] Kasha Patel, *July 2021 Was Earth's Hottest Month Ever Recorded, NOAA Finds*, WASH. POST (Aug. 13, 2021), https://perma.cc/LJ8Z-LM2B.

[3] *Residents in the Pacific Northwest Are Getting Ready for Another Heat Wave*, NPR (Aug. 11, 2021), https://perma.cc/Z3ZP-K3EG.

[4] Aya Elamroussi, *California's Wildfire Season is 'Far From Over' as Multiple Massive Blazes Rage, Official Warns*, CNN (Sep. 8, 2021) https://perma.cc/D9DF-G6UB.

[5] Robinson Meyer, *When the Climate Crisis Becomes Unignorable*, ATLANTIC (Sep. 7, 2021), https://perma.cc/EX4A-VB36.

killed over fifty more people.[6] Unfortunately, these disasters are now commonplace: almost one-third of Americans live in parts of the country that experienced a weather disaster in the summer of 2021.[7] Even in regions historically assessed as the least likely to experience such extremes, the frequency and intensity of hot extremes have increased while the frequency and intensity of cold extremes have decreased.[8]

The threads tying these disasters together is climate change. President Biden acknowledged this in a speech he gave after surveying the storm damages in New York and New Jersey: "The nation and the world are in peril. . . . They've been warning us the extreme weather would get more extreme over the decade, and we're living in it real time now."[9] In the same speech, President Biden emphasized the need to modernize infrastructure, specifically naming power transmission lines as key targets for upgrade.[10] This position is not new or surprising, as infrastructure was a major component of President Biden's campaign promises.[11] So far, President Biden has largely delivered on this promise. On June 24, 2021, he announced support for a new, bipartisan infrastructure bill[12] which made it through Congress and was signed into law just five months later.[13] Though it has been greatly altered in scope and budget since its inception,[14] the Infrastructure Investment and Jobs Act (the Infrastructure Bill) names energy infrastructure and transmission as one of its most prioritized upgrades.[15]

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[6] *Id.*

[7] Sarah Kaplan & Andrew Ba Tran, *Nearly 1 in 3 Americans Experienced a Weather Disaster This Summer*, WASH. POST (Sep. 4, 2021), https://perma.cc/5QEV-GVRF.

[8] Sonia I. Seneviratne et al., *Weather and Climate Extreme Events in a Changing Climate*, *in* CLIMATE CHANGE 2021: THE PHYSICAL SCIENCE BASIS 1517 (2021) ("It is an established fact that human-induced greenhouse gas emissions have led to an increased frequency and/or intensity of some weather and climate extremes since pre-industrial time, in particular for temperature extremes. . . . Some recent hot extreme events would have been extremely unlikely to occur without human influence on the climate system.") (emphasis omitted).

[9] *Transcript of Biden's Speech on Climate Change and Hurricane Ida*, N.Y. TIMES (Sep. 7, 2021), https://perma.cc/GDB5-RELR.

[10] *Id.*

[11] *The Biden Plan to Build a Modern, Sustainable Infrastructure and an Equitable Clean Energy Future*, JOE BIDEN [hereinafter *Biden's Plan*], https://perma.cc/9MD7-C264 (last visited Feb. 11, 2023).

[12] *FACT SHEET: President Biden Announces Support for the Bipartisan Infrastructure Framework*, WHITE HOUSE BRIEFING ROOM (Jun. 24, 2021), https://perma.cc/QF7A-T8S9.

[13] Brian Naylor & Deirdre Walsh, *Biden Signs the $1 Trillion Bipartisan Infrastructure Bill into Law*, NPR (Nov. 15, 2021), https://perma.cc/YN2Y-N5CF.

[14] One important and seemingly abandoned element is the Clean Energy Performance Program (CEPP), an incentives program that would allocate $150 billion in incentives for utilities to switch from coal and natural gas to wind, hydro, solar, and nuclear. Jeff Brady, *Congress is Debating its Biggest Climate Change Bill Ever. Here's What's at Stake*, NPR (Sept. 15, 2021), https://perma.cc/LL53-QD6H; Zoya Teirstein, *Meet the CEPP, the Biggest Federal Climate Policy You've Never Heard of*, GRIST (Sept. 29, 2021), https://perma.cc/Z9KV-3XTA.

[15] *See* Infrastructure Investment and Jobs Act, Pub. L. No. 117–58, § 40103(b)(3)(B), 135 Stat. 429, 928 (2021) (explaining that the purpose of the program is to enhance grid

Policymakers and concerned citizens want to maximize and utilize the Infrastructure Bill's funding in the most efficient, logical manner possible. One popular argument for improving energy infrastructure to help curb climate change is that roughly 75% of worldwide greenhouse gas (GHG) emissions stem from the energy sector.[16] Since this is mathematically the largest piece of the GHG "pie," it makes sense to prioritize energy sector efficiency and reformation in climate mitigation efforts. Considering that the U.S. energy grid determines where energy is produced and consumed, transmission grid reform is an ideal starting point of discussion. Improving grid transmission is a critical factor in achieving reliable, emissions-free electric energy pursuant to President Biden's stated climate goals.[17]

Regardless of one's position on infrastructure change management, the American electric energy grid is in dire need of reform. Most of the American grid was built in the 1950s and 60s with an anticipated fifty-year lifespan, and the United States experiences more power outages than any other developed country.[18] Early facilities first created and then carried the electrical power—known in the field of energy law as "load"—directly to customers.[19] This system was so inefficient that load generation facilities had to be located within a mile of the load consumer.[20] Technological advancements, transmission construction, and economies of scale increased the distance between load production and consumption, improving overall electricity output and dropping consumer prices.[21] While interconnection between facilities happened naturally over time, little overarching or unifying design philosophy existed except to base generation near high population centers "with the transmission system as the sole reliability backbone."[22] America's modern electric grid

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resilience and reliability). President Biden has also passed the "historic" Inflation Reduction Act. *See Biden-Harris Administration Releases Inflation Reduction Act Guidebook for Clean Energy and Climate Programs*, WHITE HOUSE BRIEFING ROOM (Dec. 15, 2022), https://perma.cc/AN4A-5UA9 (showing that the Inflation Reduction Act was passed in August 2022).

16 *World Greenhouse Gas Emissions: 2016*, WORLD RES. INST. (Feb. 3, 2020), https://perma.cc/QPW6-5939 (see Static Chart).

17 Yvonne McIntyre, Grant Carlisle, & Jackie Wong, *President Biden's Bold Plan to Build a Clean Electric Grid*, NAT. RES. DEF. COUNCIL (Apr. 1, 2021) https://perma.cc/AP2E-7NTQ; Miranda Wilson, *N.Y. Transmission Overhaul: Model or Warning for Biden?*, E&E NEWS (June 29, 2021) https://perma.cc/SYL6-MWA2; *see also* U.S. DEP'T OF ENERGY, NATIONAL TRANSMISSION GRID STUDY 10 (2002) [hereinafter GRID STUDY] (calling the elimination of transmission bottlenecks "vital to our national interest.").

18 Ula Chrobak, *The US Has More Power Outages Than Any Other Developed Country. Here's Why.*, POPULAR SCI. (Aug. 17, 2020), https://perma.cc/J6EF-6BLS.

19 NAT'L COUNCIL ON ELEC. POL'Y, ELEC. TRANSMISSION: A PRIMER 2 (2004).

20 *Id.*

21 *Id.* at 2–3.

22 Jereme Kent, *'It's Not Just Texas, the Entire US Grid System is Broken. More Will Die If It's Not Redesigned'*, RECHARGE (Mar. 19, 2021), https://perma.cc/E87U-R7JK ("The modern power grid is a horse built by committee over 100 years. The result is a 17-leg camel with a stock portfolio.").

is split into three distinct regions,[23] which means it is balkanized and regulated on an inefficient, regional basis.

The pre-1960s American energy market economically modeled public utilities as natural monopolies.[24] Natural monopolies exist in free markets where a firm can produce a good at a lower cost than competitors acting individually or in combination with one another.[25] Natural monopoly structure dictates that a single utility will produce the cheapest electricity by being vertically integrated and controlling each aspect of production.[26] For electric utilities, this meant that one company would produce the electricity, send it along its own transmission lines, and deliver it directly to its customers along its own distribution lines. Early economists and legal scholars acknowledged natural monopolies' usefulness and value.[27] In addition, Supreme Court jurisprudence blessed the use of natural monopolies with the caveat that nonobvious rights must be construed narrowly and in the public interest.[28] Soon after, the Court recognized that monopolies affecting the public interest could be regulated, formulating an early theory of natural monopolies.[29] The Court explained that private property must be regulated when "clothed with a public interest" or used in a manner making it of private consequence and affecting the community at large.[30] This model remained relatively undisturbed in the early days of energy generation. When the grid was first conceptualized and connected, generators and transmission providers were one and the same, generating and delivering energy as a vertical monopoly.[31] Over time, investor-owned utilities (IOUs), rural electric cooperatives, and federal power authorities all shared in different

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[23] *U.S. Grid Regions*, U.S. ENV'T PROT. AGENCY (Feb. 5, 2023), https://perma.cc/4BJX-7B5S.

[24] Brad Sherman, Note, *A Time to Act Anew: A Historical Perspective on the Energy Policy Act of 2005 and the Changing Electrical Energy Market*, 31 WM. & MARY ENV'T L. & POL'Y REV. 211, 215–17 (2006).

[25] Peter Z. Grossman, *Is Anything Naturally a Monopoly?*, *in* THE END OF A NATURAL MONOPOLY: DEREGULATION AND COMPETITION IN THE ELECTRIC POWER INDUSTRY 12 (Peter Z. Grossman & Daniel H. Cole, eds. 2003).

[26] *Id.* at 31.

[27] *Id.* at 33.

[28] *See* The Proprietors of the Charles River Bridge v. The Proprietors of the Warren Bridge, 36 U.S. 420, 605 (1837) (granting the legislature the right to create natural monopolies so long as they are made "from a high sense of public duty, [and] to promote the public welfare"). Nonobvious rights are powers not explicitly given under general monopoly rights. *See* Evelyn Atkinson, *The Foundation of Corporate Personhood: A Look at the Charles River Bridge Case of 1837*, PROMARKET (June 26, 2018), https://perma.cc/A64D-9MST (describing the history and holding of the Charles River Bridge case).

[29] Sherman, *supra* note 24, at 215 (referencing Munn v. Illinois, 94 U.S. 113 (1876)). Of course, this relied heavily on the thinking of British legal scholars. *See* Grossman, *supra* note 25, at 33 (explaining that some scholars think the idea of a natural monopoly comes from seventeenth century England).

[30] *Munn*, 94 U.S. at 125–26.

[31] Kent, *supra* note 22.

aspects of generating electricity and transmitting it to customers.[32] However, public utilities were generally recognized and protected as legal monopolies until the 1990s.[33]

Creating efficient grid design must address an issue known as transmission congestion, or bottlenecking. Bottlenecking occurs when grids cannot maintain acceptable safety margins for reliability while sending power over transmission lines.[34] The grid requires a constant balance of electricity to match energy demand both instantaneously and simultaneously;[35] when too many requests for electricity threaten to overload lines, grid operators must deny some transactions.[36] Bottlenecking also occurs on a larger scale, especially on a regional basis. For example, the Western United States has the "greatest proven potential to develop renewable resources."[37] Yet the region lacks transmission capacity to sufficiently deliver energy to areas with high load demand.[38] It does not matter how many new solar and wind farms are built or how much energy new carbon-free generation facilities create if existing infrastructure cannot transmit that energy load to consumers.[39] Similarly, it does not matter how much new transmission infrastructure is built if the warming climate's extreme weather events continue to destroy wires and power lines.

Determining and securing ideal siting locations for new transmission projects is crucial to solving bottlenecking. The U.S. can only mitigate climate change by limiting its GHG output, which requires new transmission planning and construction. This Note examines an obsolete program that allows the Department of Energy (DoE) to determine and secure land for siting transmission projects. It proposes that DoE should resurrect its corridor designation program and fund new corridor projects

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[32] Alexandra B. Klass, *Expanding the U.S. Electric Transmission and Distribution Grid to Meet Deep Decarbonization Goals*, 47 ENV'T L. REP. 10,749, 10,750 (2017).

[33] *Public vs. Private Power: From FDR to Today*, PBS https://perma.cc/WSK3-P26R (last visited Feb. 11, 2023).

[34] GRID STUDY, *supra* note 17, at 6.

[35] Timothy P. Duane, *Regulation's Rationale: Learning from the California Energy Crisis*, 19 YALE J. ON REGUL. 471, 490 (2002) ("[I]t would be comparable to having a deregulated airline system where, any time a single flight was delayed for a single minute, every other airplane flying at the time of the delay would simultaneously drop out of the sky.") (internal citation omitted).

[36] GRID STUDY, *supra* note 17, at 6.

[37] JASON JOHNS, PAMELA JACKLIN, & MARCUS WOOD, UNCORK THAT TRANSMISSION BOTTLENECK: A LEGISLATIVE AND TECHNOLOGICAL ROADMAP FOR TAPPING THE WEST'S VAST RENEWABLE ENERGY RESOURCES 3 (2010); *see* U.S. DEP'T OF ENERGY, NAT'L ELEC. TRANSMISSION CONGESTION STUDY ix fig.ES-1 (2009) (showing the weather condition constraints across the United States that must be considered for identifying areas for development).

[38] JOHNS ET AL., *supra* note 37, at 3.

[39] Especially large, urban cities located tens or hundreds of miles from generation facilities.

via the Infrastructure Bill.[40] Part II explores transmission regulation and the creation and subsequent limitations placed on transmission corridors. Part III walks through the Infrastructure Act, highlighting the ways it could fund corridors. Part IV explores takings issues on a state-by-state basis. This Note concludes that although the Federal Energy Regulatory Commission (FERC) historically lacks the funding and regulatory power necessary to enforce its backstop authority, hope exists that Congress intends to revitalize the corridor program.

II. EXPLORING AND SUMMARIZING EXISTING TRANSMISSION LAW

In 2005, the United States Congress enacted the Energy Policy Act (EPAct 2005)[41] to promote "dependable, affordable, and environmentally sound production and distribution of energy for America's future."[42] Numerous factors pushed policymakers towards restructuring energy policy in this manner.

A. A Brief History of Pre-EPAct 2005 Transmission Policy

U.S. energy market growth slowed in the 1960s and improving technology made smaller generation and renewable energy more cost efficient.[43] By the 1970s, demand for electricity grew at a rate that significantly outpaced transmission investments and reached a historical low point in 1994.[44] According to one expert report, per capita electricity consumption was seven times higher in 1999 compared to fifty years prior.[45] Congress attempted to mitigate these issues in 1978 with the Public Utilities Regulatory Practices Act (PURPA),[46] which allowed some nonutility energy producers to enter the energy market and sell power to utility companies.[47] The federal government largely enacted PURPA to

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[40] Doing so would fall in line with DoE's own statement that "[m]odernizing America's electricity infrastructure is one of [DoE's] top priorities." *Transmission Planning*, OFF. OF ELEC., https://perma.cc/8KZG-V4JG (last visited Feb. 11, 2023).

[41] Pub. L. No. 109–58, 119 Stat. 594 (codified primarily in scattered sections of 42 U.S.C.).

[42] *President's Statement on Energy Policy Act of 2005*, WHITE HOUSE (Aug. 8, 2005), https://perma.cc/9W5L-2QSB.

[43] Sherman, *supra* note 24, at 217.

[44] Debbie Swanstrom & Meredith M. Jolivert, *DOE Transmission Corridor Designations & FERC Backstop Siting Authority: Has the Energy Policy Act of 2005 Succeeded in Stimulating the Development of New Transmission Facilities?*, 30 ENERGY L.J. 415, 421 (2009) (internal citations omitted).

[45] *Id.* (referencing the U.S. Energy Information Administration's Annual Energy Review in 2000). Technological progress and modern lifestyle choices means people create more electricity demand through all times of the day, a problem exacerbated by our modern technological dependency.

[46] 16 U.S.C. §§ 2601–2645 (2018).

[47] Sherman, *supra* note 24, at 218–19 (internal citations omitted). Yet allowing nonutility producers to enter energy markets might actually have been unintentional. *See*

develop U.S. energy independence and alternative energy production, marking its entry point into direct competition with utility monopolies.[48]

The Energy Policy Act of 1992 (EPAct 1992)[49] again changed the existing model of vertically integrated utilities by giving FERC the authority to force utilities to open their transmission lines to competitors.[50] While PURPA required regulated utilities to connect with renewable generation facilities known as qualified facilities (QFs),[51] EPAct 1992 created a new version of QFs completely exempt from the monopoly model.[52] A series of landmark FERC decisions changed the overall structure of energy markets followed shortly after. Order Nos. 888 and 889 required that all public utilities give energy sellers access to their transmission lines without charging unreasonable fees, and Order No. 2000 encouraged regional development, planning, and management of transmission by Regional Transmission Organizations (RTOs).[53] RTOs are a version of Independent System Operators (ISOs), with voluntary managers across a geographical range that are responsible for energy and transmission market oversight and policy implementation.[54] FERC concluded Order No. 2000 by stating that "RTOs are needed to resolve impediments to fully competitive markets[,]" impediments such as undue discrimination and market power, reliability, and industry competition.[55] Without a central plan or federal control, transmission operators organized into patchworks of RTO and non-RTO networks without long-term planning or greater unity.[56] Unfortunately, this lack of cogent policy and planning remains unremedied.[57]

Alexander K. Obrecht, Note, *Energy Policy Act of 2005: Pseudo-Fed for Transmission Congestion*, 7 J. ENV'T PUB. HEALTH L. 159, 166 (2012).

48 Obrecht, *supra* note 47, at 166.

49 Pub. L. No. 102–486, 106 Stat. 2776 (codified as amended at 16 U.S.C. §§ 824–824w and 42 U.S.C. §§ 13201–13574).

50 EPAct 1992, 16 U.S.C. §§ 824j–824k (2018).

51 18 C.F.R. § 131.80 (2021).

52 Obrecht, *supra* note 47, at 166 (internal citation omitted).

53 Shelley Welton, *Non-Transmission Alternatives*, 39 HARV. ENV'T L. REV. 457, 475–77 (2015).

54 Regional Transmission Organizations, 238, 65 Fed. Reg. 810, 831, 859 (2000).

55 *Id.* at 834.

56 Welton, *supra* note 53, at 477. Today, there are ten major RTO/ISOs in the United States. *Electric Power Markets*, FED. ENERGY REGUL. COMM'N (Jul. 20, 2021), https://perma.cc/GK6V-NTTZ.

57 For a useful discussion of the benefits and difficulties associated with creating a Western RTO, see Chris Westfall, *Western Regional Transmission Organization: Creating a Market to Support Renewable Energy*, 31 GEO. ENV'T L. REV. 409, 423–32 (2019).

B. The Effect of EPAct 2005

FERC struggled in the wake of these Orders to deregulate energy markets while ensuring reliability and affordability.[58] Nationally, these topics came into sharp focus after a series of regional blackouts. In August of 2003, the then-largest power outage in North American history affected an area with around 50 million residents throughout the Northeast.[59] Canada and the United States loss a total of $4–$10 billion USD combined, as power took between two days and a full week to be restored.[60] In response, President Bush and Prime Minister Jean Chrétien established a joint task force to develop recommendations to reduce the possibility and scope of future outages.[61] The task force recommended 46 actions needed by government and industry—recommendations that only one American agency integrated into its future actions.[62]

Simultaneously, environmental concerns about climate change and GHG emissions received more consideration.[63] Renewable energy production began in earnest after PURPA forced utilities to buy power from small power generators with cost calculations that considered energy efficiency and conservation.[64] EPAct of 1992 forced utilities to buy from wholesale electricity producers, expanding the pool of independent power producers, and easing regulations on utility holding companies.[65] The government also felt pressure to reduce emissions given the warming climate and its telltale effects.[66]

Yet perhaps the most motivating factor for energy market reform was national security. When President Bush signed the bill into law, he explicitly characterized EPAct of 2005 as an economic and national security bill stemming from the lack of a comprehensive energy plan.[67] Part of the administration's fears were unavoidable at best and paranoid at worst, including the notion that nuclear explosions, oil embargoes, or

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[58] *See, e.g.*, *Bring Me Your Powerless Masses*, CFO (Aug. 22, 2003) https://perma.cc/W7RR-WLWY (highlighting FERC's failures in the 2003 blackout affecting Northeastern states and Canada).

[59] *Id.*; U.S.–CANADA POWER SYSTEM OUTAGE TASK FORCE, FINAL REPORT ON THE IMPLEMENTATION OF TASK FORCE RECOMMENDATIONS 2 (2006) [hereinafter U.S.–CANADA TASK FORCE].

[60] U.S.–CANADA TASK FORCE, *supra* note 59.

[61] *Id.*

[62] *Id.* at 3, 62 (showing that only DoE have taken steps to implement the action items from the Task Force).

[63] *See* Steven Ferrey, *Power Future*, 15 DUKE ENV'T L. & POL'Y F. 261, 272–73 (2005) (noting the well documented GHG emissions and resulting climate change caused by fossil fuel energy production).

[64] Max Hensley, Note, *Power to the People: Why We Need Full Federal Preemption of Electrical Transmission Regulation*, 46 U. MICH. J.L. REFORM 1361, 1367–68 (2013).

[65] Jeffery S. Dennis, *Twenty-Five Years of Electricity Law, Policy, and Regulation: A Look Back*, NAT. RES. & ENV'T, Summer 2010, at 33, 34–35.

[66] Sherman, *supra* note 24, at 221–22.

[67] *President Signs Energy Policy Act*, THE WHITE HOUSE (Aug. 8, 2005), https://perma.cc/C77N-5X4K.

cyber terror could target U.S. energy infrastructure.[68] While tempting to write-off such rhetoric as a side effect of geopolitical tensions, the Northeast blackout was the largest reliability issue in a series of energy instability events. The United States had experienced just two major outages from 1965 to 1995 but experienced four major outages between 1996 and 2003.[69] Outages, blackouts, power fluctuations, and brownouts between 1999 and 2001 also cost the U.S. economy billions of dollars.[70] President Bush consolidated these findings into EPAct 2005, a new plan for energy security and regulation and the first federally comprehensive national energy policy in over a decade.

The result of President Bush's planning and legislative efforts, EPAct of 2005 addressed lessons learned in the 1990s and early 2000s about the "fragility and vulnerability of the highly centralized U.S. grid[,]" and impacted transmission regulation and planning in a few distinct ways.[71] In addition to corridor designation and creation, EPAct of 2005 modernized federal transmission policy in four distinct areas.[72] First, it required the formal creation of Electric Reliability Organizations to enact and oversee reliability standards and granted FERC additional oversight and approval authority.[73] Second, it directed DoE and FERC to coordinate the creation of new transmission connections.[74] Third, it directed DoE to improve the efficiency of transmission applications for siting on federal land.[75] Fourth, it required FERC to adopt rules allowing transmission providers to collect incentive-based transmission rates.[76]

C. FPA Section 216: Transmission Planning and Corridor Designation

With EPAct of 2005's addition of corridor designation, DoE gained a useful tool to help solve deficient energy infrastructure systems. Corridors directly provided an answer to grid congestion, helping to satisfy energy demand by adding certainty, speed, and environmental protection.[77] Section 368 of EPAct of 2005 required the Secretaries of Agriculture, Commerce, Defense, Energy, and the Interior (the Secretaries) to designate transmission corridors for the eleven contiguous western states by 2007, and all other states by 2009.[78] It also required the

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68 Ferrey, *supra* note 63, at 275–76.

69 *Id.* at 276 (internal citations omitted).

70 *Id.* at 277.

71 Sherman, *supra* note 24, at 220.

72 Swanstrom & Jolivert, *supra* note 44, at 422–23.

73 EPAct, 16 U.S.C. § 824o (2018).

74 *See, e.g.*, *infra* note 120 and accompanying text; Swanstrom & Jolivert, *supra* note 44, at 422.

75 16 U.S.C. § 824p(h). It also appointed DoE as the lead agency for purposes of coordinated environmental reviews with additional procedural appeals processes. *Id.*

76 *Id.* § 824s.

77 *Energy Corridors on Federal Lands*, DEP'T OF ENERGY, https://perma.cc/KE5M-3PPV (last visited Feb. 11, 2023).

78 EPAct, 42 U.S.C. § 15926(a)–(b) (2018).

Secretaries to consider improving or building new transmission to "(1) improve reliability; (2) relieve congestion; and (3) enhance the capability of the national grid to deliver electricity."[79] While this section does not explicitly define what a designated corridor is, it does require specificity of its centerline, width, and compatible uses.[80]

Section 216 of the Federal Power Act (FPA)[81] sets out the boundaries of corridor designation.[82] The statute requires DoE to conduct a congestion study every three years.[83] After doing so, the Secretary of the DoE must create a report based on her findings.[84] This report "may designate any geographic area experiencing electric energy transmission capacity constraints or congestion that adversely affects consumers as a national interest electric transmission corridor" (NIETC).[85] The Secretary may weigh a variety of factors in considering whether to designate a corridor including: economic viability of energy prices; protection of economic growth; diversification of energy type; and energy independence, national policy, or homeland security of the United States.[86]

FERC can pre-empt states and issue corridor construction permits in five distinct scenarios: (1) when a state lacks the authority to approve the siting and construction of a transmission facility within its borders;[87] (2) when a state cannot consider the interstate benefits achieved by the proposed project;[88] (3) when a construction permit applicant qualifies as a transmitting utility but does not qualify for a permit because it does not serve end-use customers in that particular state;[89] (4) when a state commission withholds approval after an application is filed for a year or more;[90] or (5) when a state commission conditionally approves a permit yet the project is not economically feasible or will not reduce interstate transmission congestion.[91] Once the Secretary designates a corridor, DoE may issue a permit for corridor modification or construction, provided it first offers notice and an opportunity for a hearing.[92] Crucially, permit holders can exercise rights of eminent domain over privately-owned, designated corridors to construct or modify transmission facilities.[93] Each

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79 *Id.* § 15926(d).

80 *Id.* § 15926(e).

81 16 U.S.C. §§ 824–824w. Section 216 of the FPA is also known as 16 U.S.C. § 824p.

82 The Infrastructure Bill amended Section 216. For the updated changes to section 216, see *infra* notes 158–166 and accompanying text.

83 16 U.S.C. § 824p(a)(1).

84 *Id.* § 824p(a)(2).

85 *Id.*

86 *Id.* § 824p(a)(4)(A)–(E).

87 *Id.* § 824p(b)(1)(A)(i).

88 *Id.* § 824p(b)(1)(A)(ii).

89 *Id.* § 824p(b)(1)(B).

90 *Id.* § 824p(b)(1)(C)(i). FERC's interpretation of this rule became the central issue in a later appeal. *See infra* notes 100–105 and accompanying text.

91 16 U.S.C. § 824p(b)(1)(C)(ii).

92 *Id.* § 824p(b), (d).

93 *Id.* § 824p(e).

exercise constitutes a taking of private property, triggering just compensation "equal to fair market value . . . of the property taken on the date of the exercise of eminent domain authority."[94] With EPAct of 2005, Congress handed FERC a powerful tool for combatting the energy insecurity crisis faced by transmission planning and anticipated by President Bush and his joint task force.

D. Judicial Backlash to Section 216

But DoE's ability to designate corridors was not unchecked for long. Following section 216's passage, FERC issued orders interpreting section 216's implementation that tested its rulemaking authority.[95] In 2006, FERC promulgated a final rule to implement corridor designation pursuant to EPAct of 2005.[96] The Commission found that section 216 gave FERC pre-emption over transmission projects where state entities, with siting authority, neglected to approve or outright rejected the approval of a designated corridor.[97]

In *Piedmont Environmental Council v. FERC* (*Piedmont*),[98] two state utilities commissions and two community interest organizations facially challenged this rulemaking under the FPA.[99] FERC's final rule interpreted section 216's language as giving FERC jurisdiction over NIETCs whenever state commissions withheld approval for a year or more.[100] FERC interpreted section 216 expansively and found that a reasonable interpretation of the phrase "withheld approval" included permit denials.[101] The Fourth Circuit did not give deference to FERC's interpretation of section 216 under *Chevron v. Nat'l Res. Def. Council*,[102] determining first whether Congress's intent was clear enough to speak to the precise question at issue.[103] Ultimately, the Fourth Circuit held that FERC's interpretation of section 216 was facially invalid and reversed FERC's final order.[104] Relying on the statute's plain-meaning and interpreting Congressional intent, the court reasoned that FERC's backstop preemption authority was limited to circumstances where "a state [siting] commission either is unable to act or acts inappropriately

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94 *Id.* § 824p(f).

95 Thomas Hutton, *Energy Policy Act § 216: A Power Worth Preserving*, 39 ENV'T. L. REP. 11002, 11003 (2009).

96 Regulations for Filing Applications for Permits to Site Interstate Electric Transmission Facilities, 71 Fed. Reg. 69,440, 69,441 (Dec. 1, 2006) (codified at 18 C.F.R. pt. 50 and 380).

97 *Id.* at 69,441, 69,463.

98 558 F.3d 304 (4th Cir. 2009).

99 *Id.* at 309. This Note does not discuss the 4th Circuit's holdings regarding NEPA's applicability.

100 71 Fed. Reg. at 69,441.

101 *Piedmont*, 558 F.3d at 309–310.

102 467 U.S. 837, 842–43 (1984).

103 *Piedmont*, 558 F.3d at 312.

104 *Id.* at 313.

by including project-killing conditions in an approved permit."[105] This holding explicitly rejected FERC's interpretation of section 216 and limited its jurisdiction by granting preemption in more limited circumstances.

The Ninth Circuit dealt FERC preemption another blow two years after *Piedmont*. DoE issued its first Congestion Study pursuant to section 216 in August 2006.[106] DoE formally issued its corridor designations in 2007, and electrical utilities and citizens groups' challenges followed soon after in *California Wilderness Coalition v. Department of Energy* (*California Wilderness*).[107] This case consolidated thirteen petitions for review challenging DoE's designation of two NIETCs.[108] Petitioners challenged the designation, alleged that DoE failed to consult with the affected states as required by section 216, and failed to consider the designation's potential environmental impacts.[109] DoE prepared its congestion study alongside a 2006 request for comments and multiple technical conferences and meetings.[110] Ultimately, the court held that DoE failed to "consult" with affected states and parties as required by section 216.[111] The court reasoned that the plain-meaning and jurisprudential definition of consultation required DoE to confer with and provide modeling data to each state.[112] The court explicitly identified DoE's consultation obligations as separate and distinct from its notice and comment obligations.[113] Since the court also held that failure to consult went beyond "harmless error," the congestion study and corridor designations were vacated and remanded to DoE to complete the consultation process.[114]

To say these decisions created confusion about the validity of corridor designation would be an understatement: the impact of these two decisions sent ripples across the energy community.[115] *Piedmont* rendered

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105 *Id.* at 313–15.

106 National Electric Transmission Congestion Study, 71 Fed. Reg. 45,047 (Aug. 8, 2006) (showing DoE giving notice of the study and calling for public comments on it); Cal. Wilderness Coal. v. Dep't of Energy (*California Wilderness*), 631 F.3d 1072, 1079–80 (9th Cir. 2011) (discussing the Congestion Study and DoE's actions after it came out).

107 *California Wilderness*, 631 F.3d at 1083.

108 *Id.* at 1079, 1083.

109 *Id.* at 1079. The Court did not reach the merits of the petitioners' third challenge as to whether the corridor designations themselves were arbitrary and capricious. *Id.* at 1079–80.

110 *Id.* at 1080–81.

111 *Id.* at 1085, 1087.

112 *Id.* at 1087–89.

113 *Id.* at 1087 ("If 'consultation' means no more than 'an opportunity for comment,' there was no reason for Congress to use distinct language"). This designation imposes a "substantially higher procedural burden." Hensley, *supra* note 64, at 1369–70.

114 *California Wilderness*, 631 F.3d at 1095. The court also vacated the corridor designations on the grounds that DoE failed to take a "hard look" as required by NEPA. *Id.* at 1106.

115 *See generally* Matthew J. Agen, *Transmission Tug-of-War*, PUB. UTILITIES FORTNIGHTLY, Nov. 2011, at 46, 47 (discussing the implications of *Piedmont* and *California Wilderness* on transmission siting for utilities).

FERC's backstop authority, widely understood to be section 216's intended purpose, functionally useless.[116] Even FERC Commissioners perceived *Piedmont*'s holding as having "deeply crippled" section 216.[117] Additionally, *California Wilderness* both limited FERC's siting authority and empowered the siting authority of state Public Utility Commissions.[118] Consequently, DoE considered delegating its authority to conduct congestion studies and designate NIETCs to FERC but balked after receiving critical comments.[119] Instead, DoE and FERC issued a joint statement explaining that the agencies would collaborate in reviewing newly proposed transmission projects.[120] Although DoE did commit to continue its work on congestion studies shortly after these holdings, FERC's authority to implement federal siting authority hangs in limbo until DoE designates an NIETC.[121] To date, no other congestion study has designated an NIETC. DoE's inaction speaks volumes on the regulatory limitations that these judicial decisions imposed upon corridor planning and designation.

The decision left FERC unsure whether it could rely on corridor designation under section 216 and forced it to figure out another process to update and improve grid transmission. FERC's loss of federal pre-emption for siting meant a loss of a nationally strong or coordinated central planning authority for transmission.[122] FERC shifted its approach of unifying a disjointed grid through corridor designation to regulating RTOs and system operators, choosing to functionally abandon the powers granted by section 216. This shift fell in line with the *Piedmont* and *California Wilderness* courts' unwillingness to allow FERC and the federal government at large regulatory priority over state siting authority, even though such an approach would foster a more coherent national transmission planning process.

In 2011, FERC issued a final rule to revise transmission planning known as Order No. 1000.[123] FERC enacted Order No. 1000 to "improve transmission planning processes and cost allocation mechanisms," citing efficiency and cost-efficacy as its driving motivators.[124] Order No. 1000 shifted transmission planning by altering both the planning and the parties involved in transmission construction.[125] First, it required public

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116 Hensley, *supra* note 64, at 1375.

117 Hutton, *supra* note 95, at 11004.

118 Meredith Hurley, *Traditional Public Utility Law and the Demise of a Merchant Transmission Developer*, 14 NW. J.L. & SOC. POL'Y 318, 327 (2019).

119 Agen, *supra* note 115, at 49.

120 *Id.*; *DOE and FERC Joint Public Statement on Back Stop Siting*, TRANSMISSION & DISTRIB. WORLD (Oct. 12, 2011) https://perma.cc/4RT5-2C2H.

121 Agen, *supra* note 115, at 49.

122 Hurley, *supra* note 118, at 327 (internal citation omitted).

123 Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities, 76 Fed. Reg. 49,842 (Aug. 11, 2011) (codified at 18 C.F.R. part 35) [hereinafter Order No. 1000].

124 *Id.* at 49,844–45.

125 *Id.* at 49,842. Order No. 1000 also reformed transmission cost allocation, which will not be explored in this Note.

utility transmission providers to engage in a regional transmission planning process, even where that particular transmission region did not have an existing RTO or ISO.[126] Second, it eliminated incumbent utilities' legal advantages in constructing transmission projects.[127] Historically, a state constructing an interstate transmission project gave public utilities serving that state's retail customers the first chance to undertake the project.[128] Known as the "right of first refusal" (ROFR), this market advantage for incumbent utilities meant that independent transmission companies could not successfully compete in interstate transmission construction.[129] The federal ROFR also created two incentives detrimental to regional planning. First, it encouraged incumbent utilities to prioritize transmission construction in places where said utilities were likely to have existing ROFR.[130] Second, it discouraged non-incumbents unlikely to benefit from new transmission construction projects, from participating in planning.[131]

Order No. 1000 removed the federal ROFR, forcing states to adopt objective criteria and protocol to govern transmission facilities' construction proposals.[132] This removal encouraged independent power producers and especially renewable energy generators to compete with incumbent utilities and, theoretically, increase the viability and likelihood of additional transmission site construction.[133]

Although over sixty petitioners and intervenors challenged both aspects of Order No. 1000's facial validity in 2014, the D.C. Circuit unanimously upheld the Commission's decision.[134] Some states responded by creating their own ROFRs to protect incumbent utilities' monopoly powers.[135] These so-called "state ROFRs" have been widely accepted as a legitimate exercise of state power under Order No. 1000. For example, when a utility challenged FERC's decision to uphold Minnesota's state ROFR law, the Seventh Circuit held that FERC's decision was "proper."[136]

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126 *Id.* at 49,867–68.

127 *Id.* at 49,846; Agen, *supra* note 115, at 50.

128 Agen, *supra* note 115, at 50–51.

129 *Id.* at 51.

130 Melissa Powers, *Anticompetitive Transmission Development and the Risks for Decarbonization*, 49 ENV'T L. 885, 912 (2019).

131 *Id.* at 912–13.

132 Order No. 1000, 76 Fed. Reg. at 49,880.

133 Agen, *supra* note 115, at 50.

134 S.C. Pub. Serv. Auth. v. Fed. Energy Regul. Comm'n, 762 F.3d 41, 48–49 (D.C. Cir. 2014). The D.C. Circuit also declined to evaluate whether Order No. 1000 would violate a presumption that wholesale energy contracts are just and reasonable. *Id.* at 81. *See also* Okla. Gas & Elec. Co. v. Fed. Energy Regul. Comm'n, 827 F.3d 75, 77 (D.C. Cir. 2016) (eliminating the anti-competitive ROFR within RTO members' contracts); MISO Transmission Owners v. Fed. Energy Regul. Comm'n, 819 F.3d 329, 335 (7th Cir. 2016) (rejecting incumbent utilities' attempt to form a cartel to exclude non-incumbent utilities).

135 *See, e.g.*, LSP Transmission Holdings, LLC v. Sieben, 954 F.3d 1018, 1024 & n.3 (8th Cir. 2020) (discussing how North Dakota, South Dakota, Nebraska, Oklahoma, and Minnesota enacted state ROFR laws directly in response to Order No. 1000).

136 *MISO Transmission Owners*, 819 F.3d at 336.

The court reasoned that doing so avoided federal intrusion into transmission siting, a power traditionally reserved for states, and that Order No. 1000 did not "limit, preempt, or otherwise affect state [laws] . . . with respect to construction of transmission facilities."[137] While FERC and the federal courts subsequently reviewing its orders have acquiesced to newly-created state ROFRs, FERC is no doubt aware that unfettered state ROFR promulgation would undermine a cogent national transmission policy.[138]

This brief summary of FERC policymaking represents a general overview of the state of transmission planning and, to a larger extent, corridor designation under section 216. President Trump did not significantly attempt to revise or update transmission planning, delaying any reform until the end of 2020.[139] With President Biden's election came the expectation that he would uphold his campaign promises to overhaul America's physical infrastructure.[140] The $1 trillion USD energy policy question was whether his proposed bill would pass through Congress and, if it did, what it would contain.

III. THE INFRASTRUCTURE BILL

On November 15, 2021, President Biden signed the nearly $1 trillion USD bipartisan infrastructure bill into law just ten days after it passed through the House.[141] The bill allotted over $100 billion USD to energy infrastructure and resilience, alongside other important climate and infrastructure goals like clean drinking water and electric vehicles.[142] More importantly, the bill telegraphs Congress's potential intent to revitalize corridor designation and take a necessary step towards a unified national transmission policy.[143]

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137 *Id.* (quoting Order No. 1000, 76 Fed. Reg. 49,842 (Aug. 11, 2011) (codified at 18 C.F.R. part 35)).

138 *See* Powers, *supra* note 130, at 913–15 (noting that FERC tolerates such ROFRs despite their possible hindrance of "competitive transmission development").

139 *See* Building for the Future Through Electric Regional Transmission Planning and Cost Allocation and Generator Interconnection, 87 Fed. Reg. 26,504, 26,509 (proposed May 4, 2022) (to be codified at 18 C.F.R. pt. 35) (calling Order No. 1000 "the Commission's last significant regional transmission planning and cost allocation rule").

140 *Biden's Plan*, *supra* note 11.

141 Barbara Sprunt, *Here's What's Included in the Bipartisan Infrastructure Law*, NPR (Nov. 15, 2021), https://perma.cc/VG3P-ZAYD.

142 *Id.*

143 Infrastructure Investment and Jobs Act, Pub. L. No. 117–58, §40103, §40105, 135 Stat. 429, 928, 933 (2021). A 2020 House Select Committee on the Climate Crisis also indicated an interest in prioritizing federal transmission planning by directing FERC "to develop an infrastructure strategy, improve transmission planning, and remove barriers to transmission permitting." *Solving the Climate Crisis: Hearing Before the H. Select Comm. On the Climate Crisis*, 116th Cong. 32 (2020) (statement of Beth Soholt, Executive Director, Clean Grid Alliance).

A. Grant Funding

The relevant portions of the Bill begin at Title I of Division D and focus on grid infrastructure and resiliency.[144] The bill directs the Secretary of Energy to establish a program under which she "shall make grants to eligible entities, States, and Indian Tribes" within 180 days of the bill's enactment to promote hardening, wildfire prevention, and disruptive event minimization.[145]

Eligible entities are parties to whom the Secretary can give grants, including electricity grid operators, transmission owners or operators, and anyone else the Secretary wishes to designate.[146] The Secretary may grant funds to eligible entities for activities that involve hardening or reducing the risk of power lines causing wildfires or other disruptive events.[147] To do so, an eligible entity must send the Secretary a grant report describing their mitigation plans.[148] However, the Secretary may grant only an amount equal to what the entity itself spent on preventing or mitigating disruptive events during the previous three years.[149] The Secretary must use a cost-benefit analysis in her determinations, and ensure that at least a third of grants fund small utilities.[150] Any eligible entity receiving a grant must match 100% of the grant amount.[151] The bill treats eligible entities slightly differently than States and Indian Tribes but requires the Secretary to distribute total funds equally between them: that is, 50% to eligible entities and 50% to States and Indian Tribes.[152] The Secretary must submit a program report to Congress every two years, and currently has $5 billion USD of funding to administer between 2022–2026.[153]

Additionally, the bill directs the Secretary to distribute grants to States and Indian Tribes so they may disperse funding to eligible entities themselves.[154] Eligible entities must submit plans to States and Indian Tribes, much like applications submitted to the Secretary.[155] However, States and Indian Tribes may only grant applications after the entities

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144 Infrastructure Investment and Jobs Act, Pub. L. No. 117–58, § 40101, 135 Stat. 429, 923 (2021).

145 *Id.* § 40101(b)–(c)(1). Disruptive events are those in which the grid is "disturbed, preventively shut off, or cannot operate safely due to extreme weather, wildfire, or a natural disaster." *Id.* § 40101(a)(1).

146 *Id.* § 40101(a)(2).

147 *Id.* § 40101(c)(1).

148 *Id.* § 40101(c)(2).

149 *Id.* § 40101(c)(3).

150 *Id.* § 40101(c)(4)–(5). Small utilities are defined as entities that sell 4 million MWh of electricity per year or less. *Id.* § 40101(c)(5).

151 *Id.* § 40101(h)(1). Small utilities are exempt from this requirement and must match one-third of the grant amount. *Id.* § 40101(h)(2).

152 *Id.* § 40101(f).

153 *Id.* § 40101(i)–(j).

154 *Id.* § 40101(d)(1).

155 *See id.* § 40101(d)(2)(B)(iii) (requiring that states or Indian Tribes must include recipients of proposed funding distributions in its plan submitted to the Secretary).

provide notice and public hearing, and identify specific subfactors like total population, areas with a low ratio of customers to power line mileage, and the frequency of disruptive events in the past ten years.[156] States and Indian Tribes must also prioritize funding based on cost-benefit analysis and small utilities.[157]

B. Amendments to FPA Section 216

On top of its grant designation and distribution, the Infrastructure Bill directly amends the corridor designation process codified in subsections 216(a), (b), (e)(1), and (i) of the FPA.[158] First, the Infrastructure Bill amends section 216(a), the portion regulating NIETC designation. Additionally, the bill widens the scope of parties and subjects to be studied in the triennial corridor reports and expands how often the Secretary may issue a congestion study to "[n]ot less frequently than once every 3 years."[159] The bill also expands the designation possibilities of NIETCs from areas already experiencing transmission congestion and capacity constraints to include areas *expected* to experience transmission congestion and capacity constraints.[160] Finally, it expands the consideration factors for corridor designation to include energy security, enhancement of facilities that generate or transmit firm or intermittent energy to the grid, maximization of rights-of-way, avoidance and minimization of harms to sensitive environmental areas and cultural heritage sites, and consumer cost-reduction.[161]

Next, the infrastructure bill alters section 216(b), which controls when FERC can issue corridor construction permits. It expands instances where a state may not be able to consider interregional benefits as part of its interstate benefits.[162] Directly addressing *Piedmont*, the bill removes the language giving FERC the power to issue permits where state commissions have withheld applications for more than a year or issued permits with project-killing conditions.[163] Instead, FERC can issue permits where:

> (C) a State commission or other entity that has authority to approve the siting of the facilities—
>
> (i) has not made a determination on an application seeking approval pursuant to applicable law by the date that is 1 year after the later of—
>
> (I) the date on which the application was filed; and

156 *Id.* § 40101(d)(2)–(3).
157 *Id.* § 40101(d)(5)–(6).
158 *Id.* § 40105(a)–(d).
159 *Id.* § 40105(a)(1)–(2)(A), (a)(3).
160 *Id.* § 40105(a)(2)(B) (emphasis added).
161 *Id.* § 40105(a)(4).
162 *Id.* § 40105(b)(1)(A).
163 *Id.* § 40105(b)(1)(B)–(C).

> (II) the date on which the relevant national interest electric transmission corridor was designated by the Secretary under subsection (a);
>
> (ii) has conditioned its approval in such a manner that the proposed construction or modification will not significantly reduce transmission capacity constraints or congestion in interstate commerce or is not economically feasible; or
>
> (iii) has denied an application seeking approval pursuant to applicable law.[164]

The bill also attempts to energize (pun intended) FERC's powers of eminent domain over private landowners and stakeholders by requiring good-faith negotiation efforts.[165] Finally, the bill encourages regional cooperation by requiring the Secretary to provide technical assistance to siting authorities and giving her the ability to issue a construction permit where a year has passed since a corridor application was filed or designated as an NIETC.[166]

Congressional approval of the Infrastructure Bill could lead to section 216's first successful application. New grants could secure sufficient funding for FERC to incentivize state approval of new interstate transmission lines. Since DoE's and FERC's other "brute force" attempts have failed, paying for corridors may be the most feasible way to gain state siting approval. Congress's decision to update and amend section 216, as noted above, could signal its interest in revitalizing FERC's backstop siting authority. While many difficult economic and procedural hurdles still exist, soon FERC might designate and apply for a transmission corridor for the first time since *California Wilderness*.[167] A new designation would signal to developers and utilities that they should begin updating and constructing transmission lines.

C. Additional Regulatory Developments

In addition to Executive and Congressional reform, FERC and the DoE have also attempted to revise transmission planning through intra-agency rules and regulations. Both FERC and DoE are focusing on streamlining and simplifying the certificate application and approval process.

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164 *Id.*

165 *Id.* § 40105(c).

166 *Id.* § 40105(d).

167 *See* Ethan Howland, *2022 Outlook: FERC Expected to Prioritize Transmission, Power Markets and Gas Infrastructure*, UTILITYDIVE (Jan. 19, 2022), https://perma.cc/76C7-96SZ (opining that the new 3-2 Democratic majority of Commissioners will include transmission as "[p]erhaps the top item on FERC's agenda this year[]").

1. RM21-17

In July of 2021, FERC issued a press release discussing its "advanced notice of proposed rulemaking" (ANOPR) reforming transmission planning regulations.[168] The prefix "RM" in RM21-17, the title of the ANOPR, indicates that FERC is initiating a rulemaking. In its press release, FERC indicated that this rulemaking would focus on revising existing regulations for transmission planning and cost allocation.[169] These revisions could include holistic grid planning, intentional shifts towards renewable energy, and cost allocation on a national and regional scale.[170] Former FERC Chairman Richard Glick called this ANOPR a critical first step in a transition to clean energy, highlighting that the RM21-17 ANOPR is FERC's first major transmission reform effort in a decade.[171]

But not every stakeholder believes that FERC rulemaking is the most efficient path to transmission reform. One example is Idaho Power, a vertically integrated IOU. Idaho Power filed comments for the ANOPR, highlighting difficulties with constructing a new transmission project.[172] Idaho Power has been collaborating with the Bonneville Power Administration since 2007 to construct a 290-mile transmission line across Oregon and Idaho known as the B2H.[173] Idaho Power "strongly believes" that the primary barriers to new transmission construction are Federal permitting and siting processes—not existing Commission rules.[174] For a variety of reasons, B2H's siting process remains incomplete and no permits have issued. Constructing transmission lines will take three to four years after the permits are issued, meaning B2H will take at least eighteen years from start to finish.[175] In Idaho Power's opinion, the impact of state and federal permitting and siting is "so significant that, absent reforms to these processes, Idaho Power does not believe the Commission's efforts in this ANOPR are likely to have any material impact on the viability or development timeline for transmission

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168 News Release, Fed. Energy Regul. Comm'n, Advance Notice of Proposed Rulemaking: Building for the Future Through Electric Regional Transmission Planning and Cost Allocation and Generator Interconnection (July 15, 2021) [hereinafter FERC News Release], https://perma.cc/5SAT-Q97W.

169 *Id.*

170 *Id.* (as of January 3, 2021, FERC has not made any more filings about the ANOPR, although the comment submission period has ended).

171 News Release, Fed. Energy Regul. Comm'n, FERC Begins Reform Process to Build the Transmission System of the Future (July 15, 2021), https://perma.cc/QSH2-4BKA.

172 *See generally Comments of Idaho Power Company on Advance Notice of Proposed Rulemaking: Building for the Future Through Electric Regional Transmission Planning and Cost Allocation and Generator Interconnection*, IDAHO POWER CO. (Oct. 12, 2021), https://perma.cc/87P9-JH69 (showing Idaho Power's support for FERC removing barriers to construct new infrastructure).

173 *Id.* at 1 n.2.

174 *Id.* at 1.

175 *Id.* at 3. This timeline assumes that the permit in question was actually issued in late 2022.

infrastructure."[176] Consequently, Idaho Power does not support any reform portions of the ANOPR. We turn to these criticisms in the next Subpart.

2. Building a Better Grid Initiative

On January 11, 2022, DoE announced the Building a Better Grid Initiative—its proposed implementation of the Infrastructure Bill.[177] DoE intends to partner with various stakeholders "to improve transmission siting, permitting, and authorization processes," among other goals.[178] DoE hopes these partnerships will improve transmission studies, planning, offshore wind transmission analysis, and technical assistance.[179] DoE also aims to reform the permitting process, which it acknowledges must take place across multiple government agencies and at various state and federal levels.[180] DoE began collaboration with laboratories to create the North American Energy Resilience Model, "a national-scale energy planning and real-time situational awareness tool."[181] This model will include tools to help developers determine corridors and transmission resilience.[182]

IV. TAKINGS

FERC's ability to enforce its backstop siting authority and seize lands for transmission corridors via eminent domain is restricted by the Constitution and, more specifically, by the Fifth Amendment's Takings Clause.[183] Since interstate corridors reach across state lines by definition, the underlying land at issue is usually subject to multiple states' siting authorities. This Part will explore the outer bounds and ongoing difficulties associated with transmission siting authority, beginning with a brief overview of eminent domain and the public use requirement. It will then examine state siting authority generally before providing some examples of state siting policy.

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176 *Id.*

177 Building a Better Grid Initiative to Upgrade and Expand the Nation's Electric Transmission Grid to Support Resilience, Reliability, and Decarbonization, 87 Fed. Reg. 2,769 (Jan. 19, 2022).

178 *Id.* at 2,770.

179 *Id.* at 2,770–71.

180 *Id.* at 2,772.

181 *Id.* at 2,773.

182 *Id.*

183 However, the Takings Clause has not always been relevant in land use and planning laws. For a brief overview of when and why this transition has occurred, see Edward J. Sullivan, *Substantive Due Process and American Planning Law*, PLAN. & ENV'T L., Jan. 2012, at 3, 4 (Nov. 2012) (explaining the difficulty for planners in relying on Supreme Court decisions that used the Substantive Due Process Clause).

A. Regulatory Framework

"Eminent domain," the federal government's ability to seize property for public use,[184] remains a longstanding power inherent to any sovereign.[185] The Fifth Amendment Takings Clause "checks" this power not by eliminating seizure entirely, but by requiring just compensation to limit its overzealous application.[186] The first application of the Takings Clause to federal infrastructure came from *Kohl et al. v. United States*.[187] In *Kohl*, the Supreme Court held that Congress could seize property for the creation of infrastructure pursuant to its powers of eminent domain so long as the federal government provided just compensation.[188] The portion of the Takings Clause that allows property seizure for public use is known as the Public Use Clause.[189] States often find the Public Use Clause one of the most unclear aspects of eminent domain.[190]

Over the past eighty years, the Supreme Court decided three major cases that directly explore eminent domain's public use requirement. The 1954 Court in *Berman v. Parker*[191] held that an economic development board could seize a justly-compensated, non-blighted private property as part of larger city redevelopment efforts.[192] The Court found that public use and public purpose were essentially equivalent, although neither requires public ownership.[193] Thirty years later in *Hawaii Housing Authority v. Midkiff*,[194] the Court held that the state government of Hawai'i could break up oligopolistic land ownership via eminent domain.[195] The Court reasoned that exercise of eminent domain need only

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184 *Eminent Domain*, BLACK'S LAW DICTIONARY (11th ed. 2019).

185 Boom Co. v. Patterson, 98 U.S. 403, 406 (1879) ("The right of eminent domain, that is, the right to take private property for public uses, appertains to every independent government. It requires no constitutional recognition; it is an attribute of sovereignty.").

186 *See* Chi. Burlington & Quincy R.R. Co. v. City of Chicago, 166 U.S. 226, 241 (1896) (incorporating the Fifth Amendment's Takings Clause and public use requirement against the States through the Fourteenth Amendment).

187 91 U.S. 367, 373 (1875) (noting that this case represented the first time the Federal Government exercised its eminent domain right adversely).

188 *Id.* at 372–73.

189 U.S. CONST. amend. V ("[N]or shall private property be taken for public use, without just compensation.").

190 *See* Daniel B. Kelly, *The "Public Use" Requirement in Eminent Domain Law: A Rationale Based on Secret Purchases and Private Influence*, 92 CORNELL L. REV. 1, 2 (2006) (arguing that "[d]espite numerous attempts to understand the Public Use Clause, both courts and legal commentators have failed to provide an intellectually compelling interpretation.") (internal citations omitted); Mary Massaron Ross, *Public Use: Does* County of Wayne v. Hathcock *Signal a Revival of the Public Use Limit to the Taking of Private Property?*, *in* EMINENT DOMAIN USE & ABUSE: KELO IN CONTEXT § 1(I) (Dwight H. Marriam & Mary Massaron Ross eds., 2006) (differentiating the wide vs. narrow view of public use).

191 348 U.S. 26 (1954).

192 *Id.* at 36.

193 *Id.* at 33–34.

194 467 U.S. 229 (1984).

195 *Id.* at 245.

be "rationally related to a conceivable public purpose" to meet the Public Use Clause.[196]

Just over two decades passed before the Court heard its third and must controversial case exploring the Public Use Clause. In *Kelo v. City of New London*,[197] Connecticut's bond commission decided to develop a ninety-acre parcel of land in anticipation of siting a pharmaceutical company's proposed research facility.[198] Multiple landowners[199] challenged the state's condemnation action, each requesting to remain in their homes for personal reasons.[200] The Court ultimately articulated the public use question as "whether the City's development plan served 'a public purpose.'"[201] The Court was unwilling to define public purpose, interpreting its past jurisprudence as "eschew[ing] rigid formula and intensive scrutiny in favor of affording legislators broad latitude in determining what public needs justify the use of the takings power."[202] Relying heavily on its history of deference to state policymakers, the Court held that the comprehensive nature of the development plan met the public use requirement.[203] The Court affirmed the City's economic plan without imposing additional bright-line rules or public use safeguards.[204]

Kelo sent a massive ripple through American culture and solidified the Court's highly deferential approach to state application of eminent domain.[205] News outlets began erroneously reporting that the Supreme Court had massively expanded its powers of eminent domain and eliminated the public use requirement.[206] Americans were outraged by the decision.[207] One author who examined the political and judicial responses and reforms found that "[n]o other Supreme Court decision in

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196 *Id.* at 241. The Court also stated that "[r]egulating oligopoly and the evils associated with it is a classic exercise of a State's police powers." *Id.* at 242.

197 545 U.S. 469 (2005).

198 *Id.* at 473–74.

199 Litigating alongside plaintiff Susette Kelo, Matt Dery lived in the proposed development area next door to his parents; "Matt's mother was born in her house in 1918 and had never lived anywhere else." Kelo *Eminent Domain: Eminent Domain Without Limits?: U.S. Supreme Court Asked to Curb Nationwide Abuses*, INST. FOR JUST., https://perma.cc/Q5TZ-PAH9 (last visited Mar. 11, 2023).

200 *Kelo*, 545 U.S. at 475.

201 *Id.* at 480.

202 *Id.* at 483.

203 *Id.* at 484.

204 *Id.* at 484–88.

205 *See* Steven J. Eagle, Kelo v. City of New London*: A Tale of Pragmatism Betrayed*, *in* EMINENT DOMAIN USE & ABUSE: KELO IN CONTEXT 9.I.A (Dwight H. Marriam & Mary Massaron Ross eds., 2006) (citing the public backlash that created "an unprecedented uprising to nullify a decision by the highest court in the land") (internal citation omitted).

206 Daniel H. Cole, Kelo's *Legacy*, 37 ENV'T L. REP. 10540, 10542 (2007).

207 *Id.* ("Another national poll . . . found that property rights protection has become the most important domestic legal issue for Americans, ahead of other issues such as parental notifications for abortions by minors, the right to die, and medical marijuana use.") (internal citation omitted).

all of American history has generated so much state legislation."[208] Interestingly, two-thirds of Americans said the government should only use eminent domain for roads and utilities, while eighty-three percent of Americans directly opposed eminent domain's use by private developers.[209] State courts have reached different conclusions in adopting *Kelo* into their jurisprudence.[210] Ohio and Oklahoma directly addressed and rejected *Kelo*, denying any use of eminent domain for economic development.[211] South Dakota effectively did the same.[212] Ohio and South Dakota specifically rejected *Kelo* due to its general principles rather than state statutes or common law.[213] Rhode Island and Maryland courts decided cases that were, at best, at odds with *Kelo*'s holding.[214] It is entirely plausible that these state judiciaries' decisions were done to quell fear and assure citizens of their property rights.[215]

B. State Authority for Transmission Siting

1. Public Use Requirement

The Supreme Court's deference to state conceptions of public use means that states have adopted radically different approaches to transmission and eminent domain. Most states enacted legislation narrowing the definition of public use less than a decade after *Kelo*.[216] Although the term "public use" is ambiguous, there are two main views on its interpretation. The broad view defines public use as "advantage or benefit to the public," and the narrow view defines public use as "actual use or right to use of the condemned property by the public."[217] Most states have designated transmission lines as a public use justifying takings under eminent domain.[218] The more complex, outstanding questions are whether projects with no benefits to in-state residents meet the public use requirement and which parties can exercise eminent domain.

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208 Ilya Somin, *The Political and Judicial Reaction to Kelo*, WASH. POST (Jun. 4, 2015), https://perma.cc/2XNG-C2B3.

209 Cole, *supra* note 206, at 10542.

210 *See, e.g.*, Shaun Hoting, *The* Kelo *Revolution*, 86 U. DET. MERCY L. REV. 65, 87–99 (2009) (exploring the judicial responses to *Kelo* in subsequent takings cases).

211 Ilya Somin, *The Judicial Reaction to* Kelo, 4 ALB. GOV'T L. REV. 1, 7–8 (2011).

212 *Id.* at 8.

213 *Id.* at 7–8.

214 *Id.* at 10–12.

215 *See id.* at 21–23 (explaining that the political backlash to *Kelo* may correlate with an acceleration in the frequency of state courts striking down economic development takings).

216 Brandon Gerstle, *Giving Landowners the Power: A Democratic Approach for Assembling Transmission Corridors*, 29 J. ENV'T L. & LITIG. 535, 544 (2014).

217 Lawrence Berger, *The Public Use Requirement in Eminent Domain*, 57 OR. L. REV. 203, 205 (1978) (internal citations omitted).

218 Alexandra B. Klass, *The Electric Grid at a Crossroads: A Regional Approach to Siting Transmission Lines*, 48 U.C. DAVIS L. REV. 1895, 1917 (2015).

Use of eminent domain for transmission siting is often controlled by judicial interpretation. Courts can interpret public use siting requirements broadly or narrowly or allow for judicial discretion and case-by-case application. For example, North Dakota's state statute defines eminent domain and acts as a guideline for application, but courts retain plenary authority to determine public use.[219] In *Square Butte Electric Co. v. Hilken*,[220] the North Dakota Supreme Court adopted a broad view of the public use requirement and found that new transmission lines would benefit both intra- and interstate customers.[221] The court relied, at least partially, on the Montana Supreme Court's reasoning that:

> [A] public use is one which confers some benefit or advantage to the public. Such public use is not confined to actual use by the public, but is measured in terms of the right of the public to use the proposed facilities for which condemnation is sought. As long as the public has the right of use, whether exercised by one or many members of the public, a 'public advantage' or 'public benefit' accrues sufficient to constitute a public use.[222]

Though North Dakota's approach to public use is broader than many other states, the *Square Butte* court clarified that the standard was satisfied by providing state residents "substantial and direct benefit[s]" even if it also conferred benefits to out-of-state residents.[223]

Florida, by contrast, has adopted the narrow definition of public use pertaining to transmission. In *Clark v. Gulf Power Co.*, [224] transmission developers sought to exercise eminent domain to acquire right-of-way easements to construct and operate a transmission line solely for customers out of state.[225] The court found no evidence that Florida customers would receive a benefit.[226] Reasoning that a state's power exists only within its own borders for the use and benefits of its citizens, the court held that the state could not condemn property in one state solely for the purpose of serving a public use in another state.[227] By relying on the lack of "actual use" by Florida citizens, this decision invokes the public use clause's narrow interpretation. Despite the

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219 Square Butte Elec. Coop. v. Hilken, 244 N.W.2d 519, 522–23 (N.D. 1976), *reh'g denied*; *but cf.* City of Medora v. Golberg, 569 N.W.2d 257, 259 n.2 (N.D. 1997) (distinguishing *Square Butte* as examining the public use benefits of interstate corridors for North Dakota residents).

220 244 N.W.2d at 522–23.

221 *Id.* at 523, 530.

222 *Id.* at 523 (quoting Montana Power Co. v. Bokma, 153 Mont. 390, 457 (1969)).

223 Alexandra B. Klass & Jim Rossi, *Revitalizing Dormant Commerce Clause Review for Interstate Coordination*, 100 MINN. L. REV. 129, 187 (2015).

224 198 So.2d 368 (Fla. Dist. Ct. App. 1967).

225 *Id.* at 370.

226 *Id.* at 371.

227 *See supra* notes 216–223 and accompanying text (exploring how states interpret the public use requirement) and *infra* notes 229–236 and accompanying text (exploring when non-state entities can exercise eminent domain).

"conjecture" that the electrical flow between Florida and Georgia would benefit both states' citizens, the court believed that a "one way transmission line" meant Florida citizens would "not derive one iota of benefit."[228]

Still other states have considered public use in even broader terms. In *Oxendine v. Public Service Co.*, [229] a public utility sought eminent domain authority to build a new transmission line primarily for grid stability and reliability.[230] Landowners argued that the project failed to meet the public use requirement because the flow of electricity would mostly go to other power companies and out-of-state parties, not in-state customers.[231] Relying partially on a now-repealed Indiana state statute granting eminent domain powers to developers "for the use of the public," the court held that the developers met the public use requirement.[232] This holding suggests a broad vision of public use that values the regional electricity network above benefits solely to in-state users.[233] In nearby Illinois, the Court of Appeals upheld an oil pipeline developer's rights of eminent domain based on the court's conception of public use.[234] To interpret whether the pipeline was in the public use, the court used the standard of "substantial deference" to the Illinois Commerce Commission (ICC) and its interpretation of an ambiguous statute.[235] The court upheld the ICC's broad interpretation of public use and listed seven pieces of evidence refuting the challengers' argument that in-state residents would not experience a discrete benefit after the pipeline's construction.[236] This decision suggests that the public use requirement in Illinois necessitates a more general conception of overall public benefit and not "significant" in-state resident benefit.[237] If more states adopted a conception of public use based on holistic benefits instead of in-state resident benefits as suggested in *Oxendine* and *Pliura*, transmission developers would likely be far more successful in executing eminent domain for siting.

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228 *Clark*, 198 So.2d at 371.

229 423 N.E.2d 612 (Ind. Ct. App. 1980).

230 *Id.* at 614.

231 *Id.* at 615.

232 *Id.* at 617.

233 Alexandra B. Klass, *Takings and Transmission*, N.C. L. REV. 1079, 1108–09 (2013).

234 Pliura Intervenors v. Ill. Com. Comm'n, 942 N.E.2d 576, 584–85 (Ill. App. Ct. 2010); *see also* Klass & Rossi, *supra* note 223, at 188 ("Like interstate electric transmission lines . . . authority for siting interstate oil pipelines rests with the states.") (internal citation omitted).

235 *Pliura Intervenors*, 942 N.E.2d at 584.

236 *Id.* at 584–85.

237 *See* Klass & Rossi, *supra* note 223, at 187 ("Even in state where courts have recognized the regional benefits of interstate transmission to allow the use of eminent domain, they have been careful to point out that such power cannot be used without a showing of a significant, local public use.").

2. Police Powers

States have options for avoiding takings claims outside the flexible public use standard. The Tenth Amendment reserves powers not explicitly delegated to the federal government or prohibited by the Constitution to the states and the people.[238] These "police powers" give states and local governments the right to establish and enforce laws protecting the public's health, safety, and general welfare, including government use of eminent domain to intervene in a landowner's use of private property.[239] This language is expansive and its interaction with the Takings Clause is somewhat unsettled, but some boundaries are clear. In *Pennsylvania Coal Co. v. Mahon*,[240] a coal company sought to mine the plaintiff's land pursuant to a Pennsylvania statute in such a way that mining would remove supports and likely damage the landowner's property.[241] The Supreme Court held that the state's exercise of its police powers went "too far" and that the promulgated regulations upset the Takings Clause and triggered a requirement for just compensation.[242] Modern government actions and regulations that go "too far" are now known as regulatory takings.[243] Most of the land use tension in transmission exists in facility siting efforts involving two groups: (1) Government agencies like FERC and DoE; and (2) landowners, states, or private citizens arguing that siting efforts constitute regulatory takings.

Landowners dislike transmission siting for various reasons. Authors have argued that eminent domain places an unfair burden on landowners and promotes economic waste.[244] In addition to post-*Kelo* public use concerns, landowners also express concern over appropriate amounts of just compensation. Theoretically, just compensation maintains a landowner's original financial position by offering fair market value for the property.[245] Critics argue that fair market value reliance tends to undercompensate landowners and create unnecessary administrative and legal costs.[246] This reliance also makes ranches and farms less desirable for outside purchasers, especially those hoping to buy the land for aesthetic value.[247] In the words of one landowner advocate speaking against eminent domain, "[i]f you paid a fairer price, people would be fighting for transmission."[248] Some developers have considered adding additional funding or making slight siting alterations to remove some of

238 U.S. CONST. amend. X.

239 *Police Power*, BLACK'S LAW DICTIONARY (11th ed. 2019).

240 260 U.S. 393 (1922).

241 *Id.* at 412.

242 *Id.* at 413–14.

243 *Id.* at 415 ("[I]f [a] regulation goes too far it will be recognized as a taking.").

244 Gerstle, *supra* note 216, at 540.

245 26 AM. JUR. 2D *Eminent Domain* § 277 (2014).

246 Gerstle, *supra* note 216, at 541–43.

247 Jonathan Fahey, *Why Landowners Fight Wind and Solar Transmission Lines*, FORBES (Aug. 12, 2010), https://perma.cc/4U4A-7K3C.

248 *Id.*

eminent domain's sting.[249] Yet many landowners and environmentalists continue to oppose modern transmission projects.[250]

Authors have offered various solutions for incentivizing or reducing opposition from landowners. One report suggests forming special purpose development corporations (SPDCs), or "corporation[s] formed by a public authority for the purpose of aggregating land using eminent domain."[251] If a transmission developer were to designate a corridor and take property through eminent domain, the landowner would be offered either fair market value or shares in the SPDC.[252] The primary benefit of this system is increased assembly value which would reduce holdouts and bring compensation closer to "true economic value."[253] This system could also increase landowner participation and enthusiasm and reduce legal costs and gridlock.[254] Instead of or in addition to projects that attempt to provide extra or "true" economic value through assembly, transmission developers can, of course, do a much better job of engaging in the siting process with stakeholders and landowners both early and often.[255]

Landowners are not the only problem developers face when they attempt new transmission construction. Whether the federal government and its agencies have effectuated a regulatory taking or not, they do not control transmission planning or siting. Historically, IOUs, independent power producers, and agencies plan and execute transmission on a primarily interstate and regional basis, while states retain almost complete control over siting and permitting.[256] This arrangement makes some intuitive sense, but it results from the grid's balkanized history and design.[257] The federal judiciary seems unlikely to solve the gridlock, as the Supreme Court is historically reluctant to involve itself in eminent

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[249] Alison Berry, *Getting Right-of-Way Right: Landowner Compensation for Electric Power Transmission Rights-of-Way* 4 (Lincoln Inst. of Land Pol'y, Working Paper WP13AB1, 2013).

[250] *See* Jim Kreider, *Other Views: Demand that Idaho Power Stop Bullying Local Landowners*, THE LAGRANDE OBSERVER (Feb. 3, 2022), https://perma.cc/F5EM-VSFB (opposing a 300-mile transmission line that would go through five Eastern Oregon counties because of the threat to their land and heritage); Benjamin Storrow, *War Between Energy Titans Could Shape New England Climate*, E&E NEWS (Jan. 18, 2022), https://perma.cc/ECW3-A5VY (noting conservationist and landowners' efforts to halt a new hydroelectricity and transmission line project); Buddy Forbes, *Proposed Kentucky Power Project Leaves Floyd County Man Feeling Powerless*, MOUNTAIN NEWS WYMT (Jan. 27, 2022), https://perma.cc/5Z5C-QWHS (discussing a landowner who was resisting a fifteen mile transmission line placed on his land).

[251] Rosalie Winn, *Landowner Compensation in Transmission Siting for Renewable Energy Facilities*, 27 ELEC. J., Jun. 2014, at 21, 25 (internal citation omitted).

[252] *Id.*

[253] *Id.*

[254] *Id.* at 26.

[255] Alexandra B. Klass, *Transmission, Distribution, and Storage: Grid Integration*, *in* LEGAL PATHWAYS TO DEEP DECARBONIZATION IN THE UNITED STATES: SUMMARY & KEY RECOMMENDATION 527, 528 (Michael B. Gerrard & John C. Dernbach eds., 2018).

[256] Klass, *supra* note 218, at 1897.

[257] *See supra* notes 18–33, 43–57 and accompanying text.

domain disputes,[258] especially where the federal government has not intruded onto the property at issue.[259] The federal government does have authority over siting on federal lands, but federal lands make up a small percentage of non-western states.[260] Federal agencies can theoretically regulate interstate transmission siting through section 216.[261] Section 216 is the exception rather than the rule, as it has never been successfully applied.[262] There are also strong policy arguments for states to retain their traditional siting authority. First, state commissions are most familiar with consumer needs and the likely land use impacts of their actions.[263] Second, state agencies have exceptional self-interest in sound planning as they are responsible for policy areas related to electricity system design and operation.[264]

Some states rely on local utility companies instead of agencies for transmission planning. About half the states in the United States rely on RTOs and ISOs for oversight of their wholesale electricity markets.[265] The portions of the country that are not governed by RTOs and ISOs primarily rely upon state-operated, vertically integrated IOUs that own and operate both generation and transmission assets.[266] These arrangements are known as bilateral markets because sales occur entirely between and among parties using FERC-regulated contracts.[267] Vertically integrated IOUs are the predominate market participants and are obligated to meet the current and future needs of their retail and wholesale customers.[268] These obligations dominate the IOUs' long-term thinking when it comes

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258 The Supreme Court decided only four land use cases before 1974, all of which were substantive due process and not takings clause challenges. Sullivan, *supra* note 183, at 4.

259 Yet the Supreme Court usually rejects takings claims where the government has intruded onto private land. *See* Lisa Soronen, *Supreme Court Agrees to Hear Significant Land Use Case*, NAT'L CONF. OF STATE LEGISLATURES BLOG (Nov. 18, 2020), https://perma.cc/WM56-RK2C (describing the "long and respected tradition . . . of consistently rejecting takings claims based on certain types of government-caused physical intrusions." (quoting Vermont Law professor John D. Echeverria)).

260 Klass, *supra* note 218, at 1918.

261 *See supra* notes 123–133 and accompanying text.

262 Conventional wisdom says that although Congress attempted to create federal authority over transmission siting, "the teeth of its interventions" were pulled. Avi Zevin, Sam Walsh, Justin Gundlach, & Isabel Carey, *Building a New Grid Without New Legislation*, 48 ECOLOGY L.Q. 169, 172 (2021) (internal citation omitted). For additional justification, see *id.* at 172 n.3 (explaining section 216 further).

263 *Id.* at 185.

264 *Id.* at 185–86.

265 Klass, *supra* note 255, at 529.

266 ENERGY POL'Y GRP., LLC, COMPETITION IN BILATERAL WHOLESALE ELECTRIC MARKETS: HOW DOES IT WORK? 3–5 (2016) [hereinafter COMPETITION IN BILATERAL], https://perma.cc/PY58-L6K6.

267 *Id.* This Note does not discuss the third type of wholesale "emergent market" like the ones in the Southeast and Intermountain West. For information on emergent markets, see Tony Clark, Ray Gifford, & Matt Larson, *It's Time for Emergent Markets to Take Center Stage in Non-RTO Regions of the Country*, UTILITYDIVE (July 27, 2020), https://perma.cc/JRN9-CYKG.

268 COMPETITION IN BILATERAL, *supra* note 266, at 4.

to transmission siting and planning.[269] Utilities in bilateral markets therefore prioritize planning and building their transmission projects for native-load customers.[270] Consequently, vertically integrated IOUs would be remiss to build new transmission through state and private property for out-of-state customers. This policy approach affects renewable energy developers whose transmission siting efforts are location-dependent, especially in "pass through" states where customers do not receive benefits from proposed interstate transmission lines.[271] Thus, bilateral markets offer little incentive to build lines beneficial for interstate or long-term transmission needs.

C. Certificate Approval Process

Once developers discern where they wish to build new transmission lines, they must overcome additional administrative hurdles before construction. State siting authority means interstate transmission project developers must gain approval from each state and, in some cases, each county where new lines are to be sited.[272] Although transmission siting requirements vary from state to state, there are usually two discrete approval processes. First, state public utility commissions must approve proposed projects and grant authority to own and operate transmission facilities as a public utility.[273] Second, planners and operators of the transmission project must obtain a certificate of public convenience and necessity (CPCN) from the state agency responsible for facility siting.[274] State agencies generally issue a CPCN where building a new facility would be "in the public interest," which means "consider[ing] only the interests of in-state residents and businesses."[275] Though states vary, most public interest considerations include the state's "'need' for the line, the effect of the line on reliability, alternatives to the new line, and the potential environmental effects."[276] Consequently, states may require the completion of an environmental impact review.[277] These requirements often act as a prerequisite for developers to exercise eminent domain and to secure the needed rights-of-way.[278] The reality of this complex system is that planning, proposing, and obtaining approval for new transmission projects can take ten years or more before construction begins.[279]

Congress has attempted to backdoor some additional federal authority into transmission siting through interstate energy coalitions.

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269 *Id.* at 6, 22.
270 *Id.* at 22.
271 Klass, *supra* note 255, at 536.
272 Zevin et al., *supra* note 262, at 183–84.
273 *Id.* at 184.
274 *Id.*
275 *Id.* (emphasis omitted) (internal citation omitted).
276 Klass, *supra* note 233, at 1102 (internal citation omitted).
277 Zevin et el., *supra* note 262, at 184.
278 *Id.*
279 Klass, *supra* note 218, at 1928–29.

The FPA provides authority for the federal government to "connect federally permitted hydropower facilities to the existing grid."[280] In addition to reforming new corridor development, the EPAct of 2005 also leveraged DoE's relationships with Power Marketing Administrations (PMAs). More specifically, the Western Area Power Administration (WAPA) and Southwestern Power Administration (SWPA)—two PMAs representing self-contained territories—help generate and market the United States' hydroelectricity.[281] Section 1222 of the FPA (1222)[282] allows the DoE Secretary, through WAPA, SWPA, or both, to "design, develop, construct, operate, maintain, or own, or participate" in transmission projects alongside other entities in doing the same for new or existing facilities.[283] Although not explicitly a part of 1222, non-federal entities can use 1222 to acquire the federal government's eminent domain authority on lands used for transmission rights-of-way.[284] This is another powerful tool in the toolbox for DoE to control transmission siting, although it is restricted to WAPA's and SWPA's member states.

In 2017, landowners challenged SWPA's 1222 application to construct a high-voltage, direct-current transmission line to bring wind power from Oklahoma and Texas east through Arkansas.[285] Developer Clean Line was meant to own and run the proposed project in coordination with ISOs and IOUs through a multilateral contract.[286] Clean Line invested around $2.5 billion into the project and owned most of the line's capacity.[287] Two landowners challenged the project with three primary arguments. The landowners claimed: (1) that Clean Line's efforts were insufficient because the Arkansas' Public Service Commission had to approve the project, (2) that the United States could not take the property through eminent domain if the landowners did not sell an easement, and (3) that DoE acted arbitrarily and capriciously by not participating in the project.[288] The district court summarily rejected these claims.[289] The court first pointed out that although section 1222 authorizes DoE to build transmission lines with private money, the Clean Line project was still a sovereign action of the United States government.[290] Therefore, a state could only block the action if Congress "clearly and unambiguously authorize[d] plenary state regulation."[291]

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280 *Id.* at 1918 & n.125.

281 *Federal Power Marketing Administrations Operate Across Much of the United States*, U.S. ENERGY INFO. ADMIN. (June 12, 2013), https://perma.cc/HTF9-XH7T.

282 42 U.S.C. § 16421 (2018).

283 *Id.* § 16421(a)–(b).

284 ROB BISHOP, ASSURING PRIVATE PROPERTY RIGHTS OVER VAST ACCESS TO LAND ACT, H.R. Rep. No. 114–856, at 2 (2016).

285 Downwind LLC v. U.S. Dep't of Energy, No. 16-CV-207, 2017 WL 6542747, at *2 (E.D. Ark. Dec. 21, 2017).

286 *Id.*

287 *Id.*

288 *Id.* This Note will not discuss the landowners' due process claims.

289 *Id.* at *2–5.

290 *Id.* at *2.

291 *Id.* at *3 (internal citation omitted).

The court largely sidestepped the condemnation issues at hand, finding that the issues of eminent domain were largely hypothetical and not ripe.[292] The court also rejected the landowners' final claim, examining five statutory criteria for evaluating 1222 projects and finding that DoE did not act arbitrarily or capriciously.[293] While this case generated favorable case law for 1222, the claims in this decision were ultimately mooted or vacated on remand from the Court of Appeals.[294] Despite this "win" for the Clean Line developers, the Downwind project was never actually constructed due mostly to political opposition and backlash.[295]

V. CONCLUSION

Created over fifty years ago, in an era where IOUs were vertically integrated and power sources were locally connected, the U.S. energy grid now desperately needs to be upgraded and changed.[296] The political and economic realities that created this system have changed drastically: wind and solar are far cheaper, and the energy industry is no longer dominated by natural monopolies.[297] FERC has attempted to incentivize or force state policy change by enacting major reforms like Orders No. 888, 889, 1000, and the EPAct 2005 with varying levels of success and political buy-in.[298]

Moreover, climate change has already irrevocably altered the future of energy policy. At the time of this Note's writing, the Intergovernmental Panel on Climate Change (IPCC) has released its sixth assessment report, which some scientists have deemed "the bleakest warning yet."[299] The report's "stark and brutal findings" prompted the United Nation's Secretary General to say that "[t]oday's IPCC report is an atlas of human suffering, and a damning indictment of failed climate leadership."[300] Whether any of the predicted damage are still preventable and what can be done to prevent it remains unclear.

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292 *Id.* at *3–4.

293 *Id.* at *4–5.

294 Downwind LLC v. U.S. Dep't of Energy, No. 16-CV-207, 2018 WL 3641027 (E.D. Ark. Apr. 19, 2018).

295 Zevin et al., *supra* note 262, at 234. For a discussion of 1222's future, see *id.* at 234–38.

296 *See supra* notes 18–20 and accompanying text.

297 *See supra* notes 43–52 and accompanying text.

298 *See, e.g.*, News Release, Fed. Energy Regul. Comm'n, Final Report on February 2021 Freeze Underscores Winterization Recommendations (Nov. 16, 2021), https://perma.cc/4J5D-DKSW (overviewing the cold weather event in Texas, a state with its own independent grid, and highlighting the need for mandatory reliability standards); *cf.* David Blackmon, *FERC Report on Texas Grid Ignores the Elephant in the Living Room*, FORBES (Nov. 21, 2021), https://perma.cc/DN99-E7H4 (arguing FERC's report understates the important role of natural gas and that clerical errors resulted in electricity cutoffs which prevented the flow of natural gas).

299 Fiona Harvey, *Q&A: Has the IPCC's Bleak Warning of Climate Breakdown Been Heard?*, THE GUARDIAN (Mar. 5, 2022), https://perma.cc/F53K-J8TP.

300 *Id.* (quoting United Nation's Secretary General António Guterres).

Yet the passage of the Infrastructure Bill signals hope for improvement in American energy policy. Dormant for over a decade, section 216 lays poised to arise from its slumber.[301] Despite the EPAct of 2005's enactment of section 216, FERC and DoE have not sited a single transmission corridor. For a long time, there was no answer to the post-*Piedmont* question of how the federal government could bring states onboard with federal and interregional transmission siting projects. This Note's suggestion is to pay them with funds created by the 2022 infrastructure bill. President Biden already greenlit 4,000 new infrastructure projects funded by the bill, with almost $100 billion USD of its funds already dedicated to states, localities, and other recipients.[302] In the President's own words, "We're done talking about infrastructure weeks. We're going to have an infrastructure decade."[303]

Reform comes not only from funding new transmission projects but also from redefining takings. Widespread, state-by-state adoption of broad public-use definitions is one strong path forward. This voluntary effort is not likely to succeed, at least not at a pace useful for combatting climate change through transmission reform. Innovative techniques such as SPDCs and redefining fair market values could be instructive, especially with new funds allotted through the infrastructure bill. Section 1222 and future partnerships between PMAs and developers would also benefit from the Infrastructure Bill's funding. CPCNs need to be re-thought for transmission to succeed in any meaningful capacity. Luckily, FERC appears interested in permitting reform through its ANOPR and will hopefully provide innovative solutions that spur faster development.

Many domestic policies need to be re-thought and transformed for the United States to meaningfully reduce its carbon footprint in the coming years. Transmission corridor designation and siting is *the* low-hanging fruit that is ripe for the picking and represents a new hope for fighting climate destabilization.

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301 *See supra* note 167 and accompanying text.

302 Tom Ichniowski, *Biden Pledges a Burst of 2022 Project Starts Using IIJA Funds*, ENG'G NEWS-RECORD (Mar. 2, 2022), https://perma.cc/7XEH-8S4B.

303 *Remarks of President Joe Biden – State of the Union Address as Prepared for Delivery*, THE WHITE HOUSE (Mar. 1, 2022), https://perma.cc/FG99-6ELJ.