INTO THE LEGAL "TWILIGHT ZONE": STATE TENTH AMENDMENT JURISDICTION DISPLACING CLIMATE SUPREMACY

by
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The Supremacy Clause of the Constitution notwithstanding, western states have utilized their reserved Tenth Amendment Constitutional authority, upheld by federal circuit courts, arbitrarily to block their adjacent states' sustainable infrastructure to address climate change. The Biden Administration set in motion a rapid electrification of the entire U.S. economy via three different new laws enacted sequentially in 2021, 2022, and 2023. A re-directed federal executive branch now oversees these programs and laws. This Article analyzes how each of those three laws suffers from a critical omission plaguing this most significant infrastructure program in the last half century—now forecast counter-intuitively by some experts to cause much more, rather than less, global warming in the next decade.

This Article analyzes the growing legal battle in the courts, and particularly playing out in western states needing to import sustainable renewable power, concerning the single most important U.S. technology. This Article highlights more than 600 decisions by cities and states arbitrarily exercising reserved Tenth Amendment Constitutional power over infrastructure and land-use, blocking renewable energy infrastructure. In addition, should they choose to do so, 90% of continental U.S. states can employ their rivers and highways as legal barriers arbitrarily blocking additional sustainable power infrastructure serving adjacent states. This Article's final sections create and outline legal alternative routes under existing U.S. law to circumvent this bottleneck handicapping national and international sustainable climate policy.

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I. A STATE MECHANISM TO LEGALLY FRUSTATE SUPREME FEDERAL LAW

This Article analyzes western U.S. states' legally controlling use of their land to frustrate or now block the Biden Administration federal climate and infrastructure laws. The Ninth Circuit upheld western states' reserved power to frustrate a California policy aimed at making its economy more sustainable—a holding that is now cited and followed by other courts.[1] The stakes are large: This potential western state blockage affects the interstate electric power grid, the most important technology in the U.S., as well as President Biden's Inflation Reduction Act, hailed as one of his administration's most significant legislative achievements.[2]

The Supremacy Clause of the Constitution notwithstanding, western states have, and can, utilize reserved Tenth Amendment constitutional power arbitrarily to successfully block federal law that would assist neighboring states in implementing important sustainable infrastructure.[3] This constitutional standoff, pitting states' individual Tenth Amendment power against federal law and international climate change commitments, requires Supreme Court resolution. Under the Supreme Court's new Major Questions doctrine unveiled in late-2022, the Court narrowed any legal paths forward on climate law. This Article's final sections outline options that create legal "work-arounds" under existing U.S. law to circumvent this otherwise intractable legal bottleneck affecting national and international climate policy.

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[1] *See* Cal. Wilderness Coal. v. U.S. Dep't of Energy, 631 F.3d 1072 (9th Cir. 2011).

[2] *See* Joe Biden, U.S. President, Remarks by President Biden on the Anniversary of the Inflation Reduction Act (Aug. 16, 2023).

[3] *See* discussion *infra* Section IV.C.3.

The Biden Administration legislatively set in motion a rapid electrification of the entire U.S. economy via three different laws enacted sequentially in 2021, 2022, and 2023. President Biden described these laws as the "most significant long-term investment in our infrastructure and competitiveness in nearly a century."[4] This Article dissects how each of these three laws suffers from a "critical path" omission that could have made this most significant infrastructure program in the last half century more legally effective. A Princeton University expert who has testified before senate committees in support of the transition to clean energy and on behalf of the Biden Administration forecasts that this program will "miss out on more than 80 percent of the recent climate bill's potential emissions reductions," and, counter-intuitively, cause more rather than less global warming.[5] This Article analyzes the emerging legal battle that concerns:

- The single most important U.S. technology—the U.S. power grid;
- The bipartisan Infrastructure Investment and Jobs Act (IIJA) and the Inflation Reduction Act (IRA), both major accomplishments of the Biden Administration that require the entire economy to totally convert from fossil fuels to electric power in the next decade; and
- The Acts' constitutional shortcomings that have been upheld by courts, allowing states to now legally frustrate the implementation of sustainable infrastructure.

This Article analyzes how, even with California's aggressive 100% zero-carbon electricity laws,[6] Governor Newsom had to slash California's ambitious clean energy infrastructure spending in 2024, forcing California to import more renewable energy from adjacent western states.[7] To the east of 1,000-mile-long California[8] are states with the most significant renewable solar and wind resources in the U.S.:

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[4] Emily Cochrane & Jim Tankersley, *$1 Trillion Infrastructure Deal Scales Senate Hurdle with Bipartisan Vote*, N.Y. TIMES, www.nytimes.com/2021/07/28/us/politics/senate-infrastructure-deal.html (Aug. 10, 2021).

[5] *See* Jerusalem Demsas, *Not Everyone Should Have a Say*, THE ATLANTIC (Oct. 19, 2022), https://www.theatlantic.com/ideas/archive/2022/10/environmentalists-nimby-permitting-reform-nepa/671775 (citing Jesse D. Jenkins (@JesseJenkins), X (Sept. 22, 2022, 10:18 AM), https://x.com/JesseJenkins/status/1572998749131264000?t=qFy46JwwxtpTO7zh9oEevQ).

[6] *See* Alex Breckel & Nicole Pavia, *California's Climate Goals are Ambitious. A Clean Energy Deployment Plan Can Help Get It There*, CLEAN AIR TASK FORCE (Nov. 10, 2022), https://www.catf.us/2022/11/californias-climate-goals-ambitious-clean-energy-deployment-plan-help-get-there.

[7] Alejandro Lazo, *Newsom Unveils Plan to Cut California Climate Funding*, CALMATTERS (Jan. 10, 2024), https://calmatters.org/environment/2024/01/newsom-plan-cuts-california-climate-funding.

[8] Emma Gregg & Katie Cook, *California Geography*, RESPONSIBLE TRAVEL, www.responsiblevacation.com/vacations/california/travel-guide/california-geography (last visited Jan. 13, 2025).

Arizona, Nevada, New Mexico, Utah, Texas, Colorado and others.[9] Despite California being the largest and most politically influential U.S. state, and on its own the fifth-largest economy in the world, ten other western states (including New Mexico, Colorado, Wyoming, and Montana in the Rocky Mountains, as well as others along the Pacific coast)—not California alone—legally control upgrading the most important infrastructure serving California.[10] This Article notes more than 600 decisions by cities and states exercising reserved Tenth Amendment power over infrastructure land-use to block federal law and renewable energy infrastructure for neighboring states with whom they disagree. This outcome shifts the Supremacy Clause and dormant Commerce Clause into a constitutional "Twilight Zone," bypassing their legal dominance.

Setting the stage, Part I of this Article navigates the U.S.'s separation of powers: Electric power is regulated very differently than natural gas or any other energy source.[11] A Herculean challenge confronts U.S. law in moving the country to a new reality of two-thirds of all U.S. cars being operated by electricity[12] and rapidly converting building heating to electricity. To connect the needed amount of wind and solar power to the grid of the world's most complexly engineered infrastructure, electric generation capacity must rapidly double and transmission line capacity would have to be tripled through 2050.[13] The Biden Administration's IIJA and IRA will be measured against the legal bottlenecks they did not anticipate being erected by states, confounding the complexity of the power grid:[14]

> Today, the U.S. transmission and distribution system is a vast physical complex of interlocked machines and wires, with a correspondingly complex set of institutions overseeing and guiding it through policies, statutes, and regulations. The U.S. grid delivers approximately 3,857 terawatt-hours [or trillion watt-hours] of electrical energy from electric power generators to 159 million residential, commercial, and industrial customers. This is accomplished via

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[9] Maria Virginia Olano, *Chart: Which US States Generate the Most Solar and Wind Energy?*, CANARY MEDIA (Apr. 12, 2024), https://www.canarymedia.com/articles/clean-energy/chart-which-us-states-generate-the-most-solar-and-wind-energy.

[10] *See* discussion *infra* Part V.

[11] *See What FERC Does*, FERC, https://www.ferc.gov/what-ferc-does (Feb. 12, 2024). (discussing how electricity regulation focuses on interstate transmission and wholesale sales, while natural gas regulation includes pipeline siting and liquified natural gas (LNG) facility approvals, highlighting differences in federal authority).

[12] *See* Press Release, U.S. EPA, Biden-Harris Administration Proposes Strongest-Ever Pollution Standards for Cars and Trucks to Accelerate Transition to a Clean-Transportation Future (Apr. 12, 2023).

[13] *See Biden-Harris Administration Invests $1.5 Billion to Bolster the Nation's Electricity Grid and Deliver Affordable Electricity to Meet New Demands*, ENERGY (Oct. 3, 2024), https://www.energy.gov/articles/biden-harris-administration-invests-15-billion-bolster-nations-electricity-grid-and-0.

[14] *See* Demsas, *supra* note 5.

> 19,000 individual generators at about 7,000 operational power plants in the United States with a nameplate generation capacity of at least one megawatt (MW). These generators send electricity over 642,000 miles of high-voltage transmission lines and 6.3 million miles of distribution lines. Together with its electric generation component, the grid is sometimes referred to as the world's largest machine; in 2000, the National Academy of Engineering named electrification as the greatest engineering achievement of the 20th century.[15]

Part II examines the prior unsuccessful attempts of Congress to federally preempt state authority over new power infrastructure, and ongoing rebuffs by federal courts in the western U.S.

Part III analyzes the three Biden Administration domestic legislative achievements to parse whether they will effectively transition the U.S. economy to sustainable power. The 2022 Inflation Reduction Act (IRA)[16] and the 2021 bipartisan Infrastructure Investment and Jobs Act (IIJA)[17] together represent historic investments in the nation's energy system, authorizing expenditure of more than $430 billion.[18] A study concluded that providing sufficient transmission line capacity to move renewable power reliably throughout the U.S. would require a 60% expansion of the U.S. high-voltage transmission network by 2030, with that capacity tripled by 2050 to connect the needed wind and solar power to the grid.[19] The capital cost of these new power lines is estimated at $360 billion by 2030 and $2.4 trillion by 2050.[20] While the 2021 infrastructure law authorizes $10 billion over five years for energy projects that could include certain transmission projects,[21] even $10 billion is less than 3% of what is needed by 2030 and less than 1% of the

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[15] *See* U.S. DEP'T OF ENERGY, QUADRENNIAL ENERGY REVIEW: ENERGY TRANSMISSION, STORAGE, AND DISTRIBUTION INFRASTRUCTURE 3-4 (2015), https://www.energy.gov/policy/articles/quadrennial-energy-review-first-installment.

[16] *See* Inflation Reduction Act of 2022, Pub. L. No. 117-169, 136 Stat. 1818 (2022) (codified at various non-contiguous sections of the U.S. Code).

[17] *See* Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, 135 Stat. 429 (2021) (codified at various non-contiguous sections of the U.S. Code).

[18] U.S. DEP'T OF ENERGY, OFF. OF POL'Y, THE INFLATION REDUCTION ACT DRIVES SIGNIFICANT EMISSIONS REDUCTIONS AND POSITIONS AMERICA TO REACH OUR CLIMATE GOALS 1 (Aug. 2022) [hereinafter THE INFLATION REDUCTION ACT DRIVES SIGNIFICANT EMISSIONS REDUCTIONS].

[19] *See* Lesley Clark, Miranda Willson, David Iaconangelo, Christian Vasquez, Carlos Anchondo, Peter Behr & Heather Richards, *What the Infrastructure Deal Means for Energy*, E&E NEWS: ENERGYWIRE (July 30, 2021, 7:29 AM), https://www.eenews.net/articles/what-the-infrastructure-deal-means-for-energy.

[20] *Id.*

[21] *Id.*; *see* Steven Ferrey, *Ring-Fencing the Power Envelope of History's Second Most Important Invention of All Time*, 40 WM. & MARY ENV'T L. & POL'Y REV. 2, 6 (2015).

cost to move the country to all renewable energy by 2050,[22] as President Biden pledged. According to one analysis, quoting former economic adviser to the Federal Energy Regulatory Commission Rob Gramlich:

> The Bipartisan Infrastructure Bill got a lot of press for money it sent towards supporting "the grid," but Gramlich says only about $2.5 billion of that was for transmission lines. "That's really nice, it's a great policy, but $2.5 billion is a drop in the bucket. We spend that in a month and a half in the electric industry on transmission."[23]

Even before the unparalleled dramatic increase in electrification of the entire U.S. economy launched via the 2021 IIJA[24] and the 2022 IRA,[25] the high electrification scenario developed by the U.S. National Renewable Energy Laboratory already predicted that U.S. annual electricity consumption will increase by a factor of 1.6 by 2050 relative to the 2018 pre-pandemic level of approximately 4,000 annual terawatt-hours (TWh).[26] This magnitude of change challenges all western U.S. states. Part III analyzes the recent Supreme Court application of its new Major Questions doctrine which even further separates legal power over energy and climate in U.S. law.

Part IV examines how water from rivers is the resource that changed the west, and particularly facilitated California's evolution from a remote territory to the largest and most powerful state. Those same rivers now potentially constitute and form potential legal barriers to move interstate sustainable electric power. Part IV examines Arizona's successful blockage of additional transmission infrastructure for California power that was upheld by the Ninth Circuit and evaluates the resiliency of the Constitution's Tenth Amendment in empowering neighboring western states and cities to frustrate additional interstate commerce in electric power.

Part V analyzes adjacent western states potentially utilizing rivers forming their boundary with California as legal, rather than physical, barriers to additional electric power transmission infrastructure that would mitigate climate change. The Biden Administration legislation provided federal eminent domain power over private land

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[22] These calculations are based on percentages and costs in this paragraph.

[23] *See* Jack Holmes, *The Sexiest Part of the Clean Energy Transition Is Big-Ass Power Lines*, ESQUIRE (Oct. 6, 2022, 9:50 AM), https://www.esquire.com/news-politics/a41536123/clean-energy-transition-transmission-power-lines-wind-solar/.

[24] *See* Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, 135 Stat. 429 (2021) (codified at various non-contiguous sections of the U.S. Code).

[25] Inflation Reduction Act of 2022, Pub. L. No. 117-169, 136 Stat. 1818 (2022) (codified at various non-contiguous sections of the U.S. Code).

[26] *See* ELLA ZHOU & TRIEU MAI, NAT'L RENEWABLE ENERGY LAB'Y, ELECTRIFICATION FUTURES STUDY: OPERATIONAL ANALYSIS OF U.S. POWER SYSTEMS WITH INCREASED ELECTRIFICATION AND DEMAND-SIDE FLEXIBILITY 3–4 (2021), https://www.nrel.gov/docs/fy21osti/79094.pdf.

but omitted eminent domain over public/state land.[27] Without federal power over state public land, there is potentially a second legal mechanism—in addition to basic state and local Tenth Amendment power over land use to host electric transmission infrastructure—for a state to frustrate needed new power transmission infrastructure from crossing its land to serve adjacent states.

To circumvent this legal impasse, this Article concludes by charting alternative legal paths within existing U.S. law to, in time, address electric power's role in causing climate change. Part VI analyzes the legal omissions in Biden's domestic legislation and what mitigation tools remain available even if there remains Congressional impasse. Further, Part VI considers whether the Federal Power Marketing Administrations might exercise latent federal power to circumvent local and state barriers blocking new federal initiatives that promote interstate commerce in power. Part VI also analyzes the western states' use of extensive federal land and Native American land as part of a solution, as well as potential offshore alternatives to address California's additional need for sustainable power infrastructure.

II. CIRCUMVENTING STATE TRANSMISSION SITING AUTHORITY

Siting transmission infrastructure has historically been in the purview of and governed by states, and some states and their municipalities continue to object to large new transmission projects crossing their lands to support power use in other states.[28] A state may perceive that its residents do not derive adequate benefit from the project, or suspect that the Federal Energy Regulatory Commission (FERC) will later allocate to that state's in-state ratepayers an unfair share of the costs of regional transmission lines that cross their state but don't benefit them.[29] FERC has allocated

[27] *See* Infrastructure Investment and Jobs Act § 40105, 135 Stat. at 933–34; *Explainer on Siting Interstate Electric Transmission Facilities*, FERC, https://www.ferc.gov/explainer-siting-interstate-electric-transmission-facilities (Oct. 8, 2024).

[28] *See Issue Brief: Electric Transmission Infrastructure*, CRES FORUM (July 20, 2023), https://cresforum.org/publications/issue-brief-electric-transmission-infrastructure (noting that "states are often reluctant to allow projects to be cited without any direct benefits to the state or its municipalities."); Grid Deployment Off., *Transmission Siting and Permitting Efforts*, ENERGY.GOV, https://www.energy.gov/gdo/transmission-siting-and-permitting-efforts (last visited Jan. 13, 2025) ("The siting and permitting of interstate and inter-regional high-voltage transmission typically requires action by many different authorities governing the federal, state, local, tribal, and private lands that facilities will pass through.").

[29] *See* Lawrence Susskind, Jungwoo Chun, Alexander Gant, Chelsea Hodgkins, Jessica Cohen & Sarah Lohmar, *Sources of Opposition to Renewable Energy Projects in the United States*, ENERGY POL'Y, June 2022 (analyzing how a number of utility-scale renewable energy projects face multiple sources of local opposition). *See generally FERC Issues Final Rules on Electric Transmission Planning, Cost Allocation, and Backstop Authority Evaluation Procedures*, V&E ENERGY UPDATE (May 16, 2024), https://www.velaw.com/insights/ferc-issues-final-rules-on-electric-transmission-planning-cost-allocation-and-backstop-authority-evaluation-procedures.

some costs of new transmission projects proportionately to all in a regional Independent System Operator (ISO) or Regional Transportation Organization (RTO), without disaggregating more precisely which consumers are directly benefited.[30]

A. The Federal Power Act and Transmission Infrastructure

The federal government through FERC exercises exclusive legal authority over wholesale and interstate financial transactions in electric power, pursuant to Sections 205 and 206 of the Federal Power Act (FPA),[31] which was upheld by the Supreme Court.[32] FERC also exercises exclusive jurisdiction over the "transmission of electric energy in interstate commerce" and over "all facilities for such transmission or sale of electric energy."[33]

This federal jurisdiction cannot intrude into state regulation of retail transactions in power, nor into state physical hardware authority over the construction of transmission facilities themselves unless they are sited on federally owned lands.[34] Under the Tenth Amendment and two centuries of court precedents applying it, local government exclusively exercises its police power over all electric facility land-use and siting authority.[35] Also, transactions involving the distribution of power, as opposed to the transmission of power,[36] are regulated by the states exclusively.[37]

Given that FERC exercises exclusive jurisdiction regarding interstate electric power transactions over transmission facilities, FERC does *not* also exercise

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[30] *See* Illinois Commerce Commission v. FERC, 721 F.3d 764, 772 (7th Cir. 2013).

[31] *See* Federal Power Act, 16 U.S.C. §§ 824(a), 824d–e.

[32] *See* Pub. Util. Dist. No. 1 of Snohomish Cnty. v. FERC, 471 F.3d 1053, 1059 (9th Cir. 2006), *vacated*, 547 F.3d 1081 (9th Cir. 2008).

[33] *See* 16 U.S.C. § 824(b); Connecticut Light & Power Co., 71 FERC 61,035, 61,149 (1995); Cent. Vt. Pub. Serv. Corp., 84 FERC 61,194, 61,973–75 (1998); Niagara Mohawk Power Corp., 100 FERC 61,019, 61,042 (2002); Entergy Servs., Inc., 120 FERC 61,020, 61,061 (2007); Aquila Merch. Servs., Inc., 125 FERC 61,175, 61,926–27 (2008).

[34] *See* 18 C.F.R. § 35 (2024) (requiring nondiscriminatory access by all parties to transmission infrastructure). The federal government controls all permitting for development on federal lands. The Property Clause gives Congress authority over federal property generally, and the Supreme Court has described Congress's power to legislate under this Clause as "without limitations." Kleppe v. New Mexico, 426 U.S. 529, 535, 538–39 (1976) (discussing U.S. CONST. art. IV, § 3, cl. 2).

[35] Steven Ferrey, *Dislocating the Separation of Powers State 'Thumb' on the Biden Sustainability Initiatives & Law*, 54 ARIZ. ST. L.J. 755, 770 (2022); KARL E. GEIER, 7 CAL. REAL. EST. § 21:1 (4th ed. Supp. 2024).

[36] *See* STEVEN FERREY, LAW OF INDEPENDENT POWER § 5:10 (63d ed. 2024) [hereinafter FERREY, LAW OF INDEPENDENT POWER]; STEVEN FERREY, ENVIRONMENTAL LAW: EXAMPLES & EXPLANATIONS 632 (9th ed. 2022) [hereinafter FERREY, ENVIRONMENTAL LAW]; STEVEN FERREY, THE NEW RULES: A GUIDE TO ELECTRIC MARKET REGULATION 23–24, 46–47 (2000) [hereinafter FERREY, THE NEW RULES].

[37] *See* 18 C.F.R. § 35 (2024); *Pub. Util. Dist. 1 of Snohomish Cnty.*, 471 F.3d at 1058.

jurisdiction over the *siting and construction* of those same interstate transmission facilities. The FPA provides FERC exclusive federal authority only over transmission *transactions*, contractual terms, and prices for sales of power over the physical electric transmission system lines.[38] The lines, poles, transformers, and protective equipment—the physical hardware assets—are not included within the grant of federal jurisdiction and authority pursuant to the FPA.[39]

B. The Jurisdictional Disconnect Between FERC Natural Gas and Electric Power

The electric power system in the U.S. is governed very differently than the regulation of other energy utilities, such as natural gas.[40] Moreover, legally, electric power is handled very differently than all other things in the U.S. economy.[41] Widening the lens even more, the U.S. handles electric power differently than every other country in the world.[42] That makes electric power unique, and even legally idiosyncratic, under U.S. law.

Both electricity and natural gas are key utility services. And both electricity and natural gas have been regulated by federal regulations enacted during the New Deal Roosevelt Administration, in the 1935 FPA[43] and the 1938 Natural Gas Act (NGA).[44] During the more than eighty years since their enactments, both are regulated by the same federal agency, FERC.[45]

However, these two statutes, and the legal jurisdiction and power they bestow, are distinct in key ways that go to the core of the issue here—what each does and does not bestow in federal regulatory authority. Starting first with the NGA, it largely federalizes legal authority over natural gas.[46] Under the NGA, FERC has long been able to approve permits for new interstate natural gas pipelines and gas export terminals.[47] Gas traditionally has come from states in the southern region of the U.S., and it has been transported through interstate pipelines throughout the

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[38] *See* 16 U.S.C. §§ 824–25r; Steven Ferrey, *Down to the Wire: Connecting the Critical Path to Climate*, 48 VT. L. REV. 505, 522 (2024) [hereinafter Ferrey, *Down to the Wire*].

[39] 16 U.S.C. §§ 824–25r; Ferrey, *Down to the Wire*, *supra* note 38, at 522.

[40] *See What FERC Does*, *supra* note 11.

[41] *Id.*

[42] For coverage of how electricity is regulated in various other countries, see STEVEN FERREY & ANIL CABRAAL, RENEWABLE POWER IN DEVELOPING COUNTRIES: WINNING THE WAR ON GLOBAL WARMING (2006).

[43] *See* Federal Power Act, 16 U.S.C. §§ 791a–825r; *Public vs. Private Power: From FDR to Today*, FRONTLINE, https://www.pbs.org/wgbh/pages/frontline/shows/blackout/regulation/timeline.html (last visited Jan. 13, 2025).

[44] *See* Natural Gas Act, 15 U.S.C. §§ 717–17w; PETER R. MERRILL, THE REGULATION AND DEREGULATION OF NATURAL GAS IN THE U.S. (1938–1985) 1 (1980).

[45] *See What FERC Does*, *supra* note 11.

[46] *See* 15 U.S.C. §§ 717–17w.

[47] *See id.* § 717f(c)–(h).

continental United States.[48] These interstate pipeline siting permits are federally regulated by FERC.[49]

When FERC grants gas pipeline siting permits, FERC has the power to grant private gas pipeline companies the authority to seize and utilize underneath or above private property to site pipelines.[50] Typically, states need to consent to certain additional permits, although FERC can approve pipelines without the consent of states[51] because FERC has the power to grant the power to exercise eminent domain.[52] FERC has denied eminent domain to only two pipeline applications in the last three decades.[53]

One issue addressed in this Article regarding the new Biden Administration laws is whether the federal government can invoke eminent domain power to seize state-owned land without state permission or notwithstanding active state opposition. For natural gas pipelines, this was decided relatively recently by the Supreme Court in *PennEast Pipeline Co. v. New Jersey*, which upheld the exercise of the NGA's eminent domain authority for a natural gas pipeline crossing not only private lands, but also crossing 42 parcels of land in which New Jersey claimed an interest.[54] Two parcels were owned by the state, and the state did not own the other 40 parcels in fee simple but claimed various nonpossessory interests such as conservation easements and other limitations.[55] New Jersey opposed this pipeline project, refusing to grant any rights or permits for eminent domain to the private company approved by FERC.[56]

Of note, though this authority is contained in the NGA but omitted in the FPA governing the electric sector, *PennEast* does not seem to offer any transferable precedent, especially after the Supreme Court's most recent term. The *PennEast* decision was 5–4, with 5 Justices supporting federal eminent domain authority for NGA pipelines.[57] The Supreme Court decision centered on Eleventh Amendment state

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[48] *See* U.S. DEPT. OF ENERGY, FOSSIL ENERGY STUDY GUIDE: NATURAL GAS (2014), https://www.energy.gov/sites/prod/files/2014/02/f8/HS_NatGas_Studyguide_draft2.pdf (explaining that there are "more than 210 natural gas pipeline systems, using more than 300,000 miles of interstate and intrastate transmission pipelines.").

[49] *See What FERC Does*, *supra* note 11.

[50] *See* 15 U.S.C. § 717f(c)–(h).

[51] *See id.* § 717f(e); PAUL W. PARFOMAK, CONG. RSCH. SERV., R45239, INTERSTATE NATURAL GAS PIPELINE SITING: FERC POLICY AND ISSUES FOR CONGRESS 8 (2021).

[52] *See* 15 U.S.C. § 717f(h).

[53] *See* Ysabelle Kempe, *Eminent Domain Opens Doors for Fossil Fuels—Could it do the Same for Renewable Energy?*, GRIST (Apr. 27, 2021), https://www.grist.org/energy/eminent-domain-opens-doors-for-fossil-fuels-could-it-do-the-same-for-renewable-energy/ (citing James W. Coleman & Alexandra B. Klass, *Energy and Eminent Domain*, 104 MINN. L. REV. 659, 683 (2019)).

[54] *See* PennEast Pipeline Co. v. New Jersey, 141 S. Ct. 2244, 2251–52 (2021).

[55] *Id.* at 2253.

[56] *Id.*

[57] *See id.*

sovereign immunity along a FERC-approved 116-mile pipeline route from Pennsylvania to New Jersey.[58] Justice Breyer noted during oral argument in *PennEast* that Section 7(h) of the NGA was enacted specifically to overcome state objections related to natural gas pipelines meant to move gas from the Permian Basin, where gas reserves were located, to California, Pennsylvania, Illinois, and Massachusetts, to which various states were "objecting in a whole variety of complex ways."[59]

The Supreme Court never granted FERC any federal authority over siting interstate electric power transmission facilities by private companies.[60] The FPA is not a clone of the federally preempting NGA. The FPA was enacted first in 1935 and the NGA followed later. There is no provision similar to the NGA Section 7(h)[61] in the FPA. This is a critical difference between these two federal utility laws. Without any power to proceed against the state in eminent domain, electric transmission infrastructure projects necessary to transmit renewable energy will still be subject to a functional veto by nonconsenting states that refuse to grant necessary approvals.

Additionally, there are state jurisdictional access issues related to street crossings of electric power lines. Massachusetts law, for example, provides that a state-issued permit is required when an individual seeks to construct new power lines for transmission or distribution. In obtaining this permit, it is necessary to contact the selectmen of towns and the mayors and boards of aldermen of cities to permit the running of these wires.[62] Issues are presented when crossing streets,[63] and were FERC to interpret any such local prohibitions restricting transmission and distribution lines for moving electric power, the standard of review applied by the courts

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[58] *Id.* at 2253.

[59] Transcript of Oral Argument at 65–66, PennEast Pipeline Co. v. New Jersey, 141 S. Ct. 2244 (2021) (No. 19-1039).

[60] *See* Federal Power Act, 16 U.S.C. §824(a); New York v. FERC, 535 U.S. 1, 18–24 (2002) (discussing FERC's authority over transmission).

[61] *See* 15 U.S.C. § 717f.

[62] *See* MASS. GEN. LAWS ch. 166, § 22 (2024). This permitting process requires a written proposal and will result in a public hearing. These selectmen, mayors, etc., will evaluate the proposed path of the wires, set forth state-based guidelines governing safety concerns, material selection, location, and installation methods. Additionally, they are vested with the authority to allow a petitioner the right to attach a new line to existing poles owned by another company.

[63] Under *New England Power Co. v. Bd. of Selectmen*, an electric company had petitioned and was granted street crossing permits. Prior to construction of the proposed electric transmission line, these permits were revoked by the town. Prior to this revocation, the electric company had invested over $2.6 million in anticipation of final construction. The Court determined the powers of the selectmen culminate with the power to accept or reject street crossing locations. Revocation is beyond the scope of authority granted to them. Based upon these facts, final authority to revoke is now vested in the Department of Telecommunications and Energy. The findings under *New England Power* have served to become common precedent for multiple cases nationwide. Following *New England Power*, the vesting of power beyond the local town authority has become commonplace. 449 N.E.2d 648 (Mass. 1983); FERREY, LAW OF INDEPENDENT POWER, *supra* note 36, § 4:38 n.30.

affords no deference when FERC endeavors to interpret *state* law rather than federal law.[64] Such interpretation is reserved for the states.

C. *Prior Federal Transmission Siting Preemption Attempts*

1. *EPAct 2005 and FERC Order 689*

First, some historic legal context: To construct more needed transmission capacity, the initial step was the Energy Policy Act of 2005 (EPAct 2005) that sought to extend federal intervention into siting power transmission line projects by authorizing the U.S. Department of Energy (DOE) to designate congested National Interest Electric Transmission Corridors (NIETCs).[65] The EPAct 2005 expanded the powers of the DOE and FERC for interstate transmission projects:

- Mandating that the DOE undertake a transmission congestion study every three years, the third of which was completed in 2015.[66]
- Allowing the DOE to designate congested transmission corridors, NIETCs, in "any geographic area experiencing electric energy transmission capacity constraints or congestion that adversely affects consumers."[67]
- Establishing an expedited process for FERC to approve new electric transmission projects to obtain all federal siting permits within one year, providing FERC "backstop authority" to issue construction permits for projects in NIETCs if states withhold approval for more than a year, and established eminent domain rights, otherwise within state authority, for these NIETC projects.[68]

The Act also provided FERC so-called "backstop authority" to issue

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[64] *See* Ind't Power Producers of N.Y., Inc. v. FERC, No. 21-1166, 2022 WL 3210362, at *2–3 (D.C. Cir. Aug. 9, 2022) (per curiam) (concluding that FERC can reject New York's assumptions and provide no deference to FERC interpretation of *state* law rather than federal law about state climate legislation in setting tariffs and terms of wholesale sales and transmission; FERC assumed 2040 shut down, which would reduce owner's plant amortization periods).

[65] *See* Energy Policy Act of 2005, Pub. L. 109-58, § 1221, 119 Stat. 594, 946 (2005); 16 U.S.C. § 824p(a).

[66] The congestion study is prepared "in consultation with affected States." Cal. Wilderness Coal. v. U.S. Dep't of Energy, 631 F.3d 1072, 1080 (9th Cir. 2011); U.S. DEP'T OF ENERGY, OFF. OF ELEC., 2015 NATIONAL ELECTRIC TRANSMISSION CONGESTION STUDY (2015), https://www.energy.gov/oe/articles/2015-national-electric-transmission-congestion-study.

[67] *See* Energy Policy Act § 1221, 119 Stat. at 948; 16 U.S.C. § 824p(a)(2).

[68] FERC issued Order No. 689 in 2006, creating a multi-year process for obtaining a federal permit to construct transmission within a NIETC. Regulations for Filing Applications for Permits to Site Interstate Electric Transmission Facilities, 71 Fed. Reg. 69,440 (Dec. 1, 2006) (to be codified at 18 C.F.R. pts. 50, 380).

transmission construction permits in NIETCs if states withhold approval for more than a year.[69] Additionally, the EPAct 2005 established federal eminent domain rights for these NIETC projects.[70] This would preempt certain state siting authority. To implement this, in FERC Order No. 689, FERC declared that "withheld approval" included the express *denial* of a transmission permit by any state, even though a denial would in fact be issued rather than "withheld."[71]

To exercise eminent domain authority for electric transmission projects under Section 1221 of EPAct 2005, DOE's congestion study must identify an area and designate an NIETC covering an electric project site, and an expedited construction permit must be obtained from FERC after a state withholds, rather than denies, a transmission authorization for more than a year.[72] After that, as necessary, eminent domain can be obtained by the project developer in federal district court or state court.[73]

2. Eminent Domain

To site a transmission line, the developer of that line needs to own land or have rights to use it.[74] For interstate transmission lines, they need to cross multiple parcels of land owned by many parties. To do this, a right-of-way is necessary.[75] A right-of-way can be purchased by easement or, if not, by a taking through eminent domain.[76] The concept of using eminent domain power is similar to the broad emergency powers enumerated in interstate utility regulation.[77]

Eminent domain is the process by which the federal government, a state government, or an agent of either the federal or state government is allowed to take private property for the necessity of a public use for a public purpose.[78] The power of eminent domain is conditioned in the Fifth Amendment of the United States Constitution.[79] Neither the state, nor an agent thereof, is allowed to condemn

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[69] *Id.*

[70] *See* Energy Policy Act § 1221, 119 Stat. at 946.

[71] Regulations for Filing Applications for Permits to Site Interstate Electric Transmission Facilities, 71 Fed. Reg. at 69,444–45.

[72] *See* Energy Policy Act § 1221, 119 Stat. at 946–47.

[73] *See id.* § 1221, 119 Stat. at 948.

[74] *See* Molly Robertson & Karen Palmer, *Transmission 102: Building New Transmission Lines*, RES. FOR THE FUTURE (Sept. 22, 2023), https://www.rff.org/publications/explainers/transmission-102-building-new-transmission-lines; P. Barton DeLacey, *Energy Transmission is a Real Estate Issue*, COUNS. OF REAL EST. (Apr. 18, 2024), https://www.cre.org/real-estate-issues/energy-transmission-is-a-real-estate-issue.

[75] *Electronic Transmission Facilities Permit Process*, FERC, https://www.ferc.gov/electric-transmission-facilities-permit-process (July 29, 2024).

[76] *Id.*

[77] *See* 16 U.S.C. § 824a(c)(1).

[78] *See In re* Narragansett Elec. Co., 544 A.2d 121, 124 (R.I. 1988); Sweet v. Murphy, 473 A.2d 758, 759, 761 (R.I. 1984).

[79] U.S. CONST. amend. V; Green v. Frazier, 253 U.S. 233, 238 (1920) (noting that prior to

privately owned real property without justifying the reason behind the condemnation; the state, or its agent, must prove the necessity for its actions.[80] The owner, and all other persons with an interest in the property, must receive notice of the government's need to condemn the real property and must also receive just compensation for the real property interest taken by eminent domain.[81]

The definition of a public purpose is not absolute: "[I]t changes with varying conditions of society, new appliances in the sciences, changing conceptions of the scope and the functions of government, and other differing circumstances brought about by an increase in population and new modes of communication and transportation."[82] The record owner of the real property being condemned is entitled to just compensation. However, any party who may have a vested interest in the property may also be entitled to compensation.[83] Utilities have opposed giving FERC

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the adoption of the Fourteenth Amendment, the power of eminent domain of state governments was unrestrained by any federal authority).

[80] *See In re Narragansett*, 544 A.2d at 121 (presenting the Narragansett Electric Company petition against the Rhode Island Public Utilities Commission). The petition sought authority to condemn certain real property in order to build and maintain a transmission line in accordance with 39 R.I. GEN. LAWS § 39-1-31 (2024), which states, "Before exercising any power of condemnation, a company shall present a petition to the commission describing the land, right of way, easement, or other interest in property it proposes to acquire, and setting forth why it is necessary to acquire it by eminent domain." *In re Narragansett*, 544 A.2d at 124. The court determined that the Public Utility Commission (PUC) required Narragansett to "prove that (1) a *clear necessity* for the proposed condemnation exists, (2) there is a *need* for condemnation of property to the extent being sought, and (3) Narragansett's asserted need will materialize in the reasonably foreseeable future." *Id.* at 125 (emphasis added). Clear necessity was proven by testimony from Narragansett's expert witness stating the company's current transmission capabilities could not reliably provide "firm power . . . when the Company's overall service peak load reached 900 MW level." *Id.* at 126. The asserted need to continue to provide "firm power" to its customers was within the foreseeable future: "'Both federal and state authorities recognize that the power of eminent domain is not confined to the taking of property for which there is an absolute and immediate need. It extends also to the taking of property, which is reasonably necessary, and for which a need will probably exist within a reasonable time.'" *Id.* at 127 (quoting Chapman v. Pub. Util. Dist. 1 of Douglas Cnty., Wash., 367 F.2d 163, 168 (9th Cir. 1966)). In *Narragansett*, the court followed its previously proclaimed standard for necessity cited in *O'Neill v. City of East Providence*, 480 A.2d 1375, 1382 (R.I. 1984) ("This court has long recognized that absolute necessity is not required in eminent-domain proceedings.").

[81] The state, or its agent, must give the owner of real property notice explaining that the state is taking steps to condemn his/her property under its power of eminent domain. *See, e.g.*, 35 R.I. GEN. LAWS § 35-8.1-8.3(3) (2024).

[82] *See* 26 AM. JUR. 2D *Eminent Domain* § 44 (2024).

[83] *See id.* § 192. "When part of a mortgaged property is taken for public use, an equitable lien attaches to the condemnation proceeds in favor of [the] mortgagee to the extent of its interest." In a title theory state, "a mortgagee not only obtains a lien upon the real estate . . . but also obtains legal title to the property subject to defeasance upon payment of the debt." Therefore, the mortgagee has a vested interest in the property and may be compensated when that interest is affected by condemnation proceedings. If not, the mortgagee may end up with only a fraction of

eminent domain power to site transmission projects if utilities already have that authority to exercise eminent domain for such projects under state law.[84]

D. Federal Court Disaffirmance of Federal Transmission Siting Preemption

1. On the East Coast, Fourth Circuit: Piedmont

In the seventeen years since the enactment of the EPAct 2005, only two NIETCs were designated by DOE to benefit transmission-congested areas, both of which were immediately challenged, judicially overturned, and vacated.[85] First, in *Piedmont Envt'l Council v. FERC*, a federal appellate court in 2009 blocked FERC from acting to "backstop" and grant a federal permit for electric transmission infrastructure under Section 216 of the FPA that would carry additional power to New York and other congested eastern cities and to California when a state had denied a permit within one year pursuant to conventional state authority over such transmission facilities.[86] The court expressed concern that to uphold FERC's interpretation would cause state energy regulatory authorities to "lose jurisdiction unless they approve every permit."[87]

The court noted that had Congress intended for FERC to blanket-preempt state jurisdiction under the FPA over transmission siting, it would have said so explicitly.[88] The court determined that under the plain language of EPAct 2005, as long as the state took any action on an application within the one-year period, FERC had no power to preemptively intercede under Section 216 of the FPA.[89] The court found that a state retains its "legitimate use of its traditional powers" whenever it exercises final authority to expressly deny a transmission application.[90] The court found no reason to infringe traditional state authority under the FPA because there was

> no logical inconsistency between authorizing FERC to assume jurisdiction in the case of permit approvals with overburdensome conditions but not in the

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the security originally bargained for during negotiations of the mortgage. *See In re* D'Ellena, 640 A.2d 530, 533–34 (R.I. 1994).

[84] *See* Steven Ferrey, *Eminent Domain and Serrated Power*, 39 UNIV. OF HAW. L. REV. 171, 204–05, 229–30 (2016) [hereinafter Ferrey, *Eminent Domain*]; Miranda Willson, *With Manchin Bill Stalled, Will FERC Ever Site Power Lines?*, E&E NEWS (Sept. 29, 2022, 7:11 AM), https://www.eenews.net/articles/with-manchin-bill-stalled-will-ferc-ever-site-power-lines.

[85] *See* Piedmont Envt'l Council v. FERC, 558 F.3d 304 (4th Cir. 2009); Cal. Wilderness Coal. v. U.S. Dep't of Energy, 631 F.3d 1072, 1079, 1095 (9th Cir. 2011).

[86] *See Piedmont Envt'l Council*, 558 F.3d at 309–10; Brief for the Federal Energy Regulatory Commission in Opposition at 13–14, 16, *Piedmont Envt'l Council*, 558 F.3d 304 (No. 09-343).

[87] *Piedmont Envt'l Council*, 558 F.3d at 314.

[88] *Id.* (noting that "§ 216(b)(1), read as a whole, does not indicate that Congress intended to bring about the sweeping transfer of jurisdiction suggested by FERC.").

[89] *Id.* at 314–15.

[90] *Id.*

> case of outright denials . . . . In providing for this measured transfer of jurisdiction, Congress simply makes sure that there is a utility commission available—if not a state commission, then FERC—to make a timely and straightforward decision on every permit application in a national interest corridor.[91]

2. On the West Coast, Ninth Circuit: California Wilderness

Two years later in 2011, the Ninth Circuit addressed the second attempt to invoke federal action to cause a transmission line to be constructed despite resistance from western and eastern states. In *California Wilderness Coalition v. U.S. Department of Energy*, the court ruled that the DOE had failed to properly consult with affected states in preparing a congestion study regarding transmission corridors in mid-Atlantic and southwestern states, as required by Section 216 of the FPA. The court further ruled that the federal study failed to consider the environmental effects of designating NIETCs, as required by the National Environmental Policy Act (NEPA).[92] DOE had only exercised federal siting for these two projects in areas designated as priority transmission corridors, and the court vacated the Mid-Atlantic Area National Corridor and the Southwest Area National Corridor designated by the DOE in 2007.[93]

The two federal circuit court decisions, *Piedmont* and *California Wilderness*, eliminated the exercise of federal authority to site electric power infrastructure in the United States, despite the statutory authority granted to FERC in the EPAct 2005.[94] New Hampshire recently unilaterally blocked new transmission infrastructure needed to carry additional renewable power from Canada to Massachusetts and Connecticut.[95]

For the first eighty-five years of the FPA, U.S. courts of appeals did not legally sanction federal preemption of transmission facility siting. States remain in control of transmission facility siting, whether intra-state or interstate and their requirements vary broadly. Typically, by either state or local authorities within the state where the facilities are to be located, a proposed transmission project must generally be granted authority by the state public utility commission or a state energy facility siting authority—as well as local authorities in certain cases— to secure a certificate of public convenience and necessity to own and operate transmission facilities.[96]

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[91] *Id.*

[92] *See* Cal. Wilderness Coal. v. U.S. Dep't of Energy, 631 F.3d 1072, 1079 (9th Cir. 2011).

[93] *See id.*; 16 U.S.C. § 824p(b).

[94] Congress enacted § 1221 of EPAct 2005, which added a new § 216 to the FPA. *See* Energy Policy Act of 2005, Pub. L. 109-58, § 1221, 119 Stat. 594, 946–51 (2005); 16 U.S.C. § 824p.

[95] *See* William Pentland, *New Hampshire Blocks Major Transmission Project*, FORBES, https://www.forbes.com/sites/williampentland/2018/02/04/new-hampshire-blocks-major-power-transmission-project (Feb. 6, 2018, 8:38 PM).

[96] *See* Steven Ferrey, *Gone with the Wind: State Preemptive Power*, 79 ALBANY L. REV. 1479, 1479, 1498, 1502–03 (2017).

Each of these states differs in who can intervene and how,[97] their systems for extending eminent domain power to different types of applicants that are not utilities,[98] and their procedural and substantive requirements for siting authority.[99]

III. THE 2021 INFRASTRUCTURE INVESTMENT AND JOBS ACT (IIJA)

A. What the Infrastructure Act Legally Reconfigures

President Biden called his major initiative, the 2021 IIJA, the "most significant long-term investment in our infrastructure and competitiveness in nearly a century."[100] The electric transmission infrastructure need is significant: "Transmission line capacity would have to be tripled through 2050 to connect the needed amount of wind and solar power to the grid."[101] The IIJA and 2022 IRA together represent historic investments in the nation's energy system, totaling more than $430 billion.[102]

Even though 47 of the continental states participate in and benefit from the federal interstate transmission grid, any single state may unilaterally block any additional power transmission technology, facility, or line traversing its state.[103] The IIJA also attempts, with more direct language, to reinvigorate provisions similar to those in the previously stricken EPAct 2005,[104] which granted federal authority to compel high-priority transmission facility siting despite lack of approval from states that resist it. The IIJA does so by interceding to permit lines if state agencies reject high-priority transmission proposals or fail to act on them within a year, notwithstanding traditional Tenth Amendment powers reserved to the states over local land use.[105] To do so, the 2021 IIJA attempts to legislatively supersede the Fourth Circuit's decision in *Piedmont*[106] by providing additional statutory support for FERC's exercise of "backstop" siting authority for transmission lines in NIETCs, while also providing a slice of what is estimated to be less than 3% of the necessary funding for new transmission

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[97] *See* Steven Ferrey, *Siting Technology, Land-Use Energized*, 66 CATHOLIC UNIV. L. REV. 1, 35–44 (2017) [hereinafter Ferrey, *Siting Technology*].

[98] *See* Ferrey, *Eminent Domain*, *supra* note 84, at 229–30.

[99] *See* Ferrey, *Siting Technology*, *supra* note 97, at 15–21, 33.

[100] Clark et al., *supra* note 19.

[101] *Id.*

[102] THE INFLATION REDUCTION ACT DRIVES SIGNIFICANT EMISSIONS REDUCTIONS, *supra* note 18.

[103] *The Texas Power Grid is Unique—Here's Why*, TARA ENERGY, https://taraenergy.com/blog/the-texas-power-grid-is-unique-heres-why (last visited Oct. 20, 2024); ASHLEY J. LAWSON, CONG. RSCH. SERV., R47627, ELECTRICITY TRANSMISSION PERMITTING REFORM PROPOSALS 1–2 (2024).

[104] *See* discussion *infra* Section III.A (analyzing the IIJA and its legal reconfigurations).

[105] Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, § 40105, 135 Stat. 429, 933–34 (2021) (codified at various non-contiguous sections of the U.S. Code).

[106] *Id.*; Piedmont Envt'l Council v. FERC, 558 F.3d 304, 315 (4th Cir. 2009).

facilities for sustainable power.[107] The IIJA also provides $2 billion for loans for transmission facilities designated under Section 216 of the FPA.[108]

Specifically, the IIJA amended Section 216(b)(1)(C) of the FPA by deleting the EPAct 2005-added phrase "withheld approval" and by incorporating revisions to the statutory text.[109] As amended, Section 216(b)(1)(C) provides that FERC's permitting authority is triggered when a state commission or other entity with authority to approve the siting of the transmission facilities: (1) has not made a determination on an application by one year after "the date on which the application was filed" or "the date on which the relevant National Corridor was designated . . .," whichever is later; (2) "has conditioned its approval in such a manner that the proposed [project] will not significantly reduce transmission capacity constraints or congestion in interstate commerce or is not economically feasible"; or (3) has denied an application.[110] The IIJA amended Section 216(e), which grants a permit holder the right to acquire the necessary right of way by eminent domain once a permit holder "has made good faith efforts to engage with landowners and other stakeholders early in the applicable permitting process."[111] The IIJA amended Section 216(a)(2) to expand the circumstances under which DOE may designate a National Corridor in geographic areas *expected* to experience such constraints or congestion.[112]

In 2023, FERC started the process to grant new transmission authority pursuant to the revised Section 216 of the FPA[113] for proposed construction and modification of electric transmission facilities in National Corridors.[114] Prior to any new construction, NEPA compliance, as well as possible similar state law environmental impact review compliance, must still be determined.[115]

In the now-amended Section 216 of the FPA, private transmission holders of FERC permits can acquire and exercise a right of way through eminent domain

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[107] *See* Infrastructure Investment and Jobs Act §§ 40105–06, 135 Stat. at 933–36; Jonathan D. Brightbill & Madalyn Brown Feiger, *Will the Infrastructure Investment and Jobs Act Accelerate Transmission Development?*, WINSTON & STRAWN LLP: WINSTON'S ENV'T L. UPDATE (Jan. 4, 2022), https://www.winston.com/en/winston-and-the-legal-environment/will-the-infrastructure-investment-and-jobs-act-accelerate-transmission-development.html; Ewelina Czapla, *The Cost of Upgrading Electricity Transmission*, AM. ACTION F. (July 7, 2021), https://www.americanactionforum.org/research/the-cost-of-upgrading-electricity-transmission/.

[108] *See* Infrastructure Investment and Jobs Act § 40106, 135 Stat. at 934–36.

[109] *See* 16 U.S.C. § 824p; Infrastructure Investment and Jobs Act § 40105, 135 Stat. at 934.

[110] *See* 16 U.S.C. § 824p(b)(1)(C); Infrastructure Investment and Jobs Act § 40105, 135 Stat. at 934.

[111] *See* 16 U.S.C. § 824p(e)(1); Infrastructure Investment and Jobs Act § 40105, 135 Stat. at 934.

[112] *See* 16 U.S.C. § 824p(a); Infrastructure Investment and Jobs Act § 40105, 135 Stat. at 933.

[113] *See* Infrastructure Investment and Jobs Act § 40105, 135 Stat. at 933.

[114] Applications for Permits to Site Interstate Electric Transmission Facilities, 88 Fed. Reg. 2770, 2772–73 (proposed Dec. 15, 2022) (to be codified at 18 C.F.R. pts. 50, 380).

[115] FERREY, ENVIRONMENTAL LAW, *supra* note 36, at 101–04.

power.[116] However, these eminent domain powers only can be applied by the federal government to privately owned land. There is no eminent domain power granted over state-owned lands by the IIJA.[117]

Thus, state permission is still required for any federal siting of transmission lines over any land with state legal interests, whether that be fee-simple or other interests in land. This could become a significant distinction not bridged by the legal changes in the FPA made by the IIJA.

B. The Opportunity that California Missed: The Manchin Amendment

Then-Senator Joseph Manchin (D–W.Va.) after passage of the 2021 IIJA, but while the IRA was pending before Congress, proposed an amendment to the IRA to further strengthen Section 216 of the FPA federal siting authority contained in the IIJA.[118] The Amendment would weaken aspects of NEPA to tweak and accelerate environmental review. However, since this would also strengthen one-stop siting for any type of power lines, including those moving conventional fossil fuel-fired power, some Democratic members did not support the equal treatment of those changes and opposed the Manchin Amendment, which was not included in what was passed by Congress.[119] There was an opportunity to potentially add more preemptive girth in 2021 and again in 2022 to the IIJA to curtail existing state authority over transmission siting. However, in the 2022 elections, control of the House of Representatives was regained by the Republican Party,[120] which appears more protective of traditional state rights, allowing less federal preemption of traditional state rights regarding electric power and its transmission.

The Supreme Court has long resolved any dispute or vagueness as to whether electric power—wherever created—is a uniform article in interstate commerce, stating, "It is difficult to conceive of a more basic element of interstate commerce than electric energy, a product used in virtually every home and every commercial or

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[116] *See* Infrastructure Investment and Jobs Act § 40105, 135 Stat. at 934.

[117] *Id.*

[118] *See Senate Passes Manchin's Bipartisan Infrastructure Bill*, SENATE COMM. ON ENERGY & NAT. RES. (Aug. 10, 2021), https://www.energy.senate.gov/2021/8/senate-passes-manchin-s-bipartisan-infrastructure-bill (providing a summary of the bipartisan infrastructure bill section by section); Richard L. Roberts, William M. Keyser & Michelle Castaline, *Manchin Permitting Reform Legislation: Electric Transmission Implications*, STEPTOE: CLIENT ALERTS (Sept. 28, 2022), https://www.steptoe.com/en/news-publications/manchin-permitting-reform-legislation-electric-transmission-implications.html (describing the Section 216 amendments).

[119] *See* Roberts, Keyser & Castaline, *supra* note 118.

[120] *See* Deirdre Walsh, *Republicans Narrowly Retake Control of the House, Setting Up Divided Government*, OR. PUB. BROAD. (Nov. 16, 2022, 4:42 PM), https://www.opb.org/article/2022/11/16/republicans-narrowly-retake-control-of-the-house-setting-up-divided-government/ (reporting on the Republican party gaining control of the House of Representatives).

manufacturing facility. No State relies solely on its own resources in this respect."[121]

This Article focuses on legislation that enables the movement of electric power from other western states into California. California is by far the largest state and, with dramatic population growth during the last half century,[122] needs significant out-of-state electric power to be moved inside its borders:[123]

Rank	State	Population
1.	California	38,889,800
2.	Texas	30,976,800
3.	Florida	22,975,900
4.	New York	19,469,200
5.	Pennsylvania	12,951,300
6.	Illinois	12,516,900
7.	Ohio	11,812,200
8.	Georgia	11,145,300
9.	North Carolina	10,975,000
10.	Michigan	10,041,200

If California were isolated as its own economy, it would be large enough to constitute the fifth largest economy among countries in the world.[124] This would place California's economy immediately behind those of Japan and Germany, and be larger than the economies of India, the United Kingdom, France, Italy, Canada, South Korea, Russia, Brazil, Australia, Spain, and Mexico.[125]

Being by far the most populated state in the U.S., California also exerts substantial collective legislative influence in Congress, especially during a Democratic presidency. In the House of Representatives during the most recent Democratic presidency, California had 52 of 435 total representatives, making this a single state among the fifty states casting approximately 12% of the votes on all House legislation.[126] And among California's 52 House-member delegation, 40 of the

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[121] *See* FERC v. Mississippi, 456 U.S. 742, 757 (1982).

[122] Neil Morgan & Gregory Lewis McNamee, *California Since c. 1900*, ENCYCLOPEDIA BRITANNICA, https://www.britannica.com/place/California-state/California-since-c-1900 (Nov. 3, 2024).

[123] *See US States - Ranked by Population* 2024, WORLD POPULATION REVIEW, htttps://worldpopulationreview.com/states (last visited Jan. 30, 2025).

[124] *See* Mark Arax, *How We Drained California Dry*, MIT TECH. REV. (Sept. 16, 2021), https://www.technologyreview.com/2021/12/16/1041296/california-climate-change-water-drought; Matthew A. Winkler, *California Poised to Overtake Germany as World's No. 4 Economy*, BLOOMBERG, https://www.bloomberg.com/opinion/articles/2022-10-24/california-poised-to-overtake-germany-as-world-s-no-4-economy (Oct. 25, 2022, 5:22 AM).

[125] *See GDP by Country*, WORLDOMETER, www.worldometers.info/gdp/gdp-by-country/ (last visited Jan. 14, 2025).

[126] *See Members of the 117th Congress*, C-SPAN: CONG. CHRONS., https://www.c-span.org/

52 representatives were Democrats.[127] This number represents 260% the number of Democratic representatives sent to the House of Representatives by the next largest Democratic delegation sent by New York (with 20 Democratic representatives).[128] Recent Speaker of the House of Representatives McCarthy represented California.[129]

Since Governor Pete Wilson (1991–1999) and Governor Arnold Schwarzenegger (2003–2011), for the most recent decade, California has had Democratic governors guiding the state.[130] Similarly, since moderate Republican Senator Thomas Kuchel (1953–1969) and Pete Wilson (1983–1991), for the last 33 years, California has elected only Democratic Senators to represent it in Congress.[131] One of its former Senators, Kamala Harris, was Vice President of the United States.[132] California has had substantial influence on many new laws given the significant Democratic majority of 40 of its 52 Representatives and two Democratic Senators.

The amendments offered several times to several bills in the last four years by former Democratic Senator Joe Manchin would have advanced preemptive federal authority to expedite and site electric and gas transmission facilities and transmission lines to move power into states where it is needed. The Manchin Amendment would have superseded the status under the 2021 IIJA for other proximate states to block additional or greater-capacity interstate transmission lines to bring more renewable power into California, better connecting California with power resources in other states.[133] Then-Senate Majority Leader, Democrat Charles Schumer (D–N.Y.), "agreed to support permitting reform in August in exchange for Manchin's 'yes' vote on the Inflation Reduction Act, which includes $369 billion in climate and clean energy spending."[134] Meanwhile, "[t]he Senate voted down Senator Manchin's amended permitting reform bill in a 47–47 tie vote, meaning that the leadership

congress/members/?congress=117&congressyear=0&chamber=house&visual=&find-name=all&find-state=all&find-party=all&status=all&sort-names=name (last visited Jan. 14, 2025).

[127] *See id.*

[128] *Id.*

[129] *Kevin McCarthy: American Politician*, ENCYCLOPEDIA BRITANNICA, https://www.britannica.com/biography/Kevin-McCarthy-politician (Jul. 18, 2014).

[130] *See Former Governors—California*, NAT'L GOVERNORS ASS'N, https://www.nga.org/former-governors/california/ (last visited Jan. 14, 2025); *Gov. Gavin Newsom*, NAT'L GOVERNORS ASS'N, https://www.nga.org/governors/california/ (last visited Jan. 14, 2025).

[131] *See California Senators*, U.S. SENATE, https://www.senate.gov/states/CA/senators.htm (last visited Jan. 14, 2025).

[132] *Id.*

[133] Breanne Deppisch, *Senate Votes Down Manchin Permitting Bill Meant to Speed Infrastructure Projects*, WASH. EXAM'R (Dec. 15, 2022, 11:36 PM), https://www.washingtonexaminer.com/news/2083065/senate-votes-down-manchin-permitting-bill-meant-to-speed-infrastructure-projects/; *see also Governor Newsom Unveils New Proposals to Build California's Clean Future, Faster*, OFF. OF GOVERNOR GAVIN NEWSOM (May 19, 2023), https://www.gov.ca.gov/2023/05/19/governor-newsom-unveils-new-proposals-to-build-californias-clean-future-faster/ (declaring the new proposal).

[134] Deppisch, *supra* note 133.

failed to honor the agreement Democrats made to the West Virginia Democrat to secure his support for climate spending legislation [the IRA]."[135] Senator Manchin's amendments could have provided the federal preemptive power transmission siting deemed to be of "national interest."[136]

Opposition in the Senate came from 37 Republicans and 10 Democrats.[137] One more vote would have passed the Manchin Amendment. As examined above, Arizona is a state that previously blocked additional interstate transmission siting to benefit California.[138] During a "call with environmental groups reacting to the release of the draft text, House Natural Resources Chairman Raúl M. Grijalva, (D–Ariz.) said that while he would likely support the [continuing resolution] without the permitting provisions, 'it becomes very difficult' to support the bill if Manchin's language is included."[139] According to Senator Mike Rounds (R–S.D.), "It would take it out of the hands of your state [public utility commissions] . . . . And that's simply not acceptable in this case."[140] At the time, "[m]any Democrats oppose[d] the bill because it would facilitate new fossil fuel infrastructure, including by ordering relevant agencies to complete the Mountain Valley Pipeline, a mostly constructed natural gas pipeline traversing West Virginia that's been held up in court and strongly opposed by environmental groups."[141] Additionally,

> if a transmission line crosses multiple states—and primarily benefits one while doing little for the other—the latter's utility commission will often block approval to prevent its energy consumers from suffering a rate hike. Manchin's bill let FERC resolve such disputes by allocating the costs of construction on the basis of which energy customers stood to benefit most from the new lines . . . . California representative Ro Khanna implored progressives to oppose the bill for the sake of the "communities hit hardest" by the climate

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[135] *Id.*

[136] *See* Deppisch, *supra* note 133.

[137] *See* Alan Kovski, *Senate Votes Down Manchin's Permitting Reform Package*, OIL & GAS J. (Dec. 16, 2022), www.ogj.com/general-interest/government/article/14287213/senate-votes-down-manchins-permitting-reform-package (reporting on the Dec. 15, 2022 Senate vote).

[138] *See* discussion *supra* Section II.D.2; David Jordan, *Manchin Permitting Bill Faces Difficult Path Forward*, ROLL CALL (Sept. 22, 2022, 3:51 PM), https://rollcall.com/2022/09/22/manchin-permitting-bill-faces-difficult-path-forward/.

[139] *See* Jordan, *supra* note 138.

[140] *See* Nick Sobczyk, *End of the Line for Permitting Bill, but 2023 Fight Looms*, E&E NEWS (Dec. 16, 2022, 6:15 AM), https://www.eenews.net/articles/end-of-the-line-for-permitting-bill-but-2023-fight-looms.

[141] Deppisch, *supra* note 133. The Mountain Valley Pipeline, which would carry natural gas more than 300 miles from northern West Virginia to southwestern Virginia, was delayed and over budget, in part due to legal challenges and *federal* agency reconsideration of necessary permits. *See* Jordan, *supra* note 138.

crisis.[142]

This was the third attempt by Manchin to pass legislation designed to accelerate the environmental review and permitting of interstate energy infrastructure and to screen off litigation challenges to energy infrastructure projects by imposing a statute of limitations.[143] It was also rejected in the House of Representatives in September 2022.[144] "Earlier versions of Manchin's permitting reform legislation failed to advance due to opposition from many liberal Democrats, as well as Republicans."[145] The IIJA retains a perhaps heretofore-unseen omission that could allow any state an additional mechanism, along with basic state control over its land use, to frustrate accelerated or effective exercise of federal preemption to create interstate power transmission infrastructure.[146]

C. The Supreme Court Precedent

1. West Virginia v. EPA

The Supreme Court repeatedly in the last decade, and particularly in its recent term in the case of *West Virginia v. EPA,* sent strong signals that there is no presidential nor executive branch power to act regarding electric power beyond what Congress has specifically enacted.[147] In 2022, the Supreme Court declared and interpreted the Major Questions doctrine which constricts federal executive branch discretion regarding electric power facility regulation particularly with regard to electric power operation and technology use related to executive branch climate policy.[148] The Court held that existing federal law does not permit the Environmental Protection Agency (EPA) to attempt to regulate what or how facilities in the states generate electricity.[149] This reinforces and dramatically increased the power of the twenty plaintiff states (and consequently, all states) vis-à-vis the federal government's regulation of the electric energy sector, especially with regard to new electric power infrastructure choices and siting to implement climate change policy.[150]

The opinion makes particular note that Congress did not grant the EPA any authority to change the U.S. energy delivery system, and the EPA admitted that it

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[142] *See* Erik Levitz, *Climate Hawks Should Have Given Joe Manchin His Pipeline*, N.Y. MAG.: INTELLIGENCER (Dec. 8, 2022), https://nymag.com/intelligencer/2022/12/manchin-permitting-reform-progressives-pipeline-climate.html.

[143] *See* Deppisch, *supra* note 133.

[144] *Id.*

[145] *Id.*

[146] *See* discussion *infra* Part IV (discussing California water, and power transmission infrastructure).

[147] West Virginia v. EPA, 142 S. Ct. 2587, 2609–10, 2616 (2022).

[148] *Id.*

[149] *Id.* at 2616.

[150] *Id.* at 2597, 2616.

had no expertise in this area.[151] The concurring opinion by Justice Gorsuch, joined by Justice Alito, reinforces state "sovereign immunity" to make these electric power operating decisions without federal "'unintentional, oblique, or otherwise unlikely' intrusions on state interests."[152] "'The importance of the issue,' along with the fact that the same basic scheme EPA adopted 'has been the subject of an earnest and profound debate across the country, . . . makes the oblique form of the claimed delegation all the more suspect.'"[153] The concurrence finds as to the challenged Obama Administration Clean Power Plan, the federal executive branch "seeks to 'intrud[e] into an area that is the particular domain of state law.'"[154]

West Virginia further elevates state power relative to federal government power regarding electric power dispatch and operational choices. This reinforces state power under the Tenth Amendment over land use necessary for key siting of new electric sector technology and infrastructure necessary for implementing federal government climate policy.

2. Subsequent Challenges

Subsequently, federal circuit courts are split regarding additional constitutional limitations. The Fifth Circuit Court of Appeals found it was possible to challenge a Texas law regulating transmission line siting[155] on the basis that it was a violation of the dormant Commerce Clause.[156] A transmission developer, designated by a regional transmission organization (RTO) to construct a new line, argued that the law violates the dormant Commerce Clause because the state law blocks companies without a physical presence in Texas from building transmission facilities, reserving development opportunities in Texas only for in-state utilities.[157] After "wad[ing] through the thicket of electricity regulation," the court concluded that Texas's law does impermissibly discriminate against interstate commerce.[158] The Supreme Court considered granting *certiorari*.[159]

The Eighth Circuit took a contrary position and upheld a similar law enacted by Minnesota against a challenge, in part because the law benefitted incumbent transmission providers who were headquartered outside of the state of Minnesota, and thus the "law applies evenhandedly to all entities, regardless of whether they are

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[151] *Id.* at 2612.

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

[153] *Id.* at 2614 (majority opinion) (quoting Gonzales v. Oregon, 546 U.S. 243, 267–68 (2006)).

[154] *Id.* at 2621 (Gorsuch, J. concurring) (quoting Ala. Ass'n of Realtors v. Dep't of Health and Hum. Services, 141 S. Ct. 2485, 2489 (2021)).

[155] *See* TEX. UTIL. CODE ANN. § 37.056 (West 2023).

[156] *See* NextEra Energy Cap. Holdings, Inc. v. Lake, 48 F.4th 306, 310 (5th Cir. 2022).

[157] *Id.*

[158] *Id.*

[159] Lake v. NextEra Energy Cap. Holdings, Inc., 144 S. Ct. 485 (Mem.) (2023).

Minnesota-based entities or based elsewhere."[160] The project developer, LSP Transmission Holdings, argued that the law "discriminates against interstate commerce three times over":

- On its face by "secur[ing] lucrative business opportunities . . . for favored local operators;"
- In effect by "granting entities with an in-state presence a preference at the direct expense of out-of-state entities that lack such a presence;" and
- With a legislative discriminatory purpose of insulating in-state companies from competition.[161]

The Eighth Circuit panel found none of these facial "effect" or "purpose" claims persuasive. The court noted that the state's Right-of-First-Refusal (ROFR) restrictions actually serve the state's goal of delivering reliable and cost-effective electric power, and the "law is not primarily aimed at protecting in-state interests but at maintaining a regulatory system that has worked."[162] The panel found that preserving the status quo in transmission development is "within the purview of a State's legitimate interest in regulating the intrastate transmission of electric energy."[163]

Regarding this controversial ROFR issue: Although the majority of new generation facilities are now constructed each year by "merchant" (unregulated) companies, rather than by regulated utilities,[164] a phenomenon projected to continue,[165] existing

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[160] LSP Transmission Holdings v. Sieben, 954 F.3d 1018, 1028 (8th Cir. 2020).

[161] Brief of Petitioner-Appellant at 21, 27, 35, 37, *LSP Transmission Holdings*, 954 F.3d 1018 (No. 18–2559).

[162] *LSP Transmission Holdings*, 954 F.3d at 1029.

[163] *Id.* at 1031.

[164] *See* Electric Energy Market Competition Task Force; Notice Requesting Comments on Draft Report to Congress on Competition in the Wholesale and Retail Markets for Electric Energy, 71 Fed. Reg. 34,083, 34,083–84 (June 13, 2006) (describing how Section 1815 of EPAct 2005 requires the Electric Energy Market Competition Task Force).

> In the 1970s, vertically integrated utility companies (investor-owned, municipal, or cooperative) controlled over 95 percent of the electric generation in the United States . . . . [B]y 2004 electric utilities owned less than 60 percent of electric generating capacity. Increasingly, decisions affecting retail customers and electricity rates are split among federal, state, and new private, regional entities.

ELEC. ENERGY MKT. COMPETITION TASK FORCE, REPORT TO CONGRESS ON WHOLESALE AND RETAIL COMPETITION MARKETS FOR ELECTRIC ENERGY 10 (2007), https://www.energy.gov/sites/default/files/oeprod/DocumentsandMedia/EPAct_sec_1815_rpt_transmittal_letter_-_Epact_sec_1815_rpt_to_Congress.pdf; Steven Ferrey, *Sale of Electricity*, *in* THE LAW OF CLEAN ENERGY: EFFICIENCY AND RENEWABLES 217, 217–18 (Michael B. Gerrard ed., 2011); *see also Scheduled 2015 Capacity Additions Mostly Wind and Natural Gas; Retirements Mostly Coal*, U.S. ENERGY INFO. ADMIN. (Mar. 10, 2015), www.eia.gov/todayinenergy/detail.cfm?id=20292.

[165] *See U.S. Solar Market Insight*, SOLAR ENERGY INDUS. ASS'N (June 7, 2022),

electric transmission infrastructure remains principally built, owned, and operated by regulated retail utilities. ROFRs, as a matter of state law, provide incumbent utility transmission providers the right to take away competition-proposed transmission infrastructure construction, ownership, and operation.[166]

FERC Order 1000 attempted to make transmission infrastructure competitive, mandating that incumbent transmission providers (utilities, Independent System Operators (ISOs) and the RTOs that manage regional transmission) to remove ROFRs from FERC-approved transmission tariffs.[167] The D.C. Circuit Court of Appeals held, in a unanimous decision, that FERC had sufficient authority under the FPA to require removal of federal ROFR provisions from federally mandated transmission tariffs "upon determining they were unjust and unreasonable practices affecting rates."[168] Because of strong opposition from several states who wanted to keep all transmission infrastructure held and operated by in-state regulated utilities, FERC later dropped the federal Order 1000 requirement to remove ROFRs in federal ISO and RTO provisions and, subsequently, a significant number of states enacted state ROFR laws to embed this practice in state law, notwithstanding that it might not be in regional ISO tariffs.[169] To control the transmission infrastructure, utilities have engaged over the last decade in more local rather than interstate transmission projects rather than facilitating interstate transmission or a more integrated U.S. electric transmission backbone. This trend has made the rate-based generating assets held by conventionally regulated in-state utilities more valuable.[170]

3. The Next Challenge

Looking at continuing state-federal disagreement, the National Association of

http://www.seia.org/research-resources/us-solar-market-insight.

[166] *See* Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities (Order 1000-A), 77 Fed. Reg. 32,184, 32,202–03, 32,240 (May 31, 2012); Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities (Order 1000-B), 77 Fed. Reg. 64,890, 64,896–97 (Oct. 24, 2012). This statement does not preclude public utility transmission providers in regional transmission planning processes from taking into consideration the particular strengths of either an incumbent transmission provider or a non-incumbent transmission developer during its evaluation. An incumbent transmission provider may have unique knowledge of its own transmission systems, familiarity with the communities it serves, economies of scale, experience in building and maintaining transmission facilities, and access to funds needed to maintain reliability. Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities (Order 1000-A), 77 Fed. Reg. at 32,244.

[167] *See* Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities, 76 Fed. Reg. 49,842, 49,845–46, 49,963–64 (Aug. 11, 2011) (to be codified at 18 C.F.R. pt. 35).

[168] S.C. Pub. Serv. Auth. v. FERC, 762 F.3d 41, 48–49 (D.C. Cir. 2014).

[169] *See* Steven Ferrey, *State Refusal Triggers Constitutional Crisis: Past is Prologue on Energy and Infrastructure*, 34 UNIV. TEX. L. REV. LITIG. 423, 425, 426–27, 439, 443 (2015) [hereinafter Ferrey, *State Refusal*].

[170] *See* Alexandra Klass, Joshua Macey, Hannah Wiseman & Shelley Welton, *Grid Reliability Through Clean Energy*, 74 STANFORD L. REV. 969, 1024 (2022).

Regulatory Utility Commissioners (NARUC), representing state public utility commissioners, and many state attorney generals, support existing state authority over generation and transmission siting.[171] Opponents of the Plains & Eastern Clean Line Transmission Project, a new transmission line proposed in 2010 to transmit new planned sustainable wind power from Oklahoma to Tennessee, challenged the DOE's legal jurisdiction to condemn not state, but private land which is substantially less legally controversial than the DOE attempting to preempt use of state lands for a project.[172] Before the case ultimately was dismissed and prior decisions vacated by the Eighth Circuit when the DOE terminated the proposed project in 2018,[173] the federal district court noted while examining the DOE's authority under Section 1222 of EPAct 2005 that "Whether the Energy Policy Act authorizes the United States to acquire needed easements by condemnation is a vexed question."[174] The recent Supreme Court decision in *West Virginia v. EPA* and the omission in the IIJA to grant federal eminent domain authority over public land, creates a notable potential gap for western U.S. states and California transmission needs.

IV. WESTERN RIVERS, WATER, AND POWER TRANSMISSION INFRASTRUCTURE

"The future always looks good in the golden land, because no one remembers the past."
— Joan Didion[175]

A. Water and Power

To talk about California and its energy future is to talk about water and rivers. Water plays a key role first as a commodity in this State's industrial agriculture and

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[171] *See History & Background*, NAT'L ASS'N REGUL. UTIL. COMM'RS, https://www.naruc.org/about-naruc/our-mission/history-background/ (last visited Jan. 14, 2025); *Policy & Advocacy*, NAT'L ASS'N. REGUL. UTIL. COMM'RS, https://www.naruc.org/about-naruc/our-programs/policy-advocacy/ (last visited Jan. 14, 2025); Request for Rehearing by the States of Texas, Alabama, Arkansas, Florida, Georgia, Idaho, Iowa, Kansas, Kentucky, Louisiana, Mississippi, Montana, Nebraska, North Dakota, Oklahoma, South Carolina, South Dakota, Tennessee, and Utah at 2, 39–47, Building for the Future Through Electric Regional Transmission and Cost Allocation, FERC (No. RM21-17-000) (June 12, 2024); WILLIAM H. SMITH JR., NAT'L COUNCIL ON ELEC. POL'Y, MINI GUIDE ON TRANSMISSION SITING: STATE AGENCY DECISION MAKING 1 (2021), https://pubs.naruc.org/pub/C1FA4F15-1866-DAAC-99FB-F832DD7ECFF0 ("Decisions on where to site transmission lines must balance the needs of the electric system with other uses of land. States have evolved several ways to organize this important decision-making process.").

[172] *See* discussion *supra* Section II.C.2 (discussing lack of federal authority to grant eminent domain over state and local lands, rather than private lands).

[173] *See* Downwind LLC v. Dep't of Energy, No. 18-1399, 2018 WL 3648283 (8th Cir. Apr. 18, 2018).

[174] *See* Downwind LLC v. Dep't of Energy, No. 3:16-cv-207-DPM, 2017 WL 6542747 (E.D. Ark. Dec. 21, 2017).

[175] JOAN DIDION, SLOUCHING TOWARDS BETHLEHEM 4 (2008).

growth for the last two centuries.[176] Now, rivers could create an external, manipulatable legal barrier to California being able to expeditiously, and without additional legal challenges, connect electrically with more resources across its borders to transmit additional renewable electric power into California from outside the state.

The California story begins with water as its key commodity. The Central Valley of California is "the most industrialized farm belt in the world . . . that geologists call the most altered landscape by human hands in history . . . . 260 miles long and 50 miles wide, [the area] qualifies as desert only by measure of average rain—less than 10 inches per year."[177] With anthropogenic alteration, the City of Los Angeles in Southern California moved the Owens River over a mountain to serve the City, then in the 1960s, the State Water Project built a 444-mile aqueduct to move Northern California water to agriculture in the Central Valley and provide water "for more houses and swimming pools in Southern California."[178] During the most recent decade of the 21st century, the driest in recorded California history, instead of Central Valley agricultural interests cutting back production during this period of severe water scarcity, the valley farms "added a half million more acres of permanent crops . . . sucking so many millions of acre-feet of water out of the earth that the land is sinking."[179]

Regarding water access, California has been in a multi-year fight with its neighboring states over who gets to take more water out of rivers separating California from Nevada and Arizona to its east. California already commands a large withdrawal of water.[180] The battle over which states or Native American tribes are entitled to how much river water was again before the Supreme Court in 2023.[181] Now rivers have the potential to become a key resource limiting California's ready access to more transmission of electricity. California has always needed to import and utilize power from the ten other western states and Canada, as shown in Figure 1:

Net power flows into California from other Western States accounted for

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[176] *The California Water System*, CAL. DEP'T OF WATER RES., https://water.ca.gov/Water-Basics/The-California-Water-System (last visited Jan. 14, 2025).

[177] *See* Arax, *supra* note 124.

[178] *Id.*

[179] *Id.*

[180] Rachel Becker, *California Agrees to Long-Term Cuts of Colorado River Water*, CALMATTERS (Mar. 6, 2024), https://calmatters.org/environment/water/2024/03/california-colorado-river-agreement/; *see* Navajo Nation v. U.S. Dep't of the Interior, 26 F.4th 794, 801 (9th Cir. 2022) ("In 1952, still dissatisfied with its allotment, Arizona sued California in the Supreme Court, invoking the Court's original jurisdiction." (citing Arizona v. California, 373 U.S. 546, 550–51 (1963))).

[181] *See* Arizona v. Navajo Nation, 143 S. Ct 1804 (2023).

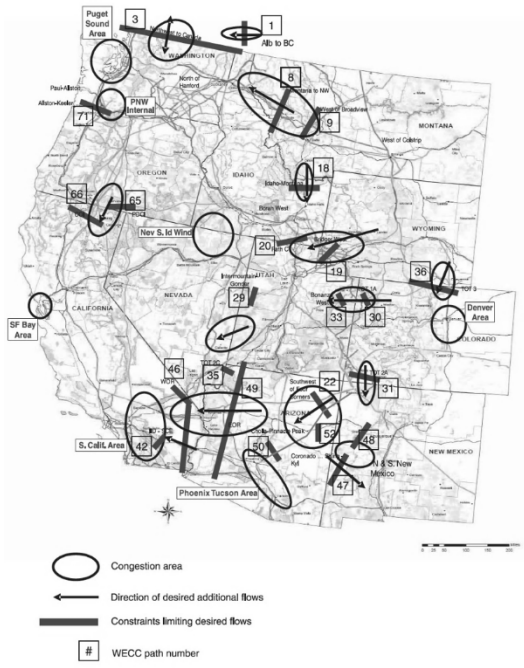
> In exchange for the Navajos' promise not to engage in further war, the United States established a large reservation for the Navajos in their original homeland in the western United States. Under the 1868 treaty, the Navajo Reservation includes (among other things) the land, the minerals below the land's surface, and the timber on the land, as well as the right to use needed water on the reservation.

Id. at 1809–10.

> about 67 million megawatthours (MWh), or 25% of California's total electric supply of 277 million MWh in 2010 . . . . California received—on net basis (power flows into the state minus power flows out of the state)—44 million MWh from the Southwest and 22.5 million MWh from the Northwest in 2010. Interregional power flows elsewhere in the West were much lower.[182]

Figure 1 below shows California having additional power needs in Southern California and in the San Francisco Bay Area (circled); significant power in Arizona, Utah, and Nevada that could move to California (via the arrows) facing insufficient transmission infrastructure (denoted by the solid lines blocking some of those arrows' progress); as well as significant electric power in Oregon, Washington, Idaho, Wyoming, and Canada similarly blocked by insufficient transmission infrastructure (solid lines). The most significant flow of electric power into California comes through the states of Arizona and Nevada at a value (47.2 million MWh) approximately twice that of the value of power entering California from Canada and other northern states (24 million MWh).[183]

Figure 1: Western State Transmission Constraints Not Moving Power to California[184]



[182] *A Quarter of California's Electricity Comes from Outside the State*, U.S. ENERGY INFO. ADMIN. (Dec. 19, 2011), https://www.eia.gov/todayinenergy/detail.php?id=4370.

[183] *See id.*

[184] U.S. DEP'T OF ENERGY, NATIONAL ELECTRIC TRANSMISSION CONGESTION STUDY 37

There is not a reciprocal mutual exchange of power. The amount of power flowing into California through Arizona and Nevada (47.2 MWh) is approximately 15 times the amount of power that reciprocally flows from California back to Arizona and Nevada (3.2 MWh).[185] California derives approximately 17% of its power transmitted across the Colorado River which separates California from Arizona and some of Nevada, with only modest return exchange of power exported from California to states across its eastern border.[186]

While the magnitude of California's import of power through Arizona and Nevada is significant, all states import power.[187] Arizona and Nevada have the best and most intense solar insolation in the U.S. to generate solar power.[188] If one wonders whether a neighboring state engages in such blockage of new transmission lines to serve California, Arizona has already done so.[189] And in doing so, Arizona's blockage has already been upheld by the Ninth Circuit as final federal law.[190]

B. Independent System Operators

California has chosen certain legal and policy options related to electricity that in some ways sets itself apart in its relationships with neighboring states. California is the only state among the eleven continental U.S. states west of the Rocky Mountains that chose to participate in an ISO.[191] An ISO exercises federal, rather than state, authority to manage transmission infrastructure and facilities in that territory, as well as wholesale transactions in power.[192] However, California did not choose to do so in conjunction with any other states—California is one of only two states in the U.S. (New York being the other) that formed a single-state ISO and does not operate as part of a group of states, as shown in Figure 2.[193]

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fig. 4-7 (2006), https://www.energy.gov/sites/prod/files/oeprod/DocumentsandMedia/Congestion_Study_2006-9MB.pdf.

[185] *Id.*

[186] *Id.*

[187] *See* FERC v. Mississippi, 456 U.S. 742, 757 (1982).

[188] *See This Map Shows an Annual Average U.S. Solar Resource in Kilowatt Hours Per Day of Solar Energy Available Per Square Meter*; NAT'L RENEWABLE ENERGY LAB'Y, https://basc.pnnl.gov/images/map-shows-annual-average-us-solar-resource-kilowatt-hours-day-solar-energy-available-square (last visited Jan. 14, 2025).

[189] *See* discussion *supra* Section II.D.2 (discussing the *California Wilderness* precedent).

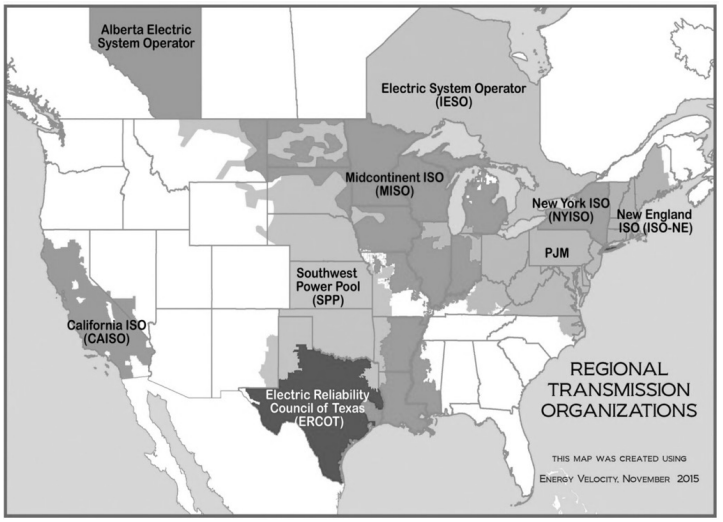
[190] *See* Cal. Wilderness Coal. v. U.S. Dep't of Energy, 631 F.3d 1072 (9th Cir. 2011).

[191] *See id.*

[192] *See* RICHARD J. CAMPBELL, CONG. RSCH. SERV., RL44783, THE FEDERAL POWER ACT (FPA) AND ELECTRICITY MARKETS 6–8 (2017); *Electric Power Markets*, FED. ENERGY REGUL. COMM'N, https://www.ferc.gov/electric-power-markets (May 16, 2023); *see also* JEFFERY S. DENNIS, SUEDEEN G. KELLY, ROBERT R. NORDHAUS & DOUGLAS W. SMITH, BERKELEY NAT'L LAB'Y, FEDERAL/STATE JURISDICTIONAL SPLIT: IMPLICATIONS FOR EMERGING ELECTRICITY TECHNOLOGIES 3, 9, 26 (2016).

[193] *See* Figure 2, *infra* note 194.

Figure 2: U.S. ISOs and RTOs[194]



Maintaining California's transmission infrastructure regulatorily separated in the California ISO (CAISO) has caused these other western states to consider creating their own RTO or joining the existing Southwest Power Pool (SPP), which as shown in Figure 2 is the closest RTO to the east. RTO membership recently became recently required by statute for Nevada utilities.[195] Alternatively joining the existing CAISO appears unattractive to several western states due to the CAISO governance structure whereunder California's governor appoints CAISO's Board and California law controls:[196]

> Westerners outside of California often refuse to turn over control of their utilities, generators, and transmission grids to any organization dominated by Californian interests. This divide is illustrated by a lawsuit being pursued by the attorneys general of Idaho, Montana, Utah, and Wyoming, among others, against California and four other states asserting that those states' energy policies are undermining industries essential to the country's prosperity.[197]

A multistate study for western states concluded that "[t]he RTO construct was

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[194] Regional Transmission Organizations (illustration), *in Power Market Structure*, U.S. EPA, https://www.epa.gov/green-power-markets/power-market-structure (Jan. 15, 2024) [hereinafter *Power Market Structure*].

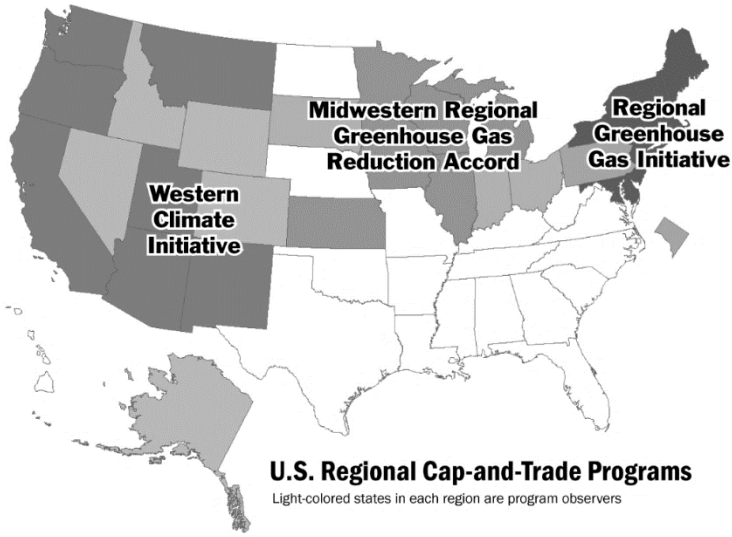
[195] Lincoln Davies & Stephanie Lenhart, *California, an Island?*, 77 STAN. L. REV. ONLINE 17, 18 & n.10 (2024).

[196] *Id.* at 21, 25 (CAISO "must 'conduct its operations' to advance 'the interests of the people of the state.'" (quoting CAL. PUB. UTIL. CODE § 345.5(a) (West 2024))).

[197] MICHAEL GIBERSON, R ST., AN RTO FOR THE WEST: OPPORTUNITIES AND OPTIONS 12 (2024), https://www.rstreet.org/wp-content/uploads/2024/09/FINAL2_r-street-policy-study-no-308-1.pdf.

the most effective at mitigat[ing] renewable curtailments," and "also resulted in the least carbon emissions."[198] If the other western states join the existing SPP RTO, this simple move would make California an island in the western part of the U.S.[199] Observers note that "Prior efforts—there have been many—to grow a regional western electricity market, including by expanding CAISO, have failed."[200]

Figure 3: Regional Greenhouse Gas Initiative[201]



California earlier formed a group of seven western states, including its adjoining neighboring states of Arizona, Nevada, and Oregon, along with the Canadian province of British Colombia, to address climate change collectively, as shown in Figure 3. The Western Climate Initiative (WCI) was formed in 2007 with the intent, through a cooperative a regional system of tradable permits, of reducing regional greenhouse gas (GHG) emissions 15% below 2005 levels by 2020.[202] All of the six states other than California, export power to California substantially more in amount than they import from California, as shown in Figure 1.[203] The other six member states, including

[198] ENERGY STRATEGIES, THE STATE-LED MARKET STUDY: TECHNICAL REPORT 42–43 (2021), https://static1.squarespace.com/static/59b97b188fd4d2645224448b/t/6148a012aa210300cbc4b863/1632149526416/Final+Roadmap+-+Technical+Report+210730.pdf.

[199] Davies & Lenhart, *supra* note 195, at 18–19.

[200] *Id.* at 18.

[201] *See* U.S. Regional Cap-and-Trade Programs (illustration), *in Regional Greenhouse Gas Initiative*, PACE ENERGY & CLIMATE CTR. (2023), https://energy.pace.edu/project/regional-greenhouse-gas-initiative.

[202] *See* Geoffrey Craig, *Six US States Leave the Western Climate Initiative*, S&P GLOBAL (Nov. 18, 2011, 9:15 AM), https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/electric-power/111811-six-us-states-leave-the-western-climate-initiative.

[203] *See supra* notes 184–90 and accompanying text.

bordering Arizona, left the group *en masse* in 2011, with their governors not in synch with California's approach to climate.[204]

C. *Past State Treatment of Imported Renewable Power*

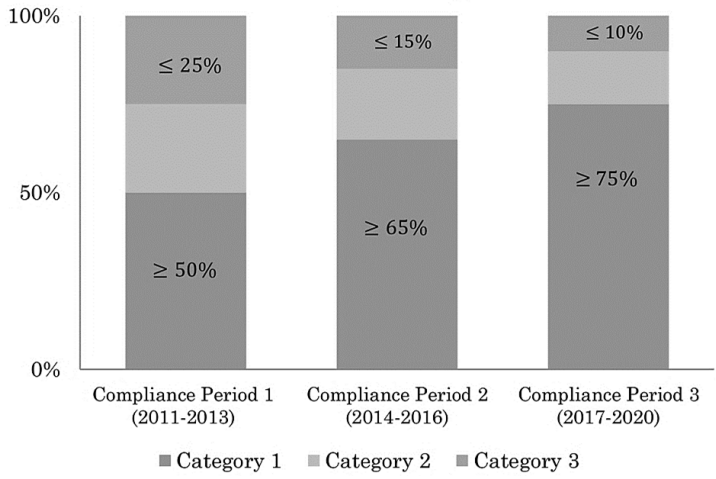
California has isolated its electric sector legally in certain ways in its effort to utilize renewable sources of energy. Four examples are discussed below.

1. *Differential Treatment of Renewable Energy Credits*

a. *California In-State Regulatory Preferences*

First, California has indirectly isolated its subsidy of electric renewable power to not include subsidy of renewable power that California imports from neighboring states. This subsidy is part of the California Renewable Portfolio Standard (RPS) program allocating Renewable Energy Credits (RECs) to power produced from renewable energy.[205] Eligible renewable energy facilities earn RECs, and California Public Utility Commission (PUC) regulation requires California Investor-Owned Utilities (IOUs) to purchase a specified, increasing amount of these RECs each year, and pass those acquisition costs on to utility ratepayers.[206]

Figure 4: RPS Portfolio Content Category Requirements[207]



[204] *See* Craig, *supra* note 202.

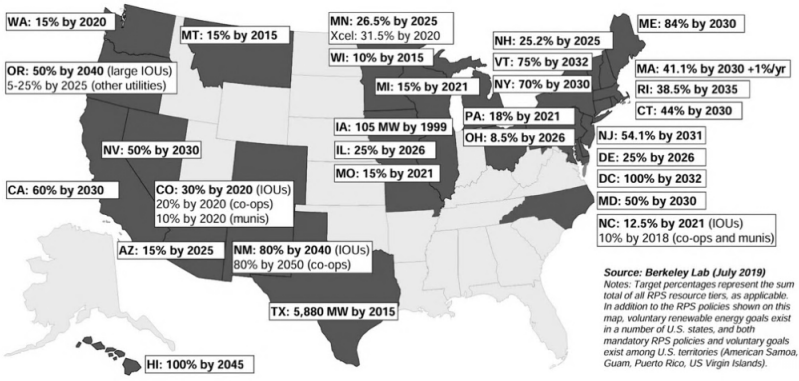
[205] *See* MALLORY ALBRIGHT, CHERYL COX & AMANDA SINGH, CAL. PUB. UTIL. COMM'N, CALIFORNIA RENEWABLES PORTFOLIO STANDARD ANNUAL REPORT 59 (2019), http://large.stanford.edu/courses/2020/ph240/multani1/docs/puc-2019.pdf.

[206] *See id.* at 21, 59–60.

[207] *Id.* at 59–60, 60 fig. The three categories depicted in this figure represent the three portfolio content categories California's RPS program uses. "Category 1" includes "[b]undled renewable energy credits (RECs) from facilities with a first point of interconnection within a California Balancing Authority (CBA), or facilities that schedule electricity into a CBA on an hourly or sub-hourly basis." "Category 2" is "procurement which bundles RECs with incremental

Under this revised framework, parties are allowed to meet the California RPS by purchasing RECs "unbundled" or separated from purchasing the associated renewable energy that creates the REC.[208] Initially, the use of Tradable Renewable Energy Credits (TRECs) for RPS compliance was limited to no more than 25% of a given IOU's or Electric Service Provider's (ESP's) annual REC obligation.[209] This limit decreased to ten percent of the utility's RPS requirement by 2017, as illustrated in Figure 4.[210] Effectively, a limit on purchase or use of TRECs restricts the remaining amount of RECs that utilities must obtain that are "bundled" with power generated from renewable energy facilities located in California or connected to a balancing authority in the California utility grid, which predominately serve in-state generation sources.[211]

Figure 5: RPS Policies in 29 States and D.C.[212]



California required a majority of its awarded RECs to be bundled with the sale of electricity produced by renewable resources in or connected to in-state transmission, thus disadvantaging renewable power generation sited out-of-state which produces renewable power that is transmitted into, sold, and consumed in

electricity, and/or substitute energy, from outside a CBA." "Category 3" are "[u]nbundled RECs that do not include the physical delivery of the energy attached to the REC." *Id.*

208 *See id.*

209 *See id.* at 59–60.

210 *See id.* Senate Bill X1-2 capped the use of TRECs at 25% for the compliance period ending December 31, 2013, and decreased the utility's RPS requirement to 10% by 2017. *Renewable Portfolio Standard*, DSIRE, https://programs.dsireusa.org/system/program/detail/840/renewables-portfolio-standard (Nov. 26, 2024).

211 ALBRIGHT, COX & SINGH, *supra* note 205, at 60.

212 GALEN BARBOSE, LAWRENCE BERKELEY NAT'L LAB'Y, U.S. RENEWABLES PORTFOLIO STANDARDS: 2019 ANNUAL STATUS UPDATE 8 fig. (2019), https://eta-publications.lbl.gov/sites/default/files/rps_annual_status_update-2019_edition.pdf.

California.[213] This requires the significant majority of usable RECs to be created by in-state renewable energy generation. Aware of this mechanism, some neighboring states may have developed the perception of California not recognizing or equitably treating renewable power originating from their states and delivered to serve California over transmission lines.

This history could be a consideration when California now seeks additional transmission capacity and approval from proximate states to move more of neighboring states' renewable power into California to satisfy its power goals and needs. The western and other states with Renewable Portfolio Standard (RPS) programs, including Nevada and Arizona, are shown in Figure 5. As shown in Figure 5, California's state RPS law (at 60% renewables by 2030) is attempting to accelerate renewable power use several times more rapidly than Arizona's state RPS law (at 15% renewables by 2025).[214]

b. Western Adjoining States Terminate Discrimination

California, New Mexico, and Nevada increased their required state RPS laws' renewable percentage of power supplied:[215]

- California: 60% by 2030 (and 100% zero-carbon by 2045).
- New Mexico: 80% by 2040 (and 100% zero-carbon by 2045).
- Nevada: 50% by 2030.

California must obtain from power imports and in-state generation 100% renewable power within the next two decades.[216] California was not the first of its neighboring states to develop its RPS program. California developed its RPS program in 2002, approximately 5 years after the RPS programs in Arizona and Nevada already were in place.[217] Initially, each state discriminated in its renewable subsidies to the detriment of out-of-state renewable power imported over transmission lines into the state.[218]

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[213] *See* ANDREW SCHWARTZ, CAL. PUB. UTIL. COMM'N, RENEWABLE ENERGY CERTIFICATES AND THE CALIFORNIA RENEWABLES PORTFOLIO STANDARD PROGRAM 24–25 (2006) (providing that the California Public Utilities Commission staff recognized that this could invoke constitutional problems).

[214] *See* BARBOSE, *supra* note 212, at 8.

[215] *Id.*

[216] *Id.* at 12.

[217] *Id.* at 10 fig. (reflecting 2019 RPS).

[218] *See* DAVID J. HURLBUT, JOYCE MCLAREN & RACHEL GELMAN, NAT'L RENEWABLE ENERGY LAB'Y, BEYOND RENEWABLE PORTFOLIO STANDARDS: AN ASSESSMENT OF REGIONAL SUPPLY AND DEMAND CONDITIONS AFFECTING THE FUTURE OF RENEWABLE ENERGY IN THE WEST, at xv (2013), https://www.nrel.gov/docs/fy13osti/57830-1.pdf (analyzing cost sensitivities for California, Nevada, and Arizona); NEV. ENERGY ASSISTANCE CORP., TRANSMISSION INITIATIVE ROUTING STUDY: AN INITIATIVE TO EXPORT NEVADA'S

In the past, western states in addition to California maintained express RPS RECs preferences for in-state renewable power, excluding imported renewable power from other states. For example, there are in-state REC multipliers in RPS states such as Arizona,[219] Colorado,[220] Nevada,[221] and Washington;[222] in-state generation REC requirements in California,[223] and Colorado,[224] as well as in-state product or labor preferences required in Arizona[225] and Montana.[226]

Judge Richard Posner, speaking for a unanimous Seventh Circuit in one of the most important recent federal court energy decisions, found such RPS REC discrimination to be a violation of the dormant Commerce Clause.[227] Thereafter, Arizona and Nevada in the last decade have ceased this former in-state RPS REC discrimination regarding out-of-state renewable energy imported to their states.[228]

Of the states that maintained RPS REC multipliers only for in-state-sited renewable electric generation in 2011, three of those states—Arizona and Nevada which border California, and Delaware—ceased offering RPS REC multipliers for

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RENEWABLE ENERGY 4-2 (2012), https://energy.nv.gov/uploadedFiles/energynvgov/content/NEAC_FinalRpt-Section4-StrategicTransmissionDiscussion.pdf. Interestingly, "Nevada's transmission grid has not been constructed with a focus on exporting electric generation out of the state." Further,

> Economics dictate that there is little demand for purchased power from higher cost California based resources into Nevada. Absent major interstate transmission expansion, little opportunity remains for either wholesale providers to import into the state or for new generation to export to neighboring markets. This is a testament to the efficiency of the existing system in that the load is being served in the state by the in-state transmission system and retail customers aren't incurring excess costs. The need for both additional import and export will require construction of new interconnected transmission systems. Ideally the construction of new lines will serve the incremental needs of out-of-state users with no adverse impacts occurring to existing customers.

Id. at 4-4 to -5.

[219] ARIZ. ADMIN. CODE § R14-2-1806(D)–(E) (2022).

[220] COLO. REV. STAT. § 40-2-124(c)(V)(A)–(D), (c)(IX), (d) (2013).

[221] NEV. REV. STAT. § 704.7822 (2023).

[222] WASH. ADMIN. CODE § 480-109-200(4) (2024).

[223] CAL. PUB. UTIL. CODE § 399.16(c)(1) (West 2019); *see Renewables Portfolio Standard*, DSIRE, https://programs.dsireusa.org/system/program/detail/840 (Nov. 26, 2024) (explaining that a maximum of 25% of RPS compliance can be achieved through the use TRECs through the end of 2013; therefore, the remainder of the RPS compliance must be attained through in-state balancing authority power sales).

[224] COLO. REV. STAT. § 40-2-124 (2012).

[225] ARIZ. ADMIN. CODE § R14-2-1806(D)–(E) (2022).

[226] MONT. CODE ANN. § 69-3-2005(3)(a) (2013) (repealed 2021).

[227] *See* Illinois Commerce Commission v. FERC, 721 F.3d 764, 776 (7th Cir. 2013).

[228] Steven Ferrey, *Legal History Repeats Itself on Climate Change: The Commerce Clause and Renewable Energy*, 32 GEO. ENV'T L. REV. 489, 513–15 (2021).

in-state sited electric generation, ending their prior geographic discrimination.[229] In addition, Arizona was one of three states that in the last decade has not extended its state statute with a preference or requirement for in-state power plant installation, manufacturing, and installation content to earn extra credit multipliers.[230] California's two neighboring states to its east have both rectified any prior RPS REC unequal treatment under their state laws affecting California renewable power entering their states for consumption. In contrast, California has not made similar changes in its RPS RECs law: California increased its percentage of in-state renewable generation from 50% a decade ago to 75% today, as shown in Figure 4.[231]

2. Net Metering of Renewable Energy In-State Only

Second, California does not permit net metering subsidies to be afforded to renewable power produced out-of-state. Imported renewable energy to California from outside a California balancing authority cannot benefit from California net metering incentives, treating identical electric renewable power differently based on its geographic place of origin. California also has reduced coverage in its current net metering 3.0 program.

In December 2022, the California PUC unanimously approved a revised net metering program, called NEM 3.0, for new net metering customers, decreasing by approximately 75% the net metering credit value for the excess electricity in the future credited at an Avoided Cost rate for unused credits.[232] This successor tariff also replaces retail rate compensation for net exported energy with an Avoided Cost that will vary according to grid needs, rather than remain at a rate near the retail rate with high differentials between winter off-peak and summer on-peak rates. This structure will promote the installation of storage with solar systems to control when net metering power is exported.[233] This has caused a precipitous drop in new California solar installations which will require California to import from adjoining states more renewable to meet its legal targets:

> [San Francisco] Bay Area rooftop-solar businesses are reeling from a statewide change that gutted compensation for homeowners returning surplus power to

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[229] *Id.*

[230] ARIZ. ADMIN. CODE § R14-2-1806(D)–(E) (2022).

[231] *See* ALBRIGHT, COX & SINGH, *supra* note 205, at 59–60.

[232] *See* ORDER INSTITUTING RULEMAKING TO REVISIT NET ENERGY METERING TARIFFS PURSUANT TO DECISION 16-01-044C, AND TO ADDRESS OTHER ISSUES RELATED TO NET ENERGY METERING, CAL. PUB. UTIL. COMM'N 3 (2022) [hereinafter ORDER INSTITUTING RULEMAKING TO REVISIT NET ENERGY METERING TARIFFS], https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M500/K043/500043682.PDF; *NEM 3.0: What Changes Are Coming?*, NRG CLEAN POWER, (Dec. 15, 2022), https://nrgcleanpower.com/learning-center/nem-what-changes-are-coming/.

[233] ORDER INSTITUTING RULEMAKING TO REVISIT NET ENERGY METERING TARIFFS, *supra* note 232, at 3.

> the electrical grid . . . . Sales of rooftop-solar setups have plummeted about 80% since the California Public Utilities Commission shrank by 75% the compensation new solar owners get for surplus power.[234]

The renewable power that new transmission infrastructure would move into California from outside the state does not enjoy California net metering incentives. Five states in the most recent decade abandoned their own net metering and implemented alternative compensation schemes in its place; Arizona and Nevada were among these five states.[235] Nevada eventually reverted under pressure and has reinstituted net metering.[236] Arizona has statewide distributed generation compensation rules other than net metering, as does neighboring Utah in the west.[237] California's net metering system for renewable power does not provide credits or otherwise compensate imported renewable power from outside a California balancing authority.[238]

3. Out-of-State Renewable Liquid Fuel Treatment in California

Third, for its vehicle transportation sector, California has not treated out-of-state ethanol, non-fossil fuel energy equally, providing greater financial subsidies for and incentives to identical liquid motor fuels produced in California.[239] This was challenged by out-of-state liquid fuel producers approximately a decade ago, and held at the federal district court to be a violation by California of the Constitution's implicit dormant Commerce Clause.[240] This was reversed, and California's law was upheld, in a 2–1 decision with a strong dissent by the federal Ninth Circuit Court of Appeals.[241]

Rocky Mountain Farmers Union v. Goldstene challenged the California Low Carbon Fuel Standard (LCFS) as violating the dormant Commerce Clause.[242] The

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[234] Ethan Baron, *Rooftop-Solar Industry Blames PG&E, Newson as Bay Area Businesses Struggle*, SILICONVALLEY.COM (Jan. 9, 2024, 2:00 PM) https://www.siliconvalley.com/2024/01/07/rooftop-solar-industry-blames-pge-newsom-as-bay-area-businesses-struggle/.

[235] *State Net Metering Policies*, NCSL (Nov. 20, 2017), https://www.ncsl.org/energy/state-net-metering-policies; *see also* Steven Ferrey, *Net Legal Power*, 53 SAN DIEGO L. REV. 221, 225 fig. 1 (2016).

[236] *See* Jason Plautz, *State Rooftop Solar Crackdowns Cloud the Industry's Future*, E&E NEWS: ENERGYWIRE (Oct. 24, 2023, 6:53 AM), https://www.eenews.net/articles/state-rooftop-solar-crackdowns-cloud-the-industrys-future/; *Net Metering*, DSIRE (Nov. 2023) https://ncsolarcen-prod.s3.amazonaws.com/wp-content/uploads/2023/11/DSIRE_Net_Metering_Nov2023.pdf.

[237] *Net Metering*, *supra* note 236.

[238] *See Net Energy Metering and Net Billing*, CAL. PUB. UTILS. COMM'N, https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/customer-generation/net-energy-metering-and-net-billing (last visited Jan. 14, 2025).

[239] Rocky Mountain Farmers Union v. Corey, 730 F.3d 1070, 1080 (9th Cir. 2013).

[240] Rocky Mountain Farmers Union v. Goldstene, 843 F. Supp. 2d 1071, 1105 (E.D. Cal. 2011); *Corey*, 730 F.3d at 1077–78.

[241] *Corey*, 730 F.3d at 1078.

[242] *Goldstene*, 843 F. Supp. 2d at 1078; *see also* Steven Ferrey, *Carbonite Legal Conflict in California*, 5 SAN DIEGO J. CLIMATE & ENERGY L. 95, 112 (2014).

plaintiffs alleged that the California Air Resources Board's (CARB) rule implicitly discriminated against renewable fuels produced outside California that were in interstate commerce.[243] Specifically, the LCFS bases its credit calculations on the distance of shipment of fuels to California and their assumed associated carbon emissions, the assumed farming practices used to raise the agricultural produce that become renewable fuels, and the fuel used to produce the electricity in the state where they are processed to produce ethanol.[244] The plaintiffs argued that CARB assigned all out-of-California U.S. low-carbon renewable fuel a higher carbon intensity value even though it is chemically identical, disadvantaging and inflating the cost incurred by out-of-state producers, thus violating the dormant Commerce Clause and the Supremacy Clause of the Constitution.[245]

a. Discrimination Against Out-of-State Commerce

The federal court for the Eastern District of California upheld the plaintiffs' argument, invalidating certain parts of the LCFS rule and enjoining the rule's enforcement because it "discriminates against out-of-state corn-derived ethanol while favoring in-state corn ethanol and impermissibly regulates extraterritorial conduct."[246] The court held that the LCFS differentiates based on the place of origin of the commerce and concluded that the LCFS discriminates on its face against out-of-state corn-derived ethanol.[247] The federal trial court held that the LCFS

> may not impose a barrier to interstate commerce based on the distance that the product must travel in interstate commerce . . . . "[L]egislation favoring in-state economic interests is facially invalid under the dormant Commerce Clause, even when such legislation also burdens some in-state interests or includes some out-of-state interests in the favored classification."[248]

b. The Ninth Circuit Majority

The Ninth Circuit reversed the federal trial court, although with a dissent on the three-judge panel, on the unconstitutionality of the California LCFS.[249] The 2–1 Circuit majority did not apply strict scrutiny to the California regulation, which the district court did. On remand, the court instructed that instead a more

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[243] *Goldstene*, 843 F. Supp. 2d at 1078.

[244] *Id.* at 1087–88.

[245] *Id.* at 1086; U.S. CONST. art. VI, cl. 2.

[246] *Goldstene*, 843 F. Supp. 2d at 1105. CARB attributed the difference in carbon intensity values to multiple scientific factors in addition to geographic location factors (emissions related to shipping or transportation of fuel). The court relied upon a table of carbon intensity values generated by CARB. *Id.* at 1081.

[247] *Id.* at 1087.

[248] *Id.* at 1089 (quoting Daghlian v. DeVry Univ., 582 F. Supp. 2d 1231, 1243 (C.D. Cal. 2007).

[249] Rocky Mountain Farmers Union v. Corey, 730 F.3d 1070, 1078, 1107 (9th Cir. 2013).

deferential balancing test be applied pursuant to *Pike v. Bruce Church, Inc.*:[250] "California may regulate with reference to local harms, structuring its internal markets to set incentives for firms to produce less harmful products for sale in California."[251] The Ninth Circuit majority stated, "The dormant Commerce Clause does not require California to ignore the real differences in carbon intensity among out-of-state" product pathways to California, including the type of electricity consumed in the region of production and the distance of travel of the product to California.[252] The Ninth Circuit majority decided that California has discretion to use its state boundary to construct favored and disfavored zones for its attribution of different amounts of associated GHG emissions.[253]

c. The Ninth Circuit Dissent

The dissenting opinion in the Ninth Circuit decision found the California law imposed facial geographic discrimination.[254] Any geographic discrimination by a state, whether along state or other geographic lines, is subject to strict scrutiny by the court: "The burden is on California to demonstrate that no less-burdensome regulatory incentives were available to control GHGs. The dissent notes that at oral argument, California admitted that there were less-burdensome alternatives on interstate commerce than 'to use lifecycle analysis to reduce GHG emissions.'"[255]

Even where a state statute is drafted in a fashion which is facially neutral rather than expressly discriminatory, the Supreme Court held that a court should apply a strict scrutiny standard where the state law has a discriminatory effect.[256] Justice Scalia, concurring in the prior majority opinion in *West Lynn Creamery,* noted that "subsidies for in-state industry . . . would clearly be invalid under any formulation of the Court's guiding principle" for Dormant Commerce Clause cases.[257]

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[250] Pike v. Bruce Church, Inc., 397 U.S. 137 (1970).

[251] *Corey*, 730 F.3d at 1104.

[252] *Id.* at 1093.

[253] *Id.*

[254] *Id.* at 1108–10 (Murguia, J., dissenting) ("[T]he [additional fee on imported commerce] facially discriminates against interstate commerce . . . .").

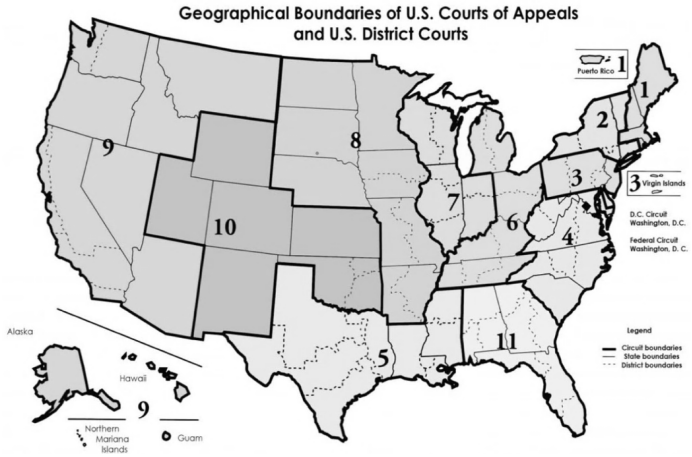
[255] *Id.* at 1109; Steven Ferrey, *Carbon Outlasts the Law: States Walk the Constitutional Line*, 41 B.C. ENV'T AFF. L. REV. 309, 328–29 (2014).

[256] C & A Carbone, Inc. v. Town of Clarkstown, 511 U.S. 383, 391–92 (1994) ("The ordinance is no less discriminatory because in-state or in-town processors are also covered by the prohibition."); Hunt v. Wash. State Apple Adver. Comm'n, 432 U.S. 333, 352–53 (1977); *see also* Fort Gratiot Sanitary Landfill, Inc. v. Mich. Dep't of Natural Res., 504 U.S. 353, 361 (1992) (holding that statute treating out-of-county waste the same as waste from other states was still discriminatory).

[257] *See* West Lynn Creamery, Inc. v. Healy, 512 U.S. 186, 208 (1994) (Scalia, J., concurring) (emphasis omitted).

d. No Other Circuits Have Issued Similar Decisions

Figure 6[258]



The Ninth Circuit is the only federal circuit Court of Appeals in the United States to have made a determination that such a program, where the distance over which commodities in interstate commerce are sent within the United States to be later consumed can be used to their financial value in a consuming state, is not discriminatory or a violation of the dormant Commerce Clause. However, the Ninth Circuit also includes the states from which California imports one-quarter of its power,[259] including predominately Arizona and Nevada, as shown in Figure 6.[260] Therefore, any of these neighboring western states' industries shipping ethanol into California remain at a competitive disadvantage pursuant to the California LCFS program.

In 2023, the Supreme Court unanimously rejected complainants' argument against California that the dormant Commerce Clause doctrine includes an "'almost *per se*' rule against laws that have the 'practical effect' of 'controlling' extraterritorial commerce."[261] This would seem to more immunize the Ninth Circuit LCFS decision in *Rocky Mountain*. Although of note, four Supreme Court Justices would have

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[258] Geographical Boundaries of U.S. Courts of Appeals and U.S. District Courts (illustration), *in You Are Here*, U.S. DIST., MIDDLE DIST. OF FL., https://www.flmd.uscourts.gov/you-are-here (last visited Jan. 15, 2025).

[259] *See supra* notes 184–90 and accompanying text.

[260] *See* Figure 6, *supra* note 258.

[261] National Pork Producers Council v. Ross, 143 S. Ct. 1142, 1145, 1147, 1150 (2023) (noting that the California law forbids in-state sales of pork that come from pigs "'confined in a cruel manner'" (quoting CAL. HEALTH & SAFETY CODE § 25990(b)(2) (West 2023))). Petitioners first invoke what they call the "extraterritoriality doctrine." *Id.* at 1153–54.

remanded the case for a lower court to determine whether the "cross-border effects" of the law at issue were "clearly excessive in relation to the putative local benefits" under the dormant Commerce Clause's *Pike* balancing test.[262]

Of note, Justice Kavanaugh issued a separate opinion in addition to the four Justices that favored remand, suggesting other Constitutional provisions might prevent states from "shutter[ing] their markets to goods produced in a way that offends their moral or policy preferences."[263] Justice Kavanaugh claimed that the pork law at issue reflects a "'California knows best' economic philosophy—where California in effect seeks to regulate pig farming and pork production in *all* of the United States."[264] He articulated concerns that "California's novel and far-reaching regulation could provide a blueprint for other States" and may "foreshadow a new era where States . . . effectively force other States to regulate in accordance with those idiosyncratic state demands."[265]

However, electric power is not analogous to cruelly treated pigs: Justice Kavanaugh's dissent, along with the four Justices who favored remand to re-balance the discriminatory impact of this regulation against the importance of California's need for such regulation, may fuel additional contests of California energy sector policies regarding its electric transmission needs passing through other states. At the very least, Arizona and Nevada, on the eastern flank of California's border, remain free to have their state energy regulatory agencies deny state approval for additional new or upgraded electricity transmission lines through their states to serve a neighboring state such as California.

4. California Deregulation Reverberations

Fourth, California's deregulation of its energy sector earlier ended in a well-publicized system reliability failure causing rolling blackouts. This brought on two decades of still-ongoing litigation, caused the recall of the Governor, ended California's electric sector retail deregulation, caused a half-dozen neighboring states to halt their electric sector deregulation, and caused California consumers to incur more than $10 billion dollars of additional power costs.[266] When California attempted to

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[262] *Id.* at 1171 (Roberts, C.J., concurring in part and dissenting in part). Under the *Pike* test, when a non-discriminatory state law has "only incidental" effects on interstate commerce, it will be upheld "unless the burden imposed on such commerce is clearly excessive in relation to the putative local benefits." *Id.* at 1165 (Sotomayor, J., concurring); *see also* FERREY, ENVIRONMENTAL LAW, *supra* note 36, at 175–76.

[263] *National Pork Producers Council*, 598 U.S. at 1174 (Kavanaugh, J., concurring in part and dissenting in part).

[264] *Id.*

[265] *Id.*

[266] *See* Steven Ferrey, *The Carbon Suite in the Hotel California: "We Are All Just Prisoners Here, of Our Own Device"*, 23 SOUTHERN CAL. INTERDISCIPLINARY L.J. 451 (2014); *see The California Crisis: California Timeline*, FRONTLINE, https://www.pbs.org/wgbh/pages/frontline/shows/blackout/california/timeline.html (last visited Jan. 15, 2025); Reid Wilson, *'If This Thing Qualifies, I'm Toast': An Oral History of the Gray Davis Recall*, THE HILL (June 2, 2021), https://thehill.

deregulate its retail power sector, the first rolling blackouts in California since World War II occurred on January 17, 2001, and power supply emergencies were declared every day for the following thirty days.[267] The average California retail electric bill increased by 30–40%.[268] Rolling blackouts were imposed on consumers during the *off-peak* winter and spring months of 2001.[269] This was and remains unprecedented in modern U.S. history.

In a matter of a few months, this created a $14 billion loss for the state purchasing power on behalf of its essentially insolvent investor-owned utilities[270] that would have to be subsidized and recouped for over a decade by California taxpayers and ratepayers. From mid-January through September 2001, the California Department of Water Resources spent $10.7 billion to purchase power on the spot market to supply customers' needs.[271] This wiped out the entire state tax surplus and led to the first recall of a sitting governor in modern history.[272]

Consequently, PG&E, the nation's largest utility, filed for Chapter 11 bankruptcy protection in April 2001.[273] The utility had incurred approximately $9 billion in purchased-power costs since June 2000, with no prospect in real time of recovering these past costs under the prior frozen rates.[274] The PG&E bankruptcy under Chapter 11 was meant to stymie ongoing losses exceeding $300 million per

com/homenews/campaign/556014-if-this-thing-qualifies-im-toast-an-oral-history-of-the-gray-davis-recall/; *Energy Unit*, OFF. OF THE ATT'Y GEN., https://oag.ca.gov/cfs/energy (last visited Jan. 15, 2025); *Subsequent Events California's Energy Crisis*, U.S. ENERGY INFO. ADMIN., https://www.eia.gov/electricity/policies/legislation/california/subsequentevents.html (last visited Jan. 15, 2025); *California Energy Crisis Sparks U.S. Re-regulation Trend*, SMART ENERGY INT'L (Mar. 31, 2001) [hereinafter SMART ENERGY INT'L], https://www.smart-energy.com/regional-news/north-america/california-crisis-sparks-u-s-re-regulation-trend/.

[267] *See* John L. Jurewitz, *California's Electricity Debacle: A Guided Tour*, ELECTRICITY J., May 2002, at 10, 23.

[268] Marie Bussing-Burks, *California's Failed Electric Power Industry Reforms*, NAT'L BUREAU ECON. RSCH. (Dec. 1, 2001), https://www.nber.org/digest/dec01/californias-failed-electric-power-industry-reforms.

[269] *The California Crisis: California Timeline*, *supra* note 266; *see* Jurewitz, *supra* note 267.

[270] Virginia Ellis & Nancy Vogel, *8 State Power Contracts Seen as Bad Deals*, L.A. TIMES (Sept. 30, 2001, 12:00 AM), https://www.latimes.com/archives/la-xpm-2001-sep-30-me-51694-story.html; *The $14 Billion Question*, NEWSWEEK (Mar. 13, 2010, 7:23 PM), https://www.newsweek.com/14-billion-question-150165.

[271] Jurewitz, *supra* note 267, at 24.

[272] James Sterngold, *California Struggling Over Budget Amid Crisis*, N.Y. TIMES (May 6, 2001), https://www.nytimes.com/2001/05/06/us/california-struggling-over-budget-amid-crisis.html; Wilson, *supra* note 266.

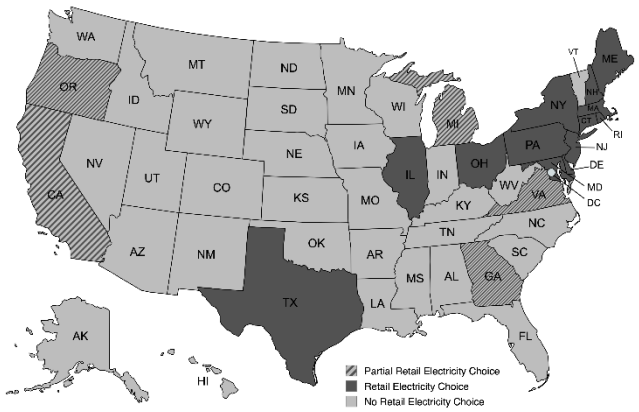
[273] *PG&E Seeks Bankruptcy*, CNN MONEY (Apr. 6, 2001, 3:02 PM), https://money.cnn.com/2001/04/06/news/pacificgas/.

[274] Press Release, Pacific Gas and Electric Company, Pacific Gas and Electric Company Files for Chapter 11 Reorganization (Apr. 6, 2001), https://investor.pgecorp.com/news-events/press-releases/press-release-details/2001/Pacific-Gas-And-Electric-Company-Files-For-Chapter-11-Reorganization/default.aspx.

month.[275] The bankruptcies were broader. At the end of the year 2000, FERC terminated formerly approved tariffs of the California Power Exchange; by January, the California Power Exchange had filed for bankruptcy.[276] The California Power Exchange was unable to pay $2.4 billion owed to the California ISO and subsequently filed for bankruptcy protection.[277]

In September 2001, the California PUC voted to suspend retail electric competition in the state so as to prevent customers from leaving state-purchased power for less expensive and unregulated competitive independent suppliers.[278] Collectively, the rolling California blackouts in 2001 cost Silicon Valley businesses an estimated $75 million a day; the rolling brownout in the first two weeks of January 2001 cost the state economy $2.3 billion due to production cutbacks and lost wages.[279] The 20 hours of outages are estimated to have reduced gross state output by $21.8 billion and reduced household income by $4.6 billion more.[280]

Figure 7: Electricity Choice and Deregulation[281]



[275] *PG&E Seeks Bankruptcy*, *supra* note 273.

[276] Jurewitz, *supra* note 267, at 23.

[277] Comments of the California Independent System Operator Corporation on the Offer of Settlement Submitted by the Official Committee of Participant Creditors of the California Power Exchange Corporation at 3–4, San Diego Gas & Elec. Co. v. Sellers of Energy and Ancillary Serv. into Mkts. Operated by the Cal. Indep. Sys. Operator Corp. and the Cal. Power Exch. Corp., No. EL00-95-000 (FERC Oct. 25, 2001) ("The Cal PX filed for chapter 11 bankruptcy protection with the United States Bankruptcy Court.").

[278] Jurewitz, *supra* note 267, at 26.

[279] *See* Ann Deering, *The Expanding Energy Crisis: United States*, RISK MGMT., May 2001, at 10, 12, 13 (2001).

[280] *See* AUS CONSULTANTS, IMPACT OF A CONTINUING ELECTRICITY CRISIS ON THE CALIFORNIA ECONOMY, at ii–iii (2001); *see also* Deering, *supra* note 279, at 2 (projecting electricity blackouts during the 2001 summer would conservatively cost California businesses $21.8 billion in lost productivity and impact job availability and income).

[281] States with Retail Electricity Choice (illustration), *in Power Market Structure*, *supra* note 194.

The electric supply collapse in California caused the state to suspend retail deregulation and caused six other states, all proximate to California, including Nevada, New Mexico, and Arizona, to delay and reverse the implementation of their in-progress deregulation.[282] Almost a quarter century later these three near-to-California states and more than two-thirds of all states remain traditionally regulated with no retail electricity choice rather than following California's deregulation, as shown in Figure 7. The electric sector restructuring plans of both Arizona and Nevada were significantly impacted by the 2001 California energy sector imbroglio.[283] This was a suspension and refusal of California's neighboring eastern states to continue to follow California's regulatory lead on deregulation of the energy sector. "What's past is prologue."[284]

California has faced power shortages not only two decades ago during its ill-fated deregulation of its power sector before reversing course and maintaining its prior regulated retail market, but also more recently. For the first time since the 2000–2001 electric power crisis, on two consecutive days in August 2020, CAISO, operating California's bulk electric power system, ordered utilities to cut power supply for rotating outages to hundreds of thousands of customers to reduce stress on the grid for the early evening when California's solar resources were no longer capable to produce sufficient power.[285] Given California laws to reduce GHG emissions to 40% below 1990 levels by 2030 and to achieve 100% zero-carbon retail power sales by 2045,[286] CAISO issued a subsequent report noting that "In transitioning to a reliable, clean, and affordable resource mix, resource planning targets have not kept pace to ensure sufficient resources that can be relied upon to meet demand in the early evening hours."[287] Three weeks later, on September 6, 2022, California

[282] *See Nevada Pulls the Plug on Deregulation*, IBEW, https://ibew.org/articles/01daily/0104/010424_Nevada.htm (Apr. 24, 2001); Ryan Randazzo, *Choose Your Own Electric Company in Arizona? 7 Things to Know About Deregulation*, AZCENTRAL, https://www.azcentral.com/story/money/business/energy/2019/08/06/arizona-energy-deregulation-rules-corporation-commission-aps-tuscon-electric-srp/1871816001/ (Aug. 7, 2019, 4:43 PM); *State of Deregulation: N.M., Nev. Looking to Return Their Deregulation Packages*, POWER GRID INT'L (July 1, 2001), https://www.power-grid.com/news/state-of-deregulation-nm-nev-looking-to-return-their-deregulation-packages/; *see also* SMART ENERGY INT'L, *supra* note 266.

[283] *Nevada Pulls the Plug on Deregulation*, *supra* note 282; Randazzo, *supra* note 282.

[284] WILLIAM SHAKESPEARE, THE TEMPEST act 2, sc. 1, l.253 (Virginia Mason Vaughan & Alden T. Vaughan eds., 1999).

[285] *See* CAL. INDEP. SYS. OPERATOR, CAL. PUB. UTIL. COMM'N & CAL. ENERGY COMM'N, ROOT CAUSE ANALYSIS: MID-AUGUST 2020 EXTREME HEAT WAVE 1, 28 (2021) [hereinafter ROOT CAUSE ANALYSIS]; *see also* Noelle Formosa, *Hot August Nights: California's Quest for Resource Adequacy Solutions to Promote Integration of Renewables and Energy Storage in the Midst of Climate Change-Related Challenges to Reliability*, 14 SAN DIEGO J. CLIMATE & ENERGY L. 1, 2–3 (2023).

[286] *See* S.B. 100, 2018 Leg., Reg. Sess. (Cal. 2018); EDMUND G. BROWN JR., EXEC. ORDER NO. B-55-18: TO ACHIEVE CARBON NEUTRALITY (2018).

[287] ROOT CAUSE ANALYSIS, *supra* note 285, at 1.

sent cellphone alerts urging millions of residents to cut their electric energy use as the state sought to prevent a blackout from the day's record-breaking heatwave driving power demand.[288]

Such instances highlight California's resource adequacy vulnerabilities that create the potential for rolling blackouts for years to come.[289] Neither Arizona nor Nevada have experienced the type of power shortages or rolling brownouts that California has over the most recent quarter century.[290] Adjacent states may weigh the impacts that they would experience if new transmission infrastructure, that they would have traditional unilateral power as a state to deny or approve, were to be sited to connect their power output to flow in greater amounts in such higher capacity transmission lines though their states and exit to California.

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[288] *See* Ivan Penn, *Dodging Blackouts, California Faces New Questions on Its Power Supply*, N.Y. TIMES (Sept. 25, 2022), https://www.nytimes.com/2022/09/25/business/energy-environment/california-energy-grid-heat.html (reporting that rolling blackouts present a real threat to California, a state which relies heavily on other states' energy). "Even absent an emergency, Californians have been acutely affected by higher electricity costs, reflecting regulatory requirements for utilities to do more to prevent their equipment from causing wildfires as well as the need for more power plants and energy storage to meet the growing demand." *Id.*; *see also* Christy Walsh, *After a Good Year for Transmission Reform, Hard Work Ahead*, NRDC (Dec. 19, 2022), https://www.nrdc.org/bio/christy-walsh/after-good-year-transmission-reform-hard-work-ahead ("California's ability to tap into power from distant sources that were unaffected by the heat wave helped save the day.").

[289] *See* Penn, *supra* note 288. "California's experience has revealed a number of vulnerabilities—in the system's design and in the region's generating capacity—that create the potential for failure." *Id.* "California finds itself on edge more than ever with a lingering fear: the threat of rolling blackouts for years to come." *Id.* "[G]rid managers like the California Independent System Operator, or CAISO, . . . must depend on and compete with neighbors for what is sold in energy markets. That means California risks falling short during periods of peak demand . . . ." *Id.*; Nichola Groom, *California Says it Needs More Power to Keep the Lights On*, REUTERS, https://www.reuters.com/world/us/california-says-it-needs-more-power-keep-lights-2022-05-06/ (May 6, 2022, 6:48 PM) (quoting Mark Rothleder, Chief Operating Officer at the California ISO grid operator, stating "We need to make sure that . . . we have sufficient new resources in place and operational before we let some of these retirements go . . . . Otherwise we are putting ourselves potentially at risk of having insufficient capacity."); Sammy Roth, *California's Race Against Time to Build Power Lines*, L.A. TIMES (Apr. 6, 2023, 6:00 AM), https://www.latimes.com/environment/newsletter/2023-04-06/californias-race-against-time-to-build-power-lines-boiling-point (discussing Princeton University research signifying "that 80% of the potential cuts in carbon pollution made possible by the Inflation Reduction Act—the climate bill signed by President Biden—could be lost if the U.S. fails to accelerate the build-out of its electric grid."). A California ISO report recommends that the State should allocate "$1.8 billion on projects that would help prevent blackouts—which are getting more difficult to avoid as rising temperatures drive up demand for air conditioning, and as the power grid becomes increasingly reliant on solar panels that stop generating electricity after dark." *Id.*

[290] *See Power Outages by State 2024*, WORLD POPULATION REVIEW, https://worldpopulationreview.com/state-rankings/power-outages-by-state (last visited Jan. 15, 2025).

V. CALIFORNIA'S NEEDED INTERSTATE TRANSMISSION UPGRADE IS NOT WITHIN CALIFORNIA CONTROL NOR SUBJECT TO FEDERAL PREEMPTION

If a state consents to additional transmissions infrastructure to be constructed through its state to serve neighboring states, there is no legal dispute. However, if a state does not so approve, as several states have not approved,[291] the Biden Administration infrastructure laws contain a potential critical path omission that could allow adjacent states to control or block additional electric transmission lines to serve adjacent states. A state retains traditional Tenth Amendment authority to control approvals for use of its land for new or upgraded power transmissions infrastructure.[292]

A. Rivers as Additional Potential New Legal Barriers—Rather than Resources—for the Power Sector

Shifting gears to look at water, not as a commodity for consumption in California, but instead as a heretofore unappreciated potential legal barrier to interconnect California's electricity transmission system more robustly with states to the east. East is the primary direction that California must look, based on basic geography. Of the 47 contiguous continental U.S. states other than California, 45 are to the east, two to the north, and none to the west or south.[293]

To reach to the east and move additional externally produced power into California, transmission infrastructure must first pass through Nevada or Arizona, which together cover the entire eastern border of California. Without assent from one or both of those eastern border states, additional transmission capacity to serve California from the east could encounter and be locked in a lengthy legal dispute. California has always in the past imported primarily coal-fired and fossil-fuel-fired power into the state, as shown in Figure 1. California now has a recently accelerated "clean energy" goal to have 100% zero-carbon electricity and economy-wide net-zero greenhouse gas emissions by 2045, with interim goals of 90% zero-carbon electricity use by 2035 and 95% by 2040.[294]

These same river waters, and the land under them, could now present a potential second layer of legal barriers that states could use to frustrate such additional transmission of power to serve California. This second legal layer did not need to be asserted or invoked to stop prior federal efforts to build more transmission infrastructure through Arizona to benefit California—reserved state Tenth Amendment

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[291] Kempe, *supra* note 53; *see, e.g.*, Pentland, *supra* note 95.

[292] Ferrey, *Down to the Wire*, *supra* note 38, at 522.

[293] *United States of America*, BRITANNICA, https://www.britannica.com/place/United-States#/media/1/616563/61895 (last visited Jan. 15, 2025).

[294] *See* Breckel & Pavia, *supra* note 6, at 2.

powers were sufficient.[295]

B. The Scope of "State" Land: Federal Government Cannot Cause Transmission Infrastructure to Cross "State" Land

States exercise permitting over rivers not only from almost two centuries of Supreme Court precedent, but also from federal statutes.[296] The potential additional second layer of reserved state authority regarding new electric power transmission infrastructure concerns not the water, but the land under and adjacent to the water. What was not changed in crafting the 2021 IIJA[297] and the 2022 IRA[298] is that the land under river and stream bottoms, such as river or lake beds, form the partial or entire boundaries of most states: "All but four of the lower 48 states . . . have at least part of their state boundaries defined by rivers or other water bodies."[299] Electric transmission towers must be anchored to the land beneath or appurtenant to those rivers or in state-protected buffer zones in order for above-ground transmission lines to cross rivers. Many states exercise state authority over any alteration or construction in broadly defined wetland areas surrounding rivers, creeks, and estuaries.[300]

For the federal government to preempt or countermand any state denial of permits, there is no ability through any automatic federal "shield" associated with other federal authority to cross over state-protected wetland areas without other necessary state or local permits. The United States Army Corps of Engineers (USACE) exercises authority under the Rivers and Harbors Act of 1899 for any permission for anything physical crossing federally navigable waters.[301] The U.S. EPA also has input and review authority over these USACE permits.[302] However, these permits, when granted federally, do not leverage or grant any state or federal eminent domain authority to site power transmission lines. This is different than federal eminent domain authority accompanying FERC permits for natural gas pipelines pursuant to the NGA, which is based on a later and different statute than the FPA governing

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[295] *See supra* Section II.D.2 (analyzing the *California Wilderness* precedent).

[296] *See* Clean Water Act, 33 U.S.C. §§ 1311, 1341–42.

[297] *See* Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, 135 Stat. 429 (2021) (codified at various non-contiguous sections of the U.S. Code).

[298] *See* Inflation Reduction Act of 2022, Pub. L. No. 117-169, 136 Stat. 1818 (2022) (codified at various non-contiguous sections of the U.S. Code).

[299] *See* Michael Wigmore, Brandon Tuck & Kelly Rondinelli, *Feds May Need Power to Take State Lands for New Grid*, LAW360 (Oct. 20, 2021), https://media.velaw.com/wp-content/uploads/2021/10/22104432/Feds-May-Need-Power-To-Take-State-Lands-For-New-Grid.pdf.

[300] *See* MASS. GEN. LAWS ch. 131, § 40 (2024); 310 MASS. CODE REGS. 10.00 (2014).

[301] *See* 33 U.S.C. § 403; 33 C.F.R. §§ 320.4(g), 325.1 (2023).

[302] *See Permit Program Under CWA Section 404*, EPA, https://www.epa.gov/cwa-404/permit-program-under-cwa-section-404 (Dec. 31, 2024); *see also* FERREY, ENVIRONMENTAL LAW, *supra* note 36, at 572–73; FERREY, LAW OF INDEPENDENT POWER, *supra* note 36, § 6:140.

electric power matters.[303]

Under the "equal footing doctrine," each state owns the bottoms of all waters within its territory that were navigable when it became a state, as reinforced by the Supreme Court in the last decade[304] as well as consistent earlier Supreme Court precedent from more than 175 years ago.[305] If the river was used for or capable of transporting any goods for sale prior to statehood, then the river is navigable, whereby the bed and the bank up to the mean high water mark are owned by the state and held in trust for the public.[306] Such state authority over river bottom land remains in place notwithstanding that much of the water moving within those rivers or streams is deemed navigable interstate U.S. water subject to federal authority.[307]

Despite certain authority inserted in the IIJA[308] granting federal power to exercise eminent domain over a limited subset of high-priority private lands to facilitate transmission siting, there is no authority for the federal government to exercise eminent domain over public or state lands.[309] This provides a potential additional, second legal basis for a non-agreeing state to decline to grant necessary rights-of-way for a transmission line to cross such in-state or state-owned river or stream bank or bottom land that was navigable when the state entered the Union. For example, Arizona did not become a state until the 20th century.[310]

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[303] *See* discussion *supra* Section II.B (presenting the jurisdictional disconnect between FERC natural gas and electric power).

[304] *See* PPL Montana, LLC v. Montana, 565 U.S. 576 (2012).

[305] *See* Pollard's Lessee v. Hagan, 44 U.S. (3 How.) 212 (1845).

[306] The Daniel Ball, 77 U.S. (10 Wall.) 557, 563 (1871) ("[Rivers] are navigable in fact when they are used, or are susceptible of being used, in their ordinary condition, as highways for commerce, over which trade and travel are or may be conducted . . . ."); *PPL Montana LLC*, 565 U.S. at 590–92; Arizona v. California, 283 U.S. 423, 447 (1931) (finding that the State's title to land under navigable waters extends, not only to land underlying the part of navigable waters over with navigation may be conducted, but to the entire river bed); *see also* Lawrence M. Johmann, *1.3.2.1 WWCC Law Summary Fact Shield*, CAL. STATE WATER RES. CONTROL BD.: CLEAN WATER TEAM (Sep. 1994), https://www.waterboards.ca.gov/water_issues/programs/swamp/clean_water_team/guidance.html ("The ability of present day small water craft, which are similar to water craft in use at the time of Statehood to navigate the river is evidence that the river was navigable at the time of Statehood.").

[307] *See* Sackett v. Env't Prot. Agency, 143 S. Ct. 1322, 1344 (2023) (holding that for wetlands to qualify as "waters of the United States" subject to the Clean Water Act, they must be indistinguishably part of a body of water that itself constitutes "waters" under the Act). "Federal regulation was largely limited to ensuring that 'traditional navigable waters'—that is, interstate waters that were either navigable in fact and used in commerce or readily susceptible of being used in this way—remained free of impediments." *Id.* at 1330. "Regulation of land and water use lies at the core of traditional state authority." *Id.* at 1341. Federal authority does not displace States' traditional sovereignty over their waters. *Id.* at 1346.

[308] *See* Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, § 40105, 135 Stat. 429, 934 (2021) (codified at various non-contiguous sections of the U.S. Code).

[309] Ferrey, *Down to the Wire*, *supra* note 38, at 531.

[310] *See Arizona 110th Anniversary of Statehood (1912): February 14, 2022*, U.S. CENSUS

Of note, this second additional legal basis regarding river and stream crossing may be superfluous; a state, exercising traditional state and local jurisdiction over its land use supported by existing precedent, can deny access for transmission infrastructure upgrades through its state when not needed by the host state or contrary to state environmental considerations. Section C next analyzes precedent reinforcing original traditional state and local legal authority over land use. Thereafter, Section C examines geographically the perhaps superfluous additional state legal authority over transmission upgrades to cross the extensive river-network eastern border of California, through which California might import more power.

C. Applying the Law to California's Need for New Interconnected Transmission

1. Supreme Court and Court of Appeals Precedent

If a state cooperates in granting permission to have new transmission lines and infrastructure run through its state to facilitate another state's importation of power, there is no issue once those lines with greater capacity are constructed to carry additional power into California. Should any state to the east of California not want to grant permission for siting additional interstate transmission lines to carry additional power to California from or through its state, it is not clear that its state-level decision can be federally preempted under the new IIJA, even if the executive branch were occupied by a president favoring exercise of federal preemptive power instead of supporting traditional state rights.

In the decision of the Ninth Circuit approximately a decade ago, one of the two states to the east of California, Arizona, blocked the supposed federal preemption that would have forced Arizona to site and support a transmission line without Arizona's consent or permits.[311] Nevada was successful in blocking the storage in its state of zero-carbon-emission power generation (nuclear) units' waste products from other states.[312] Notably, the new IIJA[313] permits federal preemption of state siting authority regarding private land; the Act does not grant federal preemptive power over, or extend eminent domain power to take, state land if a state objects. New or upgraded electric power transmission facilities cannot cross state land for a portion or entirety of a river or creek unless the host state grants a certificate of public convenience and necessity or eminent domain to create a legal right-of-way for such crossing.[314]

The exclusive state control over its land use, unless expressly preempted by

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BUREAU (Feb. 14, 2024), https://www.census.gov/newsroom/stories/arizona.html.

[311] *See* discussion *supra* Section II.D.2 (regarding *California Wilderness*).

[312] *See* FERREY, ENVIRONMENTAL LAW, *supra* note 36, at 614–16; *Yucca Mountain Research Collection: 2000–2016: The Yucca Mountain Project Grinds to a Halt*, UNIV. OF NEV., RENO, https://guides.library.unr.edu/yuccamountain/timeline2000-2016 (last visited Jan. 15, 2025).

[313] *See* Infrastructure Investment and Jobs Act § 40105, 135 Stat. at 934.

[314] Ferrey, *Down to the Wire*, *supra* note 38, at 528, 540–42.

statute, is protected by Supreme Court decisions. The Supreme Court in *Murr v. Wisconsin*, the Court's most recent decision regarding the interpretation of local zoning laws, deferred to local judgment on the enforcement and interpretation of local zoning laws regulating new construction on or using land.[315] The Supreme Court has held that states retain "traditional and primary power over land and water use."[316] Land-use control in the American legal system is predominately a local, rather than federal, exercise of legal jurisdiction.[317] Local land-use regulation enjoys broad court deference and is overturned by the judiciary only if there is no rational purpose supporting enactment of the local ordinance.[318]

2. External State Control Over California Transmission Improvements

Figure 8: Colorado River Plus Its Smaller Rivers' Watershed Potentially Blocking Transmission[319]

315 *See* Murr v. Wisconsin, 137 S. Ct. 1933, 1945–47 (2017).

316 *See* Solid Waste Agency v. U.S. Army Corps of Eng'rs, 531 U.S. 159, 174 (2001) (noting that "the States' traditional and primary power over land and water use" raises "federalism questions.").

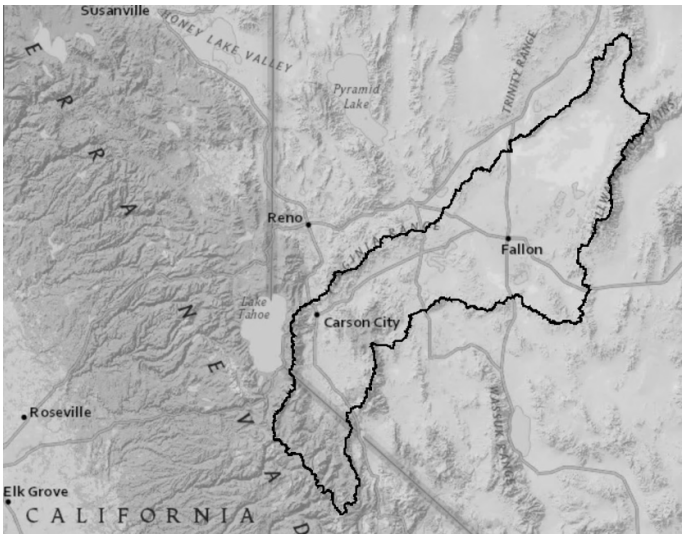
317 *See* Ecogen, LLC v. Town of Italy, 438 F. Supp. 2d 149, 157 (W.D.N.Y. 2006) (quoting Greene v. Town of Blooming Grove, 879 F.2d 1061, 1063 (2d Cir. 1989)); *see also* John R. Nolon, *Historical Overview of the American Land Use System: A Diagnostic Approach to Evaluating Governmental Land Use Control*, 23 PACE ENV'T L. REV. 821, 842 (2006).

318 *See, e.g.*, *Ecogen*, 438 F. Supp. at 156 ("In order to prevail on its substantive due process claim, Ecogen must establish that the Moratorium, at least insofar as it prohibits Ecogen's construction of a substation, bears no rational relationship to any legitimate governmental purpose." (citing Richardson v. Twp. of Brady, 218 F.3d 508, 513 (6th Cir. 2000))).

319 *See Colorado River Basin Map*, USGS (Nov. 3, 2016), https://www.usgs.gov/media/images/colorado-river-basin-map.

To achieve California's clean energy goals on its accelerated schedule,[320] one needs to look east to identify most other states: Looking east, one sees rivers. The Colorado River runs through Colorado, Utah, Arizona, Nevada and California.[321] It then travels into Mexico where it crosses between the two Mexican states of Baja California and Sonora.[322] The border between California and Arizona, as well as the entire border between Arizona and Nevada, is the Colorado River and its tributaries.[323] As shown in Figure 8, electric power moving to California from any place in Arizona, from southeastern Utah, or from Colorado, must cross the Colorado River. While these states all retain primary Tenth Amendment jurisdiction over siting new or upgraded transmission infrastructure, notwithstanding whether it needs to cross a river or stream, these states also potentially have an additional layer of legal authority regarding transmission infrastructure crossing over or under state river and stream land to reach neighboring states, notwithstanding any preemptive power added by the IIJA.[324]

Figure 9: Map of Carson River Watershed in Nevada[325]



[320] *See* Breckel & Pavia, *supra* note 6, at 3.

[321] *Colorado River Basin Map*, *supra* note 319.

[322] Zulima Leal, Mauricio Mora & Jairo Lopez, *Colorado River Basin from the Lens of the U.S.-Mexico Border*, N. AM. DEV. BANK: NADBANK BLOG (Mar. 12, 2024), https://www.nadb.org/blog/101-colorado-river-basin-from-the-lens-of-the-us-mx-border.

[323] *Colorado River Basin Map*, *supra* note 319.

[324] *See* Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, § 40105, 135 Stat. 429, 933–34 (2021) (codified at various non-contiguous sections of the U.S. Code).

[325] *Carson River Basin*, USGS, https://nevada.usgs.gov/crfld/Carson/basindesc.htm (Oct. 21, 2013).

The second state on California's eastern border is Nevada. The Carson River begins in the Sierra Nevada mountains southeast of Lake Tahoe, near Carson City, Nevada, and is comprised of two separate forks and a large watershed, as shown in Figure 9.[326] Additionally, Nevada's Truckee River has a large watershed.[327] Nevada also has an additional second layer of legal authority over transmission infrastructure improvement crossing rivers that were navigable when it became a state. There remains Nevada's Tenth Amendment traditional power over its land use, notwithstanding the federal IIJA's eminent domain power over a limited subset of high priority private land for transmission lines.

D. How States Still Exercise an Absolute Interstate Transmission Veto Despite the Biden Infrastructure Act

To plan any *interstate* transmission line or facility to serve California under FERC's new IIJA[328] as expanded by Section 216 of the FPA,[329] one would likely need to cross rivers and streams in many locations. If that river or stream segment was navigable at the time statehood was granted, that river bottom is state land held in trust. To cross or anchor transmission structures over or under state land, a state permit is required.[330] This provides the traditional layer of state authority regardless of whether a river would be traversed, leveraging state land-use authority. Using only their traditional Tenth Amendment reserved power, states successfully have opposed major interstate transmission improvements such as the Palo Verde-Devers No. 2 line to serve California (opposed in Arizona) and the Trans-Allegheny Line to serve the Mid-Atlantic region (opposed in Pennsylvania, Virginia, and West Virginia), and New Hampshire was able to avoid moving power through its state to serve Massachusetts and Connecticut.[331]

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[326] *Carson River and the Newlands Project*, WATER EDUC. FOUND. https://www.watereducation.org/aquapedia/carson-river-and-newlands-project (last visited Jan. 15, 2025). Specifically,

> the Carson River begins in the Sierra Nevada southeast of Lake Tahoe as two separate forks. The East Fork begins in the mountains of California's Sonora Pass and, after flowing through California and Nevada, it meets the West Fork just south of Carson City. The West Fork forms at California's Carson Pass, running through California and into Nevada to its junction with the East Fork. The united Carson River flows through the Carson Valley and into Lahontan Reservoir, draining after 184 miles into the Carson Sink wetlands in the Great Basin of Nevada.

Id.

[327] For a map depicting the Truckee River and the Watershed, see *Truckee River Watershed*, CITY OF RENO, https://www.reno.gov/government/departments/utility-services/regional-stormwater-quality-management-program/watershed (last visited Jan. 15, 2025).

[328] *See* Infrastructure Investment and Jobs Act § 40105, 135 Stat. at 934.

[329] *See* discussion *supra* Section III.A (discussing what the IIJA legally reconfigures).

[330] Ferrey, *Down to the Wire*, *supra* note 38, at 540–42.

[331] *See* discussion *supra* Section II.D (analyzing federal court disallowance of federal

Challenges from states and other interested stakeholders may occur again[332] as DOE and FERC exercise their new IIJA authority to attempt to preempt state transmission siting decisions. Key stakeholders in deciding the future of America's transmission infrastructure are regulated utilities, which own the existing transmission infrastructure:

- Financially: The amount of revenue that courses through electric utilities is immense. Electric power delivered a value in the United States of approximately $490 billion annually,[333] exceeding the total amount of corporate income taxes collected in the United States, even before the corporate tax rate was dramatically reduced in 2018.[334] It is much larger now.
- ROFRs: Even though FERC Order 1000 originally attempted to require states participating in FERC ISOs and RTOs to not have a ROFR where regulated utilities could usurp competitive non-utility transmission lines:[335]
    - These ROFR provisions now still predominate in many states;
    - FERC has retreated in its attempts to ban them; and
    - Utilities remain the monopoly owners and providers of transmission.
- The Distribution Charge in Retail Rates: In terms of leverage, state regulators have financed policies through increases in the distribution charge on electric bills, which is administered and collected by regulated utilities and within exclusive control of state rather than federal jurisdiction.[336]

No state or its utilities are compelled to participate in a multistate ISO or RTO.

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transmission siting preemption and presenting examples of states that contested new transmission facilities in the last two decades).

[332] *See* Piedmont v. FERC, 558 F.3d 304 (4th Cir. 2009).

[333] *See* Bruna Alves, *Revenue of the Electric Power Industry in the United States from 1970–2017*, STATISTA, https://www.statista.com/statistics/190548/revenue-of-the-us-electric-power-industry/ (last visited Jan. 15, 2025).

[334] *See Amount of Federal Revenues by Source*, TAX POL'Y CTR. (May 20, 2024), https://taxpolicycenter.org/statistics/amount-federal-revenues-source.

[335] Ferrey, *State Refusal*, *supra* note 169, at 426–27, 436 & n.78, 439, 441, 443.

[336] *See* discussion *supra* notes 28–29; *see also Formula Rates in Electric Transmission Proceedings: Key Concepts and How to Participate*, FERC, https://www.ferc.gov/formula-rates-electric-transmission-proceedings-key-concepts-and-how-participate (July 5, 2022) ("[T]he rates, terms, and conditions for the distribution of electricity are generally not under FERC jurisdiction, and would instead be regulated by a state or local agency with jurisdiction over electric rates.").

Any state or its utilities electing to do so shifts regulatory power away from its state energy regulator to federal control over all involved wholesale power sales.[337] Arizona has not had its utilities join an RTO (see Figure 3), and a recent Nevada statute now directs Nevada to be part of a larger regional western RTO.[338] Within an RTO, power transmission rates are minimized to encourage intra-RTO sharing of power; which preference ends at RTO borders.

The first six states east of California (Arizona, Nevada Utah, Wyoming, Idaho and Montana) voted for the Republican candidate in the 2024 presidential election, contrary to California's presidential vote:[339] "Politically conservative states worry that joining an RTO with a more politically progressive state may result in conservative state consumers subsidizing progressive state policies, particularly those related to clean energy mandates and other environmental goals."[340] A study by several western states recommends and directs these western states away from joining California's ISO, which would isolate California's transmission system from any alternative collaborative western regional RTO.[341]

VI. INNOVATIVE ALTERNATIVE LEGAL MECHANISMS

Coming into view now is the change in the financial situation of California. From an ample budget surplus in 2022[342] to a $57 billion budget shortfall by the beginning of 2024, Governor Newsom proposed slashing climate change programs, housing programs, and clean energy spending for the state.[343] Cutting back California funding for its transition to ambitious climate and clean energy goals will place more pressure on California to import low-carbon renewable energy from—or funded by—other states.

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[337] *See* discussion *supra* Section II.A (presenting the FPA and transmission infrastructure).

[338] Davies & Lenhart, *supra* note 195, at 18 & n.10; *see also* FERREY, THE NEW RULES, *supra* note 36, at 49–50.

[339] *See Election 2024: Presidential Results*, CNN, https://www.cnn.com/election/2024/results/president?election-data-id=2024-PG&election-painting-mode=projection-with-lead&filter-key-races=false&filter-flipped=false&filter-remaining=false (last visited Jan. 15, 2025).

[340] GIBERSON, *supra* note 197, at 15.

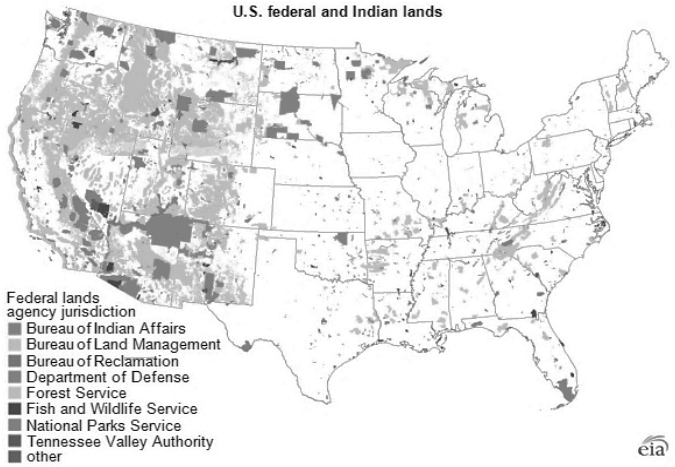
[341] Davies & Lenhart, *supra* note 195, at 25; ENERGY STRATEGIES, *supra* note 198, at 6–9.

[342] Dan Walters, *California's Volatile Tax System Strikes Again*, CAL MATTERS (Jan. 11, 2023), https://calmatters.org/commentary/2023/01/californias-volatile-tax-system-strikes-again/.

[343] Kamal Sultan, *California Faces $37 Billion Budget Crisis as Gavin Newsom Proposes Slashing Climate Change Programs, Housing and Clean Energy Spending for State*, DAILY MAIL, https://www.dailymail.co.uk/news/article-12949705/California-budget-deficit-gavin-newsom-proposed-cuts-energy.html (Jan 11, 2024, 2:56 PM).

A. Federal Land and Native American Land

Figure 10[344]



The federal government would not be guilty of usurping traditional state land use authority by placing new transmission infrastructure running on and through federally owned land, which comprises approximately 30% of all United States land, as shown in Figure 10. United States federal land is predominately located in the western states. Federally owned land is subject to federal control,[345] whereon the federal government, rather than states and municipalities, exercises power transmission siting authority.[346]

On federal land, the Federal Lands Policy and Management Act vests the Department of the Interior's Bureau of Land Management and Department of Agriculture's Forest Service with the power to issue permits for rights-of-way on federal lands, including co-location of different projects, that otherwise are compatible uses.[347] A provision directs different federal executive agencies to designate corridors on federal land for energy projects which can include environmental reviews.[348] When siting transmission lines on federal land, federal power-marketing authorities are delegated authority to "design, develop, construct, operate, maintain, or own . . . an electric power transmission facility and related facilities . . . needed to upgrade existing transmission facilities . . . ."[349] The IRA and the IIJA increase the

[344] *See Production of Fossil Fuel from Federal and Indian Lands Fell in 2012*, U.S. ENERGY INFO. ADMIN. (Aug. 12, 2013), https://www.eia.gov/todayinenergy/detail.php?id=12491#.

[345] U.S. CONST. art. IV, § 3, cl. 2.

[346] *See* discussion *supra* Section II.A (discussing the FPA and Transmission Infrastructure).

[347] *See* 43 U.S.C. §§ 1701, 1763.

[348] *See* 42 U.S.C. § 15926.

[349] *Id.* § 16421(a).

DOE's ability to identify new national interest transmission corridors in areas subject to FERC's still untested backstop transmission authority, despite local and state objections.[350] However, this addresses only part of the challenge. Once a line on poles leaves federal land, states traditionally exclusively control rights-of-way and permits for these lines to traverse state-owned or state-controlled land used for federal and state highways, bottom land under long-navigable portions of rivers and streams, and land in state parks and other state-protected areas, over which there is no express federal preemption.[351]

On the map shown in Figure 10 featuring 30% of U.S. federally owned land, also included and shown is another ownership category of Native American and tribal land held in trust by the United States. Native American reservations and trusts held "40% of the country's western coal reserves, 40% of American uranium deposits and 4% of known natural gas and oil reserves."[352] The largest amount of Native American land in the continental U.S. is located in Arizona, a state which previously blocked additional electric transmission lines to serve California.[353] Indigenous tribal concerns also permeate electric transmission proposals when projects implicate historic tribal land; for example, five First Nations tribes filed a 2021 lawsuit against Hydro-Quebec aiming to stop a power line project in Maine because almost one-third of the hydro dams producing the Canadian hydropower were built on that First Nation's ancestral territory.[354]

Native American-owned land is subject to sovereign authority, enjoying the status of separate nation jurisdiction where "it is well recognized that 'Indian tribes possess an inherent sovereignty except where it has been specifically taken away from them by a treaty or act of Congress.'"[355] Courts have repeatedly held that the

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[350] *See* Abigail Dillen, *A Roadmap for the Clean Energy Future*, EARTHJUSTICE (Dec. 22, 2022), https://earthjustice.org/experts/abigail-dillen/a-roadmap-for-the-clean-energy-future-we-need (noting that "thanks to the IRA and the IIJA, the Department of Energy (DOE) has the resources and the mandate to identify new national interest transmission corridors where Federal Energy Regulatory Commission (FERC) has backstop authority to require siting over local and state objections.").

[351] *See* discussion *supra* Section V.B (discussing the scope of "state" land and how federal government cannot cause transmission infrastructure to cross "state" land).

[352] Purba Mukerjee, *Fighting for Air in Indian Country: Clean Air Act Jurisdiction in Off-Reservation Tribal Land*, 45 ENV'T L. REP. 10,966, 10,966 (2015).

[353] *Arizona Kills Edison Power Line*, L.A. TIMES (May 31, 2007), https://www.latimes.com/archives/la-xpm-2007-may-31-fi-power31-story.html.

[354] *See* Dillen, *supra* note 350 (urging that "DOE needs to undertake the designation of those corridors with care, investing in upfront coordination with Tribes, communities, and other relevant stakeholders."); Mara Hoplamazian, *Sununu Announces Support for Proposed Transmission Lines for Canadian Hydropower*, N.H. PUB. RADIO (May 3, 2023, 6:09 PM), https://www.nhpr.org/nh-news/2023-05-03/gov-sununu-announces-support-for-proposed-transmission-lines-for-canadian-hydropower ("Hydro-Quebec has built dams in Canada on the ancestral territory of First Nations, making major changes to the landscape without notifying people who lived there.").

[355] Nance v. Env't Prot. Agency, 645 F.2d 701, 713 (9th Cir. 1981) (quoting Ortiz-Barraza

Commerce Clause[356] affords Congress the power to prohibit or regulate commerce with tribal units.[357] The FPA, as passed in 1920, only mentioned Native American tribes in passing, and did not expressly discuss the Act's applicability to them.[358] Courts prefer not to presume that a federal law of general applicability, such as the FPA, covers tribal activities.[359] Consequently, courts have split in interpreting whether FERC has the authority to regulate tribes' electric power as well.[360] There also is a judicial presumption against federal implied preemption of state and local laws.[361]

B. Extending Federal Power Marketing Administration Transmission to the Pacific Ocean

"California: bordering always on the Pacific and sometimes on the ridiculous. So, why do I live here? Because the sun goes down a block from my house."
—George Carlin[362]

1. Legal Authority

Is there a possible "back door" to federally preempt or circumvent traditional state transmission siting authority to force additional transmission lines through states that are not willing to grant permission? The federal power marketing administrations that market and deliver hydropower generated by federally owned dams built during the Great Depression, have statutory authority to develop new transmission facilities across large swaths of the continental United States.[363] Section 1222 of the EPAct 2005 grants the U.S. DOE federal siting authority for transmission lines, subject to certain conditions, within states in which the Western Area Power Administration (WAPA) and Southwestern Power Administration (SWPA) operate. This Section 1222 was enacted to build transmission facilities for moving

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v. United States, 512 F.2d 1176, 1179 (9th Cir. 1975)).

[356] U.S. CONST. art. I, § 8, cl. 3.

[357] U.S. v. Mazurie, 419 U.S. 544, 553, 554 & n.11 (1975).

[358] *See* Federal Water Power Act, Pub. L. No. 66-280, 41 Stat. 1063 (1920).

[359] Martin Kirkwood, *Federal and State Regulation of Tribal Utilities*, NAT. RES. & ENV'T, Spring 1993, at 27, 28 (citing Fed. Power Comm'n v. Tuscarora Indian Nation, 362 U.S. 99 (1960)). Courts have found congressional intent to cover Native American activity where a federal regulatory statute seeks to implement a uniform national scheme. Thus, some commentators assert that the FPA is a comprehensive scheme for regulation of transmission and wholesale sales of electricity in interstate commerce and would cover Native American activities that are interstate in character. *Id.*

[360] *Id.* at 28 (citing *Fed. Power Comm'n*, 362 U.S. 99).

[361] *Id.* (citing *Fed. Power Comm'n*, 362 U.S. 99).

[362] GEORGE CARLIN, BRAIN DROPPINGS 20 (1st ed. 1997).

[363] *See* RICHARD J. CAMPBELL, CONG. RSCH. SERV., R45548, THE POWER MARKETING ADMINISTRATIONS: BACKGROUND AND CURRENT ISSUES 7 (2019) [hereinafter CAMPBELL, THE POWER MARKETING ADMINISTRATION].

federal hydroelectric power from federal hydropower facilities, as well as to accept contributed funds and to own or join with other parties to own, construct, and develop new or upgraded transmission lines.[364] Section 1222 does not expressly limit this federal authority to transmission projects that transmit federal hydropower, despite this original purpose.[365]

2. Where?

So how large is this area? As shown in Figure 11, this WAPA and SWPA area includes all of 15 of the lower 48 states west of the Mississippi River, plus part of 2 additional Midwest states and Montana, while excluding the Pacific Northwest.[366] Arizona, Nevada, and California are included. Note that the states that are not included is because of each of these western states electing to join WAPA. WAPA is a federal creation, the youngest of the four power marketing administrations in the DOE, with the federal authority to distribute inexpensive and long-duration federal hydroelectric power from federal hydroelectric dams and facilities across the central and western United States.[367]

Figure 11: Federal Power Marketing Administrations[368]

[364] *See* Energy Policy Act of 2005, Pub. L. 109-58, § 1222, 119 Stat. 594, 952–53 (2005); 42 U.S.C. § 16421.

[365] *See* 16 U.S.C. § 825s; Energy Policy Act § 1222, 19 Stat. at 952–53.

[366] *See* 43 U.S.C. § 485i.

[367] *See Facts about WAPA*, W. AREA POWER ADMIN., https://www.wapa.gov/newsroom/fact-sheets/facts-about-wapa/ (Sept. 24, 2024) (describing WAPA as a "federal organization under the Department of Energy that markets and delivers clean, renewable, reliable, cost-based federal hydroelectric power and related services across 15 central and western states."); *see also WAPA Celebrates 45 Years Powering the West with Federal Hydropower*, U.S. DEP'T OF ENERGY (Dec. 21, 2022) [hereinafter *WAPA Celebrates 45 Years*], https://www.energy.gov/articles/wapa-celebrates-45-years-powering-west-federal-hydropower ("WAPA also owns, operates and maintains a more than 17,000 circuit-mile high voltage transmission system that represents a significant proportion of the backbone grid system in our 15-state territory.").

[368] *See Power Marketing Administration Map*, W. AREA POWER ADMIN., https://www.wapa.gov/about-wapa/regions/pma-map/ (Nov. 15, 2024).

Although 15 to 18 WAPA and SWPA states is a significant number of U.S. states, the purpose of WAPA is to distribute and market inexpensive hydropower from federal projects utilizing federal interstate waters.[369] If a state were to object to WAPA federally superseding traditional Tenth Amendment state transmission siting authority for a different purpose, this would involve lengthy court resolution of a matter of first impression. States may assert that they retain reserved Constitutional authority over state land use.

No congressionally enacted legislation or express preemption provides a federal agency or federal power marketing administration an express grant of eminent domain authority over state-owned or restricted land, limiting the scope to specific transmission lines and related facilities.[370] Nonetheless, without an express grant, the U.S. DOE has interpreted the establishment of these federal power marketing administrations as implicitly granting it authority to condemn lands for such Section 1222 projects pursuant to WAPA's and SWPA's eminent domain authority.[371] Related to such agency latitude, in the last decade the Supreme Court in *Arlington v. FCC* granted deference to federal agencies to interpret their own scope of jurisdiction.[372] Notwithstanding *Arlington,* interpretations of a federal agency on the scope or extent of its authority, especially regarding climate change and electric power issues in the United States now *circa* mid 2022 and after is less certain following the recent Supreme Court decision in *West Virginia v. EPA* regarding federal executive branch authority over climate change and electric power.[373]

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[369] *Facts about WAPA*, *supra* note 367.

[370] *See* FERREY, ENVIRONMENTAL LAW, *supra* note 36, at 188; *see also* 16 U.S.C. § 825s (authorizing the Secretary of Energy to "acquire, by purchase or other agreement, *only such transmission lines and related facilities* as may be necessary in order to make the power and energy generated at said projects available in wholesale quantities for sale on fair and reasonable terms . . . ."(emphasis added)); 43 U.S.C. § 485i ("The Secretary is authorized to perform any and all acts and to make such rules and regulations as may be necessary and proper for the purpose of carrying the provisions of this subchapter into full force and effect.").

[371] *See* Energy Policy Act of 2005, Pub. L. 109-58, § 1222, 119 Stat. 594, 952–53 (2005); 42 U.S.C. § 16421; U.S. DEP'T OF ENERGY, SUMMARY OF FINDINGS IN RE APPLICATION OF CLEAN LINE ENERGY PARTNERS LLC PURSUANT TO SECTION 1222 OF THE ENERGY POLICY ACT OF 2005 15–17 (2016) https://www.energy.gov/sites/prod/files/2016/03/f30/Summary%20of%20Findings%20Plains%20%20Eastern%20Clean%20Line%20Project%203-25-2016%20FINAL.pdf.

[372] Arlington v. FCC, 569 U.S. 290, 307 (2013).

[373] West Virginia v. EPA, 142 S. Ct. 2587 (2022); *see also* Alice C. Hill, *What Does the Supreme Court's Decision in* West Virginia v. EPA *Mean for U.S. Action on Climate?*, COUNCIL ON FOREIGN RELS. (July 19, 2022 12:19 PM), https://www.cfr.org/blog/what-does-supreme-courts-decision-west-virginia-v-epa-mean-us-action-climate (noting that the opinion "cloaks federal rulemaking in uncertainty, particularly when the proposed regulation relates to climate change"). *See generally* Keith Goldberg, *Biggest Energy-Related Court Rulings of 2022*, LAW360 (Dec. 22, 2022, 7:08 PM), https://www.law360.com/articles/1554804/biggest-energy-related-court-rulings-of-2022.

3. "Back-Door" Potential Closure by Supreme Court and Innovative Option

Even though WAPA lines move both hydropower and coal-fired power, in the multiple decades that WAPA and SWPA have existed, DOE has never used such an expansive view of power marketing administration authority to site transmission lines other than for moving federal hydropower.[374] This would constitute a new executive branch expansion of conventional federal power marketing administration authority than has been in place since the creation of these administrations three-quarters of a century ago.[375] After the 2022 Supreme Court decision in *West Virginia v. EPA,* implicit executive branch expansion of authority on a Major Question, absent express legislative grant of such power to the executive branch, particularly with regard to the electric power sector of the economy, is skeptically regarded and scrutinized by courts.[376]

The Manchin Amendment, which would have legislatively granted broader federal power to preempt state power regarding energy, were rejected in the Senate in the recent IRA, the IIJA, and in the legislative extension of the debt ceiling.[377] Their omission leaves the federal executive branch in the legal Twilight Zone, potentially unable to employ the Supremacy Clause to preempt contradictory traditional reserved state and local Tenth Amendment power, particularly with a new Major Questions doctrine in play after *West Virginia v. EPA*.[378]

California is pursuing one of the most assertive state clean energy laws to address carbon emissions generated by its fifth-largest economy in the world.[379] Should California encounter future blockages to import more zero-carbon power from the many states to its east, California's western border could host a new submarine portal to realize its sustainable energy goals. Offshore wind turbines could exploit robust wind regimes placed above the Pacific Ocean's outer continental shelf

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[374] *See WAPA Celebrates 45 Years*, *supra* note 367 (emphasizing that "For the past 45 years, WAPA has provided over 700 wholesale customers, primarily small, rural and underserved communities, with at-cost, affordable and reliable hydropower and transmission services."); *Power Marketing*, W. AREA POWER ADMIN., https://www.wapa.gov/PowerMarketing/Pages/power-marketing.aspx (Sept. 23, 2024) (explaining that WAPA sells and transmits power generated at 14 different multipurpose water resource projects throughout the West and also sells the United States' 547-megawatt entitlement from the coal-fired, and transmits power through its entitlements on the Pacific NW-SW Intertie Project).

[375] CAMPBELL, THE POWER MARKETING ADMINISTRATION, *supra* note 363, at 1 & n.1.

[376] *See West Virginia*, 142 S. Ct. at 2608; Richard Pierce, *Major Questions Doctrine Hands Power to Judges After Chevron*, BLOOMBERG L. (Feb. 21, 2024, 1:30 AM), https://news.bloomberglaw.com/us-law-week/major-questions-doctrine-hands-power-to-judges-after-chevron.

[377] *See* discussion *supra* Section III.B.

[378] *See West Virginia*, 142 S. Ct. at 2608.

[379] *See* discussion *supra* Part I (discussing how states confront interstate legal obstacles to control their own essential power infrastructure); discussion *supra* Part V (noting that California does not control California's key power infrastructure).

to generate sustainable power moved through submarine transmission lines emerging from the ocean in California.[380] Such offshore wind turbine siting to the west on the continental shelf would be within control of the federal government and not subject to the direct control of states as long as it is sited at least three miles off the coast.[381] No other state's permit denials could frustrate such substantial additional sustainable offshore power being transmitted to California for its first use without passing through any other state.

Unlike its eastern border where a state blocked additional transmission infrastructure to serve California[382] and was upheld by the Ninth Circuit,[383] California's western border opens up significant geographic renewable power transmission potential if California chooses to not oppose offshore wind turbines with transmission lines making first landfall in its state. Although the IRA substantially subsidizes new renewable power, even unsubsidized wind power and utility-scale solar projects now can produce electricity at lower prices than new gas, coal, and nuclear power.[384] California, operating through its unusual single-state ISO which regulates all transmission in the state,[385] legally is positioned to attempt to act alone—a significant opportunity could be looking to the west, rather than to its eastern neighbors.

Of note, the IRA contains ample grant funding to support renewed western state collaboration on climate should western states wish to address climate issues cooperatively.[386] Prior efforts of these same western states to join together in the Western Climate Initiative were unsuccessful and the western states did not follow California's lead and withdrew, causing a collapse.[387] It makes economic and practical sense, if necessary, for California to circumvent potential transmission infrastructure impediments in order to advance its climate objectives and side-step this potential "separation of powers" legal imbroglio. As stated by Horace Greeley, "Go

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[380] *Biden-Harris Administration Announces First-Ever Offshore Wind Lease Sale in the Pacific*, U.S. DEP'T INTERIOR, https://www.doi.gov/pressreleases/biden-harris-administration-announces-first-ever-offshore-wind-lease-sale-pacific (Feb. 7, 2024).

[381] *See The Federal Government's Role Ensuring Responsible Development*, OFFSHORE WIND MD., https://offshorewindmaryland.org/how-offshore-wind-works/the-federal-governments-role-ensuring-responsible-development/ (last visited Jan. 16, 2025).

[382] *See* discussion *supra* Section II.D.2 (noting the *California Wilderness* precedent).

[383] *See* Cal. Wilderness Coal. v. U.S. Dep't of Energy, 631 F.3d 1072 (9th Cir. 2011).

[384] *See* Silvio Marcacci, *Renewable Energy Prices Hit Record Lows: How Can Utilities Benefit From Unstoppable Solar And Wind?*, FORBES, https://www.forbes.com/sites/energyinnovation/2020/01/21/renewable-energy-prices-hit-record-lows-how-can-utilities-benefit-from-unstoppable-solar-and-wind/ (Apr. 14, 2022, 2:04 PM).

[385] *See Power Market Structure*, *supra* note 194.

[386] *See* THE INFLATION REDUCTION ACT DRIVES SIGNIFICANT EMISSIONS REDUCTIONS, *supra* note 18, at 1–2.

[387] Craig, *supra* note 202.

West . . . ."[388] As quoted at the beginning of this Section, California might observe George Carlin's identification of directly available additional renewable energy: "California: bordering always on the Pacific . . . [where] the sun goes down . . . ."[389]

[388] *See* Letter from Horace Greely, Editor, N.Y. Trib., to R.L. Sanderson (Nov. 15, 1871), https://www.gilderlehrman.org/history-resources/spotlight-primary-source/horace-greeley-go-west-1871; Stephen J. Taylor, *"Go West, Young Man": The Mystery Behind the Famous Phrase*, HOOSIER STATE CHRONS. (July 9, 2015), https://blog.newspapers.library.in.gov/go-west-young-man-the-mystery-behind-the-famous-phrase/.

[389] CARLIN, supra note 362, at 20.