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Available at: https://repository.law.umich.edu/mjlr/vol46/iss4/8

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POWER TO THE PEOPLE: WHY WE NEED FULL FEDERAL PREEMPTION OF ELECTRICAL TRANSMISSION REGULATION

Max Hensley*

State and federal governments have made significant investments in the development and installation of renewable energy technology. However, further increases in renewable power use have been stymied by the continued mismatch between the national interest in connecting consumers with utility-scale wind and solar installations and state and local control over the siting of electrical transmission lines. Because renewable power potential is often located far from consumers, transmission lines must cross multiple jurisdictions whose local interests have tended to prevent or significantly delay development. This Note analyzes that disconnect, reviews academic and legislative proposals to overcome it, and proposes a way for the federal government to preempt the states in order to streamline construction of the needed infrastructure while maintaining consideration of local concerns and advancing the overarching policy goal of shifting the electrical grid towards renewable power.

INTRODUCTION

In the summer of 2010, high waters fed the hydroelectric dams on the Columbia River that have long produced the majority of the Pacific Northwest’s electricity. At the same time, huge amounts of wind coursed through the wind farms throughout the region that had been constructed over the past decade. The Bonneville Power Administration (BPA)—the agency that administers the electrical grid in the Northwest—faced a unique problem: too much renewable power. The overload threatened the integrity of the grid as a whole. In response, the BPA stopped accepting power from coal and nuclear plants in the area.¹

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² See Bernton, supra note 1.

³ See Behr, supra note 1.
This is how renewable power is supposed to work: supplementing and at times entirely replacing the traditional forms of power generation that provide the baseline load. However, the 2010 summer overload was more extreme than in previous years. The hydroelectric dams produced so much power that the BPA no longer had room for the input from wind producers, and the BPA stopped accepting their power as well. As a result, five wind energy producers in Washington and Oregon sued the BPA on a breach of contract claim for lost profits and injunctive relief to ensure they would not face a similar situation in the future.

The Columbia Valley renewable energy producers had already overcome the technological barriers of turning wind into electricity and the economic barriers of installing utility-scale wind farms. They had succeeded. Yet the nation’s failure to expand its aging and overburdened system of electrical infrastructure—the grid—stopped these producers from actually providing low-cost green energy to consumers. These limited, congested, and aging lines are unable to shift power efficiently around the country from the places it is being produced to the places it is needed. In fact, at the same time that the BPA was refusing to accept wind power, California ratepayers were paying nearly twice as much per kilowatt-hour as consumers in Washington and Oregon because of California’s high demand for power and relatively limited supply.

Although the Northwest has been one of the more aggressive adopters of renewable energy in the United States, the challenges of an aging and inadequate electrical grid are not unique to that

4. See id. (noting the BPA’s efforts to replace coal generation with wind and hydropower).
5. See id.
6. BPA argues that environmental regulations aimed at protecting salmon limit the extent to which dam owners such as itself can use spillover to cut the output of hydroelectric dams. Thus, they are the last in line for shutdowns or power reductions. See Murphy, supra note 1.
7. Petition for Review under the Northwest Power Act, Cannon Power Group, LLC v. Bonneville Power Admin., No. 11-72059 (9th Cir. July 21, 2011). See also Behr, supra note 1 (estimating the financial loss to be approximately $50 million).
8. See Tilting at Windmills, supra note 1 (“More effort by BPA to link this new capacity to grids in California and British Columbia could have avoided the need to idle these wind turbines . . . .”).
11. See Tilting at Windmills, supra note 1 (“The north-west gets more of its power from hydro than any other region of the United States.”).
area. The most dramatic recent example of grid failure came in 2003, when a power station on Lake Erie crashed because of air conditioner use on an unexpectedly hot day, and a transmission line in Walton Hills, Ohio shorted out on an untrimmed tree branch. Within three hours, fifty million people across eight states and Ontario had lost power, resulting in the largest blackout in North American history. The blackout lasted a day and a half and cost the economy $6 billion.

Reliability is one key reason for infrastructure construction, but new transmission is also necessary to bring the next generation of power sources—utility-scale renewables—online. Unlike traditional power plants, which are built to serve their region and can ship in oil, natural gas, or coal from anywhere in the world, renewable energy potential is generally concentrated in less populous areas: wind in the Midwest, solar in the Southwest, and geothermal in the Mountain West and South. Meanwhile, the highest demand for electricity is in the Northeast and California. Despite the need to link supply and demand, the format of the power grid matches the regional outlook of the traditional producers. This disconnect has been noted at the highest levels of U.S. policymaking, drawing

12. See Nat’l Conference of State Legislatures, supra note 10, at 4 (“Many federal, state, and utility representatives feel that the transmission system is outdated and overloaded, which ultimately prevents efficient delivery of electricity, reducing reliability and making energy more costly.”); U.S. Energy Info. Admin., supra note 9 (“It is generally agreed that some replacement and upgrading of current lines will have to be done, and that new lines need to be constructed to maintain the system’s overall reliability.”).


14. Id.

15. Id.


18. The Eastern Interconnection includes all or parts of thirty-nine states (plus Canadian territories) east of the Rocky Mountains, the Western Interconnection contains all or part of fourteen states (plus Canadian territories and a small part of Mexico), and the Texas Interconnection includes most of the state of Texas (Alaska, Hawaii, and Quebec each also have their own independent interconnections). Id. at 5 fig. 4.
attention from think tanks, journalists, and the White House. The President’s Job Council has taken the position that the inadequacy of transmission infrastructure is “one of the highest risks facing the energy industry over the next ten years,” and that reform provides perhaps the best opportunity to maintain America’s global leadership in innovation, cheap power, and job creation.

This Note argues that overly localized and inadequate infrastructure is the most substantial hurdle to the adoption of utility-scale renewable power, and that federal preemption of transmission siting authority is the only way to clear it. Part I follows the development of energy regulation in the United States and explains the link between local control of infrastructure development and the continuing flaws in our current system. Part II outlines recent efforts to reform the current system and argues that these intermediate steps toward regional and national control are inadequate. Part III sets out my proposal for full federal preemption of electrical transmission infrastructure siting. It explains the theoretical justification for federal action, compares electrical transmission to similarly preempted fields, and addresses the federalism concerns that may prevent the adoption of a national policy for siting electrical transmission infrastructure.

I. ADAPTING ENERGY LAW TO THE RENEWABLE POWER FUTURE

Nearly every state, as well as the federal government, has made the development of renewable energy a priority. This support


22. Id. at 13–16.

23. See infra note 24–29 and accompanying text. One of the significant assumptions of this Note is that expanded electric transmission construction would be of substantial benefit to the development of green energy, and that this is a policy goal worth achieving. However, both parts of that statement have significant challengers from both ends of the political spectrum. First, a substantial portion of the political community remains committed to the traditional sources of energy and is not interested in advancing renewable technologies. While the Energy Policy Act of 2005 was developed primarily by then-Vice President Dick Cheney, Tara Benedetti, Running Roughshod? Extending Federal Siting Authority Over Interstate Electric Transmission Lines, 47 Harv. J. on Legis. 253, 257 (2010), energy policy has become
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comes primarily through tax credits,24 direct loans or loan guarantees25 to power producers, and state renewable portfolio standards.26 Combining these and other smaller programs, the federal government alone spent approximately $4.6 billion on direct expenditures and another $8.2 billion in tax credits to promote renewable energy in fiscal year 2010.27

However, the potential impact of these policies and the significant financial investments that support them are frustrated by the inability to get renewable power to consumers. While renewable energy has significant economic, technical, and environmental hurdles to clear before it can fully replace traditional power sources, only its regulatory hurdles are self-imposed. Scientists and engineers may be able to develop cheaper and more efficient turbines or solar cells, but the impact of these discoveries is muted by a regulatory system that hinders the creation of the infrastructure substantially more divisive over the last eight years. See generally Ryan Lizza, As the World Burns: How the Senate and the White House Missed Their Best Chance to Deal with Climate Change, THE NEW YORKER, Oct. 11, 2010, at 70, available at http://www.newyorker.com/reporting/2010/10/11/101011fa_fact_lizza. This regional, ideological, and partisan divide has stymied many potential reforms. Second, a substantial number of environmental advocates prefer a system of distributed generation based around technology like rooftop solar and backyard wind turbines. Michael Dorsi, Piedmont Environmental Council v. FERC, 34 HARv. ENVTL. L. REV. 593, 600–01 (2010). Finally, many renewable energy advocates fear that expanded electric transmission would be used not to link stranded wind and solar energy, but to bring previously inaccessible coal resources into the grid. See, e.g., Rose Jenkins, Higher Power: Will New Energy Infrastructure Force Land Trusts to Protect the Climate at the Expense of the Land?, SAVING LAND, Fall 2009, at 24, 24. All of these are substantial concerns, but completely resolving any of them is beyond the scope of this Note. The final concern, however, should be substantially mitigated by the safeguards discussed in the text, infra notes 98–100.


26. Financial Incentives for Renewable Energy, supra note 24 (listing thirty-eight states that have renewable portfolio standards, or RPS). An RPS is a mandate that requires a utility operating within the jurisdiction to purchase a certain percentage of its power load from renewable sources.


necessary to bring renewable power to American consumers.29 Today, wind developers have applied for transmission access for projects whose output would quintuple American wind power production.30 These projects, however, have no chance of being built without substantial upgrades to our transmission system because the grid is too crowded and does not effectively link the entire nation.31 In fact, one recent study of five Western states shows that, without substantial investments in interstate transmission infrastructure, it would be physically impossible to increase the market share of wind and solar power beyond 20 percent. Furthermore, even at that level, the lack of infrastructure would add substantial difficulty and cost.32 It would be shortsighted to invest heavily in the development of renewable power generation and then prevent its use by maintaining a locally-focused transmission regulatory system that ensures that transmission will remain suitable only for a world of localized fossil-fuel generation.

This section briefly outlines the history and development of modern energy regulation, focusing on the transition of power generation from a primarily local industry to a national concern. It then examines the most prominent recent legislative and regulatory reforms in greater depth.

A. The Development of Modern Energy Regulation

At the beginning of the twentieth century, generating and transmitting electricity was a purely local activity. Four thousand local utilities burned coal and produced power for their metropolitan areas, and links distributing locally produced power between cities—let alone regions—were rare.33 Over the past century, as

29. See id. at 3. (A FERC Commissioner and the chief counsel arguing that, "perhaps no issue is more central to the nation’s progress toward a clean energy system than the development of a robust electric transmission grid."); Alborz Nowamooz, Inadequacy of Transmission Lines: A Major Barrier to the Development of Renewable Energy, 3 ENVTL & ENERGY L. & POL’Y J. 176, 179–80 (2008) ("If our nation is ever to distance itself from fossil fuel dependency, the immense solar, wind, and geothermal resources that are typically available in remote areas of this geographically vast country must be utilized. However, use of these resources requires a national transmission system in place to deliver the energy from these remote areas to our big cities and surrounding suburbs.").
31. See PRESIDENT’S COUNCIL ON JOBS & COMPETITIVENESS, supra note 21, at 14.
33. What is the Electric Power Grid, and What are Some of the Challenges it Faces?, supra note 9.
populations grew, generation capabilities increased, and our economy became more national, the electrical grid became more interconnected. Yet this has been a process of fits and starts, as the underlying assumption has been that local ratepayers are ultimately interested primarily in their own area's power production and consumption.

The Federal Power Act (FPA) was passed in 1935, and remains the primary source of federal regulatory power over the electric industry to this day. Until the passage of the FPA, the entire industry was regulated exclusively by the states. This legislation allowed the federal government, first through the Federal Power Commission and later through the Federal Energy Regulatory Commission (FERC), to regulate interstate transmission and wholesale interstate sales of power. However, the FPA specifically limited federal regulation of the industry to "those matters which are not subject to regulation by the States." It also specifically disclaimed federal authority over power generation and local distribution. Under this regulatory scheme, the electric industry developed into numerous local, vertically integrated monopolies where one company owned and operated the transmission, generation, and distribution capacity for a local area.

This system remained fundamentally unchanged for nearly half a century until Congress passed the Public Utilities Regulatory Policy Act of 1978 (PURPA). PURPA attempted to break down local monopolies in response to the energy crises of the 1970s. It did so by mandating that utilities purchase electricity from small power generators and by adopting new ratemaking policies that encouraged local utilities to consider a wider variety of factors beyond the traditional economic cost model, including more sophisticated pricing models, integrated resource planning, and energy efficiency and

35. Id. at 615 (noting that the Federal Power Act failed to anticipate many of the changes in the electricity market).
39. Id. § 201(b) (codified as amended at 16 U.S.C. § 824(b)(1) (2006)).
40. Dennis, supra note 37, at 33.
42. See Id. § 2601; Dennis, supra note 37 at 33–34.
conservation. Combined, these changes kick-started the independent power production sector by requiring purchases from small renewable or cogeneration producers and creating a more favorable regulatory environment for other independent producers. Utilities and state regulators immediately challenged the law on constitutional grounds, but the Supreme Court held that PURPA fell squarely within Congress' Commerce Clause authority and did not intrude upon States' sovereignty as guaranteed by the Tenth Amendment.

The third major federal statute in this area is the Energy Policy Act of 1992 (EPAct of 1992). Intended to further expand the independent power production market, the EPAct of 1992 required utilities to provide transmission to independent power producers and created an exemption to ownership restrictions for wholesale energy retailers. These changes expanded the pool of independent power producers and abolished some of the major barriers to linking into the general electrical grid, thereby further promoting competition in electrical generation.

B. Recent Changes

In the last decade, federal policymakers have taken three major steps in the area of energy regulation, each of which has increased the role of the federal government and attempted to ease the path towards the development of additional electrical transmission lines. Building on each other, these actions have incrementally shifted energy policy toward the consolidation of authority in the federal government.

The first significant change was the Energy Policy Act of 2005 (EPAct of 2005). Section 216 of the EPAct of 2005 gives the FERC the power to override state decisions on transmission siting within
specified National Interest Electrical Transmission Corridors (NIETC) when a state (1) refuses to consider interstate benefits of additional transmission construction, (2) refuses to consider an application for construction of a line because the line would not deliver power to anyone in that state, (3) withholds approval of new transmission construction for more than one year, or (4) places conditions on its approval that would make construction prohibitively expensive or prevent it from reducing congestion. When the FERC acts, it removes state jurisdiction over the project, grants a permit holder eminent domain authority, and requires state and local authorities to cooperate with the construction process.

The judiciary twice has weakened the force of this seemingly powerful tool. The FERC initially determined that “withhold” under section 216 included scenarios where a state considered a project but eventually rejected it. However, in 2009, the Fourth Circuit held that the FERC’s ability to overrule state jurisdiction was limited to situations where a state did not consider a project, and that such authority did not include the power to overturn a legally justified denial. As a result of this decision, the scope of federal backstop power to counteract state decisions has been sharply circumscribed: since the Fourth Circuit’s decision, the FERC has received just one permit application (subsequently withdrawn) for a program that was intended to substantially spur development of interstate electrical transmission.

In 2011, the Ninth Circuit found that the U.S. Department of Energy (DOE) also overstepped its statutory boundaries in determining which areas should be designated as NIETC, the prerequisite designation for federal intervention in transmission siting. The court held that DOE’s designation of two corridors (the Mid-Atlantic Area and Southwest Area National Corridors) violated its duty to confer with the affected states under the EPAct of 2005. The Court ruled that DOE’s “consultation obligations are separate

55. Id. at 314-15.
58. Id. at 1079-80.
and distinct from (albeit related to) its notice-and-comment obligations” and create a substantially higher procedural burden.\footnote{59. \textit{Id.} at 1088 (quoting U.S. Steel Corp. v. United States, 29 Ct. Int'l Trade 33, 40 (2005)).} Thus, although DOE had undergone the standard notice-and-comment procedures for administrative rulemaking, its designation of the two NIETC was held procedurally deficient.\footnote{60. \textit{Id.}} The consultation requirements under the EPAct of 2005 were not specifically defined, but the court clearly required substantially more (and more meaningful) interaction between DOE and the states.\footnote{61. \textit{Id.} (“Thus, DOE's efforts here fall far short of the efforts that were determined to meet the requirement [on the EPA under NPDES permitting statutes] in \textit{Environmental Defense Center [v. EPA}, 344 F.3d 832 (9th Cir. 2003)].”.)}

The second major policy change resulted from a pair of FERC orders. FERC Order 888, issued in 1996, imposed mandatory open-access transmission tariffs on transmitting electricity in interstate commerce to further promote the growth of independent power producers and support competition in the wholesale power market.\footnote{62. \textit{Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities, 61 Fed. Reg. 21540-01, 21541 (May 10, 1996). Mandatory open access tariffs require that transmission operators charge uniform rates to all electricity generators who send power over the lines, and forbid discrimination between generators.}} FERC Order 890, which was finalized in 2007, amended Order 888 to remove opportunities for discrimination by requiring state transmission planners to make their plans in the open, coordinate with neighboring states, and develop cost-allocation principles that encourage regional transmission.\footnote{63. \textit{Preventing Undue Discrimination and Preference in Transmission Service, 72 Fed. Reg. 12266-01, 12667-68 ¶ 2-4 (March 15, 2007).}} The combined effect of these orders was to substantially lower the burden on independent power producers—who then, as now, made up a large percentage of renewable power generators in the United States—to gain access to the transmission networks they needed to get their power to consumers.

The third major policy change also resulted from a FERC order, which further encouraged regional cooperation. FERC Order 1000, which was issued in the summer of 2011, requires local transmission planners to participate in regional planning processes.\footnote{64. \textit{Transmission Planning and Cost Allocation, 136 FERC ¶ 61,051, at 10 (July 21, 2011).}} It also requires regional authorities to allow cost recovery for transmission that is necessary to achieve public policy goals, which include bringing renewable power to market.\footnote{65. \textit{Id.}} Although prior policy changes
had indirectly aided the growth of renewable energy by breaking down some of the rules that propped up the traditional local monopolies, Rule 1000 took aim at a specific issue important to the growth of renewable power—the construction of interstate and regional transmission—and explicitly authorized a means of resolving it.

C. Problems with the Current State of Regulatory Policy

While these changes represent substantial progress toward undoing the local gridlock that has stalled the creation of a modern electrical transmission grid, they are by no means sufficient to resolve the major problem that the country faces: the disconnect between national needs and local authority.66 While Congress and the FERC have made efforts over the past decade to help transition to a new energy future, these policy changes continue to build on the outdated assumption that the industry is primarily local or regional in nature.

Consider as an example the steps needed to build a transmission line connecting Washington's wind farms and hydroelectric dams to California customers, a potential solution to the conflict described in the Introduction to this Note. Despite the regionalization urged by PURPA, the EPAct of 1992, FERC Orders 888, 890, and 1000, and the federal backstop authority granted in the EPAct of 2005, a developer must still get approval from a multiplicity of state and local regulators—each with its own requirements, processes, and priorities—in order to build the kind of interstate transmission lines that utility-scale renewable power generation requires.

The line would start in Washington, which has a variety of state and municipal agencies that have jurisdiction over the various activities necessary to start construction.67 Additionally, each affected county and municipality has the authority to independently regulate the siting of transmission lines.68 The line would then cross through Oregon, which requires a certificate from its Energy Facility Siting Council (EFSC), "a complicated, multistage undertaking"
that takes into account local interests, statewide goals, and environmental and historical impacts.\textsuperscript{69} EFSC requires multiple applications, and it must find a \textit{locally} justified need (which would presumably rule out consideration of the potential benefits to Washington or California residents) before it can authorize the project to go forward.\textsuperscript{70} Finally, California places its siting authority in its Public Utilities Commission, which is authorized to grant a certificate of public convenience and necessity after an analysis of need, cost of the project, impact on grid congestion, environmental impact, and proof that there are not other, more cost-effective alternatives.\textsuperscript{71} These extensive requirements add, at minimum, years to any new development, and the financial resources and time required for the permitting process alone can make projects uneconomical.\textsuperscript{72} Nevertheless, nearly everyone involved in this arena agrees that substantial new transmission construction is necessary if we want to make the shift to renewable power.

\section{II. Alternative Proposals}

Because the gap between our future energy needs and our current infrastructure is widely recognized, scholars and policymakers have proposed numerous solutions. These attempted reforms can be grouped into three different categories. First, a number of states have reformed their siting processes to make them friendlier to alternative energy in an effort to move forward on their own. Second, the FERC and local policymakers have attempted to promote regional responses to the problem of infrastructure siting. A third group of proposals has tried to mitigate the conflicts between state and federal interests. However, all of these attempts have ultimately failed to provide a comprehensive solution.

\subsection{A. State Action}

In the absence of federal action, some states have taken the initiative to promote the development of renewable energy.\textsuperscript{73} While the

\begin{itemize}
\item \textsuperscript{69} \textit{Id.} at 407-08.
\item \textsuperscript{70} \textit{Id.} at 407-13.
\item \textsuperscript{71} \textit{Id.} at 390-92.
\item \textsuperscript{72} \textsc{President's Council on Jobs \\ & Competitiveness, supra} note 21, at 14 (noting that construction of a line from Virginia to West Virginia took thirteen years to approve, and a line from Minnesota to Wisconsin more than six).
\item \textsuperscript{73} \textit{See supra} notes 24-27 and accompanying text.
\end{itemize}
majority of these efforts are too new for a final analysis of their impact on many levels, the gap between the needs of a national energy policy and the incentives that motivate state policymakers is simply too wide for state-level efforts to be a viable long-term strategy to build the transmission infrastructure necessary to support renewable power. This is best demonstrated by an examination of how the most common prorenewable energy policies have actually been implemented, which reveals the inherent limitations of local action.

One of the primary tools states have adopted to promote renewable energy generation is the Renewable Portfolio Standard (RPS), which mandates that utilities within a state receive a certain percentage of energy production from renewable sources. However, a significant number of states have included protectionist limits in their RPS. For example, at least three states will not credit any out-of-state production, others limit RPS credits to regional production, and a third group of states provides a multiplier for in-state production. These limits may promote in-state investment and local economic growth, but they limit the impact of the RPS on the renewable energy market as a whole. States simply are not able to effectively handle problems that cross their borders, while an energy project must extend to wherever the resource is located.

B. Regional Efforts

Recognizing this fundamental problem, Congress, the FERC, and a number of states have urged regional solutions. Regional Transmission Organizations (RTOs) are the primary method by which authority has been consolidated in recent years. Voluntarily formed by an assortment of utilities and state regulators with strong encouragement from the FERC, RTOs are tasked in many parts of the country with operating the transmission system, managing congestion, and administering the regional wholesale electricity market. FERC Order 1000 mandates that localities that are not covered by an RTO—approximately one-third of the consumer

74. See supra note 26 and accompanying text.


77. See Dennis, supra note 37, at 36–37.
market as of 2010—enter into an analogous process that would accomplish similar goals on a regional level.

Three failed federal legislative proposals would have worked along similar lines to encourage regional cooperation. Senator Byron Dorgan introduced the National Energy Security Act of 2009, which would have required regional authorities to designate “clean energy superhighways,” and then grant the FERC sole power over siting within those areas. Alternatively, Senator Jeff Bingaman’s National Clean Energy Superhighway Act (and its House companion sponsored by Representative Jay Inslee), also introduced in 2009, would have granted siting power to those regional authorities under the supervision of the FERC. These bills were not passed into law, and neither was reintroduced during the 112th Congress.

Although FERC Order 1000 was a strong step towards strengthening the creation and operation of RTOs, it also began the process of inter-RTO cooperation, which hints at the problems that will undercut the effectiveness of a regional solution. While any expansion of geographic jurisdiction is a step in the right direction, any RTO is still limited to a comparably small part of the country. For example, the California Independent System Operator and the Electric Reliability Council of Texas do not even include their entire states. These organizations, along with the New York ISO, do not cross state lines. The Southwest Power Pool and Midwest ISO do include multiple states, but are primarily made up of areas that will be renewable energy exporters and do not include the major markets that will consume that power. In the Columbia River example which introduced this Note, none of the Washington or Oregon utilities are covered by an RTO, while the far northern California

78. See id. at 37.
82. Benedetti, supra note 23.
84. Id.
85. The PJM Interconnection is the only RTO that includes both relatively rural power-exporting areas and a portion of the highly congested coastal power grid, and thus could be seen as a model for future geographic consolidations. However, it is facing substantial internal conflict, with western utilities resisting many of the grid upgrades that their eastern counterparts are pushing for. See Ill. Commerce Comm’n v. Fed Energy Regulatory Comm’n, 576 F.3d 470 (7th Cir. 2009) (Illinois and Ohio utilities suing over the cost allocation of a transmission line built between West Virginia and Virginia).
utilities are not included in the California ISO. Regionalization is a step in the right direction, but a truly national regulatory system must emerge to solve a truly national issue.

C. Federal Backstop or Mediation

Another approach to bridging the gap between state-level policymaking and issues of national concern has been to establish federal authority as a backstop. Although this was widely understood to be the intent of section 216 of the EPAct of 2005, the Fourth Circuit's decision in *Piedmont Environmental Council v. Federal Energy Regulatory Commission* made that authority functionally useless.87

One previously proposed piece of legislation would have overturned the holding in *Piedmont* by amending section 216 to grant the FERC backstop authority whenever a state "denies" or is "otherwise unable to approve" permits for a transmission project in an NIETC.88 This bill, sponsored by Senator Ben Nelson (Democrat from Nebraska), would have allowed the FERC to override a state's rejection or non-consideration of permits necessary for such construction, thereby specifically overturning the Fourth Circuit's decision in *Piedmont*. Although it did not pass, this legislation also would have created a presumption of federal authority within federally-defined "energy superhighways."89

One prominent practitioner believes that section 215 of the EPAct of 2005 could provide some of the necessary authority that the FERC exercised under section 216 before the *Piedmont* decision and which the Nelson legislation would have restored.90 Section 215 imposes a national requirement that all local transmission system owners and operators follow FERC-established reliability standards.91 To the extent that a state's rejection of a potential transmission project threatens national or local grid reliability, the FERC has the authority to step in and overrule that decision.92

86. *Id.*
87. *See supra* notes 54–56 and accompany text; Thornley, *supra* note 56, at 394 (noting that, post-*Piedmont*, "Only one [NIETC] permit application has been filed, which was subsequently withdrawn by the applicants.").
91. *Id.* at 47.
92. *See id.* at 50–51.
The exact boundaries of this authority are unclear and would certainly be subject to substantial litigation. However, even advocates of section 215 note the limitations of this authority: if the transmission line is not needed for grid reliability but for some other purpose (including the promotion of renewable energy), this backstop authority would not be available because section 215 applies only to reliability (as opposed to section 216, which contains a public policy exception).

Federal backstop authority, whether created through new legislation or the reinterpretation of existing language, would be a step in the right direction, but it is ultimately too incremental to overcome the problems facing a state or regional approach. Requiring developers to first apply for state permits and then be rejected or ignored before federal authority is activated would simply delay the permitting process without adding any benefits.

A related academic proposal urges the creation of a dispute-resolution mechanism when local and national interests diverge. According to its proponents, this proposal has the advantage—similar to the backstop concept—of maintaining some traditional state control while providing a voice for national policy concerns when the national problems rise to a particularly compelling level. Supporters also note that mediation is a commonly used tool in resolving land use disputes, and costs less and moves faster than traditional litigation. A further advantage is that mediation allows for the inclusion of a variety of interested parties, including the general public, who have a range of unique concerns and whose approval can grant a particularly powerful legitimacy to a project.

It should be noted, however, that many of the public participation advantages of mediation could be achieved through a well-designed federal regulatory scheme. There is no reason to believe that federal regulators are less interested or less able to take note of individual objections to a particular project. Additionally, they are able to consider those objections in a broader context that recognizes benefits that may extend beyond the jurisdictional boundaries of states. As noted previously, one of the most significant

93. See id.
94. See id. at 51.
96. Id. at 248.
97. See id. at 250–52.
98. See, e.g., Benedetti, supra note 23, at 264 (noting that the SMART Act would require the FERC to consider "input from all interested parties").
99. See Diamond, supra note 95, at 229–30 (noting both political constraints and explicit legal bars on state consideration of a potential project's out-of-state benefits).
problems with the current system of state authority is that many projects cross multiple state lines and thus must receive approval from multiple jurisdictions. Each argument for providing a more efficient mechanism to resolve federal-state jurisdictional disputes only underscores the need for avoiding such disputes altogether.

The fundamental flaw of all of these approaches is that they attempt to mitigate the problems of using a nineteenth-century framework to regulate a twenty-first-century electrical grid. Even those who oppose full federal preemption recognize the need for action and acknowledge the costs of allowing near-sighted states to stymie the growth of renewable energy development. Rather than adding on to the existing structure, moving forward requires a new center of authority that is capable of handling the entire system—not just patchwork parts. Of course, a fundamental overhaul of state-federal relations is not an easy task, and a number of economic, legal, environmental, and political hurdles stand in the way.

III. Full Federal Preemption

Given the scope of the problem and the inadequacy of existing proposals for reform, a fundamental shift in the principles that guide the regulation of electrical transmission is necessary. A truly national solution is the only way to overcome decades of parochial inertia in the electrical industry and create a modern infrastructure that can support a nationally integrated grid powered by large-scale renewable energy producers. The simplest and best way to accomplish this goal is to grant the FERC complete regulatory authority over the transmission of electricity in or substantially affecting interstate commerce, including the intrastate transmission necessary to bring projects online. Purely local distribution that connects consumers to the grid would remain locally regulated, as long as it did not inhibit national projects. This proposal shifts the baseline from a system of general local control with pockets of federal regulation in a few enumerated areas to a federal default that allows local authority to manage a specific and limited part of the field.

My proposal has four key elements: (1) granting the FERC jurisdiction over the siting of electrical transmission infrastructure

100. See supra notes 67-71 and accompanying text.
101. Benedetti, supra note 23, at 257 (describing Pennsylvania’s successful disruption of a line from West Virginia to New Jersey and Connecticut’s struggle to prevent a line through its waters that linked New England and New York.). See Diamond, supra note 95, at 230 (“In most states, parochialism casts a significant, although not always determinative, shadow over the process.”).
necessary for a reliable grid that connects consumers to renewable energy, (2) a comprehensive consultation mandate that engages states, local governments, and other interested stakeholders, (3) a requirement that the FERC ensure that new transmission capacity will actually accomplish the renewable power and reliability goals that justify the Commission’s authority, and (4) the maintenance of local control over local distribution.

The grant of jurisdiction is the most important element of the proposal and should be as broad as possible. Textually, it could be modeled off of the existing power that the FERC holds under the Natural Gas Act, which was passed when the pipeline industry shifted from a local and regional focus to a national one and which gave the federal government exclusive and complete regulatory control over the siting of natural gas pipelines necessary for a functional interstate transmission system.102

The consultation mandate is the necessary counter to the proposed expansive new power over siting. It should mimic the higher levels of consultation that the Ninth Circuit applied to the FERC’s powers under the EPAct of 2005,103 but should be expanded to include local governments, tribes, property owners, and other stakeholders beyond simply states. While consultation has the potential to slow the permitting process down, it is essential to mitigate the loss in local control that federal preemption would create. One particularly effective way to implement these consultation requirements would be to require the creation of regional FERC offices that would be able to coordinate projects from outside Washington, D.C.104

The policy requirement is drawn from a previous, failed piece of legislation: Senator Harry Reid’s proposal that each line built under enhanced federal authorization be available to carry at least 75 percent green energy.105 While a specific percentage requirement may not be the most effective way to guarantee that the needed links are

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102. See infra notes 129–32 and accompanying text.
104. For a similar system, see the Environmental Protection Agency’s ten regional offices, each independently responsible for a multistate area but implementing the same policies and practices throughout the country.
built, keeping a strong connection between increased infrastructure and a growing renewable energy sector is crucial to ensure that the FERC's new authority is not used for other ends.\textsuperscript{106}

Finally, I suggest that local entities maintain control over distribution, as there is no reason for the federal government to step in and take over local distribution. How power gets to homes and businesses has no impact on the generation and transmission of power, and there is no need for more radical reforms than necessary to accomplish the goal of increasing the capacity of the grid to achieve a greater market share for renewable power.

The remainder of this section will explain the theoretical justifications for such a proposal, describe other markets where the federal government has similarly preempted local control, more fully outline the best practices this reform should adopt, and address the fundamental federalism concerns that this reform raises.

A. Theoretical Justifications for Preemption

The crucial reason for elevating control over electrical transmission siting to a national level is to control externalities. An externality occurs when a particular activity imposes either costs (negative externalities) or benefits (positive externalities) on people who are not engaged in that activity. Because those costs or benefits are not factored into the price of the activity, they distort the level at which it occurs. By internalizing all costs and benefits, the activity will take place at the socially optimal level. Administrative law scholar Richard Revesz has noted that the theoretical basis for externalities (unlike the "race to the bottom") is "analytically unimpeachable,"\textsuperscript{107} and Justice Stephen Breyer included externalities in his seminal work on administrative law as one of three primary market failures that justify regulation.\textsuperscript{108}

In environmental law, where much of the most important work on externalities has been done, the paradigmatic example of negative externalities arises when a state benefits from economic activity

\textsuperscript{106} See Jenkins, supra note 23, at 24 (discussing the fear of environmental groups that enhanced transmission construction could connect consumers with stranded coal resources rather than renewable power).


and is then able to export pollution across state lines. The problem in the context of this Note, however, is that states are not able to internalize the positive externalities of infrastructure construction. States are being asked to suffer environmental or other land-use harms caused by the construction of transmission lines, but are not able to take advantage of the benefits—the jobs and economic activity created at the point of production and the access to electricity and lower prices for the end user at the point of consumption. Consequently, many states are less likely to invest in substantial transmission construction. Because the FERC would be able to consider the costs and benefits across all affected areas (as opposed to a state regulator who is limited to her particular jurisdiction), it would be better at determining the level of transmission construction that would create the maximum benefits for the country as a whole.

A complementary justification comes from public choice theory, which posits that larger and more diffuse groups will have a disproportionately small impact on public policy in the face of smaller, better organized, and better financed opposition. Within the field of environmental protection, where public choice theory is commonly applied, Revesz points out that the remedy of federal regulation can actually intensify the problem by increasing the number of decision makers and the complexity of the decision-making process. By further increasing the number of already-diffuse groups, federal oversight can create local-federal conflicts among loosely affiliated groups.

Application of public choice theory to energy law, however, creates interesting consequences. At the local level, land-use advocates may be the smaller and more organized constituency, especially when compared to power consumers, who are the major constituency for transmission construction but are generally unlikely to be aware of that fact. Power companies have some sway but are severely limited by regulatory obligations. Under public choice theory, the result is that those who often oppose transmission construction have the greatest degree of influence on public policy

109. See Revesz, Externalities, supra note 107, at 2343.
111. See id. at 559–60.
112. See id. at 561–63.
surrounding that construction. In this scenario, a transition to federal regulation may be enough to increase the size of the diffuse group in order to overcome the organizational capacity of local anticonstruction advocates.\textsuperscript{114}

In considering these theories together, it is helpful to put forth a hypothetical situation to explore the potential costs and benefits of transmission construction. For instance, a line could connect a renewable resource in one state with a consumer base in another, but would need to pass through a third state to do so. In this scenario, the transmission line would not be built under the current state-based system of regulation, because the negative land use impacts in the transmitter state would trump the benefit of a few in-state construction jobs and broad-based grid improvement. The externality issue is clear: the ability of the transmitter state to halt construction denies both the producer and consumer states substantial benefits, even though construction would improve net welfare. The positive externalities would go unrealized, because the power to engage in construction would reside with a state that would experience predominantly negative effects if the construction were to take place. Public choice theory supports the argument that elevating the decision point to the federal level will allow for consideration of all relevant voices, including the numerous (but notably less-interested) consumers far from the site of transmission.

\textbf{B. Comparable Systems}

Full federal preemption of electrical transmission regulation may constitute a fundamental overhaul of the traditionally local electricity market, but it has substantial precedent in other policy areas. In fact, federal authority is almost universal in other areas of infrastructure that, like electrical transmission, link Americans together, providing further evidence that the current system is a relic of a bygone age and should be abandoned.

An early historical example of federal preemption is the creation of the cross-country railroad. Recognizing the pressing national

\textsuperscript{114} The first in Revesz's famous trio of articles on the theoretical justifications for national regulation addresses the "race to the bottom." Richard L. Revesz, \textit{Rehabilitating Interstate Competition: Rethinking the "Race-to-the-Bottom" Rationale for Federal Environmental Regulation}, 67 N.Y.U. L. Rev. 1210 (1992). Revesz convincingly shows fundamental flaws with that initially plausible story. See \textit{id.} at 1233-35. However, transmission siting faces the opposite problem: state regulation is too strong, unnecessarily deterring investment. The NIMBY (not-in-my-backyard) issue requires the opposite solution—a federal ceiling for state regulation, rather than a floor—and Revesz specifically disclaims applying his analysis to this question, \textit{id.} at 1219 n.24, and that analysis is thus not included within this Note.
need to link the Atlantic and Pacific Coasts, the federal government offered enormous incentives to private corporations in a series of laws passed between the 1830s and 1870s. These laws provided for land grants of right-of-ways that were 200 feet wide and direct subsidies that totaled over 130 million acres of public land. Because the vast majority of the construction took place on federal land, the conflict between state and federal authority that dominates so many discussions of this kind was in some degree moot. However, the federal government recognized that no other jurisdiction was capable of acting on the necessary scale and thus took action.

More recently, the federal government designed and funded the interstate highway system. Although state departments of transportation completed the actual construction, federal authorities approved the routes. With a few exceptions, federal policymakers got their way, and crucial economic development and national security goals for the system were realized.

The telecommunications industry also provides a useful parallel. Like electrical power distribution, it arose as a local activity until advances in technology made long-distance calls both technically and economically feasible. The Telecommunications Act of 1934 gave the FCC authority over interstate telecommunications traffic, but maintained local control over local calls. This division of labor between state public utility commissions and the Federal Communications Commission led to a regulatory system that gave rise to the Bell monopoly. However, the divide between local and interstate telephone service eventually collapsed as new technology—originally introduced in the 1940s and 1950s—allowed the same lines to carry both types of calls. The continued enforcement of regulations that relied on the local-long distance divide in

116. Id.
121. See id. at 839-42.
122. See id. at 841-42 (noting that regulators made only "nominal" efforts to determine actual use patterns).
the face of technology that had made that distinction irrelevant stymied effective regulation and development of the industry.\textsuperscript{123}

In response, the 1996 Telecommunications Act gave the FCC authority to preempt any state or local law that inhibits the provision of telecommunications services, whether inter- or intrastate.\textsuperscript{124} While overall reception of the 1996 Act has been mixed—largely because of the impact of unanticipated new technologies, such as cellular telephones—this is a clear example of regulatory authority shifting from states and localities to the federal government in response to an industry's technological advancements.

Because of the technological shift from landlines to cell phones, the focus of the FCC's siting authority has shifted from long-distance telephone wires to local cellular towers. The FCC maintains the authority to trump local laws that conflict with its infrastructure-creation goals, including zoning and other land-use regulations.\textsuperscript{125} The approach the FCC has chosen is known as "process preemption," which leaves the decision to approve or deny a siting permit in local hands, but allows the federal government to mandate the process by which that decision is made, including the factors to be considered.\textsuperscript{126} Process preemption has proven to be a successful middle ground because it allows the federal government to promote a national policy for telecommunications while maintaining space for local input and, perhaps more importantly, buy-in.\textsuperscript{127}

The federal government has already taken over regulatory control of parts of the energy sector based on motivations similar to those that supported the railroad, highway, and telecommunications policies. Today, the FERC has full authority over the siting of natural gas pipelines.\textsuperscript{128} This was not always the case. In fact, just like electricity, pipelines were once seen as a fundamentally local activity. As the former head of the FERC has noted, "[W]hile the Federal Power Act remains rooted in an implicit, but now false, assumption that electricity markets are characterized by local delivery[,] Congress recognized its error with respect to interstate

\textsuperscript{123} Id.
\textsuperscript{124} See id. at 859–60.
\textsuperscript{126} Id.
\textsuperscript{127} See id. at 292–93. However, while process federalism has also been proposed as a potential solution to restraints on the development of renewable power generation, see generally Patricia E. Salkin & Ashira Perlman Ostrow, Cooperative Federalism and Wind: A New Framework for Achieving Sustainability, 37 HOFSTRA L. REV. 1049 (2009), it does not address the fundamentally interstate problem of transmission. While process reforms can effectively promote the creation of single facilities, they cannot break down state borders.
\textsuperscript{128} 15 U.S.C. § 717f (2006)).
natural gas pipelines and corrected the law . . . to provide for exclusive and preemptive federal pipeline siting." Section 7 of the Natural Gas Act, passed in 1938, made this correction by granting the FERC the full measure of authority that Congress is able to grant under its Commerce Clause power. When the FERC considers a potential natural gas pipeline, it now undertakes a comprehensive review, considering economic, engineering, and environmental issues, along with input from local stakeholders. However, the FERC is capable of overruling local laws and regulations when necessary to accomplish a project that has been approved.

This is an exact parallel to the authority that this Note proposes giving the FERC with respect to electrical transmission lines. The FERC is no stranger to either the electricity markets or renewable energy, given its sole authority over the siting of major hydropower producers. The fundamental similarities between electrical energy and the transmission of natural gas or telecommunications provide strong support for preempting local regulation of electrical transmission siting.

It is crucial that a federal siting authority adopt the best practices of these previous examples to ensure that the policy helps promote renewable energy and fairly considers and mitigates local land-use concerns. These best practices could include a range of alternatives. For example, the establishment of regional FERC offices would lower the barrier to participation by individuals and increase the FERC's understanding of local issues. Similarly, statutory limits similar to the heightened "consultation" requirement imposed on the Department of Energy by the EPAct of 2005 would ensure that stakeholders are heard during the federal process. If this is not done well, federal preemption could result in the invasion of private property rights that its opponents fear.

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132. See id. (explaining how local land use regulations that would prohibit or unreasonably delay a FERC-approved project are preempted).
134. See supra notes 57–61 and accompanying text.
C. Federalism Concerns

Presidents of both parties have recognized that the federal government must act with great care when it takes authority over any area of law away from state or local governments, and have forced their administrative agencies to justify any expansion of central authority. Similarly, this Note's legislative proposal is certain to face legal and political pushback on federalism grounds, because it takes an area traditionally governed by state and local laws and places it under federal control.

There is no serious constitutional objection to federal preemption of electrical transmission siting. As the Supreme Court held in rebuffing a prior commerce clause challenge, "It is difficult to conceive of a more basic element of interstate commerce than electric energy . . . . The intrastate activities of these utilities . . . bring them within the reach of Congress' power over interstate commerce." Another potential challenge could be brought under the Tenth Amendment, because electrical regulation is a substantive area of law that was traditionally under state control, but the Supreme Court has abandoned that line of cases. Even when it was a legally relevant question, the Supreme Court held that areas of traditional state dominance could be preempted by the federal government through Congress's authority under the Commerce Clause.

135. Exec. Order No. 13,132, 64 Fed. Reg. 43,255 (Aug. 4, 1999) (Pres. Bill Clinton) ("The national government should be deferential to the States when taking action that affects the policymaking discretion of the States and should act only with the greatest caution."); Exec. Order No. 12,612, 52 Fed. Reg. 41,685 (Oct. 26, 1987) (Pres. Ronald Reagan) ("In the absence of clear constitutional or statutory authority, the presumption of sovereignty should rest with the individual States.").

136. Fed. Energy Reg. Comm'n v. Mississippi, 456 U.S. 742, 757 (1982). See also New York v. Fed. Energy Reg. Comm'n, 535 U.S. 1, 31-32 (2002) (Thomas, J., concurring in part and dissenting in part) ("Unlike the other electricity components and with the exception of transmission in Alaska, Hawaii, and parts of Texas—transmission is inherently interstate . . . . Electricity flows at extremely high voltages across the network in uncontrollable ways and cannot be easily directed through a particular path from a specific generator to a consumer. The transfer of electricity from one point to another will, to some extent, flow over all transmission lines in the interconnection, not just those in the direct path of the transfer.") (internal quotation marks and citations omitted).

137. Garcia v. San Antonio Metro. Transit Auth., 469 U.S. 528, 546-47 (1985) ("We therefore now reject, as unsound in principle and unworkable in practice, a rule of state immunity from federal regulation that turns on a judicial appraisal of whether a particular governmental function is 'integral' or 'traditional'.").

138. New York v. Fed. Energy Reg. Comm'n, 535 U.S. 1, 5 (2002). ("Prior to 1935, the States possessed broad authority to regulate public utilities, but this power was limited by our cases holding that the negative impact of the Commerce Clause prohibits state regulation that directly burdens interstate commerce."). See also R. Seth Davis, Conditional Preemption, Commandeering and the Values of Cooperative Federalism: An Analysis of Section 216 of EPAct, 108 COLUM. L. REV. 404, 420-35 (2008) (arguing that the current state of transmission siting law
While the constitutionality of federal preemption of energy regulation may not be in question, the same instincts that lead critics to question the legality of federal control also expose some of the practical problems it faces. This Note has relied on four cases that are landmarks in defining the scope of the FERC’s authority. While each of these cases deals with a slightly different substantive question of law, there is one very important procedural element that they all have in common: each involves states attempting to maintain their current level of control over transmission regulation.\(^{139}\)

State participation in these lawsuits highlights an important point about the intransigence of local control. Given that many of these states are the same ones that have adopted pro-green energy incentives,\(^{140}\) and that some of the same states have been at the forefront of their local Regional Transmission Organizations,\(^{141}\) it is clear that at least some portion of these states share the FERC’s goals in enacting the regulations. Nevertheless, these states opposed the regulations strongly enough to litigate against them. Even those states that have done the most to support renewable power on a local level have joined these lawsuits against the federal government on the issue of local control.\(^{142}\)

Deciding how to respond to the electrical infrastructure problem requires states to weigh two distinctly different interests. One is the maintenance of their own authority, and with it the ability to respond more directly to the needs and values of their constituents. The other is the fact that a complete response to the expressed will of their constituents requires that they step aside and allow the federal government to step in. This balance is not easily struck.\(^{143}\)

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\(^{140}\) See supra notes 24–26.

\(^{141}\) See supra notes 77–79.

\(^{142}\) Cf. supra notes 139 (listing states involved in litigation) and 24–26 (outlining state renewable energy incentives).

\(^{143}\) See Ashley C. Brown & Jim Rossi, Siting Transmission Lines in a Changed Milieu: Evolving Notions of the “Public Interest” in Balancing State and Regional Considerations, 81 U. COLO. L. REV. 705, 751–54 (2010) (describing how state regulators have begun shifting from traditional concerns of reliability, land use, consumer protection, local air and water quality, or...
However, the actions of the states in pursuing this series of lawsuits shows that states have made their choice, and that a similar set of objections can be expected if a plan that fully preempts the state role in transmission siting were proposed.

CONCLUSION

Events like 2010's wasteful shutdown of installed wind generation are harmful to our economy and threaten the future of renewable power. They are also preventable. There may still be substantial technological and economic progress to be made before wind, solar, and other clean energy sources can supplant or substantially reduce the use of coal, petroleum, or natural gas; however, that is no reason to maintain a legal system that stymies such progress, especially when states and the federal government are so heavily invested in the success of these technologies.

One of the most substantial legal challenges that stands between us and a clean energy future is the byzantine set of state and regional rules that hinder the construction of new electric transmission lines. Most utility-grade renewable resources are in remote areas, far from the populous regions that require their power. Linking them into the existing grid requires the approval of multiple jurisdictions, some of which are forbidden by state law from considering any benefits that accrue to non-residents.

To overcome this problem, Congress should pass a statute granting the FERC the authority to make siting decisions so as to cut through the bureaucratic processes that currently hold up renewable energy development. This statute should include the best practices of prior federal siting regulatory schemes to ensure that local voices and other values are not lost, but are instead balanced against the need to realize important national priorities. This is a substantial change for the power industry and will likely meet significant opposition from entrenched interests. But it is an essential reform if we hope to create an environment in which the technological and economic advances of the green power industry can be applied to their full capacity.

other parochial concerns to out-of-jurisdiction concerns, such as regional energy production and climate change, but noting that such changes are "the exception and not the rule" and are limited by the lack of universal acceptance of such principles).