

IF IT'S BROKE, FIX IT: FEDERAL REGULATION OF ELECTRICAL INTERSTATE TRANSMISSION LINES

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The current electrical transmission line regulatory system is broken, preventing the nation from expanding the electricity grid to keep up with growing energy consumption. The current regulatory scheme reserves to the states siting authority over where new lines are constructed, which often hinders project development because interstate lines are not seen as good for the state's own citizens. Natural gas does not suffer the same infirmity, because it has been under federal control since the Natural Gas Act of 1938. This Note traces the history of the regulation of the two energy delivery systems—beginning with local control over local utilities early in their development—to today's complex interstate systems. Then this Note analyzes three possible regulatory approaches: (1) state control; (2) an intermediate solution that retains state power to regulate line siting from each state's internal energy sources to its internal load centers, but allocates to the federal government the power to construct interstate lines from plentiful energy sources to distant load centers; and (3) a federal system mirroring the system for siting natural gas pipelines. Finally, this Note concludes that only a federal regulatory system modeled on the natural gas pipeline regulations is adequate to keep up with growing energy demand.

I. INTRODUCTION

The Commerce Clause of the U.S. Constitution grants the federal government the power to regulate commerce among the States, while the Tenth Amendment reserves to the individual states all powers not specifically delegated to the federal government or prohibited to the states by the Constitution.¹ Thus, the federal government has the authority to regulate interstate commerce, while state governments have the authori-

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1. U.S. CONST. art. I, § 8, cl. 3; U.S. CONST. amend. X; see also Judith M. Matlock, *Federal Oil and Gas Pipeline Regulation: An Overview* (Rocky Mtn. Min. L. Inst. Paper No.4, Feb. 23, 2011).

ty to regulate intrastate commerce. In 1938, Congress exercised its Commerce Clause authority to regulate interstate natural gas pipelines by passing the Natural Gas Act (the NGA).² Congress, however, has yet to assert similar authority to regulate interstate electrical transmission lines. For example, the Federal Energy Regulatory Commission (FERC) has had sole siting authority over natural gas pipelines since the beginning of the twentieth century,³ but it does not have similar siting authority over electrical transmission lines.

United States energy consumption continues to increase, reliance on energy sources that are distant from where the energy is desperately needed mandates that the electrical transmission grid is expanded and interconnected. The current regulatory scheme reserves to the states siting authority over electrical transmission line construction, which is often used to squander project development resources because development is seen as not being used for the good of that state's citizens.⁴ Consequently, interstate lines are barred from extending a source's energy to distant consumer needs. This system cannot continue to support the nation's people, and a solution employing federal regulation of siting transmission lines, similar to the federal regulatory system that built up the interstate natural gas pipeline system, must be implemented. The Federal Energy Regulatory Commission's (FERC's) most recent Order 1000, mandating states to consider regional impacts of transmission lines in their siting evaluations, reflects the maximum extension of FERC's reach under current legislative authorization. It is now left to Congress to mirror the NGA's authorization of FERC and implement a federally regulated transmission line system that considers the welfare of the entire nation in determining the need for an electrical line.

Part II presents an overview of electrical transmission in the United States and the history of its electrical system. The history of electrical transmission regulation is reviewed, as is the current state-governed regulation scheme. An overview of natural gas pipelines in the United States is then presented, including the history of the natural gas pipeline system. The history of gas pipeline regulations follows, as well as a description of the current federally regulated scheme and the security that interstate pipelines provide for energy supplies.

Part III considers three regulatory approaches that may be used to address the growing energy crisis. First, the current, state-regulated system is described. The independent nature of each state's regulations is discussed, and the discussion demonstrates how these regulations work to effectively restrict electrical development. Second, an intermediate

2. Natural Gas Act of 1938, Pub. L. No. 75-688, 52 Stat. 821 (codified as amended at 15 U.S.C. § 717 (2006)).

3. Section 7(c) of the NGA provides that natural gas companies must obtain a certificate of convenience and necessity before constructing facilities. 15 U.S.C. § 717f(c).

4. See *infra* Part II.A.3.

solution is presented that retains state powers to regulate line siting from each state's internal energy sources to its internal load centers, but allocates to the federal government the power to construct interstate lines from plentiful sources to distant load centers. Finally, a federally regulated system is presented as a third possible solution. Part IV recommends a solution mirroring natural gas pipeline regulations and explains why this is the best solution for electrical transmission lines.

II. BACKGROUND

This Part outlines the history of the electrical transmission line system in the United States and then describes the progression of the development of the regulatory structure surrounding the electrical transmission line industry. The development of the natural gas pipeline system is then laid out, followed by a history of the natural gas pipeline regulatory scheme.

A. *Electrical Transmission Lines in the United States*

This Section lays out the development of the electrical transmission line system in the United States, beginning first with the history of electrical transmission, and then outlining the development of the regulatory structure surrounding electrical transmission siting. Finally, the current electrical transmission line regulatory siting scheme is presented.

1. *History of Electrical Transmission*

This Subsection describes the history of the electrical transmission line system, starting with the invention of the electrical distribution system centered on localized generation, and then detailing the development of extensive transmission systems able to span great distances to carry power from energy sources to wherever the electricity is needed by consumers.

a. Development of the United States' Electrical Transmission System

The U.S. electric industry began in the 1880s, when inventors began to harness electricity by putting small generators next to the machines that used the electricity.⁵ The earliest distribution system arose in conjunction with Thomas Edison's Pearl Street electricity generating station

5. MATTHEW H. BROWN & RICHARD P. SEDANO, NAT'L COUNCIL ON ELEC. POLICY, *ELECTRICITY TRANSMISSION: A PRIMER 2* (2004), available at <http://energy.gov/sites/prod/files/oeprod/DocumentsandMedia/primer.pdf>.

in Manhattan, which opened September 4, 1882.⁶ This first system distributed power over copper lines using direct current, a highly inefficient method of transmitting electricity because of the inability to increase the voltage for long-distance transmission.⁷ This required placing the power plant within a mile of the final user of the energy, called the “load.”⁸ At the time, however, Pearl Street Station was idolized as “a model of efficiency,” serving fifty-nine customers from one generation unit.⁹ As other power stations appeared, they all took on the same distribution structure of power generators located close to the machines they powered, and consequentially the stations were limited to each only serving a few city blocks’ worth of load.¹⁰ Thus, “the electric power industry was composed of largely self-sufficient utilities with their own generation, transmission, and distribution facilities. . . . Because electric energy could not yet be transmitted efficiently over long distances, local utilities were not linked into large, centralized systems,” and each population center had its own local supply of electricity to meet its energy needs.¹¹

b. Transmission Lines Developed to Expand Reach

By the 1890s, this localized system began to show its flaws. Different types of loads, such as lighting, railway systems, and industrial electric motors, required different voltages. Accordingly, each load type within a city was using a different generator and transmitting over individual electric lines.¹² The solution to this inefficiency was high-voltage power transmission lines using alternating current (AC), which “allowed power lines to transmit power over much longer distances than the direct current system that Edison preferred.”¹³ This new system used transformers to “step up” voltage from generators to the high-voltage transmission lines, and then “step down” the voltage to that needed by the local distribution customers.¹⁴ Thus, it was able to serve both lighting and

6. *Id.*; ENERGY INFO. ADMIN., U.S. DEP’T OF ENERGY, THE CHANGING STRUCTURE OF THE ELECTRIC POWER INDUSTRY: AN UPDATE 105 (1996), available at <http://www.eia.gov/FTPROOT/electricity/056296.pdf>.

7. THOMAS P. HUGHES, NETWORKS OF POWER: ELECTRIFICATION IN WESTERN SOCIETY, 1880–1930, at 81–84 (1983).

8. BROWN & SEDANO, *supra* note 5, at 2.

9. ENERGY INFO. ADMIN., *supra* note 6, at 105.

10. *Id.*; BROWN & SEDANO, *supra* note 5, at 2.

11. Brief for FERC at 5, *New York v. FERC*, 535 U.S. 1 (2002) (Nos. 00-568, 00-809), 2001 WL 716903.

12. *History of Electric Power Transmission*, WIKIPEDIA, http://en.wikipedia.org/wiki/History_of_electric_power_transmission (last updated Feb. 4, 2013); see also *Building the Invisible City*, VIRTUAL NEW YORK, http://www.vny.cuny.edu/blizzard/building/building_fr_set.html (an etching of overhead telephone and telegraph wires on Broadway in 1890) (“Wires snapped on a regular basis as a result of over tension, wind, or ice weighing them down. The electrical wires carried a significant charge, but the other wires carried electricity as well. As wires snapped and lashed across streets, smashing against buildings, thrashing about, spraying sparks in all directions, blocks were rendered impassable until power to the downed lines could be cut.”).

13. BROWN & SEDANO, *supra* note 5, at 2.

14. Hughes, *supra* note 7, at 125.

industrial energy demands from a single electrical transmission line.¹⁵ Later, developers used these to introduce the practice of locating generating stations far from the stations' consumption centers.¹⁶ George Westinghouse built a hydroelectric generating station at Niagara Falls and an 11,000-volt AC transmission line to carry the power to Buffalo—more than twenty miles away—demonstrating the superiority of the new system's ability to supply electricity from one circuit for multiple end uses such as railways, lighting, and industry.¹⁷ From then on, the voltage of transmission lines and the size of generators grew larger and served larger loads.¹⁸

Today, our electrical transmission grid works as a “complex, interstate machine” moving the electricity from the generators that produce it to the areas where consumers need it.¹⁹ That electricity gets “dropped off” at substations that deliver it into the local distribution system and send it to the consumers at the end of the distribution lines.²⁰ “Transmission lines” are differentiated from “distribution lines” generally by the distance they travel and the voltage they carry: transmission lines span longer distances and carry the electricity at higher voltages to avoid line losses, while distribution lines span shorter, more localized distances and carry the electricity at lower voltages so it is ready for end use by the consumers.²¹ The “scope and complexity of the transmission system and its components . . . cannot be overstated—there are over 200,000 miles of transmission lines, and more than 1,800 entities own or operate portions of it.”²²

2. *History of Electrical Transmission Regulation*

This Subsection outlines the history of electrical transmission regulation, beginning with the state and local assertion of authority over the industry. As electrical transmission lines grew longer and crossed state boundaries, however, the states no longer had jurisdiction over the now-interstate lines, so the federal government stepped in to take over regulating parts of the industry.

15. *Id.*

16. *Id.* at 119.

17. BROWN & SEDANO, *supra* note 5, at 2; ENERGY INFO. ADMIN., *supra* note 6, at 105.

18. BROWN & SEDANO, *supra* note 5, at 2.

19. John R. Norris & Jeffery S. Dennis, *Electric Transmission Infrastructure: A Key Piece of the Energy Puzzle*, NAT. RESOURCES & ENV'T, Spring 2011, at 3, 5 (2011) (citing N. AM. ELEC. RELIABILITY CORP. & U.S. DEP'T OF ENERGY, HIGH-IMPACT, LOW-FREQUENCY EVENT RISK TO THE NORTH AMERICAN BULK POWER SYSTEM 9 (2010)).

20. *Id.*

21. *Id.*

22. *Id.*

a. Implementation of State Regulation

As a consequence of the growing efficiencies from the more capable power transmission system, the multiple small plants and local distribution systems established in the 1880s and 90s merged with, began purchasing power from, or were absorbed by larger, more efficient private multiservice systems, which then interconnected with high-voltage transmission lines.²³ Private electric utilities also consolidated into larger utility holding companies which together controlled larger dominant electric utilities, peaking in the 1920s when the sixteen largest companies controlled seventy-five percent of all electricity generated.²⁴

As utility service areas grew to extend beyond city boundaries, and then across state lines, state governments extended the jurisdiction of their regulatory commissions to also regulate electric companies.²⁵ By 1914, over forty states had regulatory commissions with “the authority to franchise the utilities, to regulate their rates, financing, and service, and to establish utility accounting systems.”²⁶ The electric industry continued its growth and consolidation, and by 1932 only eight giant companies controlled the majority of the utility business.²⁷ These giants interconnected with neighboring utilities, and issues arose around exchanges of electricity in interstate commerce, which was beyond state power to regulate, as were the interstate holding companies controlling local utilities.²⁸ These companies’ practices came under criticism during the 1920s and 1930s, and many people began pushing for federal regulation of the electric power industry.²⁹

b. Federal Regulation Steps In

The changes resulting from the rapid transformation of the original local electric system into an interstate system led the U.S. Supreme Court to recognize that electricity is not an intrastate commodity, but is instead an interstate commodity subject to federal regulation in addition to state regulation.³⁰ Later Court rulings affirmed this federal jurisdiction over the transmission system.

The Public Utility Act of 1935 was the first major federal statute governing the electric power industry, enacted to address the concerns

23. ENERGY INFO. ADMIN., *supra* note 6, at 105–06.

24. *Id.* at 106.

25. BROWN & SEDANO, *supra* note 5, at 3.

26. ENERGY INFO. ADMIN., *supra* note 6, at 106; *see also* BROWN & SEDANO, *supra* note 5, at 3.

27. BROWN & SEDANO, *supra* note 5, at 3.

28. Brief for FERC at 5, *New York v. FERC*, *supra* note 11.

29. *Id.* at 5–6; BROWN & SEDANO, *supra* note 5, at 3.

30. *Pub. Utils. Comm’n of R.I. v. Attleboro Steam & Elec. Co.*, 273 U.S. 83, 89 (1927).

surrounding the holding company practices.³¹ Title I, known as the Public Utility Holding Company Act (PUHCA), limits the geographical scope of utility holding companies' corporate structure, providing for regulation by the Securities and Exchange Commission. In Title II, known as the Federal Power Act of 1935 (the FPA), Congress wanted "to provide effective federal regulation of the expanding business of transmitting and selling electric power in interstate commerce."³² This enabling legislation "authorizes FERC to regulate 'the sale of electric energy at wholesale' as well as 'the transmission of electric energy in interstate commerce,'" while maintaining "state jurisdiction over the siting and construction of facilities used for generation and local distribution or for the transmission of energy in intrastate commerce."³³

Supreme Court cases following the passage of PUHCA and the FPA helped clarify the extent of FERC's power, as well as the qualifying criteria for federal regulation. In *Jersey Central Power & Light Co. v. Federal Power Commission* (FPC), the Supreme Court established that FERC jurisdiction results when electricity flows into or out of a state, becoming interstate commerce, whether or not there is technically a "sale" in interstate commerce.³⁴ *Connecticut Light & Power Co. v. Federal Power Commission* further clarified the FPA by explaining that even if the distribution systems of a utility normally operate in intrastate transmission, just a few cross-border transactions make the utility's transmission system subject to FERC jurisdiction, excluding however, utility lines used solely for local distribution.³⁵ Thus, states retained jurisdiction over siting of generation and transmission facilities, resulting in a combination of state and federal regulation of the electric industry for nearly the next fifty years.³⁶

Two other major pieces of federal legislation were important in shaping the transmission system in the subsequent years: the 1978 Public Utility Regulatory Policies Act (PURPA) and the 1992 Energy Policy Act (EPAAct).³⁷ In PURPA, the federal government, for the first time, required utilities to purchase power from non-utility companies and required that the non-utility generators be given access to the transmission system in order to deliver power onto the grid.³⁸ EPAAct requires that competing generators or utilities be given access to the utilities' transmis-

31. Public Utility Act of 1935, Pub. L. No. 74-333, 49 Stat. 803 (repealed 2005); Brief for FERC, *New York v. FERC*, *supra* note 11, at 5. PUHCA also gave the Federal Power Commission (FPC) regulatory authority over some centralized service companies.

32. *Gulf States Utils. Co. v. FPC*, 411 U.S. 747, 758 (1973); *see* Federal Power Act of 1935, 16 U.S.C. § 791a (2006).

33. Denise L. Desautels, *Who Should Regulate the Siting of Electric Transmission Lines Anyway? A Jurisdictional Study*, ELEC. J., May 2005, at 11, 18 (quoting 16 U.S.C. § 824(a)).

34. *Jersey Cent. Power & Light Co. v. FPC*, 319 U.S. 61, 71 (1943).

35. *Conn. Light & Power Co. v. FPC*, 324 U.S. 515, 523-24 (1945).

36. *BROWN & SEDANO*, *supra* note 5, at 3.

37. *Id.* at 4.

38. *Id.*

sion grid on rates and terms that are comparable to those that the utility would charge itself for access to the same grid.³⁹ In 1993, FERC began ordering utilities, on a “case-by-case basis, to transmit the electricity of competing wholesale sellers over the utilities’ transmission lines.”⁴⁰

c. Recent Regulatory Developments

To enable the continued accomplishment of the goals of EPAct, FERC has issued several orders since the 1990s. In 1996, Order 888 mandated utilities to separate their transmission and generation businesses.⁴¹ Order 888 forbids a transmission business from giving its own power plants preferential access to lines and requires non-discriminatory, open-access transmission service to bring more efficient, lower-cost power to the nation’s electricity consumers.⁴²

The same day that FERC issued Order 888, it also issued Order 889, “addressing the separation of vertically integrated utilities’ transmission and merchant functions, the information transmission providers were required to make public, and the electronic means they were required to use to do so,” namely the Open Access Same-Time Information System (OASIS).⁴³ Order 889 directed that “all public utilities that owned, controlled or operated facilities used in the transmission of electric energy in interstate commerce were required to create or participate” in OASIS, an online system that provides transmission customers information about the available transmission capacity (ATC) on each provider’s lines so that the customers can be aware of which lines have space for transmitting their power.⁴⁴

Nine states challenged Order 888 in 2002, but the Supreme Court upheld issuance of the Order.⁴⁵ The Court held that FERC has broad authority to regulate transmission in interstate commerce even when that transmission involves unbundled retail transactions, explaining “trans-

39. *Id.* at 4–5; Energy Policy Act of 1992, Pub. L. No. 102-486, 106 Stat. 2776 (1992) (codified at 15 U.S.C. § 79, repealed 2005).

40. Debbie Swanstrom & Meredith M. Jolivet, *DOE Transmission Corridor Designations & FERC Backstop Siting Authority: Has the Energy Policy Act of 2005 Succeeded in Stimulating the Development of New Transmission Facilities?*, 30 ENERGY L.J. 415, 419 (2009); see Fla. Mun. Power Agency v. Fla. Power & Light Co., 65 FERC ¶ 61,125, 61,599, 1993 WL 594575 (1993).

41. BROWN & SEDANO, *supra* note 5, at 5; see Promoting Wholesale Competition Through Open Access Non-discriminatory Transmission Services, 61 Fed. Reg. 21,540 (May 10, 1996) (codified in scattered sections of C.F.R.).

42. Promoting Wholesale Competition Through Open Access Non-discriminatory Transmission Services, 61 Fed. Reg. at 21,593; BROWN & SEDANO, *supra* note 5, at 5.

43. Preventing Undue Discrimination and Preference in Transmission Service, 72 Fed. Reg. 12,266, 12,270 (Mar. 15, 2007) (codified in 18 C.F.R. pts. 35, 37); Open Access Same-Time Information System, 61 Fed. Reg. 21,737 (May 10, 1996) (codified in 18 C.F.R. pt. 37).

44. Preventing Undue Discrimination and Preference in Transmission Service, 72 Fed. Reg. 12,266, 12,270 (Mar. 15, 2007) (codified in 18 C.F.R. pts. 35, 37); Open Access Same-Time Information System, 61 Fed. Reg. 21,737 (May 10, 1996) (codified in 18 C.F.R. pt. 37).

45. New York v. FERC, 535 U.S. 1, 26–28 (2002).

missions on the interconnected national grids constitute transmissions in interstate commerce.”⁴⁶

In 2005, Congress addressed transmission again, this time focusing on “developing a robust future transmission infrastructure” by passing the Energy Policy Act of 2005 (EPAAct 2005).⁴⁷ EPAAct 2005 reflected congressional concern over U.S. energy supply, the culmination of many years’ attempts at federal energy reform.⁴⁸ It “substantially [changed] the legal authority of the FERC and other federal agencies with respect to the siting, permitting, development, and operation of electric transmission facilities,” and was the first time in history that some regulatory jurisdiction over siting and permitting of electric transmission lines shifted from the states to FERC.⁴⁹

EPAAct 2005 modernized the FPA in four ways with respect to the transmission of electricity in interstate commerce. One of these granted FERC authority to issue permits to site interstate transmission lines in National Interest Electric Transmission Corridors (NIETCs).⁵⁰ The states retain the authority to act first to authorize these lines, but if they fail to do so, or unnecessarily delay the proceedings, then FERC’s authority over these NIETCs comes into play. FERC can then site the lines independently of the states’ wishes. Hence, this authority is commonly referred to as FERC “backstop” permitting or siting authority.⁵¹

46. *See id.* at 16.

47. Norris & Dennis, *supra* note 19, at 5.

48. EPAAct’s scope has been broad:

EPAAct 2005 comprehensively reformed federal energy laws to enhance our nation’s energy security and reduce dependence on foreign fuel sources. It reflected Congress’ concern that demands for energy were outpacing domestic supply, and that the reliability of energy infrastructure in many parts of the country was in jeopardy. Congress designed EPAAct 2005 to promote energy efficiency and a diversity of fuel sources, as well as strengthen the interstate delivery system for energy supplies.

Swanstrom & Jolivert, *supra* note 40, at 421–22.

49. *Id.* at 420–21; *see* Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 599; Norris & Dennis, *supra* note 19, at 5.

50. NIETCs are geographic areas of national importance experiencing transmission capacity constraints or congestion that adversely affects consumers, as determined by the Secretary of the Department of Energy (DOE). 16 U.S.C. § 824p(a)–(d) (2006); Swanstrom & Jolivert, *supra* note 40, at 422.

51. 16 U.S.C. § 824p(b); *see* Swanstrom & Jolivert, *supra* note 40, at 422.

Before the FERC can issue a permit to construct or modify transmission facilities in a NIETC, it must make the following findings:

(1)(A) a State in which the transmission facilities are to be constructed or modified does not have authority to—

(i) approve the siting of the facilities; or

(ii) consider the interstate benefits expected to be achieved by the proposed construction or modification of transmission facilities in the State;

(B) the applicant for a permit is a transmitting utility under this chapter but does not qualify to apply for a permit or siting approval for the proposed project in a State because the applicant does not serve end-use customers in the State; or

(C) a State commission or other entity that has authority to approve the siting of the facilities has—

(i) withheld approval for more than 1 year after the filing of an application seeking approval pursuant to applicable law or 1 year after the designation of the relevant national interest electric transmission corridor, whichever is later; or

In 2007, Order 890 updated FERC's open-access transmission rules by "eliminating the wide discretion that transmission providers currently have in calculating" ATC on their lines, instead directing the North American Electric Reliability Corporation (NERC) "to develop consistent methodologies for ATC calculation and to publish those methodologies to increase transparency."⁵² This important reform of publishing available transmission capacity online via OASIS, calculated using a consistent methodology, was intended to ensure that customers are treated fairly when seeking alternative power suppliers.⁵³ Further, FERC "added a formal requirement that . . . transmission providers participate in transmission planning processes at both the local and the regional level" and add an attachment describing their planning process.⁵⁴

While EAct 2005 was arguably intended to address some of the regulatory risks of multistate projects, two cases have "called into question how effective that [backstop] authority will actually be in addressing the challenges faced by multistate projects."⁵⁵ In 2009 the Fourth Circuit, in the first case to challenge FERC's backstop authority, considered the interpretation that the phrase "withheld approval for more than 1 year" in § 216(b)(1)(C)(i) allowed FERC to overstep lawful state denials of permit applications.⁵⁶ The Fourth Circuit held that the statute giving FERC authority to grant siting permits after a state has "withheld approval for more than 1 year after the filing of an application," does not apply when a state affirmatively denies a siting permit.⁵⁷ In effect, this decision "gives the states the ability to avoid federal preemption entirely by simply denying an application outright (rather than taking too long to

(ii) conditioned its approval in such a manner that the proposed construction or modification will not significantly reduce transmission congestion in interstate commerce or is not economically feasible;

(2) the facilities to be authorized by the permit will be used for the transmission of electric energy in interstate commerce;

(3) the proposed construction or modification is consistent with the public interest;

(4) the proposed construction or modification will significantly reduce transmission congestion in interstate commerce and protects or benefits consumers;

(5) the proposed construction or modification is consistent with sound national energy policy and will enhance energy independence; and

(6) the proposed modification will maximize, to the extent reasonable and economical, the transmission capabilities of existing towers or structures.

In some instances—including where interstate compacts are entered into by states—the FERC may lack authority to issue any permit at all.

Swanstrom & Jolivert, *supra* note 40, at 440–41 (citing 16 U.S.C. § 824p(b), (i)(4)).

52. Preventing Undue Discrimination and Preference in Transmission Service, 72 Fed. Reg. 12,266, 12,267 (Mar. 15, 2007).

53. *Id.* at 12,270.

54. Swanstrom & Jolivert, *supra* note 40, at 420.

55. Norris & Dennis, *supra* note 19, at 6.

56. Piedmont Envtl. Council v. FERC, 558 F.3d 304, 313–14 (4th Cir. 2009); Norris & Dennis, *supra* note 19, at 6.

57. Piedmont Envtl. Council, 558 F.3d at 315. "One judge dissented from the majority opinion of the Court, stating that the FERC correctly interpreted 'withheld approval [of a permit application] for more than 1 year' to include cases in which the permit application was denied." Swanstrom & Jolivert, *supra* note 40, at 450 (citing 558 F.3d at 320 (Traxler, J., dissenting)).

act or conditioning an approval excessively).⁵⁸ In early 2011, the Ninth Circuit in *California Wilderness Coalition v. Department of Energy* vacated and remanded a designation by the DOE of a NIETC.⁵⁹ These two “decisions have significantly reduced the utility of these federal authorities in reducing the siting uncertainty facing multistate transmission projects.”⁶⁰

Order 1000, issued in July 2011, requires “each public utility transmission provider to participate in a regional transmission planning process that produces a regional transmission plan” that satisfies Order 890 principles and meets the region’s needs more efficiently or cost-effectively.⁶¹ It also requires each provider to describe procedures for “consideration of transmission needs driven by Public Policy Requirements in the local and regional transmission planning processes”⁶² and “improves coordination between neighboring transmission planning regions for new interregional transmission facilities”⁶³ by requiring public utility providers in each pair of neighboring regions to coordinate to determine if more efficient or cost-effective solutions are available.⁶⁴ Despite the regional interstate requirements of Order 1000, FERC explicitly retained state siting authority, stating that “[n]othing in this Final Rule is intended to . . . affect state or local laws or regulations with respect to the construction of transmission facilities, including but not limited to authority over siting or permitting of transmission facilities.”⁶⁵ This order has not yet fully played itself out, but it has the potential to be a step in a movement toward an interconnected national transmission regulatory system.⁶⁶

3. Current Regulatory Siting Authority

Today, each state has individual regulations for “the siting and construction and corresponding eminent domain and public safety jurisdiction over the electric industry, including interstate transmission lines.”⁶⁷ This means developers of interstate transmission lines must seek approval from each respective state, as FERC has no jurisdiction over the construction of new facilities.⁶⁸ State siting proceedings revolve around determining the “need” for the proposed interstate line, an analysis that

58. *Id.* at 449.

59. *Cal. Wilderness Coal. v. DOE*, 631 F.3d 1072, 1079 (9th Cir. 2011); Norris & Dennis, *supra* note 19, at 6.

60. Norris & Dennis, *supra* note 19, at 6.

61. Transmission Planning and Cost Allocation, 76 Fed. Reg. 49,842–49,854–55 (Aug. 11, 2011) (codified at 18 C.F.R. pt. 35).

62. *Id.* at 49,876.

63. *Id.* at 49,842.

64. *Id.* at 49,904–05.

65. *Id.* at 49,891.

66. See *infra* Part IV.

67. Desautels, *supra* note 33, at 12, 18.

68. *Id.*

entails slightly differing factors and considerations in each individual state.⁶⁹ Most states' definitions, however, have some concept of "need" as pertaining to the state's own citizens, with no regard for the regional or national impacts.⁷⁰ States weigh the knowledge that "the need for an interstate transmission line may not include servicing customers of the state through which it will be constructed" against the detriments that the line will bring to the state's citizens, and thus often disapprove proposed lines.⁷¹ The social and political incentives to put a state's own citizens' wishes above those of the greater region are many and often win out.

In order to build transmission lines, a developer must be able to condemn the necessary land through eminent domain, because owners of the land may not be willing sellers. Currently, state regulators are the only entities with the power to grant eminent domain authority, depending on a developer's ability to prove the "public benefit" of the proposed line.⁷² This is a problem, however, because "for many states, the public benefit is based on the developer being a public utility under state law."⁷³ For developers attempting to construct interstate lines, this could mean that a single developer is faced with the hurdle of becoming a "public utility" in multiple states—an obstacle capable of stalling a project.

Beyond these two key complications, developers seeking to construct transmission lines across state lines are also faced with the hurdles inherent in being subject to multiple regulatory bodies. Developers must "comply with the regulatory procedures of each impacted state and, at times, each county and municipality," all with their own regulations, specifications, criteria, demands, and timelines, with each ultimately hav-

69. See, e.g., FLA. STAT. ANN. § 403.537(c) (West 2012) ("In the determination of need, the commission shall take into account the need for electric system reliability and integrity, the need for abundant, low-cost electrical energy to assure the economic well-being of the residents of this state, the appropriate starting and ending point of the line, and other matters within its jurisdiction deemed relevant to the determination of need."); MONT. CODE ANN. § 75-20-301(2) (2011) ("In determining that the facility will serve the public interest, convenience, and necessity under subsection (1)(f), the department shall consider: (a) the items listed in subsections (1)(a) and (1)(b); (b) the benefits to the applicant and the state resulting from the proposed facility; (c) the effects of the economic activity resulting from the proposed facility; (d) the effects of the proposed facility on the public health, welfare, and safety; (e) any other factors that it considers relevant."); ME. REV. STAT. ANN. tit. 35-A, § 3132(6) (2011) ("In determining public need, the commission shall, at a minimum, take into account economics, reliability, public health and safety, scenic, historic and recreational values, state renewable energy generation goals, the proximity of the proposed transmission line to inhabited dwellings and alternatives to construction of the transmission line, including energy conservation, distributed generation or load management."); KAN. STAT. ANN. § 66-1,178(b) (West 2000) ("Upon the filing of an application pursuant to subsection (a), the commission shall . . . determine the necessity for and the reasonableness of the location of the proposed electric transmission line.") (interpreted by *Kan. City Power & Light Co. v. State Corp. Comm'n*, 670 P.2d 1369, 1371 (Kan. Ct. App. 1983) as meaning that "[t]he provisions of the Kansas Siting Act only direct a determination of the reasonableness of the location of the proposed electric transmission line. No authority is granted to determine the necessity or public convenience of the line." (internal citations omitted)).

70. See, e.g., FLA. STAT. ANN. § 403.537(c); MONT. CODE ANN. § 75-20-301(2); ME. REV. STAT. tit. 35-A, § 3132(6).

71. Desautels, *supra* note 33, at 13.

72. *Id.*

73. *Id.*

ing the power to withhold approval and defeat an entire project.⁷⁴ Examples of such burdens include state requirements that (1) a certain number of public hearings be held in affected counties or towns, (2) the utility file an application with both a preferred route and an alternate route for the power line, (3) the utility present an analysis of alternatives to building the transmission line, and (4) specific procedures be followed to appeal a decision.⁷⁵ Although such procedures retain local “control and enforcement over the routing and environmental impacts of transmission lines,” the different regulations in each locality result in development timelines that are “lengthier, costlier, and riskier” than if developers were subject to a single set of regulations.⁷⁶

B. *Natural Gas Pipelines in the United States*

This Section lays out the development of the natural gas pipeline system in the United States, beginning with the history of natural gas pipelines and then outlining the development of the regulations for natural gas pipeline siting.

1. *History of Natural Gas Transmission*

This Subsection describes the history of the natural gas pipeline system, starting with the invention of a pipe to carry the gas to local consumers, and then details the development of extensive pipeline systems able to span great distances to carry natural gas from the wells where it is obtained to wherever the gas is needed by consumers.

a. *Development of the United States’ Natural Gas System*

Natural gas “was discovered and identified in America as early as 1626, when French explorers discovered natives igniting gases that were seeping into and around Lake Erie.”⁷⁷ In 1821, William A. Hart drilled a twenty-seven-foot well in Fredonia, New York, trying to get a stronger flow of the gas he noticed seeping from the surface, “the first well intentionally drilled to obtain natural gas.”⁷⁸ In 1859, Colonel Edwin Drake dug a well just outside Titusville, Pennsylvania, hitting oil and natural gas at sixty-nine feet below the surface.⁷⁹ A two-inch-thick pipe was built to carry the gas from Drake’s well five-and-a-half miles into Titusville.⁸⁰

74. *Id.* at 19.

75. BROWN & SEDANO, *supra* note 5, at 21.

76. Desautels, *supra* note 33, at 19.

77. *History*, NATURALGAS.ORG, <http://www.naturalgas.org/overview/history.asp> (last visited Feb. 15, 2013).

78. *Gas History*, U.S. DEP’T OF ENERGY, http://fossil.energy.gov/education/energylessons/gas/gas_history.html (last modified Feb. 12, 2013).

79. NATURALGAS.ORG, *supra* note 77.

80. *Id.*

Drake's well and the subsequent laying of this pipeline is regarded as the beginning of the natural gas industry, proving that natural gas could be brought safely and easily from its source many miles away to be used locally.⁸¹

Throughout the remainder of the nineteenth century, "natural gas was used almost exclusively as a fuel for lamps" on city streets, "because there were no pipelines to bring the gas into individual homes" for private use.⁸² Then in 1885, Robert Bunsen invented a burner that mixed air with natural gas, allowing gas to be brought inside the home to be used for cooking and warmth.⁸³ Natural gas's development as a source of electricity was hindered, however, due to its gaseous nature; no method of storing and transporting the gas existed, so if it was not used immediately, it was just allowed to vent into the atmosphere and went to waste.⁸⁴ Thus, natural gas pipelines existed relatively early—for example, a very rudimentary 120-mile-long pipeline carried gas from Indiana to Chicago in 1891—but it took the industrial and technological revolution of World War II to spur the growth of the nation's pipeline network.⁸⁵

During the "1950s and 1960s, thousands of miles of pipeline were constructed throughout the United States," growing to today's national pipeline structure encompassing over 210 pipeline systems that total over 305,000 miles, a distance long enough to stretch to the moon and back twice.⁸⁶ This natural gas pipeline network is a highly integrated transmission and distribution grid that can transport natural gas to and from nearly any location in the country, due in large part to the 11,000 delivery points, 5000 receipt points, and 1400 interconnection points that provide for seamless transfer among interconnections.⁸⁷

b. Interstate Natural Gas Pipelines

Two-thirds of the United States relies almost completely on the interstate pipeline system for its supply of natural gas, which is often routed through several interstate pipeline systems before it reaches its final destination.⁸⁸ The interconnecting of interstate and intrastate natural gas pipelines allows the transportation of natural gas from distant locations in the United States to become a relatively seamless operation.⁸⁹ The

81. *Id.*

82. U.S. DEP'T OF ENERGY, *supra* note 78.

83. *Id.*

84. NATURALGAS.ORG, *supra* note 77.

85. U.S. DEP'T OF ENERGY, *supra* note 78 (noting that improvements in metals, welding techniques and pipe making during the War made pipeline construction more economically attractive).

86. *Id.*; ABOUT U.S. NATURAL GAS PIPELINES—TRANSPORTING NATURAL GAS, U.S. ENERGY INFO. ADMIN. 1 (June 2007), available at http://www.eia.gov/pub/oil_gas/natural_gas/analysis_publications/ngpipeline/fullversion.pdf.

87. *Id.* at 1.

88. *Id.* at 2.

89. *Id.* at 3.

“intrastate pipeline systems often [transport] natural gas from production areas directly to consumers in local markets,” but “it is the interstate pipeline system’s long-distance, high-capacity trunklines that supply most of the major natural gas markets in the United States.”⁹⁰

The U.S. Energy Information Administration identifies six geographic regions of pipelines, with the Southwest region containing the most individual pipeline systems (over ninety), and the longest pipeline mileage (over 106,000 miles).⁹¹ These natural gas pipeline systems link the plentiful gas production areas of the Southwest with the other regions of the country, carry the largest levels of pipeline capacity, and supply gas to almost every major metropolitan area in the United States.⁹² The Midwest region has long received most of its natural gas supplies from the Southwest region’s producing areas, although recently pipelines from Canada have grown in importance.⁹³ Chicago, Illinois, for example, is served by the Natural Gas Pipeline Company of America,⁹⁴ the Panhandle Eastern Pipeline Company of America,⁹⁵ and the ANR Pipeline Company,⁹⁶ as well as the Alliance Pipeline Company and Northern Border Pipeline Company.⁹⁷ Thus, Chicago is a prime example of a major metropolitan area with few natural gas sources located nearby that remains able to utilize the benefits of the natural gas of distant regions due to the interstate pipeline system.

2. *History of Natural Gas Pipeline Regulation*

This Subsection outlines the history of natural gas pipeline regulation, beginning with the initial state and local assertion of authority over the industry. As the pipelines grew and crossed state boundaries, however, the states no longer had jurisdiction over the now-interstate pipelines, so the federal government took over the regulation of the industry. Although not granted certification powers initially, the federal government quickly realized the necessity of federal siting authority to enable the expansion of the interstate pipeline network and amended the necessary legislation to grant FERC these certification powers.

90. *Id.*

91. *Id.*

92. *Id.* at 16–21.

93. *Id.* at 8.

94. *Id.* at 2 (explaining how a pipeline carries gas from the Texas Permian Basin and the Gulf of Mexico).

95. *Transportation and Storage Services*, PANHANDLE ENERGY, http://www.panhandleenergy.com/serv_trans.asp (last visited Feb. 15, 2013).

96. U.S. ENERGY INFO. ADMIN., *supra* note 86, at 2; *see also* ANR PIPELINE, http://www.anrpl.com/company_info/ (last visited Feb. 15, 2013) (describing pipeline carrying gas from the deep-water Gulf of Mexico).

97. U.S. ENERGY INFO. ADMIN., *supra* note 86, at 2; *see also* *About Us—Interactive Map*, ALLIANCE PIPELINE, <http://www.alliance-pipeline.com/imap/imap.aspx?cid1=1&cid2=500&cid3=0> (last visited Feb. 15, 2013) (showing two pipelines, both carrying additional gas from Western Canada).

a. Implementation of State Regulation

The local regulation of natural gas pipelines dates back to the mid-1800s with the beginning of the industry, when natural gas was manufactured mostly from coal and delivered locally “within the same municipality in which it was produced.”⁹⁸ “Local governments, seeing the natural monopoly characteristics of the natural gas market at the time, deemed natural gas distribution a business that affected the public interest to a sufficient extent to merit regulation.”⁹⁹ Thus, local governments began regulating the rates these monopolies charged and implemented regulations preventing them from abusing market power.¹⁰⁰ As the natural gas industry expanded and began to be shipped between municipalities, however, the gas markets were no longer divided by locality boundaries and were thus outside the reach of local governments’ regulations and oversight.¹⁰¹

In response to this, state governments stepped in to regulate these now “intrastate” pipelines by creating public utility commissions to oversee natural gas distribution.¹⁰² As technology progressed to allow the construction of interstate pipelines, however, the state regulatory commissions were unable to regulate natural gas distribution that extended outside state boundaries.¹⁰³ Although several states attempted to assert jurisdiction over interstate pipelines, the “U.S. Supreme Court held that such state oversight of interstate pipelines violated the interstate commerce clause of the U.S. Constitution,” and thus exempted interstate pipeline companies from the regulatory power of state government.¹⁰⁴ Without any federal regulatory oversight in place, this meant that pipeline companies were completely unregulated, triggering concern about the companies’ monopolistic power and industry conglomeration.¹⁰⁵

b. Federal Regulation Steps In

In 1935, the federal government, concerned about the market power exerted by the eleven giant natural gas holding companies that controlled massive amounts of the interstate pipeline system, stepped in to take over regulation of the natural gas industry by passing the Public Utility Holding Company Act (PUHCA).¹⁰⁶ PUHCA limited the ability of the

98. *The History of Regulation*, NATURALGAS.ORG, <http://www.naturalgas.org/regulation/history.asp#earlydays> (last visited Feb. 15, 2013).

99. *Id.*

100. *Id.*

101. *Id.*

102. *Id.*

103. *Id.*

104. NATURALGAS.ORG, *supra* note 98; *see* FPC v. Panhandle E. Pipe Line Co., 337 U.S. 498, 502–03 (1949).

105. NATURALGAS.ORG, *supra* note 98.

106. *Id.*

holding companies to gain more power over a public utility market but did not cover regulation of interstate gas sales, a problem that Congress later resolved with the passage of the NGA in 1938.¹⁰⁷ The NGA gave the Federal Power Commission (FPC—later renamed FERC)¹⁰⁸ regulatory authority over interstate natural gas sales, as well as certification powers that were extended in 1942 to specify that no new interstate pipeline could be built without the approval of the FPC.¹⁰⁹

FERC now has authority over whether, when, where, and how interstate natural gas pipelines are to be built under NGA section 7, specifying that a “natural gas company planning to construct, expand, acquire or operate any facility for the transportation of natural gas in interstate commerce must first obtain a certificate of public convenience and necessity” from FERC.¹¹⁰ “FERC issues a certificate only if it determines that the applicant is able and willing to comply with the NGA and FERC’s regulatory scheme and that the proposed project ‘is or will be required by the present or future public convenience and necessity.’”¹¹¹ A federal agency thus regulates siting and construction of interstate pipelines, and “public convenience and necessity” are determined from a broader perspective than that used by a state agency.¹¹²

Under NGA section 3, FERC also may attach “any reasonable terms and conditions” that it finds necessary, “including that the applicants obtain all other federal and state permits required by federal law.”¹¹³ Accordingly, the NGA gave the federal government regulatory power over the transportation and sale of natural gas in interstate commerce, yet remains complementary in its operation to those regulatory schemes of the states by reserving state authority over the intrastate and local distribution of natural gas.¹¹⁴

107. *Id.*

108. See 16 U.S.C. §§ 824-825r (2006); BORIS I. BITTKER & BRANNON P. DENNING, BITTKER ON THE REGULATION OF INTERSTATE AND FOREIGN COMMERCE 3-44 (1999).

109. NATURALGAS.ORG, *supra* note 98. Section 7(c) of the NGA provides that natural gas companies must obtain a certificate of convenience and necessity before constructing jurisdictional facilities. Natural Gas Act of 1938, 15 U.S.C. § 717f(c) (2006). The regulations concerning applications for certificates of convenience and necessity and orders permitting and approving abandonment of facilities are published in the Code of Federal Regulation. 18 C.F.R. §§ 157.1–157.22 (2012).

110. Joan M. Darby et al., *The Role of FERC and the States in Approving and Siting Interstate Natural Gas Facilities and LNG Terminals After the Energy Policy Act of 2005—Consultation, Preemption and Cooperative Federalism*, 6 TEX. J. OIL GAS & ENERGY L. 335, 339 (2011).

111. *Id.* at 339–40 (quoting Natural Gas Act of 1938, 15 U.S.C. § 717f(c)).

112. *How Are Pipelines Regulated?*, INTERSTATE NATURAL GAS ASS’N OF AM., <http://www.ingaa.org/cms/143.aspx> (last visited Feb. 15, 2013). “The Natural Gas Act of 1938 empowers the FERC with plenary authority to conduct the review of a proposed interstate natural gas pipeline, coordinate environmental and land user permitting with other federal and state agencies, and determine [that] a proposed pipeline meets the ‘public convenience and necessity.’ As part of approving a pipeline application, FERC can specify the conditions under which the pipeline can be constructed, including the route used.” *Id.*

113. Darby et al., *supra* note 110, at 340 (citing the Natural Gas Act of 1938, 15 U.S.C. § 717f(e)).

114. See *N.W. Cent. Pipeline Corp. v. State Corp. Comm’n of Kan.*, 489 U.S. 493 (1989); *Panhandle E. Pipe Line Co. v. Pub. Serv. Comm’n of Ind.*, 332 U.S. 507 (1947); *Pub. Utils. Comm’n of Ohio v. United Fuel Gas Co.*, 317 U.S. 456 (1943).

III. ANALYSIS

The electrical regulatory framework built up in the United States provides developers with a confusing labyrinth of statutory language and hurdles to overcome in their attempts to construct interstate transmission lines. The practical difficulties entailed by this framework led government officials and commentators to consider alternate schemes that could make the regulatory process simpler, thus speeding up development of interstate transmission lines.

This Part addresses three possible regulatory approaches that may be used to govern the growing energy crisis. First, the current, state-regulated system is presented. Statutory language is discussed as suggesting that the current system can be maintained and still provide the expansion needed. Second, an intermediate solution is presented that retains state power to regulate line siting from each state's internal energy sources to its internal load centers, but allocates to the federal government the power to construct interstate lines from plentiful energy sources to distant load centers. This approach is also supported by current statutes and could be implemented, without a major overhaul of the system, to allow the necessary electric grid expansion. Finally, a federally regulated system is presented as a third possible solution, mirroring the system for siting natural gas pipelines. This solution would entail a greater regulatory system change, but would result in the most cohesive regulations, enabling ease of system expansion.

A. *State Regulated Interstate System*

This Section discusses the possibility of retaining the current state-regulated system of electrical transmission line siting, explaining the regulatory system currently in place, as well as statutory language that, if implemented broadly or interpreted in a way conducive to interstate line development, could provide the necessary regulatory capabilities to expand the electric grid. Policy arguments advanced by commentators and surveyors are next presented, arguing both for and against the retention of the current system.

1. *The Current State Regulatory Scheme Allows Interstate Line Construction*

The current state-regulated system, which revolves around state-allocated power of eminent domain bestowed upon developers wishing to construct interstate transmission lines, provides the first potential regulatory option.¹¹⁵ Under the Fifth Amendment, a state “may take privately-owned property and convert it to public use, so long as it demon-

115. See *supra* Part II.A.3 for a description of current state regulatory system.

strates a public need for the project and adequately compensates the property owner for its loss.”¹¹⁶ When siting transmission lines, developers often encounter “holdout” property owners, whose refusal to sell their land threatens the success of the entire project.¹¹⁷ Eminent domain power solves this problem by allowing the government to seize the land so long as it compensates the landowner.¹¹⁸ State governments have historically bestowed eminent domain power on private developers, which is justified due to the public use served by providing the public with reliable energy.¹¹⁹

Under this scheme, an interstate line developer can establish the “public use” served by a line traversing multiple states and accordingly be granted siting authority in each individual state—indeed, this is the process used so far by developers attempting to construct interstate lines.¹²⁰ A consistent impediment to this system, however, is the differing and often limiting statutory language used in each state’s individual regulations. Thus, a necessary step in retaining the current regulatory system would be to improve coordination in statutory language, or at least in the language’s interpretation.¹²¹ States must consider their role in the interstate electricity problem and overcome “a history of working in isolation from one another. Introspection and interaction are both necessary actions to adequately address interstate transmission siting coordination.”¹²²

Several kinds of statutory language currently exist that could facilitate the interstate transmission development necessary, without a broad overhaul of the entire system. Currently, twenty-three states have statutory language in place that “encourages coordination by supporting interstate cooperation, joint hearings and investigations, or entering into

116. Michael Diamond, Note, *‘Energized’ Negotiations: Mediating Disputes over the Siting of Interstate Electric Transmission Lines*, 26 OHIO ST. J. ON DISP. RESOL. 217, 220 (2011); see U.S. CONST. amend. V; *First English Evangelical Lutheran Church of Glendale v. Cnty. of Los Angeles*, 482 U.S. 304, 314 (1987).

117. Diamond, *supra* note 116, at 221.

118. Abraham Bell, *Private Takings*, 76 U. CHI. L. REV. 517, 529 (2009) (discussing efficiency justifications for eminent domain doctrine); Diamond, *supra* note 116, at 221.

119. Diamond, *supra* note 116, at 221–22; see *Coronado Oil Co. v. Grieves*, 603 P.2d 406, 411 (Wyo. 1979) (citing the “great public interest in an imminent need for energy”).

120. NAT’L COUNCIL ON ELEC. POLICY, COORDINATING INTERSTATE ELECTRIC TRANSMISSION SITING: AN INTRODUCTION TO THE DEBATE 2 (2008) (“Projects such as Arrowhead-Westin and Buffalo Ridge in the Midwest serve as examples of transmission lines that required more than one State’s approval, and while both faced challenges, they ultimately succeeded as examples of multi-state siting.”); see also David H. Meyer & Richard Sedano, *Transmission Siting and Permitting*, in NATIONAL TRANSMISSION GRID STUDY ISSUE PAPERS, E-1, E-10 (U.S. Dep’t of Energy, May 2002) (discussing the successful four-state transmission siting project of New Century Energies, subsequently merged into Xcel Energy).

121. NAT’L COUNCIL ON ELEC. POLICY, *supra* note 120, at 4 (recommending that “a first step in ameliorating the interstate siting process is to understand both the conducive and limiting language in the statutes that govern a State’s ability to work with another on interstate transmission siting”).

122. *Id.* at 4.

compacts.”¹²³ Further, a few states have language instructing the state commission on how it should interact with a regional transmission organization, which could also serve as an entry-point for addressing interstate siting issues.¹²⁴ Some states have laws addressing resource adequacy and dictating “how a State and its utilities can interact with their neighbors,” which also may affect interstate transmission siting.¹²⁵ Additionally, some states have statutes requiring “utilities to examine environmental and economic benefits to society at large,” thus addressing broad impacts resulting from the utility or commission’s actions.¹²⁶ Finally, a handful of states have statutes that specifically “address interstate transmission from various perspectives including reliability, strategic planning, and specific generation sources such as hydro-electric power and other renewable resources.”¹²⁷ This type of language, if adopted by more states, could enable the development of an expanded electricity grid with greater reliance on distant energy sources.

2. *Arguments for Why the Current System Should Be Retained*

The current state-regulated system should be retained for several reasons, including the bureaucratic advantages of a state system and the consideration that must be retained for private property rights, which a state forum best addresses.

a. Bureaucratic Advantages of State Power

The current state-regulated system should be retained because of its ability to allow political participation at a lower cost, thus promoting political experimentation. “State politics enhances the participation of stakeholders in the regulatory process,” largely due to the lower cost of participation at this lower forum, and state regulation thus holds many advantages over regional or federal regulation for the development of efficient regulatory policies.¹²⁸

123. *Id.* at 7, 8 tbl.2 (providing a chart of State Coordination Language). Although some of the language in the statutes does not specifically regard transmission, there is nothing barring the coordination from extending to interstate transmission line siting.

124. *Id.* at 9–10. Examples include Michigan, New Jersey, and Kentucky—each statute is different, but they all speak to their state’s involvement with a regional entity.

125. *Id.* at 10. Examples include New Hampshire and Georgia, both of which encourage interstate utility coordination, but in quite differing levels of specificity.

126. *Id.* at 11. Examples include Georgia and Kentucky. The geographic scope of these statutes ranges from State-centered—only concerned with the welfare of citizens within its borders—to regional, national, or even international in nature.

127. *Id.* at 12–14. Examples include Michigan, Minnesota, Wisconsin, North Dakota, Ohio, and California. Ohio’s language in particular is often cited as a good example of language encouraging interstate transmission siting.

128. Jim Rossi, *The Electric Deregulation Fiasco: Looking to Regulatory Federalism to Promote a Balance Between Markets and the Provision of Public Goods*, 100 MICH. L. REV. 1768, 1782 (2002).

State governments “are routinely touted as laboratories of democracy, encouraging policy experimentation that the federal government would find unwieldy because of the heterogeneity of interest groups at the federal level and the costs associated with national implementation of policies.”¹²⁹ State government is able to provide a local, inexpensive forum for local concerns and to address needs that could not be heard at a higher governmental forum due to the sheer cost of bringing such issues before this higher forum.¹³⁰ In response to these concerns, state governments are able to engineer unique solutions and try regulatory and legislative strategies that have not been tested before, knowing that a faulty regulation will be recognized and overturned more quickly since it will be felt locally, and the costs of failure are likely to be much less significant since they only affect their individual state.¹³¹ Such efficient responses are simply not possible at a higher government level due to the vast interests involved and potentially affected individuals and entities.¹³²

b. Landowners’ Private Property Rights

A state system is best able to address landowner’s private property rights that are implicated when siting transmission lines. Studies show that the presence of electric transmission lines adversely affects property values—a consideration that accounts for why property owners often strongly oppose the construction of lines near their land.¹³³ Consequentially, systems for siting transmission lines must be considerate of issues relating to private property rights, including balancing the national goal of expediting the siting process against local property interests.¹³⁴ A state-based system is best for maintaining private property rights, as logically, the further the regulatory oversight gets from the individual property owners, the less likely their concerns are to be heard.¹³⁵ Congress’s concern for local needs and its desire to retain state primacy is reflected in EPAAct 2005’s federal backstop authority,¹³⁶ which is only applicable in

129. S.L. RAO, GOVERNING POWER: A NEW INSTITUTION OF GOVERNANCE, THE EXPERIENCE WITH INDEPENDENT REGULATION OF ELECTRICITY 147 (2004); *New State Ice Co. v. Liebmann*, 285 U.S. 262, 311 (1932) (Brandeis, J. dissenting) (“It is one of the happy incidents of the federal system that a single courageous State, may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country.”).

130. Rossi, *supra* note 128, at 1782.

131. *Id.*

132. *Id.*

133. CYNTHIA A. KROLL & THOMAS PRIESTLEY, EDISON ELEC. INST. SITING & ENVTL. PLANNING TASK FORCE, THE EFFECTS OF OVERHEAD TRANSMISSION LINES ON PROPERTY VALUES: A REVIEW & ANALYSIS OF THE LITERATURE, at ii–iii, 11 (Internet ed. 2003), available at <http://staff.haas.berkeley.edu/kroll/pubs/tranline.pdf> (discussing study findings including: overhead lines reduce residential and agricultural property values by up to fifteen percent; this decrease in value diminishes over time; other factors are much more likely than overhead lines to be major determinants of property value; and lines can also have significant positive impacts on property).

134. Diamond, *supra* note 116, at 226.

135. *See id.* at 227–28, 237, 251–52.

136. *See supra* notes 46–51, 55–60 and accompanying text.

five circumstances, and thus only “allow[s] FERC to act . . . when state actions would impede the development of projects whose benefits transcend that state.”¹³⁷

Further, a nationwide survey has shown strong citizen preference for local and state regulatory siting authority, with sixty percent of community residents saying local government should have ultimate authority to approve transmission lines and nineteen percent supporting state government approval, while only ten percent preferred federal government regulation.¹³⁸ Such surveys reflect critiques that changing the current system, especially combined with federal backstop authority, will be unlikely to respond to local landowner concerns.¹³⁹ As of 2011, there has been only one application for federal backstop authority to FERC, and that application was subsequently withdrawn.¹⁴⁰ Thus, there is no basis on which to analyze the efficacy of federal authority in preserving local landowners’ concerns, although even the possibility of federal preemption of siting authority hints at greater regional considerations at the expense of local landowners’ rights.

3. *Arguments for Why the Current System Should Be Changed*

The current state-regulated system should be changed for multiple reasons, such as the expanding energy needs of the United States, the difficulty in complying with multiple differing regulations, and the desirability of a public policy encouraging a cohesive national approach to energy.

a. Expanding Energy Needs of the United States

The United States’ energy consumption is growing daily, and the transmission capacity is nowhere near adequate to support growing population load centers and increasing distances between the load and the resources.¹⁴¹ An interstate transmission system that is able to transport energy cross-country to the location of load centers is crucial, and the regulatory hurdles imposed by each individual state work to effectively prohibit such grid expansion. The more the United States relies on renewable energy sources in the coming years, the more this transmission

137. Diamond, *supra* note 116, at 232; see *Piedmont Env'tl. Council v. FERC*, 558 F.3d 304, 313–14 (4th Cir. 2009).

138. Press Release, Saint Consulting Group, National Survey: Opposition to Power Transmission Lines (May 5, 2009), available at <http://tscg.biz/saintblog/2009/05/national-survey-opposition-to-power-transmission-lines.html>.

139. Meyer & Sedano, *supra* note 120, at E-21.

140. Application of S. Cal. Edison Co. (U338-E) for Certificate of Pub. Convenience and Necessity to Construct the Devers-Palo Verde No. 2 Transmission Line Project, Cal. (Pub. Util. Comm’n Apr. 11, 2005).

141. ERIC HIRST, EDISON ELEC. INST., EXPANDING U.S. TRANSMISSION CAPACITY, at v & fig. S-1 (2004), available at http://www.gc.doe.gov/sites/prod/files/oeprod/DocumentsandMedia/transmission_capacity.pdf.

distance will increase, and the current state-regulated system is likely to prohibit the country from meeting its renewable energy goals.

i. Growing Energy Demands

The United States is rapidly falling behind in its ability to supply the energy needed to sustain growing populations. As demand for electricity increases, the need for transmission capacity to carry this extra electricity increases. The amount of transmission capacity per unit of consumer demand has declined consistently since the 1970s, and it is expected to continue dropping under the current state-regulated system.¹⁴² Between 1975 and 1999, there was a “steady decline in construction of new transmission facilities,” with investment falling an average of \$83 million a year.¹⁴³ Further, the demand for energy grew consistently in this time and continues to do so, culminating in an energy situation in which the gap between available transmission capacity and needed transmission capacity is growing increasingly larger.¹⁴⁴ All sectors of the electricity industry reach the same conclusion from such data and projections: more transmission capacity is needed, and soon.¹⁴⁵ The key obstacles to building this new transmission capacity are also uniformly identified: local opposition to the lines, and associated local and state regulatory approval processes.¹⁴⁶

The DOE released its first congestion study in 2006¹⁴⁷ in response to EAct 2005’s directive to conduct nationwide studies of electrical transmission congestion and to designate NIETCs.¹⁴⁸ DOE defines “transmission congestion” as occurring “when actual or scheduled flows of electricity across a line or piece of equipment are restricted below desired levels—either by physical or electrical capacity of the line, or by operational restrictions.”¹⁴⁹ Transmission congestion occurs in most parts of the nation, and the costs it imposes upon the system are “included to some degree in virtually every customer’s electricity bill.”¹⁵⁰ DOE identified three classes of congestion areas that need immediate federal attention, the most severe of which are Critical Congestion Areas, which are

142. *Id.*

143. *Id.* at 7.

144. *Id.* at 8 fig.4; *id.* at 7–11 (analysis of data showing growth in energy load demands and projected future increases).

145. *Id.* at v.

146. Steven J. Eagle, *Securing a Reliable Electricity Grid: A New Era in Transmission Siting Regulation?*, 73 TENN. L. REV. 1, 25 (2005).

147. U.S. DEP’T OF ENERGY, NATIONAL ELECTRIC TRANSMISSION CONGESTION STUDY (Aug. 2006), available at http://nietc.anl.gov/documents/docs/Congestion_Study_2006-9MB.pdf.

148. See *supra* notes 48–51 and accompanying text.

149. U.S. DEP’T OF ENERGY, *supra* note 147, at vii.

150. *Id.* at viii (“The cost of congestion varies in real time according to changes in the levels and patterns of customers’ demand (including their response to price changes), the availability of output from various generation sources, the cost of generation fuels, and the availability of transmission capacity.”).

“areas of the country where it is critically important to remedy existing or growing congestion problems because the current and/or projected effects of the congestion are severe.”¹⁵¹ The DOE study asserts that immediate affirmative government action and industry decisions will be needed in the next few years to begin developing needed generation sources and associated transmission facilities.¹⁵² This necessary action is the expansion of the interstate electricity system, an action hindered by the current regulatory approach.

A state-regulated system does not encourage the robust interconnected power system that is vital to maintenance of energy supply, especially in the face of the growing congestion faced on current transmission lines.¹⁵³ A strong electricity system “allows many different kinds of generating plants in many locations to supply power to customers,” giving users the ability to draw from a diverse set of power supplies “with different operating characteristics.”¹⁵⁴ A robust system such as this has a certain amount of redundancy built in and will be able to “withstand the failure of its most critical lines or other components.”¹⁵⁵ When a system is limited in its expansion to only those energy supplies located in states in which the line developer is able to meet the regulatory burdens imposed, the ability of transmission lines to be truly “robust” is severely limited.

The United States is thus faced with growing energy demands, lagging transmission construction, overload of transmission congestion on the current lines, and a regulatory system that hinders the construction of new lines. These factors, analyzed as a whole, portray a very grim outlook for the current state-regulated system’s ability to support the growing energy needs of the country.

ii. Population Load Centers Far from Supply Sources

The current state-regulated system was built in response to local energy provision requirements and continues to impose regulations that are founded on an intrastate model of self-sufficiency and self-supply of en-

151. *Id.* at viii–ix. Figures ES-2 and ES-3 identify two such areas, each of which is large, densely populated, and economically vital to the nation; *id.* at 18–19 (showing energy noted in the Eastern United States—the light green shows the load demands exerted in that area, and the dark green shows the accompanying generational capacity (notice the disparity between colors in almost all nodes)); *id.* at 27, fig.3–7 (showing the most congested transmission paths in the Eastern United States); *id.* at 32–33, figs.4-1, 4-2 (showing the most congested transmission paths in the Western United States).

152. *Id.* at ix.

153. See BROWN & SEDANO, *supra* note 5, at 8–9.

154. *Id.* (“Some power plants are built to run continually; others run only at peak hours when they are most needed.”).

155. *Id.* at 9 (“Analysts often refer to this as a single contingency analysis, or N-1 analysis. This robustness and diversity create a network of power plants and lines that is far more reliable than one that relies on the output from a single plant or a single line.”); see also U.S. DEP’T OF ENERGY, *supra* note 146, at 36–37, figs.4-5, 4-7 (both showing projected congestion on Western transmission paths in 2015).

ergy.¹⁵⁶ Population load centers, however, are no longer near the best sources of energy, and transmission lines regulated under the state system are unable to expand to reach distant resources.¹⁵⁷ A strong, interconnected power system should have the flexibility to use diverse resources such as wind, coal, or geothermal energy, even if they are located far from consumers, to guarantee consistent energy supply.¹⁵⁸

Distant power sources often have excess generating capacity that they are eager to share with distant paying customers, but they lack the transmission capacity to transmit the electricity to the needed load centers.¹⁵⁹ To solve this, transmission developers try to find ways to use new transmission lines to deliver power from a location with excess capacity to another area that needs the electricity.¹⁶⁰ North and South Dakota, for example, are two of the windiest states in the United States and would be ideal for wind turbines, were it not for the states' distant location from any large population center.¹⁶¹ Wyoming similarly has some of the best coal reserves in the United States but is far from the load centers needing the electricity.¹⁶² The current state-based system hinders development of lines to transmit all of these states' energy potential to areas where it is desperately needed, wasting precious energy resources and stifling the nation's infrastructural development.

Further, distant power sources are often cheaper than local sources and can serve customers with more reliable energy at lower prices than local power plants. This happened recently when Arizona power plants began serving customers in California, displacing the local suppliers and driving overall energy prices down in the newly competitive power markets.¹⁶³ Under the state-regulated system, expansion of Arizona's cheap energy into additional states would require complying with completely new sets of regulations, proving the "public benefit" in each state, meeting each state's environmental requirements—all processes that take many months or even years of regulatory litigation, and can cost developers millions of dollars.¹⁶⁴ A state-regulated system that imposes hurdles such as these hinders these new cheap sources from reaching distant need, consequentially hurting energy consumers with the inability to access cheaper energy supplies.

156. See BROWN & SEDANO, *supra* note 5, at 3.

157. See *id.* at 14.

158. *Id.* at 9. Wind farms must be constructed where "wind is strongest and most consistent;" coal plants are most efficient when built near the mine since it is cheaper to transmit electricity over lines than to ship coal; "natural gas plants can be built close to population centers" since pipes can be used to transport the gas there cheaply. *Id.*

159. See *id.* at 14.

160. *Id.*

161. *Id.*

162. *Id.*

163. *Id.* at 10–11 (describing how "new transmission lines into the constrained area can force the power generators inside the constrained area to lower their prices when they have to compete with low-cost power with new access to the area").

164. See *supra* Part II.A.3.

iii. Increasing Reliance on Renewable Energy Sources

The existing energy transmission system was designed to move power primarily from fossil-fueled generating plants to nearby major load centers, mostly within state boundaries.¹⁶⁵ A robust new system of energy transmission lines built to new locations is essential to capture abundant domestic renewable resources, but “the existing transmission grid is not sufficient to allow integration of large amounts of new renewable resources located in most instances well away from load centers and existing transmission infrastructure.”¹⁶⁶ “The lack of the right sized transmission in the right location is a barrier to the development of wind, solar and other renewable resources,”¹⁶⁷ and the current state-based regulatory system hinders the development of these interconnecting lines.

The best way to tap into renewable energy stores is with those projects that “can be shown to most efficiently move large blocks of the highest potential renewable energy from remote areas to load centers where the existing transmission grid can then be used to take that energy the last few miles to the ultimate customers.”¹⁶⁸ Given the locations of renewables, however, “[m]any of those projects will cross multiple states to complete the system and that will require close cooperation and a common focus on sustainability.”¹⁶⁹ Under the current regulatory scheme, these projects will likely be stalled for months or years in regulatory battles at each state’s permitting and siting commission, and the focus will be state-centered, as opposed to a focus on common sustainability.

As the United States increases its reliance on renewable energy sources, in accordance with President Obama’s New Energy for America plan, the distance between the resource supplies and the load centers will likely only expand further, a fate that the current state-based regulatory system is ill-prepared to handle.¹⁷⁰ Within two years of President Obama taking office, over twenty-seven utility-scale renewable energy projects had been approved by the Department of the Interior, including sixteen solar projects, four wind farms, and seven geothermal plants—enough to power 2.3 million U.S. households.¹⁷¹ In October 2011, the Obama ad-

165. See *supra* Part II.A.1.

166. BLACK & VEATCH, 2009/2010 FOURTH ANNUAL STRATEGIC DIRECTIONS IN THE ELECTRIC UTILITY INDUSTRY SURVEY: WHAT DOES THE FUTURE HOLD FOR AN INDUSTRY IN TRANSITION? 73 (2010), available at http://s3.amazonaws.com/zanran_storage/www.bv.com/ContentPages/43046060.pdf (discussing the policy conundrum that transmission has created over the years).

167. *Id.*

168. *Id.*

169. *Id.*

170. See *The Obama-Biden Plan*, CHANGE.GOV, http://change.gov/agenda/energy_and_environment_agenda/ (last visited Feb. 15, 2013) (planning to have ten percent of U.S. electricity come from renewable sources by 2012, and twenty-five percent by 2025).

171. Susan Kraemer, *Obama Has Nearly Quadrupled Renewable Energy on Public Lands*, CLEANTECHNICA.COM (Dec. 31, 2011), <http://cleantechnica.com/2011/12/31/obama-has-nearly-quadrupled-renewable-energy-on-public-lands/>.

ministration's Rapid Response Team for Transmission announced a plan to accelerate the permitting and construction of seven transmission lines that will provide renewable electricity in twelve states, "intended to serve as pilot demonstrations of streamlined federal permitting" and review procedures.¹⁷² If this plan is implemented as intended, it has the potential to help "close the time gap between energy project development and access to transmission," an often-encountered result of state-regulated transmission approval processes.¹⁷³

As the United States continues to search for new ways to meet energy needs by reaching into the realm of renewable energy, the best resources will likely continue to be found outside state boundaries, lacking the transmission to bring the electricity over.¹⁷⁴ A state-regulated system will likely only hinder interstate access to energy sources, costing consumers and the nation as a whole dearly.

b. Public Policy Concerns Regarding the State-Regulated Scheme

The public policy concerns and potential disadvantages of state regulation of the energy industry are severe and extensive. Although the state provides a more accessible governmental body for stakeholder concerns, as discussed above, the state forum also allows "more extreme interest groups to influence the content of policies, since those interest groups are not required to build coalitions with others in the more diverse national forum, where extreme factions are less likely to influence policy."¹⁷⁵ As James Madison noted in *The Federalist Papers*, constituent groups, including industrial consumers, environmental groups, and consumer interests, are more likely to organize into dysfunctional factions at the state level, as opposed to in national politics,¹⁷⁶ and these factions have the potential to adversely influence the content and applicability of enacted regulation.

Further, the state forum is "more prone to favor interest groups with parochial concerns, rather than those that are likely to favor concerns affecting matters outside of a given state."¹⁷⁷ Even leaving residual authority over regulation to the states can raise difficulties for regulatory law, as the strongest interest groups can more readily capture the regulatory process in state politics than in national politics, thereby thwarting the goals of both federal and state regulatory policies.¹⁷⁸ These local factions encourage isolationist energy policies, discourage regional or na-

172. Carl Zichella, *Obama Administration's Electric Transmission Announcement Can Be Good News for Renewables, if Done Right*, SWITCHBOARD: NATURAL RES. DEF. COUNCIL STAFF BLOG (Oct. 5, 2011), http://switchboard.nrdc.org/blogs/czichella/obama_administrations_electric.html.

173. *Id.*

174. *See id.*

175. Rossi, *supra* note 128, at 1782.

176. *Id.*; THE FEDERALIST NO. 10 (James Madison).

177. Rossi, *supra* note 128, at 1782.

178. *Id.*

tional consideration of energy need, and directly affect the ability of the electricity grid to expand via interstate transmission lines.

As the February 2011 blackouts in Texas demonstrate, a single overexertion can wreak havoc on an electrical system that claims to be self-reliant, scoffs at regulation, and promotes state isolationism.¹⁷⁹ When “power companies help make the rules” governing the electricity grid, and lawmakers seem reluctant to reclaim the rule-making authority in a state dependent on energy companies (and arguably energy lobbyists funding the lawmakers’ campaigns), the consumers are ultimately the ones that suffer.¹⁸⁰ The chilled reception federal authorities investigating the Texas blackouts received reflects the problematic attitude from years of lacking federal scrutiny in state-run power systems.¹⁸¹

Further, surveys of electric industry representatives show regulatory authority and reliability as their top two concerns,¹⁸² since “there is great political and regulatory uncertainty.”¹⁸³ Faced with an energy crisis and the need for new technological developments to meet this crisis, energy industry respondents list “regulatory requirements” as the most important factor involved in their adoption of new technologies.¹⁸⁴ The surveyors interpreted the overall results of the study “to suggest that respondents were pretty much beaten down . . . remained confused about direction and lost enthusiasm. . . . Like deer in the headlamps, respondents might simply be frozen in the face of the glaring challenges.”¹⁸⁵

Even while aware that extra technology spending will have greater potential positive impact in areas of transmission and distribution, however, utilities generally spend most company money on “maintenance equipment and facilities,”¹⁸⁶ largely because of the regulation surrounding new technology investment.¹⁸⁷ The surveyors urge that “[w]ith the continuing infrastructure and environmental compliance requirements faced by electric utilities, the political push towards achieving greater energy efficiency targets, and with technological innovation quickly entering the picture, it is imperative that utilities be able to manage and mini-

179. Kate Galbraith, *Power Failures Thrust Deregulation into Public Glare*, N.Y. TIMES, Feb. 20, 2011, at A27.

180. *Id.*

181. *Id.*

182. BLACK & VEATCH, *supra* note 166, at 16.

183. *Id.* at 10.

184. *Id.* at 25; *see id.* at 26 (charts reflecting industry views on what factors most move the industry to invest in new technology).

185. *Id.* at 16.

186. *Id.* at 27.

187. *Id.* at 40 (“Even today, our IOU survey respondents report that regulation is their number one major concern and the biggest driver of new technology investment. While regulation affects public power somewhat less, public systems also agree that regulation is the greatest technology driver. It is further generally recognized that the utility industry is going to have to change dramatically if the goals of more intelligent grids and greenhouse gas mitigation are going to be met . . .”).

mize regulatory uncertainty.”¹⁸⁸ If the United States is hoping to rely on the electric industry to solve its energy crisis, surveys such as this suggest that the current regulatory scheme is holding back not only the industry’s morale, but also its innovation. A cohesive nation needs cohesive regulations in place to encourage the kind of sustainable and common-minded innovation and development that will ensure energy needs are met for years to come.

B. *A Shared-Authority Interstate System*

This Section discusses the possibility of enacting a solution that retains state power to regulate line siting from each state’s internal energy sources to its internal load centers, but which allocates to the federal government the power to construct interstate lines from plentiful energy sources to distant load centers. This approach is also supported by current statutes and could be implemented, without a major system overhaul, to allow the necessary electric grid expansion. The statutory language is presented along with subsequent federal and state developments that support a shared-authority scheme. Policy arguments are then presented both for and against implementation of such an intermediate solution.

1. *A Shared-Authority Regulatory Scheme Could Allow Interstate Line Construction*

Allowing states to retain transmission line siting authority over intrastate lines, but allocating to the federal government authority to site and construct interstate lines could be a solution to two problems: the lack of interstate lines, and the current regulatory obstacles that hinder interstate line development. In the most basic system of this kind, a state retains the power to regulate line siting from each of its internal energy sources to its internal load centers, as the states have throughout the history of the electrical industry.¹⁸⁹ The federal government would be allocated power to construct interstate lines from plentiful sources of energy to distant load centers, complying with a new federally enacted regulatory line-siting scheme. This federal scheme could outline the requirements that must be met and define such terms as “public need” and “convenience and necessity” with a view toward national sustainability and efficiency.

Commentators have presented alternate ideas for how this type of shared-authority system could be set up, all of which preserve state authority for siting intrastate lines and allocate authority to federal bodies

188. *Id.* at 43 (discussing how regulation continues to be the top-of-mind issue for the electric industry).

189. *See supra* Part II.A (providing a history of electrical transmission development).

for siting interstate lines. One approach, centered on the need to connect renewable resources, advocates for making small changes to EAct 2005 that would serve to remedy concerns of both critics and supporters of *Piedmont Environmental Council v. FERC*.¹⁹⁰ The first change would be FERC helping states within NIETCs develop “capacity plans” that map out the expansion of electricity transmission capacity within the Corridor; “FERC would serve as the national perspective needed to remedy regional congestion problems, while allowing States to maintain their authority to site lines.”¹⁹¹

Another change would be strengthening the interstate compact provisions of EAct 2005.¹⁹² These types of compacts should be encouraged to help identify current and future energy needs and to develop the capacity plans to meet both energy needs within the compact and in the greater geographical region.¹⁹³ EAct 2005 “provided a potentially powerful tool for states that wanted to prevent FERC from taking their authority to site transmission lines,” authorizing states to create “regional transmission siting agencies.”¹⁹⁴ The agencies should be authorized to site new transmission lines within states participating in the compact and control access to those lines. This would simplify and expedite the siting process, as FERC would have no authority to site lines within those states unless the states ran into a disagreement, in which case FERC could step in and site the project.¹⁹⁵

Thus, the final change would be limiting FERC’s backstop authority to only those instances where an interstate project that would bring in renewable energy resources has been denied or withheld from approval for more than a year.¹⁹⁶ This commentator’s approach assures that FERC’s evaluation of national or regional plans will bring a national perspective to a proposal’s evaluation and ensure that denials at the state level are in the best interest of national energy policy, while maintaining state authority over plans that would deal with nonrenewable energy within their state borders.¹⁹⁷

190. John Noor, Note, *Herding Cats: What to Do When States Get in the Way of National Energy Policy*, 11 N.C. J.L. & TECH. 145, 167 (2009). In *Piedmont*, the Fourth Circuit held that, where a state has affirmatively denied a siting permit, FERC lacks authority to grant one. See *supra* notes 47–50, 53–58 (discussing EAct 2005 and *Piedmont*).

191. Noor, *supra* note 190, at 167.

192. *Id.* at 172. Interstate compacts bring state participants and federal authorities together to accomplish any number of regional and interstate priorities, which could include serving as the vehicle to coordinate regional planning and cooperation to ensure streamlined and cohesive transmission line siting regulatory processes. *Id.* at 167, 169; see CAROLINE N. BROUN ET AL., *THE EVOLVING USE AND THE CHANGING ROLE OF INTERSTATE COMPACTS: A PRACTITIONER’S GUIDE* 3, 66 (2006) (“[C]ompacts are singularly important because through a compact, the states can create a state-based solution to regional or national problems and effectively retain policy control for the future.”).

193. Noor, *supra* note 190, at 172.

194. *Id.* at 172; see Natural Gas Act, 16 U.S.C. § 824p(i) (2006).

195. Noor, *supra* note 190, at 170, 173.

196. *Id.* at 174.

197. *Id.* at 175.

Another commentator discusses similar possibilities for shared regulation by the state and federal governments, such as state participation in the federal approval process, possibly with a lead agency and conditioning of the approval, or a bifurcated proceeding with joint review and state regulation of the indirect effects.¹⁹⁸ This commentator begins by recognizing the importance of retaining state authority over intrastate affairs, and cautions that “as to any federal non-jurisdictional aspect, pre-existing state power should remain essentially [undisturbed] so as not to usurp state authority over intrastate transmission lines.”¹⁹⁹ A system of interstitial joint proceedings, however, could solve the conundrum brought by interstate lines: greater reliability and economic benefits brought to a region or state, but environmental, land use, and aesthetic costs imposed solely on the locality.²⁰⁰ The bifurcated proceeding could entail that (1) specific routing and need (regional, as opposed to intrastate) be determined by a federal agency, and (2) environmental impacts be reviewed by the affected state.²⁰¹

This type of approach would relieve states of having to find regional need, which many states’ regulations prohibit considering,²⁰² but would protect the affected states by retaining their control over the environmental and aesthetic impacts.²⁰³ Similarly, a joint-review siting paradigm could increase efficiency “by including all affected governmental entities in a coordinated joint review process while preserving the authority of affected state and local governments” to site the lines.²⁰⁴ Thus, this commentator’s solutions also promote state consideration of intrastate issues, while suggesting federal and regional approaches to enhance interstate coordination. Any of the approaches outlined above could be implemented fairly simply under currently enacted regulations and legislation to allow streamlined interstate transmission line development while preserving states’ authority over intrastate lines.

2. *Arguments for Why a Shared-Authority Regulatory System Should Be Implemented*

An intermediate shared-authority regulatory system should be implemented for several reasons, including consistency of this scheme with current legislation, the retention of state autonomy and local control, and the system’s ability to provide access to renewable resources and distant energy sources, all of which are detailed below.

198. Desautels, *supra* note 33, at 20.

199. *Id.*

200. *Id.* at 21.

201. *Id.*

202. Eagle, *supra* note 146, at 14.

203. Desautels, *supra* note 33, at 21.

204. *Id.*

a. Consistency with Current Legislation

The shared-authority approach is consistent with much current law and would not require a dramatic system overhaul to implement. Federal authority to regulate the siting of interstate lines could be based on the same authority that authorizes the federal government to regulate the rates that electricity providers charge consumers, an expansion of the “nondiscriminatory access to transmission” provisions, allowing the whole nation’s load to access the whole nation’s resources.²⁰⁵ Section 201(b)(1) of the FPA establishes federal jurisdiction over “the transmission of electric energy in interstate commerce” and “all facilities for such transmission,” but excludes from FERC’s jurisdiction “facilities used . . . only for the transmission of electric energy in intrastate commerce.”²⁰⁶ Section 201(c) outlines that “electric energy shall be held to be transmitted in interstate commerce if transmitted from a State and consumed at any point outside thereof.”²⁰⁷ The FPA’s plain language thus seems to support a shared-authority system, preserving “state jurisdiction over local distribution facilities and retail sales,” and vesting FERC “with jurisdiction over all transmission of electric energy that involves origination and consumption in different States, and over all the facilities used for such transmission.”²⁰⁸

Further, in the cases following passage of the FPA, the Supreme Court held that FERC jurisdiction results when electricity flows into or out of a state, becoming interstate commerce and thus subject to federal regulation regardless of whether a “sale” in interstate commerce actually occurs.²⁰⁹ Even if the distribution systems of a utility normally operate in intrastate transmission, just a few cross-border transactions make the utility’s transmission system subject to FERC jurisdiction, excluding only utility lines used solely for local distribution.²¹⁰ Both of these major cases clarifying the FPA seem to suggest that the intent behind the FPA was to establish this shared-authority system of regulation.

FERC’s issuance of Order 888 in 1996 also supports the possibility of creating a shared-authority regulatory system, as it was the first time that FERC asserted jurisdiction over a component of electric transmission traditionally regulated by the states: the sale of electricity in states which opened their electric markets to competition.²¹¹ Order 888 pro-

205. See *supra* notes 32–36 and accompanying text for discussion of FPA and FERC’s jurisdiction; *supra* notes 37–40 and accompanying text for discussion of federal rate and grid authority granted by PURPA and EPCRA.

206. FPA, 16 U.S.C. § 824(b)(1) (2006).

207. *Id.* § 824(c).

208. Brief for FERC, *New York v. FERC*, *supra* note 11, at 11, 13.

209. *Jersey Cent. Power & Light Co. v. FPC*, 319 U.S. 61, 71 (1943); see *supra* note 34 and accompanying text.

210. *Conn. Light & Power Co. v. FPC*, 324 U.S. 515, 519–21 (1945); see *supra* note 35 and accompanying text.

211. See *supra* notes 41–43 and accompanying text for discussion of Order 888.

vides seven indicators to distinguish between federally regulated transmission and locally regulated distribution of energy.²¹² According to FERC, local distribution facilities should sit close to retail customers—“power flows into local distribution systems [and] rarely, if ever, flows out”—and power entering a local system is used in a relatively small area.²¹³ The separation of distribution and transmission facilities, in theory, makes it possible for an electric company to know which lines transport only to local consumers and which are involved in the interstate open-access transmission service market, a distinction enabling a shared-authority system.

EPAct 2005 tried to assert federal transmission line siting authority by allocating FERC “backstop” authority, marking the first time that Congress directly shifted regulatory jurisdiction of siting and permitting from the states to FERC.²¹⁴ FERC, however, can only exercise this backstop authority if, after one year of effort in siting an interstate transmission line, a state case has proceeded with no decision—so under EPAct 2005 it is also critically important to distinguish interstate transmission from local distribution.²¹⁵ The Supreme Court held that “transmissions on the interconnected national grids constitute transmissions in interstate commerce,” and are thus subject to federal jurisdiction.²¹⁶ Further, where a utility purchases or sells energy from another state, these transactions alone establish the transmission system as in interstate commerce, again subject to federal jurisdiction.²¹⁷ Therefore, FERC has jurisdiction over transmission facilities used in interstate commerce which are *not* local distribution facilities, a two-part test: (1) “the facilities *must* be used in interstate commerce, and” (2) the facilities “*must not* be local distribution facilities.”²¹⁸

Thus, the statutory, regulatory, and case-law framework has developed as to permit a shared-authority system with little system overhaul. The only issue will be determining whether a transmission line is quali-

212. *Id.*

213. Promoting Wholesale Competition Through Open Access Non-discriminatory Transmission Services, 61 Fed. Reg. 21,540, 21,620 (May 10, 1996) (codified at 18 CFR pts. 35, 385).

214. See *supra* notes 46–49, 52–58 and accompanying text for discussion of EPAct 2005’s passage and intent.

215. See Swanson & Jolivet, *supra* note 40, at 418.

216. *New York v. FERC*, 535 U.S. 1, 16 (2002); see also *supra* note 44 and accompanying text.

217. *Conn. Light & Power Co. v. FPC*, 324 U.S. 515, 519–20 (1945). Even where the distribution systems of the utility normally operate with intrastate transmission, just a few transactions make the transmission system of the utility one which is engaged in interstate business. This establishes FERC jurisdiction over the accounts of the utility. However, FERC jurisdiction does not extend to utility lines used for local distribution; they are exempt from federal jurisdiction. Regardless of what the original source is for electric energy carried by local distribution facilities, they are exempt under the Federal Power Act from FERC jurisdiction. *Id.* at 531.

218. Steven Ferrey, *Federal Versus State Jurisdiction*, 1 L. INDEP. POWER § 10:48 (2012). While establishing the principle, the Court did not define what was a local distribution facility. See also *United States v. Pub. Util. Comm’n of Cal.*, 345 U.S. 295, 315–16 (1953); *Ark. Power & Light Co. v. FPC*, 368 F.2d 376, 383 (8th Cir. 1966).

fied as “intrastate” or “interstate,” a determination that has much statutory language guiding it.

b. Retention of State Autonomy and Local Control

Under a shared-authority system, the states would retain autonomy over their local sources of energy and local load centers but would also be able to tap into federally regulated interstate transmission to sell the state’s extra energy and bring extra energy to the state if its load demands it. This approach allows state commissions to determine “whether particular facilities of a public utility are transmission facilities subject to federal jurisdiction, or, alternatively, local distribution facilities subject exclusively to state jurisdiction when used in connection with a retail sale of energy.”²¹⁹ Allowing the state to determine who has regulatory authority over transmission lines puts the state in the position of power, as the autonomous body making the initial ruling on “intrastate” or “interstate,” which then determines which regulatory procedure the developer must comply with throughout the remainder of the construction process. This type of bifurcated process preserves “pre-existing state power . . . essentially [undisturbed] so as not to usurp state authority over intrastate transmission lines.”²²⁰

Further, as discussed above, the retention of state autonomy is most likely to preserve landowners’ rights.²²¹ The same justification applies for a shared-authority system, as the state retains the ability to ensure, through its exclusive possession of the police power, that its citizens’ rights are protected from encroachment, even while ensuring that electricity needs are met. Case law has firmly established that the “state is the sole and exclusive repository of the police power, neither the federal nor local government has any such inherent power,”²²² thus recognizing that only the state is equipped with a protective shield to use for its citizens’ welfare. State commissions and courts

generally act on the proposition that a State cannot use its power of eminent domain for the benefit of the citizens of another State. Courts find this limitation within the source of the legislative power; the sovereign is obligated to protect and promote the health, safety, morals, and welfare of citizens of the individual state.²²³

Ensuring the states’ ability to use the police power to oversee the siting of intrastate lines thus complies with this principle of law, and avoids

219. Brief for FERC, *New York v. FERC*, *supra* note 11, at 30–31.

220. Desautels, *supra* note 33, at 20.

221. See *supra* Part III.A.2.b (regarding local control to preserve landowners’ rights).

222. See *State v. Hutchinson*, 624 P.2d 1116, 1128–29 (Utah 1980) (J. Maughan, dissenting) (arguing further that “the exercise of the police power is an attribute of state sovereignty” not to be relinquished to any other governmental body).

223. Eagle, *supra* note 146, at 14.

landowner issues that might present themselves if the federal government tries to encroach on a state's right.

EPAAct 2005's section 216(b), outlining FERC backstop authority, was enacted with an eye toward respecting state authority and allows FERC to issue permits only upon finding that one of the listed situations exists.²²⁴ Thus, the siting authority granted FERC is supplemental to that of the states. FERC Chairman Joseph T. Kelliher said the final transmission siting rule was "very respectful of state authority" and he expected "states will continue to site the vast bulk of transmission projects."²²⁵ Hence, even recent federal legislation has recognized the importance of sustaining state authority over siting decisions, signaling agreement with claims that "state and local officials may be best situated to balance local economic, environmental, and similar needs."²²⁶ With a large percentage of landowners partaking in "not in my backyard" arguments, state commissions are uniquely placed to address concerns regarding "such issues as property values, aesthetics, electromagnetic fields, equity and fairness of location, just compensation for easements granted with eminent domain, and the underlying justification for needing to build the line in the first place."²²⁷

c. Access to Renewable Resources and Distant Energy Sources

A shared-authority regulatory system could allow the desperately needed access to renewable resources and distant energy sources discussed above.²²⁸ The first shared-authority possibility above, solely determined on the bright line of whether the line crosses state boundaries, could best allow access to renewable energy to support growing energy needs. When all interstate line siting is allocated to the federal government, determinations of "need" and "benefit" will be made on a larger national scale, preventing a small-minded state commission from hindering development of an interstate line.²²⁹ State energy sources are still subject solely to state authority, thus retaining sovereignty over state

224. See *supra* notes 47–50, 54–58 and accompanying text for discussion of EPAAct 2005 and section 216's requirements.

225. News Release, FERC, Commission Finalizes Electric Transmission Siting Rule, Nov. 16, 2006, available at <http://www.ferc.gov/media/news-releases/2006/2006-4/11-16-06-c-2.pdf>; Kelsey Jae Nunez, Note, *Gridlock on the Road to Renewable Energy Development: A Discussion About the Opportunities & Risks Presented by the Modernization Requirements of the Electricity Transmission Network*, 1 J. BUS. ENTREPRENEURSHIP & L. 137, 174 (2007).

226. Nunez, *supra* note 225, at 176.

227. *Id.* at 177.

228. See *supra* Part III.A.3.a.iii (discussing reliance on renewable energy sources).

229. Eagle, *supra* note 146, at 13 ("For an interstate transmission project, each affected state must approve the project. Before construction can begin, a large interstate project may have to successfully navigate several independent state and federal review procedures, a process that has taken up to a decade and caused considerable expense. . . . [S]uch projects are further complicated during the approval process by local politics, by interstate squabbles, or by state courts empowered to consider only intrastate concerns in granting siting approval or the use of eminent domain.").

property and ensuring resources will not be pushed out of the spectrum of energy providers.

A more complicated system implementing either the second scheme above, composed of interstate compacts or regional transmission siting agencies,²³⁰ or the third scheme above, implementing a bifurcated review process,²³¹ could also serve to ensure regional and federal consideration of energy source locations. A shared-authority system such as these recognizes that given the locations of many renewable resources, “[m]any of [the projects attempting to bring renewable energy to load centers] will cross multiple states to complete the system and that will require close cooperation and a common focus on sustainability.”²³² Allowing a regional cooperative or federal agency the authority to evaluate the need for a line assures this cooperation and sustainability focus will not be hindered by narrow state interpretation of need requirements.²³³ Retaining the state’s authority to condition the siting on compliance with environmental or aesthetic considerations and retaining sole state authority for intrastate energy provision ensures that state sovereignty will be upheld and the state’s needs considered. Any of these shared-authority schemes could thus provide the necessary regulatory authority to allow ease of interstate line development to access distant energy supplies and renewable energy sources, while still retaining certain authority with the states.

3. *Arguments for Why a Shared-Authority Regulatory System Should Not Be Implemented*

Although a shared-authority regulatory system is arguably a solution to the current energy crisis, any benefits this type of system may provide are likely outweighed by the arguments against implementing this type of system. These considerations include the physical impracticality of controlling electron flow along transmission lines, states’ rights and preemption issues, and certain bureaucratic difficulties this type of system would involve.

a. *Physical Impracticality of Controlling Electron Flow*

Although the FPA and subsequent legal developments seem to neatly distinguish between “intrastate” and “interstate” electrical trans-

230. See *supra* notes 191–96 and accompanying text.

231. See *supra* notes 199–203 and accompanying text.

232. BLACK & VEATCH, *supra* note 166, at 73.

233. Eagle, *supra* note 146, at 13. “For an interstate transmission project, each affected state must approve the project. Before construction can begin, a large interstate project may have to successfully navigate several independent state and federal review procedures, a process that has taken up to a decade and caused considerable expense. . . . such projects are further complicated during the approval process by local politics, by interstate squabbles, or by state courts empowered to consider only intrastate concerns in granting siting approval or the use of eminent domain.” *Id.*

mission, the physical impracticality of controlling electron flow along the electric grid has made the distinctions all but obsolete. A regulatory system relying on these distinctions to determine which governmental body will have authority over the transmission line will be faced with immense confusion and possibly even more litigation than currently encountered under the state-regulated system.

As noted above, the FPA grants FERC jurisdiction over the transmission of electrical energy in interstate commerce, but not “over facilities used for the generation of electric energy or over facilities used in local distribution or only for the transmission of electric energy in intrastate commerce.”²³⁴ Section 201(c) defines energy transmitted in interstate commerce as energy “transmitted from a State and consumed at any point outside thereof.”²³⁵ The FPA came before Congress as prepared by FERC staff, couched largely in technical electric language, and “[f]ederal jurisdiction was to follow the flow of electric energy, an engineering and scientific, rather than a legalistic or governmental, test.”²³⁶ The Court in *Connecticut Power & Light Co.* noted that the technology of the electrical transmission industry is “such that if any part of a supply of electric energy comes from outside of a state it is, or may be present in every connected distribution facility. Every facility from generator to the appliance for consumption may thus be called one for transmitting such interstate power,” and it has thus “never been questioned that technologically generation, transmission, distribution, and consumption are so fused and interdependent that the whole enterprise is within the reach of the commerce power of Congress.”²³⁷

In *FPC v. Florida Power & Light Co.* the Court recognized the practical reality that physically isolated utilities have become a thing of the past, noting that as utilities have connected to interstate networks, their electrical energy has commingled with other energy in the networks, “just as molecules of water from different sources (rains, streams, etc.) would be commingled in a reservoir.”²³⁸ Recent litigation also outlined the technical complications of such distinctions, explaining that

within each grid, electric energy follows the path of least resistance. The energy divides among multiple paths—which may or may not be owned by the utility that generates or sells the power—in order

234. 16 U.S.C. § 824(b) (2006); see also *FPC v. Fla. Power & Light Co.*, 404 U.S. 453, 454 (1972); *Conn. Light & Power Co. v. FPC*, 324 U.S. 515, 523 (1945).

235. 16 U.S.C. § 824(c); *Fla. Power & Light Co.*, 404 U.S. at 454; see *supra* notes 33–36 and accompanying text.

236. *Conn. Light & Power Co.*, 324 U.S. at 529.

237. *Id.* at 529–30. Recognizing the importance of policy considerations in a bifurcated government, the Court qualified this expansive technical view by stating that “[i]t does not seem important whether out-of-state energy gets into local distribution facilities. They may carry no energy except extra-state energy and still be exempt under the [FPC]. The test is whether they are local distribution facilities.” *Id.* at 531.

238. *Fla. Power & Light Co.*, 404 U.S. at 461.

to find the path of least resistance between the generating station and the demand for power (load).²³⁹

This energy flow over multiple “parallel paths . . . is inevitable unless there is a direct . . . connection between the generation facility, at one end, and the load, at the other.”²⁴⁰ Thus, if any part of a supply of electric energy comes from outside the state, it might be present in every connected distribution facility, a phenomenon recognized as early as 1945 in *Connecticut Light & Power v. Federal Power Commission*.²⁴¹

These cases establish the technical reality that despite the most well-intended regulatory language, the current electric grid’s interconnecting lines and energy flow make it impossible and impractical to determine whether a proposed line will be one qualifying as a “local distribution facility” exempt from federal regulation, or one that enables electricity flow between state borders and is thus subject to federal regulation. Consequently, any shared-authority regulatory scheme is burdened by the necessity of distinguishing lines as intrastate or interstate, based on little more than rules in legal precedent which are quickly becoming outdated with each new technological advance.

b. States’ Rights Issues

Several states’ rights issues also present themselves in considering a shared-authority regulatory scheme, including state-owned resources being allocated to distant locations under federal authority, federal seizure of private property to build lines, and federal preemption of state regulation.

i. Seizure of Private Property to Build Lines

A limitation on a shared-authority scheme arises in how the federal regulatory body, granted the authority to regulate the development, siting, and construction of interstate transmission line projects, would go about procuring the necessary land for siting these interstate lines. Eminent domain is traditionally used to acquire easements from any holdout landowners, but “the power of eminent domain, however, can only be exercised for public use.”²⁴² This will be a challenge under most state regulatory schemes, since the benefit of most interstate “transmission facilities now inures primarily to a regional market instead of a locality.”²⁴³ As noted above, legal jurisprudence has firmly established that states are the primary possessors of the power of eminent domain, and that “a

239. Brief for FERC, *New York v. FERC*, *supra* note 11, at 4.

240. *Id.*

241. *Conn. Light & Power*, 324 U.S. at 529.

242. Eagle, *supra* note 146, at 14. Therefore, in order to obtain approval for a project, there must be a showing of public need. *Id.*

243. *Id.*

State cannot use its power of eminent domain for the benefit of citizens of another state. Courts find this limitation within the source of the legislative power; the sovereign is obligated to protect and promote the health, safety, morals, and welfare of citizens of the individual state.²⁴⁴ Thus, under a shared-authority scheme, if a proposed line were interstate, dependent on federal authority for permitting and siting, it could not look to the state's eminent domain powers for siting the line.

Although EAct 2005 provides for federal backstop siting authority, this permitting authority is limited to transmission projects in critical regions where one of the states involved is not authorized to consider regional benefits, the permit applicant cannot qualify for a permit because it does not serve end-users in the state, or the state siting authority has unnecessarily delayed or conditioned permit approval.²⁴⁵ The project also must be interstate in nature, be consistent with public interest, significantly reduce transmission congestion, and maximize the use of existing facilities to minimize its aesthetic and environmental impact.²⁴⁶ The bill also gives the federal permit holder the right to use the federal power of eminent domain to obtain necessary easements for which negotiations have failed, and to conduct eminent domain proceedings in federal court.²⁴⁷

Thus, although EAct 2005 makes it easier for critical interstate transmission facilities to obtain federal siting approval, "it is important to note that permitting and the use of eminent domain are separate issues," and that "[t]he power of eminent domain does not immediately follow the granting of a siting permit."²⁴⁸ EAct 2005 does provide "for the use of federal eminent domain power, but only for projects that are federally permitted."²⁴⁹ This leaves open the possibility that a proposal with a state siting permit will be denied the use of eminent domain power under that state's restrictive eminent domain regulations, and it will have no recourse to seek federal eminent domain power.²⁵⁰ In a shared-authority regulatory scheme, such a scenario is likely and has the potential to negate even the most well-intended regulatory overhauls.

ii. Preemption of State Regulation

A further problem with a shared-authority regulatory scheme deals with federal preemption and might arise when states refuse to cooperate with the federal government attempting to site an interstate line through their borders. States with current laws only permitting line siting if it

244. *Id.*

245. 16 U.S.C. § 824p(b)(1) (2006).

246. *Id.* § 824p(b)(2).

247. *Id.* § 824p(e).

248. Eagle, *supra* note 146, at 38.

249. *Id.*

250. *Id.*

benefits their own citizens, with no consideration for regional or national effects, are likely to be the most incensed by the federal government asserting authority over a portion of their siting authority.²⁵¹ These states might argue that the federal government is overstepping its authority and infringing on powers reserved to the states under the Tenth Amendment: the police power and the power of eminent domain.²⁵² Despite the states' exclusive retention of the police power,²⁵³ the U.S. Constitution provides in Article VI that the "Constitution, and the Laws of the United States which shall be made in Pursuance thereof . . . shall be the supreme Law of the Land."²⁵⁴ A federal law "made in pursuance of the Constitution suspends or overrides all State statutes with which it is in conflict."²⁵⁵ Thus, if state law conflicts with federal law, that state law is "preempted."²⁵⁶

In the context of regulating interstate "electric transmission line siting, preemption might be found where a state's regulatory scheme conflicts or interferes with Congress's objective of ensuring grid reliability by easing transmission line congestion."²⁵⁷ The Supreme Court has established:

The powers thus granted are not confined to the instrumentalities of commerce, or [services] known or in use when the Constitution was adopted, but they keep pace with the progress of the country, and adapt themselves to the new developments of time and circumstances. They extend from the horse with its rider to the stage-coach, from the sailing-vessel to the steamboat, from the coach and the steamboat to the railroad, and from the railroad to the telegraph, as these new agencies are successively brought into use to meet the demands of increasing population and wealth. They were intended for the government of the business to which they relate, at all times and under all circumstances. As they were intrusted to the general government for the good of the nation, it is not only the right, but the duty, of Congress to see to it that intercourse among

251. See *supra* notes 71–72 and accompanying text.

252. The Tenth Amendment to the U.S. Constitution reads, "The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people." U.S. CONST. amend. X; *New York v. United States*, 505 U.S. 144, 156 (1992).

253. See *supra* note 221 and accompanying text.

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

255. *Pensacola Tel. Co. v. W. Union Tel. Co.*, 96 U.S. 1, 9 (1877).

256. *Gade v. Nat'l Solid Wastes Mgmt. Ass'n*, 505 U.S. 88, 98 (1992) (stating that preemption "may be either express or implied, and is compelled whether Congress' command is explicitly stated in the statute's language or implicitly contained in its structure and purpose. Absent explicit pre-emptive language, we have recognized at least two types of implied pre-emption: field pre-emption . . . and conflict pre-emption, where . . . state law stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress." (internal quotation marks and citations omitted)).

257. Erich W. Struble, Comment, *National Interest Electric Transmission Corridors: Will State Regulators Remain Relevant?*, 113 PENN ST. L. REV. 575, 592 (2008); see *supra* notes 170–73 (discussing Congress and Pres. Obama's enacted legislations supporting this objective of easing transmission line congestion).

the States and the transmission of intelligence are not obstructed or unnecessarily encumbered by State legislation.²⁵⁸

In a shared-authority regulatory system, this principle, that the federal government has the right and the duty to ensure intercourse between the states is not encumbered by state legislation, means the federal government would have the authority to ignore or invalidate state regulations that run counter to federal siting plans or authorization given to an interstate line developer. In *Pensacola Telegraph Co.*, the Supreme Court stated:

The government of the United States, within the scope of its powers, operates upon every foot of territory under its jurisdiction. It legislates for the whole nation, and is not embarrassed by State lines. Its peculiar duty is to protect one part of the country from encroachments by another upon the national rights which belong to all.²⁵⁹

As discussed above, the energy crisis resulted in federal passage of legislation encouraging interstate line construction.²⁶⁰ Thus, if a shared-authority regulatory system is implemented, exclusionary and intrastate-interests regulations will be preempted, as “[t]hese siting regimes conflict with Congress’s objective of easing electric transmission congestion to ensure regional, and ultimately national, grid reliability.”²⁶¹

This preemption is a problem because, should such a scenario result, the states would be forced to dramatically overhaul their regulations and legislation. Further, the litigation between the states and the federal government that will precede this end result will be immense and extend for many months or even years, as neither level of government is likely to willingly concede power to the other. The administrative burdens imposed on the states and the costs of litigation thus urge against implementation of such a shared-authority regulatory system.

c. Bureaucratic Difficulties Imposed

A shared-authority regulatory system will also be problematic due to the bureaucratic difficulties it will impose upon all parties. As outlined above, the state is likely to be the determiner of whether a line proposal is deemed “interstate” or “intrastate” and which regulatory body, the state or the federal, hence has regulatory authority over the line’s development. Consequently, a developer will have to first go to

258. *Pensacola Tel. Co.*, 96 U.S. at 9. Although this is a case regarding interstate telegraph lines, the principle stated here has great applicability to interstate electric transmission lines as well, in the idea of adapting to “new developments of time and circumstances” and “new agencies . . . brought into use to meet the demands of increasing population and wealth.” The similarities between the development of the telecommunications industry and the electric industry are many, but are outside the scope of this Note.

259. *Id.* at 10.

260. *See supra* notes 170–73.

261. Struble, *supra* note 257, at 598.

each intended state, file its proposal, wait for the states' determination of what kind of line they consider this particular line to be, then proceed to file the actual construction and siting proposal under whatever body is determined to be the authority.

Imagine a situation in which one state determines the line will be "intrastate" in nature, perhaps because some of the energy is deposited to a load center within that state's borders, and then a neighboring state determines the line is "interstate" in nature because it is traversing multiple states. As the North American Electric Reliability Corporation (NERC) has explained, "if a line is going to go through three different states, the states on either end can demonstrate to their constituents what the benefits of that transmission line will be, but the state in the middle has a very difficult time demonstrating the benefit" and thus is unable to satisfy state requirements for line siting.²⁶² Although FERC has distinctions to determine whether a line is engaged in interstate transmission or local distribution, there is no bright-line test, and the state commissions are the ones making the evaluation.²⁶³ The dilemma in that situation will be determining which state gets to decide: the energy providing state, or the energy receiving state? Or maybe even the states in between, that are simply being crossed without providing the energy or receiving the electricity?

Further, even if the "deciding state" is determined by some general rule and all states agree to abide by this rule, the problem of developers having to go through two processes is still present. As one commentator has noted, "a jurisdictional divide in electric power regulation between federal and state regulators threatens the ability of even well-intentioned state regulators to implement efficient regulatory policies in the electric industry."²⁶⁴ The double-filing required in a shared-authority system prevents efficient regulatory policies, as it might ultimately extend the overall regulatory approval process, instead of simplifying it to encourage more transmission line construction. Customers would then have to wait longer for construction of transmission lines, which goes against the stated policy goals of faster, more efficient line development so as to provide easier access to reliable, cheaper energy. The potential bureaucratic difficulties thus provide one more reason why such a shared-authority regulatory scheme is unlikely to be the best solution to the current energy dilemma.

262. See, e.g., Carl J. Levesque, *Stringing Transmission Lines, Untangling Red Tape*, 139 PUB. UTIL. FORT. 46, 51 (2001) (quoting Tim Gallagher, manager of technical services at NERC).

263. NGA, 16 U.S.C. § 824 (2006); see *supra* notes 212–18 (discussing FERC distinctions between interstate transmission and local distribution).

264. Rossi, *supra* note 128, at 1781.

C. Federally Regulated Interstate System

This Section discusses the possibility of enacting a federal solution, in which the federal government assumes siting authority over all electrical transmission lines throughout the nation. This approach would be modeled after the regulatory system in place for siting natural gas pipelines, arguing that the two forms of energy provision are comparable, and their regulatory structures should be as well. Although a federal approach is not directly supported by current statutes, legislation and regulation in current years has developed progressively toward enacting this type of system. The major system overhaul that would have to be implemented is presented below, along with policy arguments arguing both for and against moving the country to a federal regulatory system.

1. A Federal Regulatory Scheme Could Allow Interstate Line Construction

A federal system that allocates to the federal government all regulatory siting authority over electrical transmission lines could be a solution to the problems of lack of interstate lines and the current regulatory obstacles that hinder interstate line development. Due to the immense similarities between the natural gas industry and the electric industry, the federal natural gas regulatory policy would be used as a model for implementing this federal assertion of authority. In this system, the federal government would assume all the siting authority for all electrical transmission lines, perhaps by creating a federal siting authority, basing its assertion of authority on the science of electron flow and interconnectedness of the electricity grid.²⁶⁵ This new scheme would still require a developer to prove the “public interest” of the line’s construction, but the determination would depend on considerations of regional and national interests—the overall “public” and not just the “public” of state citizens, as under the current scheme.

The natural gas and electric industries’ historical development is very similar, both beginning as local energy providers, restricted in their growth by the inability to store and transport the energy generated, then freed from restriction by the development of transmission systems able to span vast distances and immediately use the energy.²⁶⁶ Both are also unevenly distributed throughout the nation, with electricity resources located increasingly further from load centers, and natural gas clustered in key areas and transported nationally for use.²⁶⁷

265. See *supra* Part III.B.3.a (discussing the inability to control electron flow and the resulting inability to determine which lines are truly “interstate” or “intrastate”).

266. See *supra* Parts II.A.1, II.B.1 and accompanying text for industries’ history.

267. *Id.*; see *supra* notes 87–97 and accompanying text (discussing the Southwest region’s natural gas supplies, and Chicago as an example of major metropolitan area with few gas supplies nearby but able to utilize the benefits of natural gas due to the interstate pipeline system).

Further, the initial regulation of both industries was on the local, then state level. The federal government did not assert any kind of regulation over either industry until the 1930s, and when it finally passed PUHCA, it grouped both industries together under one piece of legislation, acknowledging their similarities.²⁶⁸ The statutory language of the FPA and the NGA are closely parallel in many cases, especially concerning the general ratemaking authority, and in fact, some federal courts have held that “precedent developed under one of the statutes was applicable to the parallel provision of the other statute.”²⁶⁹

The similarities between the natural gas and electrical industries are long recognized. Almost twenty years ago, a commentator proposed that the FPA be amended to confer onto “FERC the same powers with respect to transmission projects that the Natural Gas Act (NGA) gives it for gas pipeline projects,”²⁷⁰ namely issuing certificates of public convenience and necessity, and the “authority to preempt states and to authorize and order the construction of transmission lines just as it may authorize and order the construction of natural gas pipelines” under the NGA.²⁷¹ Imposing a solution reaching back to the original 1935 FPA could bring many of the same benefits realized by the natural gas industry since the enactment of the NGA, due to the extensive similarities between the industries.

There are key differences, however, between the statutory schemes set out in the FPA and the NGA, which could explain the lacking electrical transmission. The principal difference is FERC’s authority to issue certificates for interstate pipeline construction, as compared to the lack of federal siting authority for electrical transmission lines.²⁷² Under section 7 of the NGA, FERC must issue a pipeline developer a certificate of public convenience and necessity before construction can begin, and can attach to the certificate “such reasonable terms and conditions as the

268. See *supra* notes 31, 104 and accompanying text.

269. Donald F. Santa, Jr. & Clifford S. Sikora, *Open Access and Transition Costs: Will the Electric Industry Transition Track the Natural Gas Industry Restructuring?*, 25 ENERGY L.J. 113, 124 (2004); see, e.g., *FPC v. Sierra Pac. Power Co.*, 350 U.S. 348, 353 (1956). Compare NGA, 16 U.S.C. § 824d (2006), with 15 U.S.C. § 717c (1988).

270. Richard J. Pierce, Jr., *The State of the Transition to Competitive Markets in Natural Gas and Electricity*, 15 ENERGY L. J. 323, 334 (1994).

271. Hoang Dang, *New Power, Few New Lines: A Need for a Federal Solution*, 17 J. LAND USE & ENVTL. L. 327, 342 (2002).

272. Other than the differences described, the FPA grants FERC certain authorities which are not granted by the NGA. See, e.g., 16 U.S.C. § 824b(a) (public utilities must secure FERC order before: selling, leasing, or otherwise disposing of jurisdictional facilities in excess of \$100,000; merging or consolidating jurisdictional facilities with those of any person; or purchasing, acquiring, or taking a security of another public utility); *id.* § 824c (describing FERC jurisdiction over, among other things, public utility securities issuances or assumption of certain liabilities); *id.* § 824f (describing Commission jurisdiction upon complaint by a state commission to fix proper, adequate, or sufficient service); Santa & Sikora, *supra* note 269, at 124 n.62.

public convenience and necessity may require.”²⁷³ After the FERC decides a pipeline is in the public convenience and necessity, section 7(h) authorizes it to grant a certificate holder eminent domain powers to take property necessary for a right-of-way to construct, operate, and maintain the pipeline.²⁷⁴ “This authority effectively preempts state or local interests from blocking the facility’s construction and operation.”²⁷⁵

There is no similar provision in the FPA. As discussed above, FERC lacks certificate jurisdiction under the FPA, and all siting and authorization of transmission lines is subject to state, not federal, regulations.²⁷⁶ A federal approach that mirrors the approach of the NGA could begin by simply remedying this difference between these enabling statutes, allowing FERC the same certification powers over the electricity grid as it holds over the natural gas pipeline network.

Another commentator has suggested that this change to the FPA could have been implemented via EPAct 2005, arguing that “although Congress granted limited backstop authority to approve federal electric transmission line siting in a few specific circumstances . . . Congress should have [instead] granted FERC exclusive jurisdiction over transmission siting, making the FPA mirror the [NGA].”²⁷⁷ Such a bold move would have paralleled that taken by the NGA in granting FERC eminent domain authority,²⁷⁸ and it nonetheless could have provided for a state role in the process, allowing FERC to impose similar conditions to the certificate as it does for natural gas pipelines—mandating the proposal satisfy state siting standards, local zoning laws regarding reasonableness of location, environmental regulations, and state comprehensive plans.²⁷⁹

While there are significant differences between the FPA and the NGA suggesting a federal approach to electricity could not mirror the approach taken with natural gas, “at bottom, both Acts are designed to achieve substantially the same purpose: to fulfill the supreme authority of the federal government to permit or certificate facilities necessary to transmit electricity or natural gas in interstate commerce, without undue interference from the states.”²⁸⁰ Enacting a federal electric transmission line regulatory system could thus be based on the approach used to regu-

273. 15 U.S.C. § 717f(c), (e). Also, under 15 U.S.C. § 717(b), FERC approval is required before a natural gas company may abandon jurisdictional facilities or services rendered using such facilities. *Id.* § 717f(b); Santa & Sikora, *supra* note 269, at 125.

274. 15 U.S.C. § 717f(h); Santa & Sikora, *supra* note 269, at 125.

275. Santa & Sikora, *supra* note 269, at 125.

276. *Id.*

277. Joshua P. Fershee, *Misguided Energy: Why Recent Legislative, Regulatory, and Market Initiatives Are Insufficient to Improve the U.S. Energy Infrastructure*, 44 HARV. J. ON LEGIS. 327, 360–61 (2007).

278. “Less than a decade after the NGA’s passage, the NGA was amended to give FERC eminent domain authority over the construction of natural gas pipelines in the public interest.” Mark A. de Figueiredo, Note, *A Regulatory Framework for Investments in Electricity Transmission Infrastructure*, 26 VA. ENVTL. L.J. 445, 456 (2008); see 15 U.S.C. § 717(f).

279. See Dang, *supra* note 271, at 345.

280. Swanson & Jolivet, *supra* note 40, at 453–54.

late natural gas pipelines, using the lessons learned from the development of natural gas regulations to guide the nation in formulating a new approach to siting interstate transmission lines.

2. *Arguments for Why a Federal System Should Be Implemented*

Enacting a federal system of electrical transmission line siting regulation should be implemented as the solution to the energy crisis for many reasons. The regulatory and legislative histories show a consistent trend in the direction of expanded federal authority. The Commerce Clause powers of the federal government clearly justify an expansive federal role as well. The expanding energy needs of the country require the ability to ensure reliable energy on a national level, and a federal system provides an easier, more efficient way to achieve grid expansion without imposing bureaucratic hurdles.

a. Authorization for a Federal Regulatory System

Allocating to the federal government all electrical transmission line siting authority seems like it would encounter resistance from a legal perspective, but as presented below, both the legislative progression and the Commerce Clause readily support a federal assertion of jurisdiction.

i. Legislative Progression Toward an Expanded Federal Role

Although there is currently no legislation in place directly supporting implementation of a federal policy, since the federal government did not extend the siting authority to electrical transmission lines that it did to natural gas pipelines,²⁸¹ history reveals a legislative movement that increasingly suggests the possibility of enacting a federal system. Federal authority over the electricity industry has been asserted since the 1935 passage of PUHCA and the FPA, in which Congress wanted “to provide effective federal regulation of the expanding business of transmitting and selling electric power in interstate commerce.”²⁸² Following the FPA, *Jersey Central Power & Light Co.* clarified that FERC’s authority results when electricity flows into or out of a state, becoming interstate commerce, whether or not there is technically a “sale” in interstate commerce.²⁸³ *Connecticut Light & Power Co.* further explained that even if

281. In 1935 Congress passed PUHCA, which limited the ability of both the electric and natural gas industries to be controlled by industry monopolies. Title II of PUHCA, the FPA, limited federal authority by reserving state authority over the siting and construction of transmission lines. The natural gas industry was not similarly addressed, and in 1938 Congress remedied this by passing the NGA which gave FERC authority over the siting and construction of new interstate natural gas pipelines. Thus, the natural gas industry was under federal siting regulation, but the electric industry was left to state siting regulation. *See supra* notes 31–37, 104–12 and accompanying text.

282. *Gulf States Utils. Co. v. FPC*, 411 U.S. 747, 758 (1973).

283. *Jersey Cent. Power & Light Co. v. FPC*, 319 U.S. 61, 71 (1943).

the distribution systems of a utility normally operate in intrastate transmission, just a few cross-border transactions make the utility's transmission system subject to FERC jurisdiction.²⁸⁴ Thus, even the earliest cases signal an extensive federal reach, hampered only by state regulation of "intrastate" lines.

Since the passage of PUHCA, FERC has increasingly asserted authority over the U.S. electricity industry, by stating whom utilities can purchase power from, mandating that all have access to all lines equally, and passing several Orders affecting the whole structure of the industry.²⁸⁵ Order 888 in particular was an instance of FERC asserting then-unprecedented jurisdiction over the transmission component of electricity sales.²⁸⁶ The Supreme Court held that FERC has broad authority to regulate transmission in interstate commerce because "transmissions on the interconnected national grids constitute transmissions in interstate commerce."²⁸⁷ EAct 2005 then shifted some regulatory jurisdiction from state to FERC control—the first time in history so much authority had been usurped from the states.²⁸⁸ Finally, Order 1000 expands federal authority by requiring "each public utility transmission provider [to] participate in a regional transmission planning process that produces a regional transmission plan" to meet the region's energy needs.²⁸⁹ These are all glaring examples of federal assertion of authority over the entire electricity industry, progressively increasing the federal government's authority and decreasing the state's role in the siting process.

ii. Constitutional Support for Federal Regulation

The federal government's authority to expand its jurisdiction in such a way is derived from the same powers which authorized it to regulate the interstate railroads, telecommunications lines, highways, navigable waters, and natural gas pipelines: the Commerce Clause. Since the Marshall Court ruled in *Gibbons v. Ogden* that under the Commerce Clause, "the power of Congress does not stop at the jurisdictional lines of the several states [as] it would be a very useless power if it could not pass those lines," the Commerce Clause has been used to assert federal jurisdiction over all kinds of commercial and noncommercial entities.²⁹⁰

The *Gibbons* decision contained the following principles, which apply to a federal assertion of authority over the transmission system: (1) Commerce is "intercourse . . . all its branches, and is regulated by pre-

284. *Conn. Light & Power Co. v. FPC*, 324 U.S. 515, 519–21 (1945).

285. *See supra* notes 37–40 and accompanying text (describing PURPA and EAct).

286. *See supra* notes 41–46 and accompanying text.

287. *See New York v. FERC*, 535 U.S. 1, 16 (2002).

288. *See supra* notes 47–52, 55–60, 61–66 and accompanying text (discussing Order No. 1000 and EAct 2005).

289. *Transmission Planning and Cost Allocation*, 76 Fed. Reg. 49,842 (Aug. 11, 2011); *see supra* notes 61–66 and accompanying text (discussing Order No. 1000).

290. *Gibbons v. Ogden*, 22 U.S. (9 Wheat.) 1, 195 (1824).

scribing rules for carrying on that intercourse.”²⁹¹ (2) Commerce among the states cannot stop at the external boundary-line of each state, but may be introduced into the interior. Although, comprehensive as the word “among” is, it may very properly be restricted to that “commerce which concerns more States than one.”²⁹² (3) The Commerce power is the power to regulate, that is “to prescribe the rule by which commerce is to be governed” which “may be exercised to its utmost extent, and acknowledges no limitations other than are prescribed in the Constitution.”²⁹³ Additionally, Marshall’s emphasis that “commerce” also includes “navigation” implicitly “assumed that the Commerce Clause kept up with the progress of technology, since he devoted only six paragraphs at the end of his opinion, to the fact that the dispute in *Gibbons v. Ogden* concerned a steamship, a type of craft unknown to the Founders in 1787.”²⁹⁴ This progress of technology is precisely what is at issue with regards to electrical transmission line development, and even Marshall would seem to have agreed that it would be subject to federal jurisdiction.

In 1882, the Court expanded on this understanding of technological advances by announcing that telegraph companies, like railroad companies, “are instruments of commerce, and their business is commerce itself,”²⁹⁵ following soon after with the declaration that the Commerce Clause “operates today upon modes of interstate commerce unknown to the fathers, and it will operate with equal force upon any new modes of such commerce which the future may develop.”²⁹⁶ These earliest of Court decisions support an expansive federal role in transmission lines. In *Kidd v. Pearson*, however, the Court distinguished between “manufacturing” and “commerce,” seemingly limiting the federal government’s reach into state activities.²⁹⁷ Left at this, the federal government would arguably be unable to assert Commerce Clause jurisdictional authority over the siting and construction of transmission lines, since the development of the lines is much more the “manufacturing” component of the process than the subsequent transmission of the electricity over the lines, which would be the “commerce” component.

The Court, however, acknowledged that the explicitly granted “commerce power is not confined in its exercise to the regulation of commerce among the states. It extends to those activities intrastate which so affect interstate commerce . . . as to make regulation of them

291. *Id.* at 189–90.

292. *Id.* at 194.

293. *Id.* at 196.

294. BITTKER & DENNING, *supra* note 108, at 3-3; *see id.* at 190.

295. *W. Union Tel. Co. v. Texas*, 105 U.S. 460, 464 (1882).

296. *See In re Debs*, 158 U.S. 564, 591 (1895); BITTKER & DENNING, *supra* note 108, at 3-4.

297. *Kidd v. Pearson*, 128 U.S. 1, 20 (1895) (noting that “No distinction is more popular to the common mind, or more clearly expressed in economic and political literature, than that between manufactures and commerce”); *see* BITTKER & DENNING, *supra* note 108, at 3-4.

appropriate,” thus implicitly including the power to regulate “local” activities with a close relationship to interstate commerce.²⁹⁸ In *United States v. Lopez*, the Court noted that “Congress may regulate the use of the ‘channels’ of interstate commerce . . . the ‘instrumentalities’ of interstate commerce . . . [and] those activities that substantially affect interstate commerce.”²⁹⁹ One commentator notes that “[t]here is . . . little doubt that electricity transmission—even that within a single state—‘substantially [affects]’ interstate commerce,” tying in the Court’s holding in *Wickard v. Filburn* that “even wheat grown and consumed on a single farm substantially affects interstate commerce because that consumption of wheat decreased the demand for wheat in general.”³⁰⁰ Along this analogy, electricity consumed within Illinois decreases the amount of electricity available to serve customers in Wisconsin, and hence substantially affects interstate commerce. Thus, even with *Kidd*’s limitation, a federal reach into complete transmission line regulation is still supported, as even generating electricity has a direct, substantial, or material effect on the subsequent transmission of that electricity.

Furthermore, “the interconnected grid could even be seen as an instrumentality of interstate commerce, for electricity travels through the grid to get from one state to another, just as goods in interstate commerce travel by railway from one state to another.”³⁰¹ The Court in *Wabash, St. Louis and Pacific Railway Co. v. Illinois* held that railway service within a single state should be regulated as interstate commerce because

when . . . each one of the States shall attempt to establish its own rates of transportation, its own methods to prevent discrimination in rates, or to permit it, the deleterious influence upon the freedom of commerce among the States and upon the transit of goods through those States cannot be overestimated.³⁰²

If “transmission” is substituted for “transportation” and “electricity” for “goods,” this applies directly to the current regulatory debate.

This is especially so when combined with the electron flow theories discussed above: with no way to control electron flow, no way to know whether the electricity is moving through the “intrastate” lines or has instead chosen to follow a path of less resistance through an “interstate” line, the interconnectedness of the entire transmission grid justifies total federal regulation. Since the federal government can regulate goods that cross state lines, and energy is a commercial good, a commodity pur-

298. *Wickard v. Filburn*, 317 U.S. 111, 124 (1942).

299. *United States v. Lopez*, 514 U.S. 549, 558–59 (1995) (internal citations omitted).

300. Cassandra Burke Robertson, Note, *Bringing the Camel Into the Tent: State and Federal Power Over Electricity Transmission*, 49 CLEV. ST. L. REV. 71, 78 (2001) (discussing *Wickard*, 317 U.S. at 127–28).

301. *Id.* at 78.

302. *Wabash, St. Louis & Pac. Ry. Co. v. Illinois*, 118 U.S. 557, 577 (1886); Robertson, *supra* note 300, at 78.

chased by consumers and worth a price in the market, then “when any part of the electricity moves across state lines, transmission all the way to the retail customer is transmission in interstate commerce,” subject to federal regulation.³⁰³ Thus, even energy resources, generating stations and intrastate lines within a state, connected to a single interstate line, can be encompassed as all a part of the “interstate” electrical system, prohibiting the states from influencing national energy provision with protectionist regulations. Whether because the lines on the grid are “instrumentalities,” or because of the “substantial effect” of each component on the overall electrical industry, the outcome is the same: they are interstate commerce, justifying federal regulation.

The entire history of using the Commerce Clause to justify federal regulation of industries is extensive and beyond the scope of this Note, but it does make “clear that the connection to interstate commerce is strong enough to permit Congressional action,”³⁰⁴ and should a federal system be imposed to regulate transmission lines, it could easily rest its authority on the Commerce Clause.³⁰⁵

b. Expanding Energy Needs of the United States

As discussed in detail above, the expanding energy needs of the United States are currently failing to be met by the state-regulated system, and this failure is increasing consistently.³⁰⁶ A federal system of regulation would best be able to provide the system efficiency and reliability needed. As one commentator has noted, “[a] concern for transmission efficiency includes a concern that electricity get to where it is needed most, as cheaply and as easily as possible.”³⁰⁷ Reliability is similarly defined by the Energy Information Administration as requiring adequacy and security.³⁰⁸ Efficiency and reliability considerations played a role in choosing federal regulation for the natural gas industry when it faced similar problems as the electrical industry is now facing: the location of the energy sources is often very distant from the location of the load centers where the energy is needed, and the cost of energy increases the more hurdles it has to cross to get to the final consumer, yet it can still often be provided more cheaply from non-local sources, and an ability to transport the energy across the country is mandatory for industry success. Without a federal siting system, the barriers to expansion of the transmission grid prevent reliable service—if one source of energy cuts

303. Brief for FERC, *New York v. FERC*, *supra* note 11, at 26.

304. Robertson, *supra* note 300, at 79.

305. For an expansive history of the Commerce Clause as used to justify federal jurisdiction over all the industries listed in this Note, see BITTKER & DENNING, *supra* note 106.

306. See *supra* Part III.A.3.a (discussing of current energy crisis).

307. Robertson, *supra* note 300, at 86.

308. *Electricity Terms and Definitions*, U.S. ENERGY INFO. ADMIN., <http://www.eia.gov/cneaf/electricity/page/glossary.html> (last visited Feb. 15, 2013).

off or is overused, there is no backup source to supply the needed energy—and prevent system efficiency by imposing bureaucratic and systematic hurdles that stall energy provision and increase consumer prices.

These concerns escalate as the country increases its reliance on renewable energy sources. *The New York Times* aptly stated “[t]he dirty secret of clean energy is that while generating it is getting easier, moving it to market is not,” urging that “[w]e need an interstate transmission superhighway system” to replace the current outdated electricity grid.³⁰⁹ The current grid’s limitations are preventing renewable energy projects already, and the “windiest sites have not been built, because there is no way to move that electricity from there to the load centers,” claims a developer of wind energy.³¹⁰ For the energy to be moved, an expansion of the grid must occur, enabled by a federal regulatory system.

T. Boone Pickens, the oilman building the world’s largest wind farm, testified before Congress that “[i]f you want to [tackle the grid problem] on a national scale, where the transmission line distances will be much longer, and utility regulations are different, Congress must act.”³¹¹ This urging of federal intervention is pervasive and “[m]any observers have agreed that federal jurisdiction is needed to ensure that power can be moved reliably and efficiently.”³¹² The U.S. Department of Energy has also stated that “however understandable the local concerns, they are getting in the way. ‘Modernizing the electric infrastructure is an urgent national problem, and one we all share.’”³¹³ Even state governors have urged federal action, claiming that “[w]e still have a third-world grid . . . [w]ith the federal government not investing, not setting good regulatory mechanisms, and basically taking a back seat on everything except drilling and fossil fuels, the grid has not been modernized.”³¹⁴ The demand for expanding the electric grid to increase access to renewable resources is tied intricately into ensuring efficient and reliable energy provision, and a federal regulatory system would provide the most comprehensive action.

309. Matthew L. Wald, *Wind Energy Bumps into Power Grid’s Limits*, N.Y. TIMES, Aug. 27, 2008, at A1 (quoting Sudeen G. Kelly, member of FERC).

310. *Id.* (quoting Gabriel Alonso, chief development officer, Horizon Wind Energy).

311. *Id.* (quoting T. Boone Pickens, Texas oil tycoon). T. Boone Pickens proposed building as many as 4000 MW of wind turbines in the state of Texas. One acknowledged barrier to developing such a large wind turbine project is the lack of transmission lines in areas of the state that have strong wind resources. Elizabeth Souder, *T. Boone Pickens Plans Power Play with Huge Texas Panhandle Wind Farm*, DALLAS MORNING NEWS, May 15, 2008, at 1D, reprinted in ORANGE POWER (May 15, 2008), <http://www.orangepower.com/threads/dmn-t-boone-pickens-plans-power-play-with-huge-texas-panhandle-wind-farm.51033/>; 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, 737–38 (2010).

312. Robertson, *supra* note 300, at 87.

313. Wald, *supra* note 309 (quoting Kevin M. Kolevar, assistant secretary for electricity delivery and energy reliability, U.S. Department of Energy).

314. *Id.* (quoting Bill Richardson, Governor, New Mexico and former U.S. Energy Secretary under President Bill Clinton).

Many agree that federal power over siting could expand available transmission capacity, urging the imitation of the natural gas regulatory scheme by pointing out that such power has aided the expansion of transmission in the context of natural gas, and hence “parallel authority” is needed for electrical transmission lines as well.³¹⁵ The expansion of the natural gas pipeline system “pursuant to FERC’s certificate authority under the NGA . . . has facilitated the expanded role of natural gas in the nation’s energy mix,” and granting FERC certification authority over the electrical transmission line system could similarly expand the use of renewable resources and distant sources in the nation’s energy mix.³¹⁶ Thus, a federal regulatory system, allowing FERC to implement a system-wide solution to transmission problems, would result in the efficient and reliable provision of electricity to consumers: ensuring the electricity is getting to where it is needed, as cheaply and easily as possible, consistently and predictably.

c. Bureaucratic Advantages of Federal Power

A federal regulatory system could eliminate several of the bureaucratic hurdles currently hindering development projects. By implementing a comprehensive statutory scheme outlining what is needed to apply for certification to construct a line, defining an expanded view of the “public need,” and ensuring consistency in proposal evaluations, the effort required to plan a transmission line will be significantly decreased, thus encouraging development. Federal siting authority would be “procedurally beneficial, eliminating the need for interstate projects to navigate bureaucracy caused by the presence of several state siting authorities.”³¹⁷ Further, FERC, “having sited interstate natural gas lines for the past sixty-five years, is the most competent body to handle large-scale transmission projects.”³¹⁸ A federal grant of eminent domain provides consistency and legitimacy to assertions of this power against uncooperative landowners and reduces the ability of local factions to influence national energy provision.

In implementing a federal system, the concept of “public need” will be redefined to a broader view that a federal siting body must use in evaluating project proposals. This will provide the opportunity to assess need on a wide regional and national level, taking into account the big picture that current state legislation ignores or diminishes. Although there are many different factors that can help make this federal “public

315. See Donald F. Santa Jr., *California’s Power Crisis: Catalyst for National Reform?*, PUB. UTIL. FORT, Dec. 1, 2000, available at <http://www.fortnightly.com/fortnightly/2000/12/californias-power-crisis-catalyst-national-reform>.

316. *Id.*

317. Diamond, *supra* note 116, at 236.

318. *Id.*

need” tangible and successful, one commentator has proposed that any new definition include the following criteria:

- (1) The impact of the proposed facility on the power grid and the market being served by it (e.g., effect on competitiveness);
- (2) The effect of the proposed facility on alleviating constraints, weaknesses, congestion, and other shortcomings on the existing grid;
- (3) The effect that the proposed facility will have on the resource mix of generators whose output will be accessible to consumers (e.g., will it facilitate access of renewable resources to load centers?);
- (4) Expected regional environmental effects (e.g., reduced carbon emissions), of the anticipated changed dynamics of the regional grid after the line is put in service; and
- (5) The impact of the proposed new line on the state’s and region’s economy and economic development.³¹⁹

Other commentators have proposed similar criteria, all focusing mainly on the greater effects of the proposed line. The more local concerns typically at the center of a state evaluation are still considered, except that now, under this new broader evaluation, they are just one factor out of many.

Minimizing the role of these local concerns in the proposal evaluation is also a key benefit of implementing a federal system. As discussed above, the state forum is best able to hear local concerns cheaply, but this comes at the price of increasingly powerful state interest groups that promote protectionist views of electrical transmission, harming neighboring states and potentially the whole nation in the process. As one commentator has noted, “[t]he strongest interest groups may more readily capture the regulatory process in state politics than in national politics, thereby thwarting the goals of both federal and state regulatory policies.”³²⁰ On the federal level, however, “officials are less likely to be influenced by parochial concerns,” thus avoiding the problem presented “when small costs to a small group of vocal residents prevent the siting of infrastructure that provides large benefits to a large group of people,” an inefficiency that results only “when concerns of negatively affected residents are given disproportionate weight.”³²¹ A federal siting authority would be less likely to concede to narrow local interests or allow them to be overvalued, especially if the “public need” definition in the federal regime is written in a way that considers these concerns as only one factor

319. Brown & Rossi, *supra* note 311, at 750–51.

320. Rossi, *supra* note 128, at 1782; *see supra* notes 176–79 and accompanying text (discussing interest group factions at lower levels of government).

321. Eagle, *supra* note 146, at 44.

among many others that favor the line.³²² Thus, if a federally regulated system is implemented, the bureaucratic hurdles that would be reduced by eliminating local parochialism and evaluating “public need” from a broad perspective would allow faster permitting of lines, and consequently, a more responsive grid expansion that is necessary to meet the country’s energy needs.

3. *Arguments for Why a Federal System Should Not Be Implemented*

A federal system for regulating electrical transmission lines might not be the best solution to the energy crisis. Such an extension of federal authority might provoke problems like state claims of usurpation of authority and disregard for local concerns. A federal system would also entail bureaucratic challenges, both in its implementation, and its effect on future development proposals. Public policy concerns also argue against a federal system as being politically untenable and too removed from the citizenry to be effective.

a. State and Local Landowners’ Concerns

Implementing a federal electrical transmission line regulatory system will undoubtedly raise concerns from state and local government levels. The federal government would be asserting authority over private property within state borders, that, were it not for the development proposal being considered, would have no tie to interstate commerce and would be outside the reach of the federal government’s powers. The Court has noted that “Congress is acutely aware of the existence and vitality of these state governments. It sometimes is moved to respect state rights and local institutions even when some degree of a federal plan is thereby sacrificed.”³²³ Thus, although arguably the federal government is institutionally preferable for siting decisions because of its procedural efficiencies, its experience in siting energy projects, and its ability to balance national and state interests, there is a legitimate fear that national regulators will focus on national priorities to the detriment of the state and local interests, and “may further stall potential transmission projects by encroaching upon traditional state authority and provoking backlash by the states.”³²⁴

Given the huge scope of transmission projects, “increased nationalization of transmission line siting potentially represents a literal and fig-

322. Although there is continuing concern that federal siting authority will run over state and local interests, these fears can be alleviated by allowing representatives on behalf of each of the local, regional, and national interests to have a seat at the decision-making table when evaluating development proposals. See Tara Benedetti, Note, *Running Roughshod? Extending Federal Siting Authority over Interstate Electric Transmission Lines*, 47 HARV. J. ON LEGIS. 253, 275–76 (2010).

323. *Conn. Light & Power Co. v. FPC*, 324 U.S. 515, 530 (1945).

324. Benedetti, *supra* note 322, at 254–55.

urative ‘power grab’ by FERC from local landowners and authorities.”³²⁵ Increased reliance on eminent domain to overpower disgruntled landowners is not the best way to streamline the siting of lines and expand the electric grid, as “[w]idespread federal use of eminent domain is likely to anger landowners attempting to retain their private property rights, and could potentially unleash a public outcry against the perceived overuse of governmental condemnation power.”³²⁶

Additionally, by “taking power away from local authorities most likely to account for provincial issues such as private property rights and environmental considerations, [an expansion of federal authority] would be likely to alienate local landowners from the siting process.”³²⁷ As discussed above, the further the regulatory oversight gets from the individual property owners, the less likely their concerns are to be heard. Considering that FERC and similar federal agencies are not elected representatives and are hence not subject to a majoritarian political process, when these officials authorize the taking of private land, the democratic ideal is negated, as landowners have little influence, practically or theoretically, over their appointment, and thus no recourse against these officials.³²⁸

This exclusion of landowners’ ability to participate in the process conflicts directly with Supreme Court takings precedent from *Kelo* and the enhanced notice and opportunity for participation requirements in much state legislation that reflect the “increased social and judicial concern . . . placed on the integration of the public in eminent domain proceedings.”³²⁹ These considerations urge courts to evaluate condemners’ integration of landowners when adjudicating eminent domain cases for transmission line projects, but this integration cannot be done if the condemner is a developer presenting a proposal to the government in Washington D.C., and the landowner is a farmer in North Dakota.³³⁰

Even if a procedure could be put in place to allow that farmer to be heard before federal approval of a project planned to seize his land, commentators have argued that many such “reforms aimed to better integrate the public . . . fail to alter what are essentially unjust takings,”³³¹ and “insulating an injustice with bureaucratic procedural requirements

325. Diamond, *supra* note 116, at 219.

326. *Id.* at 219–20; see also *The Kelo Decision: Investigating Takings of Homes and Other Private Property: Hearing Before the S. Comm. on the Judiciary*, 109th Cong. 14 (2005) (statement of Prof. Thomas W. Merrill, Charles Keller Beekman Professor, Columbia Law School) (stating that “the American people believe that property rights are invested with significant moral significance”).

327. Diamond, *supra* note 116, at 238–39.

328. *Id.* at 251.

329. *Id.* at 242; see also *Kelo v. City of New London*, 545 U.S. 469, 483–84 (2005); Nasim Farjad, Note, *Condemnation Friendly or Land Use Wise? A Broad Interpretation of The Public Use Requirement Works Well for New York City*, 76 *FORDHAM L. REV.* 1121, 1124 (2007) (arguing that procedural reform, rather than prohibitive legislation, would best prevent unjust private takings).

330. Diamond, *supra* note 116, at 242; Meyer & Sedano, *supra* note 120, at E-20.

331. Diamond, *supra* note 116, at 245 (citing Ilya Somin, *The Limits of Backlash: Assessing the Political Response to Kelo*, 93 *MINN. L. REV.* 2100, 2114 (2009)).

simply cannot transform it into a just act.”³³² The *Kelo* Court did suggest, however, that “public, participatory planning is a constitutional safe harbor” legitimizing takings and protecting condemning entities from challenges by landowners.³³³ Thus, placing authority at the federal level, distant and unreachable to most citizens, could transform an otherwise just taking that gives the landowners notice and opportunity to be heard, into an unjust taking, depriving the landowners of the procedural rights necessary to legitimize eminent domain seizure of their land.

b. Bureaucratic Difficulties Imposed

Overall, moving to a federally regulated system, no matter how it is done, will necessitate extensive regulatory overhaul and many details will need to be sorted out. A federal siting agency might need to be created independently of FERC to handle the sheer volume of proposals that will now be redirected from all fifty states to just one authority. A comprehensive statutory scheme would need to be enacted detailing all the requirements that must be met to justify the “public need” for a line from an interstate national perspective. This statutory scheme must be able to “quickly and clearly identify energy infrastructure needs, provide significant financial incentives and realistic deadlines to entice and enable investors, and expand and exercise all available federal authorities to ensure that regulatory delays do not impede the process” of expanding the electricity grid.³³⁴ This identification and analysis of the overall “need” of a proposal will be crucial to successful implementation of a federal system.

Even if all these systematic issues are resolved, applying a FERC-based natural gas pipeline regulatory regime to electric transmission lines could be “unproductive and politically untenable.”³³⁵ The natural gas pipeline regulations arose during the New Deal era, “when the public looked to large federal programs to solve problems,” which is simply no longer the case.³³⁶ Any proposals put in front of Congress today to expand federal authority would be criticized that “federal officials would be making siting decisions far removed from the localities and would be unable to fully appreciate the externalities associated with the transmission projects.”³³⁷ The burdens that would be imposed on local participants are substantial, as most events under FERC processes take place in Wash-

332. *Id.* (quoting Timothy Sandefur, *The “Backlash” So Far: Will Americans Get Meaningful Eminent Domain Reform?*, 2006 MICH. ST. L. REV. 709, 731 (2006)).

333. *Id.* at 251.

334. Fershee, *supra* note 277, at 362.

335. Figueiredo, *supra* note 278, at 457.

336. *Id.*

337. *Id.*

ington D.C., a lengthy distance from the vast majority of the country, essentially serving to preclude participation by citizens.³³⁸

Commentators caution that, contrary to the ideal of increasing productivity by imposing federal regulation, “some pipeline siting cases have also dragged on for years, and assert that the process is not sufficiently predictable” to justify emulating it as a model when designing an electrical regulatory scheme.³³⁹ In contrast, transferring to the federal government the “immense amount of information from local, state, and regional sources,” along with the required “consultations and negotiations” with all the parties involved, will likely produce “over-centralization, resulting in delays, hasty or poor decisions,” or worse.³⁴⁰

IV. RECOMMENDATION: FEDERAL REGULATION OF ELECTRICAL TRANSMISSION LINES

Congress’s challenge in the coming years is to craft a solution to the energy crisis that both facilitates the policy goals outlined above and is politically acceptable enough to secure the cooperation of FERC, the states, and citizens. A system of federal regulation over all electrical transmission lines is the best solution to implement, and the most likely to lead to the electric grid expansion necessary to meet the country’s ever increasing energy needs. As discussed above, the legislative, historical, and constitutional development of electrical transmission line regulation has progressively moved toward expanded federal regulation, but has always hindered itself by insisting on retaining states’ authority over siting “intrastate” lines. Granted, a federal system would be a drastic change from the current scheme, but desperate times call for desperate measures, and the current state of the energy industry is nothing if not desperate.

FERC’s most recent Order 1000 acknowledges this need for drastic change by *mandating* participation in regional planning, sharing of information, and joint evaluation of proposals, all signaling a need to move away from individualistic state-centered evaluations of proposals. Order 1000, however, still frustratingly contains language retaining state authority over siting and permitting of transmission facilities, a clause that should be removed from all future regulations concerning electrical transmission lines.

Although there are good arguments for why the current state-regulated system should be maintained, these arguments simply falter under the incredible weight of the arguments mandating a system change. Similarly, a shared-authority system of federal regulation of interstate lines and state regulation of intrastate lines has good justifica-

338. Meyer & Sedano, *supra* note 120, at E-20.

339. *Id.*

340. *Id.*

tions suggesting it could be the solution to the energy crisis, but this type of system still just retains too much power at the state level to hinder expansion of the electric grid. This Part of the Note addresses each of these issues in turn, beginning with Order 1000's implications for moving to a federal system, and then explaining the inadequacies of the state and shared authority systems. Finally, an approach for moving forward is outlined, suggesting complete federal control over electrical transmission line siting.

A. *FERC Order 1000's Implications for a Federal System*

FERC Order 1000, issued July 2011, deals with whether states can be forced to coordinate on transmission planning, and says that yes, in fact, states can be so compelled.³⁴¹ Although this was arguably FERC's strongest exertion of federal authority over electrical transmission to date, it is still insufficient to facilitate the necessary grid expansion. The amount of opposition to this rule suggests that FERC might be at the end of its rope under its enabling legislation, and that if any more federal authority is to be proclaimed, it will have to come from Congress, as an agency cannot claim authority that has not been specifically delegated to it.³⁴² As presented below, the authority thus far delegated resulted in the passage of this Order, with significant progress towards an expansive scheme for evaluating transmission siting, but progress that will inevitably fall short of solving the energy crisis.

The Order concluded that the existing requirements of Order 890, requiring participation in local and regional planning processes, are inadequate, as transmission providers were under no affirmative obligation to consider regional implications in their local transmission planning processes or to consider transmission needs at the regional level.³⁴³ Thus, Order 1000 enhanced the obligations placed on transmission providers by adopting reforms intended to achieve the primary objective of ensuring that "transmission planning processes at the regional level consider and evaluate . . . possible transmission alternatives and produce a transmission plan that can meet transmission needs more efficiently and cost-effectively."³⁴⁴ These mandates directly compel states to work together

341. *As Plain As Can Be: FERC Order 1000 In Simple Language*, AOL ENERGY (Aug. 11, 2011), <http://energy.aol.com/2011/08/11/as-plain-as-can-be-ferc-order-1000-in-simple-language/>.

342. For a discussion on legislative delegation, see *Loving v. United States*, 517 U.S. 748 (1996).

343. *Transmission Planning and Cost Allocation*, 76 Fed. Reg. 49,842, 49,849 (Aug. 11, 2011) (codified at 18 C.F.R. pt. 35).

344. *Id.* at 49,845. The specific reforms include (1) requiring "transmission providers to participate in a regional transmission planning process that evaluates transmission alternatives at the regional level that may resolve the transmission planning region's needs more efficiently and cost-effectively than alternatives identified by individual public utility transmission providers in their local transmission planning process;" (2) mandating that these processes "result in the development of a regional transmission plan;" (3) requiring that both the regional transmission planning process and the underlying local transmission planning processes of transmission providers "provide an opportunity to consider transmission needs driven by Public Policy Requirements." *Id.* "[B]y considering transmission

to achieve transmission efficiency, arguably negating the state laws that provide for only intrastate consideration of effects of proposed transmission.

Order 1000 also requires transmission providers to “improve coordination across regional transmission planning processes by developing and implementing . . . procedures for joint evaluation and sharing of information regarding the respective transmission needs . . . and potential solutions to those needs,” providing for the “identification and evaluation by neighboring transmission planning regions of interregional transmission facilities to determine if there are more efficient or cost-effective interregional transmission solutions” than those identified, which requires the “exchange of planning data and information between neighboring transmission planning regions.”³⁴⁵ This means essentially that the states are now obligated to work together, share their information, and consider the available transmission opportunities in each other’s boundaries before approving a plan for transmission line siting.

As revolutionary as Order 1000 thus seems to be, compelling state action to an extent never done before, FERC stipulates that “[n]othing in this Final Rule requires . . . interconnectionwide planning,”³⁴⁶ and consistently reiterates that “nothing in this Final Rule is intended to alter the role of states.”³⁴⁷ The states’ role is repeatedly reaffirmed throughout, acknowledging that “there is longstanding state authority over . . . siting, permitting, and construction . . . [but since] nothing in this Final Rule involves an exercise of siting, permitting and construction authority . . . [there is] no reason why this Final Rule should create conflict between state and federal requirements.”³⁴⁸ Accordingly, as radical as this long-awaited rule is, it is insufficient to expand the grid as necessary to solve the country’s energy crisis due to its insistence that states retain siting authority.

As discussed above, the states’ role in the siting and permitting of transmission lines is the largest problem stalling line development, and as long as so-called “solutions” continue to maintain this state authority, the grid expansion will continue to be stalled. The regional focus that FERC is attempting to implement with this Order is a step in the right direction, but the insistence that states’ authority is not being preempted or challenged effectively renders any regional consideration secondary to states’ already established priorities of intrastate benefits, even at the expense of interstate harms.

needs driven by Public Policy Requirements, we mean: (1) the identification of transmission needs driven by Public Policy Requirements; and (2) the evaluation of potential solutions to meet those needs.” *Id.* at 49,877. “The effects of Public Policy Requirements on transmission needs are highly variable based on geography, existing resources, and transmission constraints.” *Id.*

345. *Id.* at 49,846.

346. *Id.*

347. *Id.* at 49,878.

348. *Id.* at 49,861.

Commentators on Order 1000 have high hopes for its success, especially regarding renewable sources that are “location constrained,” claiming that “the new rule could make it easier for different types of generating sources to connect to the grid, including . . . projects that are often sited far from consumers and connections to the grid.”³⁴⁹ The rule is seen as a positive step, “consistent with previous commission policy and its efforts to promote integration of diverse resources into the energy market.”³⁵⁰ Those same commentators, however, note that “today’s grid is subject to a bewildering assortment of local, state, and federal requirements,” an inefficient system that inflicts penalties on renewable resources, and so they recognize that the “order is not the entire solution.”³⁵¹ They also criticize solutions thus far, stating that “Congress’s recent attempts to promote transmission, such as the corridor designation and backstop siting process, have generally not been successful.”³⁵² The barriers that still exist after Order 1000, such as the lack of a national energy plan to determine what transmission needs to be built and where, are still insurmountable and prohibit grid expansion.³⁵³

Order 1000 did include a significant step in the right direction, though, by codifying a new type of benefit that must be considered in evaluating transmission plans: public policy benefits. This means that “transmission lines that make it easier to achieve the goals of a public policy—say, a state renewable energy standard—have a clear public benefit that should be considered in planning” processes.³⁵⁴ Public policy benefits that must now be considered can include such benefits as reducing permitting and planning barriers, increasing renewable resource development, increasing certainty of project developments, reducing environmental footprints, facilitating investments in manufacturing and construction, providing employment opportunities, and such other public policy benefits as a particular project may provide: no specific public policies are stipulated by the Order itself.³⁵⁵ Even with these new mandated

349. Sharryn Dotson, *How FERC Order 1000 Could Affect Hydro*, RENEWABLE ENERGYWORLD.COM (Oct. 18, 2011) (last visited Mar. 14, 2012), <http://www.renewableenergyworld.com/rea/news/article/2011/10/how-ferc-order-1000-could-affect-hydro> (citing Jim Hoecker, outside counsel to the WIRES Group and senior counsel and energy strategist at Husch Blackwell LLP).

350. *Id.*

351. *Id.*

352. *Id.*

353. *Id.* In Order 1000, FERC rejected the claim that “it is necessary for the Commission to determine what needs to be built, where it needs to be built, and who needs to build it,” stating explicitly that it “is not, and is not required to be, the intent of this rulemaking.” Transmission Planning and Cost Allocation, 76 Fed. Reg. 49,842, 49,852 (Aug. 11, 2011) (codified at 18 C.F.R. pt. 35).

354. Richard W. Caperton, *FERC Helps Line Up Clean Energy Projects with New Rule*, CTR. FOR AM. PROGRESS (July 28, 2011), http://www.americanprogress.org/issues/2011/07/ferc_order_1000.html.

355. See e.g., Johannes Pfeifenberger & Samuel Newell, THE BRATTLE GROUP, *Executive Summary: An Assessment of the Public Policy, Reliability, Congestion Relief, and Economic Benefits of the Atlantic Wind Connection Project 4* (2010); see also JAMES HEIDELL & SANDRA RINGELSTETTER ENNIS, FERC ORDER 1000 & PUBLIC POLICY TRANSMISSION PROJECTS (Mar. 5, 2012), available at http://www.nera.com/nera-files/PUB_FERC_Order_1000_0412.pdf (cautioning the inclusion of public

considerations that can help push evaluation of a proposed line to a broader view, however, congressional action is still needed in the form of expanded federal authority. As pleased as commentators can be with the results of Order 1000, they still inevitably come back to the same conclusion—“FERC has done its job in driving this agenda and now Congress needs to take the next step.”³⁵⁶

Consequently, in terms of Order 1000 facilitating a federal expansion of authority over transmission line siting, FERC has mandated regional consideration of line effects and required states to cooperate and share information, thus compelling as much state action as can be justified via its current FPA authority. By consistently reiterating that it is not infringing on states’ siting authority, however, FERC is recognizing the existing limitation to its authority via the FPA’s differentiation between “intrastate” and “interstate” jurisdiction. Order 1000 reflects the broad view that the current state-focused system is not working to enable grid expansion and continues the consistent FERC trend of pushing for greater interstate consideration, but it remains constrained by current legislation.³⁵⁷ There is not much more that FERC can do under the current FPA to promote interstate transmission lines—so long as the states retain siting authority, projects will continue to be burdened with conflicting state regulations and will continue to be stalled at state regulatory commissions, maintaining the same dichotomy they are currently faced with.

B. Arguments for Why State or Shared Authority Systems Are Inadequate

Neither the current state-regulated system nor a shared-authority system is adequate to address the U.S. energy crisis. Although both systems have strong arguments in their favor, a federal system is simply a smarter solution, promoting more vital interests and having already successfully enabled the expansion of the natural gas pipeline system. The strongest arguments in favor of both alternative system proposals are negated below with justifications for why they falter in comparison to the arguments supporting a federal system.

1. A Federally Regulated System Is Superior to State Regulated System

The current state-regulated system, although it arguably could be tweaked to allow expansion of the electric grid via implementation of regional-consideration language, is simply too outdated and inefficient to allow the extent of grid expansion necessary to support the United

policy may result in a large number of projects claiming unrealistically high benefit-to-cost ratios, or benefits disproportionate to traditional projects).

356. Caperton, *supra* note 354.

357. *Id.*

States' increasing energy needs. To rely on all states adopting the kind of national-consideration language presented above would entail waiting for each state to choose to implement regulations expanding the reach of their considerations to encompass other states, an unlikely scenario given the "tragedy of the commons" situation faced: the first state to consider national benefits would be taking on the costs to itself of permitting and siting lines that would have no benefits for its own citizens, hoping that other states do the same. But if the other states choose to not expand their consideration, then the first state is left out on a ledge, imposing costs on its citizens and bureaucratic processes, with no reciprocity from other states and no way to force them to reciprocate. No state wants to be the first state. Hence, the country will forever be waiting for the states to choose to act in a way that they have no incentive to act, and thus likely never will.

Further, even if under the current system the states did all agree to consider the national benefits of a proposed line, there is no way to guarantee that they will all adopt the same, or even remotely consistent, requirements. Developers would still have the burden of satisfying multiple different sets of criteria and dealing with multiple different regulatory commissions and keeping up with multiple different timelines and deadlines, all the while knowing that should they mess up just one step of one of these processes, the whole project could be ruined.

A federal system that takes over siting authority would remedy both problems by preempting the states' language for siting interstate lines with federal language mandating that the "public need" by which to evaluate a proposal will be based on a national evaluation of energy demand and resource availability. This can be implemented immediately and will automatically enable more efficient proposal evaluations, as the language will be identical for all states involved, so no state will have to risk being the lone cost-bearer. The one comprehensive set of criteria to meet, environmental requirements, definitions, deadlines, required hearings, and procedures is also much more conducive to encouraging developers to pursue transmission line projects. The expense of developing a transmission line is too great to risk a project being stalled halfway through, but a single set of guidelines by which to abide would simplify the process immensely, cutting down the risk of project negation.

The bureaucratic advantages of a state forum in allowing cheaper, more accessible local citizen participation, addressing local landowners' concerns, and implementing unique solutions are significant, and no other system will likely be able to provide these same benefits. This consideration is outweighed, however, by the potential for political factions taking over state and local governmental control. A federal system will reduce the ability for these local factions supporting minority concerns to influence energy policy that affects the majority of the country. As undemocratic as it might be to risk alienating landowners by placing siting

authority at the federal level, it is substantially more undemocratic to permit the small costs to a small group of vocal residents to prevent benefits to a large group of people, and such disproportionate weight should not be given to local opinions.³⁵⁸ The U.S. Department of Energy has recognized that however understandable local concerns may be, they are getting in the way of modernizing the nation's electric infrastructure, which is an urgent national problem shared by all, thus stressing the point that a minority voice should not trump a majority concern for the majority's welfare.³⁵⁹

A federal system will ensure that the majority's welfare is given prime consideration, but will still be required to implement certain procedural requirements to satisfy constitutional due process rights of the local landowners. The requirements of notice and an opportunity to be heard can be easily implemented into a federal system by procedural rules stipulating that should a transmission proposal reach the regulatory step of choosing the location of the line, thus potentially impacting landowners' rights, a federal representative will be sent to all proposed line locations to hold open house meetings, speak with landowners, and hear their concerns. These "public participatory planning" meetings would insulate a federal system by providing a "constitutional safe harbor" that legitimizes such federal siting and eminent domain proceedings.³⁶⁰

Further, although the state system offers landowners a more direct route to recourse via the majoritarian political process, the federal system can offer recourse as well. Despite the logical conclusion that the further away regulatory oversight is, the less likely local concerns are to be heard, a federal system that relies on FERC or another executive agency, although not democratically elected, will still be constrained by considerable political rules. An agency can only act in ways it has been legislatively authorized to act, and the legislature is a democratically elected body. Thus, should there be citizen disapproval of FERC actions, each state and locality has an opportunity for recourse via its democratically elected representatives with the power to revoke FERC authority.

Although state regulation is favored by citizens, and commentators have argued that a federal system may be politically untenable given the current resistance to federal authority, the state system is plainly failing to meet the nation's energy demands. In times of clear failure, waiting for an alternative decision to gain political popularity is not a realistic option. The overhaul necessary to implement a federal system could produce backlash from states and citizens, but there are procedures that can be implemented as a part of the new system to reduce this displeasure

358. See *supra* note 352 and accompanying text.

359. See *supra* note 315 and accompanying text.

360. See *supra* note 334 and accompanying text.

and seek to maintain a voice for all parties involved, while still enabling the efficient expansion of the transmission grid.

2. *A Federally Regulated System Is Superior to a Shared-Authority System*

A shared-authority system, in which the states retain power to regulate line siting from internal energy sources to internal load centers, but which allocates to the federal government the power to construct interstate lines from plentiful energy sources to distant load centers, could also arguably enable the kind of system expansion necessary to meet the country's increasing energy demands. This system would, however, in effect be substantially identical to the system currently in place: the federal government, via FERC, issuing rules and orders mandating regional considerations and cooperation, and the state governments retaining authority to site intrastate lines. The only difference would be the federal government's expanded power to also site interstate lines through the states, a power that the states currently retain. Although this expansion of federal siting authority for interstate lines could solve some of the siting issues currently stalling interstate line development, the problems inherent in any type of authority split are too vast to enable the extent of grid expansion necessary.³⁶¹

The strongest argument for implementing a shared-authority system is likely its consistency with current legislation, which would ease implementation and not require a dramatic system overhaul. The case law provides that FERC has jurisdiction over all electricity flowing into or out of a state via federal Commerce Clause powers, and that even a few cross-border transactions make a system subject to federal jurisdiction, along with the legislative and regulatory history outlined above, all suggest that both the FPA and Congress intended to support this type of shared-authority system, granting FERC extensive interstate powers, yet reserving all intrastate power to the states.³⁶²

However, all the language presented also suggests a continued movement toward increased federal authority, at ever decreasing state authority. The only consistent statement regarding states' rights seems to be the one pervasive expression that has trickled down through legislative history despite its inaccurate reflections of a changing electrical industry: that states retain authority over siting and permitting of intrastate transmission facilities. This is a consistently confusing division of authority, as evidenced by the complete negation of EPAct 2005's attempt to allow some federal siting, because of Congress's insistence on preserving state authority. So long as states retain siting of "intrastate" lines, all lines sited inside state boundaries are arguably intrastate lines, subject to

361. See *supra* notes 124–25 and accompanying text.

362. See *supra* notes 233–34 and accompanying text; *supra* Part III.A.2.

state authority. And after *Piedmont*, even lines that are blatantly “interstate” are still subject to each state’s power to bar the whole project, as denying line siting precludes subsequent federal backstop siting under EAct 2005.³⁶³

A shared-authority system simply retains too much power at the state level, and that power has consistently been used to hinder necessary transmission projects. Despite the benefits of retaining local control and the states’ ability to protect their citizens under the states’ police power, a shared-authority system imposes excessive bureaucratic burdens and risks of project negation on developers. It is too complicated to go through so many avenues in attempt to get a project off the ground, only to still possibly have it jeopardized at a later forum, due to one state’s determination of the line qualifying as “inter” or “intra” state.

A federal system that cancels the need for this initial determination of whether a line is “interstate” or “intrastate” would allow all the enacted legislation and FERC orders to reach their intended effect, as no matter what solutions are enacted under the current terminology split, line siting will always be subject to state denial. This concern reflects the theory presented above regarding the inability to technically or scientifically differentiate between electricity that flows through interstate or intrastate lines.³⁶⁴ If a single interstate line is connected to a single generating station within a state, all the other lines connected to that generator are potentially carrying interstate energy as well, and are thus involved in interstate commerce, subject to federal jurisdiction. Thus, so long as Congress continues to be “respectful of state authority” and retains the states’ siting authority for the “vast bulk of transmission projects,” all legislative and regulatory efforts to promote grid expansion will be in vain, as under the current differentiation of “interstate” or “intrastate” there is no clear distinction, and thus all lines are all subject to state authority, prohibiting grid expansion.³⁶⁵

C. *An Approach Moving Forward*

The solution that must be implemented in order to meet the increasing energy demands of the United States is a complete system overhaul, revoking state siting authority, and granting the federal government full siting authority over all electrical transmission lines. A move to a federal system has been urged by commentators for decades, as they began realizing in the 1980s that the current transmission system was simply not expanding in time with energy demands. Congress had the opportunity to mirror the NGA amendment, granting FERC siting authority over natural gas pipelines, with the passage of EAct 2005, but failed to

363. See *supra* notes 237–44, 250–53 and accompanying text.

364. See *supra* Part III.B.3.

365. See *supra* note 251 and accompanying text.

do so, insisting on retaining state authority. This left FERC unable to expand its reach any further when issuing Order 1000, hindered by the prohibition against encroaching on state jurisdiction. Both these enactments though, help justify why the next step must be complete federal authority.

This next step of complete federal authority can emulate the NGA's structure, granting FERC eminent domain authority, but maintaining a state role in the overall process via the "conditions" FERC can impose on the certificates, mandating that the proposal satisfy state zoning laws regarding reasonableness of location, environmental regulations, and state comprehensive plans. In this way, FERC (or a newly created federal siting authority, should that be chosen instead) will have central authority over line approval and evaluation, reflecting the obvious conclusion that tip-toeing around state authority is not currently working. Mirroring the NGA, on the other hand, carries with it the successful history of federal siting authority over pipelines, evidenced by the huge system of pipelines that sprung up after enactment of the NGA, a system that the entire country relies on now for its natural gas needs. The electrical industry needs a similar period of federal siting to allow the necessary expansion of its transmission infrastructure.

This new federal system would entail analysis of a line's benefits from a national perspective, reflecting the wide range in available resources at distant locations, all necessary to interconnect to one another in order to ensure national system reliability and efficiency. A synchronized interconnected grid would be able to access all these different energy sources, making the best use of the country's energy potential by combining them all into one interchangeable system for maximizing optimal use. The infrastructure to support such an interconnected nation is possible, but necessitates a comprehensive regulatory scheme that allows for comprehensive evaluation of proposals. Achieving this would allow energy to flow from wherever it is available to wherever it is needed, eliminating the potential for blackouts and reducing waste, as all resources would be used simultaneously, without overload, but also without stalling. This inter-reliance on national energy sources would help reach the nation's renewable energy goals, cut back reliance on foreign energy sources, and reduce energy costs for consumers.

As outlined above, the key difference between the NGA and the FPA is FERC's inability to site transmission lines the same way it can site pipelines. Absent any larger indicator of the cause of the electrical industry's inability to expand the transmission grid adequately to keep up with rising energy needs, this single federal inability must be the cause.³⁶⁶ Granting the federal government this siting authority would be justified both by legislative history and by constitutional doctrine, and it is the

366. See *supra* notes 301–04 and accompanying text.

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single approach best able to address the current energy crisis by significantly reducing the bureaucratic hurdles in project development, and enabling an experienced federal agency such as FERC to undertake the task of interconnecting the nation's electrical grid.

V. CONCLUSION

When every other option has been tried, tested, and failed, it is imperative that a viable solution yet to be implemented be given the opportunity to try its hand at success. The current electrical transmission line regulatory system is broken, prohibiting the nation from expanding the electricity grid to keep up with growing energy demand. A federal regulatory system enabled the natural gas pipeline system to provide energy to every corner of the nation, and should now be given the opportunity to do the same for the electrical industry.

