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INTRODUCTION

In accordance with the Federal Power Act, the United States Department of Energy ("DOE") is required to conduct a study every three years that examines electric transmission congestion and constraints within the nation's power grid.[1] The most recent DOE National Electric Transmission Congestion Study ("NETCS") was published in December 2009[2] and, by order of the American Reinvestment and Recovery Act of 2009, included an "analysis of significant potential sources of renewable energy that are constrained by lack of adequate transmission capacity."[3] Among its many findings, the 2009 NETCS highlighted that the gap between the potential for wind development in areas with high wind development potential and actual new wind development in those areas exists "principally because there is neither adequate transmission capacity to deliver wind generation, nor an expeditious way to build new transmission for that purpose."[4]

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1. 16 U.S.C. § 824p (2005).

2. The next NETCS is currently being prepared and will include an examination of "[r]ecent, current and planned transmission and interconnection queues." WORKSHOP NOTICE AND REQUEST FOR COMMENT, 76 FED. REG. 70122–70123 (Dep't of Energy Jan. 10, 2011), http://energy.gov/sites/prod/files/2012CongestionStudyNov10.pdf. At present, a great deal of uncertainty surrounds the release of the upcoming NETCS given, in part, to a U.S. Court of Appeals decision in 2011 that vacated DOE's designations of certain "national corridors" based on the NETCS released in 2006. 27-SUM Nat. Resources & Env't 51; *see also* California Wilderness Coalition v. DOE, 631 F.3d 1072 (9th Cir. 2011).

3. Office of Electricity Delivery and Energy, U.S. Dep't of Energy, *2012 National Electric Commission Congestion Study*, ENERGY.GOV, http://energy.gov/oe/services/electricity-policy-coordination-and-implementation/transmission-planning/2012-national (last visited Jan. 19, 2013).

4. U.S. DEP'T OF ENERGY, NATIONAL ELECTRONIC TRANSMISSION CONGESTION STUDY 18 (2009), *available at* http://energy.gov/sites/prod/files/Congestion_Study_2009.pdf.

As of the end of September 2012, the United States had a total of 51,630 megawatts (MWs) of wind power capacity installations[5] with an additional 8,430 MWs under construction.[6] As the 2009 NETCS recognized, lack of transmission capacity remains a major impediment to both the installation of additional MWs and the elimination of curtailment of operating wind farms.[7] As of the end of 2009, there were approximately 300,000 MWs of proposed wind projects waiting in interconnection queues.[8] Of this figure, roughly 100,000 MWs were located in the upper Midwest and Central Plains regions. Both were identified by the DOE in the 2009 NETCS as areas "where it appears that the development of significant additional [wind] generation—using existing technology with known cost and performance characteristics—is limited primarily by the availability of transmission capacity."[9] In the Northeast, it is estimated that consumers in New York could save hundreds of millions of dollars annually, while also realizing the increased "economic benefits of renewable resources" through upgrades to the transmission system that would result in reduced congestion.[10]

Clearly put, inadequate transmission capacity hinders the development of wind power as a source of electricity generation in

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5. For purposes of comparison, total U.S. coal generation capacity is 342,296 MW and total U.S. natural gas generation capacity is 467,214 MW (this numbers are as of November 2011 and are past due to be updated in November 2012). U.S. ENERGY INFORMATION ADMINISTRATION, ELECTRIC POWER ANNUAL 2010, *available at* http://large.stanford.edu/courses/2012/ph240/nam2/docs/epa.pdf.

6. AMERICAN WIND ENERGY ASSOCIATION, U.S. WIND INDUSTRY THIRD QUARTER 2012 MARKET REPORT 3 (Oct. 2012), http://www.awea.org/learnabout/publications/reports/upload/3Q2012-Market-Report_Public-Version.pdf.

7. MICHAEL DWORKIN ET AL., THE LAW OF CLEAN ENERGY: EFFICIENCY AND RENEWABLES 546 (Michael B. Gerrard ed., 1st ed. 2011) (noting that the "lack of available transmission" has had a "clearly material" impact on renewable energy development).

8. American Wind Energy Association, *Annual Statistics on U.S. Wind Energy, Year ending 2009* 16, http://www.awea.org/_cs_upload/learnabout/publications/5094_1.pdf (hereinafter "American Wind Association, *Year ending 2009*); *see also* American Wind Energy Association, *Annual Statistics on U.S. Wind Energy, Year ending 2008* 5, http://www.awea.org/learnabout/publications/upload/AWEA-Annual-Wind-Report-2009.pdf ("The proposed wind projects in these queues have applied for interconnection to the grid, but most of these wind plants cannot be built because there is insufficient transmission capacity to carry the electricity they would produce. While not all of these wind projects will ultimately be built, it is still clear that wind power development is outpacing the expansion and modernization of our electric grid.").

9. *Compare* U.S. DEP'T OF ENERGY, *supra* note 4, at 22–23, *with* AMERICAN WIND ENERGY ASSOCIATION, YEAR ENDING 2009, *supra* note 8.

10. *FERC Grants ROE Incentive*, 3888 PUR Util. REG. NEWS 3 (Sept. 6, 2008).

the United States. The two primary remedies to this deficiency are (1) to build out the nation's transmission system and (2) to improve the integration of wind power into the transmission system. The avenues for achieving these remedies are to first incentivize investment and second to improve planning for better integration of wind power into the transmission system. This Article examines the mechanisms in place at the federal level to facilitate these remedies. Section I provides a brief overview of the different levels of government, the regulatory agencies, and other organizations involved in the regulation and operation of the transmission system. Section II provides an overview and analysis of FERC Order No. 679, which is the primary mechanism in place to incentivize investment in transmission system assets. Finally, Section III examines FERC Order No. 1000, which lays the framework to improve transmission system planning, and discusses the implications of that measure on facilitating an increase in transmission capacity.

I. THE FRAMEWORK FOR ELECTRICITY TRANSMISSION REGULATION

The regulation of the electricity transmission system occurs on several levels. In addition, a number of governmental agencies and non-governmental organizations play a role in regulating the transmission sector.

A. The Federal Level

The federal government first attempted to regulate the transmission system through the 1920 Federal Power Act.[11] The Federal Power Act created the Federal Power Commission—the predecessor to the present day Federal Energy Regulatory Commission ("FERC")—and granted that institution the "authority over interstate wholesale electricity trade and its associated transmission interconnections and rate-making practices."[12] The last piece of significant legislation to amend the Federal Power Act and have an impact on the regulatory landscape overseeing the transmission system was the Energy Policy Act of 2005 ("Energy Act 2005").[13]

FERC draws its authority to regulate electricity markets from the Federal Power Act. Section 205 of the Federal Power Act requires that rate filings be submitted to FERC by public utilities

11. DWORKIN ET AL., *supra* note 7, at 535.
12. *Id.*
13. *Id.* at 535–36.

engaged in the wholesale electricity market, while Section 206 of the Federal Power Act governs rate changes "initiated" by FERC or via a third party complaint.[14] In both of these instances, FERC is mandated to protect consumers and ensure that the rate utilities charge is "just and reasonable" and not "unduly discriminatory or preferential."[15]

The United States Department of Energy was created in 1977 by the Department of Energy Organization Act.[16] The DOE has no direct authority to regulate the transmission of electricity or the electricity market. However, as indicated above, the DOE is required by the Energy Act 2005 to conduct a NETCS every three years.[17] The NETCS is the mechanism through which the DOE identifies national interest electric transmission corridors ("NIC").[18] Once an area is labeled a NIC, FERC has the ability to exercise expanded regulatory powers in regard to the "construction or modification of electric transmission facilities" within those areas.[19]

B. The Regional and State Levels

Since 1996, FERC has encouraged the concept of Independent System Operators ("ISO") as one method of ensuring non-discriminatory access to transmission.[20] In any transmission system, there must be a system operator coordinating the flow of electricity.[21] An ISO is a system operator that performs this function and is "independent of the existing electric utilities and other market participants."[22] In the United States, ISOs were first formed as the electrical industry's response to FERC Order No. 888,[23] a rule that called for "nondiscriminatory access to

14. *Id.* at 536.
15. *Id.*
16. The Department of Energy Organization Act of 1977, Pub. L. No. 95-91, 91 Stat. 565 (codified as 42 U.S.C. § 7101).
17. 16 U.S.C. § 824p (2005).
18. These corridors are areas that are "experiencing electric energy transmission capacity constraints or congestion that adversely affects consumers." 16 U.S.C. § 824p(a)(2). *See also* 27-SUM NAT. RESOURCES & ENV'T 51.
19. 16 U.S.C. § 824p(b); 27-SUM NAT. RESOURCES & ENV'T 51.
20. *Regional Transmission Organizations (RTO)/ Independent System Operators (ISO)*, FED. ENERGY REG. COMMISSION, www.ferc.gov/industries /electric/indus-act/rto.asp (last updated Nov. 15, 2012).
21. WILLIAM W. HOGAN, INDEPENDENT SYSTEM OPERATOR: PRICING AND FLEXIBILITY IN A COMPETITIVE ELECTRICITY MARKET 1 (1998).
22. *Id.*
23. *Promoting Wholesale Competition Through Open Access Non-discriminatory Transmission Services by Public Utilities, Recovery of Stranded Costs by Public Utilities and Transmitting Utilities*, 61 Fed. Reg. 21540 (1996).

transmission service on a regional basis."[24] In response to this rule, electricity generators, transmission providers, and utilities united to "form voluntary organizations designed to reduce the opportunities for transmission owners to discriminate against their transmission service customers."[25] ISOs can be statewide or cover a group of neighboring states or regions.[26] Some ISOs also qualify as Regional Transmission Organizations ("RTOs").

Although RTOs and ISOs are functionally equivalent, an RTO satisfies the requirements of FERC Order No. 2000, which includes several mandates relating to operator independence and ensuring grid reliability.[27] ISOs and RTOs are thus "FERC-approved regional organizations [that] operate as FERC-jurisdictional entities."[28] As such, ISOs and RTOs are "required to file a tariff with FERC that neither favors nor disfavors" any system user and that openly provides transmission system access "pursuant to a single, unbundled, grid-wide tariff that applie[s] to all eligible users in a non-discriminatory manner."[29] Interstate transmission "facilities overseen by RTOs or ISOs must satisfy the region's tariff" that must first be approved by FERC.[30] At present, there are ten ISOs/RTOs operating in the United States that provide electricity to more than two-thirds of U.S. consumers.[31]

A utility, generator, or transmission provider that is not part of an ISO or RTO must still provide open access transmission service to interested third parties. States control transmission siting, and transmission siting statutes and regulations vary from state to state.[32] Additionally, states have jurisdiction over lower voltage distribution facilities and retail sales to ultimate consumers. As a practical matter, if a utility is vertically-integrated—meaning the utility owns generation, transmission, and distribution—the state where the utility is located has significant regulatory authority over that utility.

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24. Matthew R. McGuire, *(Mis)understanding "Undue Discrimination": FERC's Misguided Effort to Extend the Boundaries of the Federal Power Act*, 19 GEO. MASON L. REV. 549, 555–56 (2012).

25. *Id.*

26. *Regional Transmission Organizations (RTO)*, *supra* note 20.

27. *Regional Transmission Organizations*, Order No. 2000, 89 F.E.R.C. ¶ 61,285 (1999) (codified at 18 C.F.R. pt. 35).

28. McGuire, *supra* note 24, at 556.

29. *Id.*

30. Gabe Maser, *It's Electric, but FERC's Cost-Causation Boogie-Woogie Fails to Justify Socialized Costs for Renewable Transmission*, 100 GEO. L. J. 1829, 1832 (2012).

31. *The ISO/ RTO Council*, ISO/ RTO COUNCIL, http://www.isorto.org/site/c.jhKQIZPBImE/b.2603295/k.BEAD/Home.htm (last visited Feb. 13, 2013).

32. DWORKIN ET AL., *supra* note 7, at 538.

II. INCENTIVIZING INVESTMENT IN TRANSMISSION ASSETS—FERC ORDER NO. 679

Historically, investments in the "upgrade and expansion" of the electricity transmission system have lacked any real incentives.[33] Utilities were vertically-integrated and generally required to make prudent investments to provide adequate service. Thus, investments in transmission had to "compete" for capital internally with generation and distribution investments. Difficulties in siting long haul transmission lines, with returns on investment no higher than normal, generally led to a lack of interest in major transmission projects. Transmission lines were typically built to move generation to local load. As a result, investment in transmission has been deficient over time, and the existing infrastructure places "considerable constraints on the amount of wind generation that can be absorbed by the grid."[34] The Energy Act of 2005 attempted to address this shortcoming by ordering FERC to promulgate rules that promote capital investment in the "enlargement, improvement, maintenance and operation" of the transmission system.[35] Toward this end, FERC issued Order No. 679, which became effective in September 2006.[36]

Of particular interest to FERC when promulgating Order No. 679 was "encourag[ing] investors to take the risks associated with constructing large new transmission projects that can integrate new generation[,] . . . reduce congestion and increase reliability."[37] As such, Order No. 679 allows FERC to facilitate expanded capacity and improved reliability in the transmission system by approving public utility plans for transmission investment which include incentive based rate treatment.[38] Rate based incentives, known collectively as "Risk Reducing Incentives," include for example: (1) higher return on equity ("ROE") for transmission projects with a higher than "normal" risk level, known as "Incentive ROE"; (2) assurance of recovery of abandoned plant costs in the case where a project is abandoned for reasons that are beyond the control of the

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33. Emily E. Steinhilber & Jonathan R. Voegele, *Taxation and Electricity Transmission: Bringing Wind Energy Onto the Grid*, *in* GREEN TAXATION AND ENVIRONMENTAL SUSTAINABILITY 161 (Larry Kreiser et. al. eds., 2012).

34. *Id.*

35. *See* The Energy Policy Act of 2005, Pub. L. No. 109-58, § 1241, 119 Stat. 594, 961.

36. *Promoting Transmission Investment through Pricing Reform*, Order No. 679, 116 F.E.R.C. ¶ 61,057, (2006) (codified at 18 C.F.R. pt. 35) [hereinafter "Order No. 679"].

37. *Id.* at 16.

38. *Id.* at 17–18.

public utility; (3) an acceleration in the timing of recovery of new transmission investments; and (4) streamlined rate adjustments in connection with transmission investment.[39] An applicant for such rate based incentives must demonstrate in its proposed plans that the "facilities for which it seeks incentives either ensure reliability or reduce the cost of delivered power by reducing transmission congestion,"[40] "there is a nexus between the incentive sought and the investment being made," and the "resulting rates are just and reasonable."[41]

Through May 2011, FERC received more than seventy-five applications for the transmission incentives provided for under Order No. 679, totaling around $50 billion worth of transmission investments.[42] It is anticipated that by the close of the 2008 to 2016 period, about $36.2 billion will have been deployed.[43] This represents a sizeable allocation of capital.

A. Clarifying FERC's Evaluation of Order No. 679 Rate Based Incentive Applications

On November 15, 2012, FERC issued a Policy Statement that provides guidance on how applications for Order No. 679 rate based incentives will be henceforth evaluated.[44] The clarification included in this Policy Statement emphasized the evaluation process for Order No. 679 rate based incentive applications. FERC will require that both the nexus between the incentive sought and the investment being made be highly correlated with the requirements of Order No. 679 and that "applicants . . . take all reasonable steps to mitigate the risks of a project, including requesting those incentives designed to reduce the risk of a project, before seeking an [I]ncentive ROE based on a project's risks and

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39. *See generally id.* at 49–107 (discussing the various rate based incentives adopted by Order No. 679).

40. Thus satisfying Section 219 of EPA 2005. The Energy Policy Act of 2005, *supra* note 35, at § 219.

41. Order No. 679, *supra* note 36, at 45.

42. Notice of Inquiry, *Promoting Transmission Investment through Pricing Reform*, 18 C.F.R. ch. 1 (2011).

43. Energy Central, *FERC Order 679 Responsible for $23bn of Transmission Infrastructure Investment in 2012–2016*, BUSINESS WIRE (Jul. 17, 2012), *available at* http://www.businesswire.com/news/home/20120717005461/en/FERC-Order-679-Responsible-23bn-Transmission-Infrastructure.

44. *FERC Policy Statement Provides Guidance on Electric Transmission Rate Incentives*, FED. ENERGY REGULATORY COMM'N, (Nov. 15, 2012), *available at* https://www.ferc.gov/media/news-releases/2012/2012-4/11-15-12-E-3.asp.

challenges."[45] With this Policy Statement, FERC places a greater burden on applicants "to demonstrate how the total package of incentives requested is tailored to address demonstrable risks and challenges."[46] Specifically, if Risk Reducing Incentives could ". . . reduce the risks of the project, that fact will be taken into account in any request for an [Incentive] ROE."[47] Even prior to this Policy Statement's issuance, FERC signaled its intention to move toward a more conservative approach in evaluating Order No. 679 Incentive ROE applications in an October 2011 decision to trim the Incentive ROE by fifty basis points included in a proposal for a major interregional transmission project.[48]

Toward this goal, FERC's Policy Statement details four criteria that applicants seeking an Incentive ROE for a proposed transmission project's "risks and challenges" should address in their application. First, applicants should "demonstrate that the proposed project faces risks and challenges that are not either already accounted for in the base ROE or addressed through" the Risk Reducing Incentives.[49] The Policy Statement suggests that the first requirement is satisfied by projects that (1) "relieve chronic or severe grid congestion that has had demonstrated cost impacts to consumers;" (2) "unlock location constrained generation resources" which "previously had limited or no access to the wholesale electricity markets;" or (3) "apply new technologies to facilitate more efficient and reliable usage and operation of existing or new facilities."[50]

The second criteria applicants should provide when requesting a "risks and challenges" based Incentive ROE is a demonstration that the applicant is taking "appropriate steps and using appropriate mechanisms to minimize its risks during project development."[51] This requirement can be achieved through several actions, including requesting Risk Reducing Incentives, mitigating costs through best practices in project management, and pursuing joint ownership arrangements to "diversif[y] . . . financial risk across multiple owners and minimiz[e] siting risks."[52]

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45. *Promoting Transmission Investment Through Pricing Reform*, Policy Statement, 141 F.E.R.C. ¶ 61,129 (2012) (to be codified at 18 C.F.R. pt. 2 & 35) [hereinafter "Policy Statement"].
46. *Id.* at 7.
47. *Id*.
48. *Reforming Order 679: Did FERC Jump the Gun?*, 4042 PUR UTILITY REGULATORY NEWS 1 (Oct. 21, 2011).
49. Policy Statement, *supra* note 45, at 14.
50. *Id.* at 15.
51. *Id.* at 17.
52. *Id.* at 18.

The third showing that Incentive ROE applicants should make is "that alternatives to the project have been, or will be, considered in either a relevant transmission planning process or another appropriate forum."[53] The Policy Statement indicates that this requirement "could be satisfied through participation in open processes that are already in existence." Examples of these open processes include consideration in an "Order No. 890 or Order No. 1000 compliant[54] transmission planning process" that allows for comparison with alternatives or "by a local regulatory body, such as a state utility commission that evaluated alternatives . . . and determined that the proposed transmission project is preferable to the alternatives evaluated."[55]

Finally, the fourth requirement an applicant must meet when applying for an Incentive ROE is "to commit to . . . a cost estimate."[56] Satisfying this final requirement would, for example, require limiting the requested Incentive ROE to the cost estimate of the project at the time of RTO approval or utilizing another approach to control transmission development costs and improve transparency.[57]

B. The Policy Statement and the Integration of Wind Power

Under section 219 of the Federal Power Act, FERC must encourage transmission development "while maintaining just and reasonable rates" for consumers.[58] Clear from the focus of the Policy Statement is FERC's belief that Incentive ROEs put "more upward pressure on transmission rates" than Risk Reducing Incentives and hence FERC encourages applicants to first examine the Risk Reducing Incentives.[59] However, as it is the Order No. 679 rate based incentive that directly improves the financial attractiveness of a project, FERC's granting of the Incentive ROE potentially makes an investment in such a proposed transmission project particularly appealing. As discussed, the FERC Policy Statement narrows the types of projects to which it will grant an Incentive ROE, provided applicants can satisfy the requirements.

Because wind power and most other renewable generation resources are "location constrained," proposed transmission

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53. *Id*.
54. *See infra* Part III.
55. Policy Statement, *supra* note 45, at 19.
56. *Id.* at 20. The four requirements are collectively referred to as the "Policy Statement Four Requirements."
57. *Id.* at 20.
58. Federal Power Act, 16 U.S.C. § 219 (2005).
59. Policy Statement, *supra* note 45, at 13–14.

projects that would "unlock" wind and other renewable resources and allow generated electricity to enter the wholesale markets would likely satisfy FERC's first requirement—i.e., that the project be unaccounted for by base ROEs and Risk Reducing Incentives.[60] Significantly, this requirement is the only one which prefers a certain group of generation technologies, specifically those that are "location constrained," such as wind and solar. The other three requirements would apply equally to all proposed transmission projects regardless of the type of generation the proposed project serves. Since the Incentive ROE will likely not be granted unless all four requirements are satisfied, a proposed transmission project that provides generation technology for a preferred project will be more financially attractive, and more likely be implemented.[61] This could further encourage the development and integration of renewable generation technologies.

This point takes on additional importance with the realization that the first requirement is the only requirement outside the applicant's control. An applicant controls the following: the steps taken to mitigate the project risk, participation in a planning process that compares the proposed project against alternatives, and its commitment to a cost estimate. With control over these three variables, an applicant can tailor its proposal toward compliance with the second, third, and fourth requirements. However, satisfaction of the first requirement, which is implicitly project-type specific, is not an adjustable variable. Therefore, if all other considerations are equal, projects that satisfy the first requirement will be favored, since they are more likely to receive an Incentive ROE. This again suggests that the Policy Statement will have a positive impact on integrating and promoting wind power and other renewables.

In addition to the rate based incentives discussed above, FERC's recent Order No. 1000—which reforms both transmission planning and cost allocation policies, and eliminates the right of first refusal that public utilities have historically enjoyed in constructing and owning transmission—will likely be highly effective in promoting transmission system expansion.[62]

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60. *See supra* Part II(i).

61. And hence is eligible for the Incentive ROE if the other three of the Policy Statement's four requirements are satisfied.

62. Bryce W. Radford, *First Refusals, Least Regrets*, 148 No. 12 PUB. UTIL. FORT. 22 (2010).

III. IMPROVING TRANSMISSION PLANNING—FERC ORDER NO. 1000

In July 2011, FERC issued Order No. 1000 in an effort to build upon FERC Order No. 890, which was a prior effort to promote regional transmission planning.[63] Although Order No. 890 did result, to some extent, in the "improved . . . ability of wind generation to access transmission," it still had some shortcomings.[64]

Just like Order No. 890, Order No. 1000 focuses on process rather than outcome. But it includes both the stipulation that public utility transmission providers participate in more comprehensive planning, and cost allocation activities that better account for the integration of wind power and other renewable sources of generation. As noted in Order No. 1000, the major deficiencies of Order No. 890 included inadequate transmission planning requirements and a lack of transmission cost allocation procedures, both of which hindered transmission infrastructure expansion.[65] Order No. 1000 addresses both of these shortcomings.

A. Changes to Transmission Planning and Cost Allocation: Improving the Conditions for Integration of Wind

One requirement found in Order No. 1000 is that public utility transmission providers ("PUTP") participate in the regional transmission planning process where such PUTP is located, as long as the regional transmission planning process satisfies Order No. 890 transmission planning principles,[66] and actually does produce a regional transmission plan.[67] In addition, PUTPs in neighboring planning regions must implement procedures to "identify and

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63. Proposed Rule, at 1–2. *Preventing Undue Discrimination and Preference in Transmission Service*, Order No. 890, 72 Fed Reg. 112266, FERC STATS. & REGS. ¶ 32,660 (2007) (to be codified at 18 C.F.R. pt. 35 & 37) [hereinafter "Order No. 890"].

64. U.S. Department of Energy, National Electric Transmission Congestion Study (Dec. 2009), *available at* http://energy.gov/sites/prod/files/Congestion_Study_2009.pdf.

65. *Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities*, Order No. 1000, 76 Fed. Reg. 49842, 136 FERC STATS. & REGS. ¶ 61051, at 31–32 (2011) (to be codified at 18 C.F.R. pt. 35) [hereinafter "Order No. 1000"].

66. The Order 890 transmission planning principles are (i) coordination; (ii) openness; (iii) transparency; (iv) information exchange; (v) comparability; (vi) dispute resolution; (vii) regional participation; (viii) economic planning studies; and (ix) cost allocation for new projects. *See* Grace S. Kurdian, et al., *Energy and Natural Resources Market Regulation*, 2011 ABA ENV'T ENERGY, & RESOURCES L.: YEAR IN REV. 181, 181 (2012).

67. Order No. 1000, *supra* note 65, at 57; STEVEN FERREY, 1 L. OF INDEP. POWER § 8:10 (2012).

jointly evaluate transmission facilities" that span both regions.[68] Finally, regional transmission planning processes must, when determining transmission needs, account for[69] public policy considerations—including any renewable portfolio standard requirements.[70] FERC views these as critical requirements, because local transmission plans may not include the considerations in regional level plans that would ultimately lead to more cost-effective and efficient transmission planning.[71] This is important to renewable power generation and to wind power specifically, because such resources often sit near state borders and far from population centers.[72] The regional transmission planning process is typically the more appropriate forum for "reliably and cost-effectively integrating location-constrained renewable energy resources."[73]

Order No. 1000 also includes transmission cost allocation requirements. These requirements state that the regional transmission planning process, in which the PUTPs participate, must adopt a regional cost allocation method for new transmission facilities. Any such method should take into account the "expected beneficiaries" of the planned transmission project and "appropriately" allocate the cost of new transmission among consumers such that costs are borne by those receiving the benefits from the project.[74] FERC has made clear that the Order No. 1000 cost allocation requirements are intended to give PUTPs flexibility in determining the composition of the cost allocation methods, but requires that the method developed satisfy six specified cost allocation principles.[75] For transmission projects that span two or

68. Order No. 1000, *supra* note 65, at 57.

69. This includes both "*identify[ing]* transmission needs driven by Public Policy Requirements and *evaluat[ing]* potential solutions to meet those identified needs." Shelly Welton & Michael B. Gerrard, *FERC Order 1000 as a New Tool for Promoting Energy Efficiency and Demand Response*, 42 ENVTL. L. REP. NEWS & ANALYSIS 11025 (2012) (emphasis in original).

70. Kurdian, et al., *supra* note 66, at 182.

71. Order No. 1000, supra note 65, at 55, 64.

72. Hannah Wiseman, *Expanding Regional Renewable Governance*, 35 HARV. ENVTL. L. REV. 477, 503 (2011).

73. Order No. 1000, *supra* note 65, at 66.

74. *Id.* at 369; FERREY, *supra* note 67, at § 8:10.

75. The cost allocation principles include (i) proportional allocation of costs commensurate with estimated benefits; (ii) prohibition of involuntary allocation of costs to non-beneficiaries; (iii) use of reasonable benefit-to-cost ratio in determination of whether a transmission facility should be selected in a regional plan, such that no facility with significant net positive benefits is excluded; (iv) confinement of cost allocation within the relevant planning region, unless the outside region voluntarily agrees to assume a portion of the costs; (v) use of transparent methods in determining benefits and identifying beneficiaries; and

more regions, the same cost allocation requirements apply. In addition, the regional cost allocation method adopted for interregional projects must be common among the PUTPs in the neighboring planning regions and satisfy the cost allocation principles.[76] These changes are of primary importance for wind power integration because the growth of renewable generation partly drives the urgent need for new interregional transmission facilities. Sources of renewable generation, especially wind, are "frequently remote from load centers" and thus necessitate transmission facilities that traverse several regions.[77]

Certain commentators to the proposed Order No. 1000 felt that the "deficiencies in transmission planning and cost allocation processes [of Order No. 890]" resulted in a large number of planned transmission projects not being built.[78] One commentator highlighted the "lack of transmission expansion" as *the* reason for "significant congestion in areas with extensive operating wind generation" and that "curtailments primarily caused by [such] congestion" were getting worse over time.[79] FERC views the transmission planning and cost allocation requirements in Order No. 1000 as crucial to support efficient and cost-effective investment decisions that will fund the transmission upgrades required to "meet reliability needs and integrate new sources of generation."[80] As wind power holds tremendous potential as a source of electricity generation, the ability of the U.S. transmission system to integrate new sources of wind is crucial.

B. Eliminating the Right of First Refusal and Improving Conditions for the Build Out of Transmission to Integrate Wind

Another important aspect of Order No. 1000 is the elimination of the right of first refusal for an "incumbent transmission provider with respect to transmission facilities" located within its territory.[81] Prior to Order No. 1000, a PUTP had the option to build and own

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(vi) the freedom of PUTPs to choose different cost allocation methods for different facilities, such as those required for reliability, congestion relief, or to achieve public policy goals. In addition, cost allocation methods must be explained in the compliance filing of the PUTP. *See* Kurdian, et al., *supra* note 66, at 183.

76. Order No. 1000, *supra* note 65, at 416–17.
77. *Id.* at 469, 509.
78. *Id.* at 36–40.
79. *Id.* at 39.
80. *Id.* at 50.
81. *Id.* at 345.

new transmission lines located within its jurisdiction.[82] In practice, this privilege stifled the ability of merchant developers and independent transmission companies who covet the stable revenue streams offered by transmission projects to bid on these transmission projects.[83] This is especially true in regions with large renewable energy potential, particularly wind, where "developers [have] been . . . literally falling over one another in a race to lock down key markets and rights-of-way" for transmission projects.[84]

Although the elimination of the right of first refusal has the potential to facilitate transmission system expansion and thus indirectly promote the integration of wind generation, this mandate lies at the cuff of FERC's statutory authority. As such, it remains to be seen whether the elimination of the right of first refusal through Order No. 1000 will survive judicial scrutiny. On the one hand, there is little precedent to support the extension of federal jurisdiction to protect against discrimination in transmission construction.[85] In fact, recent jurisprudence has reaffirmed that transmission construction traditionally falls within the bounds of state regulatory authority.[86] In an attempt to justify the expansion of its jurisdiction under Order No. 1000, FERC clarified that its elimination of the right of first refusal "excludes a new transmission facility if the costs of that facility are borne entirely by the [PUTP] in whose retail distribution service territory or footprint that new transmission facility is to be located."[87] However, FERC goes on to clarify that any allocation of the costs of a new facility outside its service territory or footprint requires a regional cost allocation method application, and thus any such transmission facility cannot be considered a local transmission facility.[88] In framing its jurisdiction argument, FERC is stating that the elimination of the right of first refusal is not an attempt to preempt state jurisdiction or force states to cede statutorily assigned regulatory privileges,[89] but is instead a legitimate attempt to remedy "unduly discriminatory" and preferential treatment in

82. Radford, *supra* note 62, at 22.
83. *Id.*
84. *Id.*
85. McGuire, *supra* note 24, at 577–78.
86. *Id.* at 579.
87. *Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities*, Order No. 1000-B, 141 F.E.R.C. ¶ 61,044, 61, 159 (2012) (to be codified at 18 C.F.R. pt. 35) [hereinafter "Order No. 1000-B"].
88. *Id.*
89. *See* Piedmont Envtl. Council v. FERC, 558 F.3d 304, 314 (4th Cir. 2009).

transmission facility construction, which is placed within FERC's regulatory purview[90] once cost allocation is spread throughout the region.[91]

CONCLUSION

The electricity transmission system in the United States lacks capacity. This inadequate level of transmission infrastructure hinders the integration of wind power generation into the grid and thus inhibits wind power development. The DOE has identified several areas of the country where improving transmission capacity could directly increase the number of wind power installations. In an attempt to facilitate the build out of the transmission system, the federal government has put in place several programs to encourage investment in infrastructure and improve the regional planning process to better integrate wind generation facilities into the grid. Both FERC Order No. 679 and FERC Order No. 1000 can have a continued positive impact on transmission expansion. As long as there exists a need for more capacity, FERC will undoubtedly push to extend its jurisdictional reach in an attempt to facilitate transmission expansion.

90. *See* 16 U.S.C. § 824 (2012).
91. Order No. 1000-B, *supra* note 87, at 61, 158.