Article

Energy and Eminent Domain

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INTRODUCTION

In 2005, the U.S. Supreme Court decided Kelo v. City of New London,[1] triggering a backlash known as the "Kelo Revolution" throughout the country. Under the Fifth and Fourteenth Amendments to the U.S. Constitution, private property may only be taken for "public use" and with "just compensation."[2] In Kelo, a five-justice majority of the Supreme Court held that the City of New London could use eminent domain to acquire Suzette Kelo's home, along with other nearby properties, to assemble land to be part of a larger, public-private economic redevelopment project that included a new research facility for Pfizer Corporation.[3] The Court found that the use of eminent domain for the redevelopment project satisfied the Fifth Amendment Takings Clause, holding that the project's goal of increasing the city's tax base and creating jobs was itself a "public purpose" which met the Constitution's "public use" requirement.[4] The decision rested on a long line of Supreme Court cases that had created an expansive definition of public use.[5] But it caused a national backlash: over forty states amended their statutes and

1. 545 U.S. 469 (2005).

2. U.S. CONST. amend. V ("[N]or shall private property be taken for public use, without just compensation."); Haw. Housing Auth. v. Midkiff, 467 U.S. 229, 245 (1984).

3. *Kelo*, 545 U.S. at 489–90.

4. *Id.* at 484.

5. *Id.* at 477–83.

constitutions to limit "economic development takings" under state law.[6]

One notable aspect of these post-*Kelo* reforms was their focus on alleged *government* abuse of eminent domain authority. The economic development takings targeted by reformers were often referred to derogatorily as "private takings," because once the government took property from private owners, it then transferred the properties to a private developer or corporation.[7] But the post-*Kelo* reforms in the states were careful not to restrict another kind of equally common "private taking"—eminent domain actions brought by private companies to build oil pipelines, gas pipelines, electric transmission lines, and other types of infrastructure for energy transport and natural resource development which had been enshrined in state statutes and constitutions for decades.

The Institute for Justice—the advocacy group that represented Suzette Kelo and spearheaded the efforts to "stop eminent domain abuse"—is a libertarian group with a mission to limit the role of government in civil society, including the use of eminent domain.[8] Other groups involved in the *Kelo* revolution were similarly focused on reforming government-initiated economic development takings.[9] By contrast, eminent domain actions to build energy projects are virtually always brought by private parties—oil companies, gas companies, electric utilities, and the like—using authority delegated by state legislatures or

6. *See infra* notes 60–63 and accompanying text.

7. *See infra* notes 64–65 and accompanying text.

8. *See Private Property*, INST. FOR JUSTICE, https://ij.org/issues/private-property [https://perma.cc/VF48-TVMS] ("The Institute for Justice is dedicated to protecting the right of every American to own and use his or her property freely. Respecting the right of private property is essential to a just and prosperous society. But government at all levels—local, state and federal—routinely infringe on these rights.").

9. *See*, *e.g.*, *About Pacific Legal Foundation*, PAC. LEGAL FOUND., https://pacificlegal.org/about [https://perma.cc/Y5BT-6ZJ4] ("Pacific Legal Foundation is a nonprofit legal organization that defends Americans' liberties when threatened by government overreach and abuse. We sue the government when it violates Americans' constitutional rights—and win!"); *Property Rights*, PAC. LEGAL FOUND., https://pacificlegal.org/cases [https://perma.cc/3TNN-E663] (describing the group's representation in property rights litigation against governmental entities).

Congress.[10] These types of takings never became part of the narrative surrounding alleged abuses of eminent domain.

By 2007, two years after the *Kelo* decision, most state legislatures and voters had completed their post-*Kelo* reforms. But that same year, a new revolution had just begun in the domestic energy arena. Beginning in 2007, technological developments in directional drilling and hydraulic fracturing ushered in the "fracking revolution," resulting in a huge increase in domestic shale oil and gas development in Texas, North Dakota, Pennsylvania, and other states.[11] At approximately the same time, a convergence of new technologies, tax incentives, and state renewable energy policies prompted a massive increase in the production of utility-scale onshore wind energy.[12] These new sources of fossil fuels and renewable electricity required new oil pipelines, gas pipelines, and electric transmission lines for transport to market. And these new energy transport projects, in turn, required eminent domain: otherwise each landowner along a proposed pipeline or power line route could, in theory, try to hold out for the entire economic surplus of the project.[13] Thus began a massive build-out in energy transport infrastructure that continues to this day and, with it, new coalitions of landowners and interest groups to oppose the use of eminent domain for these projects.

With regard to oil and gas pipelines, environmental groups, landowners, and property rights advocates joined forces to oppose these new projects—albeit for different reasons—using *Kelo*-reform rhetoric in their arguments.[14] As for electric transmission lines, many environmental groups have favored these projects for their ability to increase the nation's use of renewable energy and displace fossil fuels in the electricity sector.[15] But these projects remain controversial among landowners and some local environmental groups who claim they are not a "public use."[16] Thus, with regard to both types of projects, the post-*Kelo*

10. *See infra* notes 65–68 and accompanying text.

11. *See infra* notes 90–102 and accompanying text.

12. *See infra* Parts III.B–C.

13. Amnon Lehavi & Amir N. Lich, *Eminent Domain, Inc.*, 107 COLUM. L. REV. 1704, 1729 (2007).

14. *See infra* notes 120–26 and accompanying text.

15. *See infra* notes 212–13 and accompanying text.

16. *See infra* Part III.D.

reform movement may be catching a second wind that will expand to combat the energy transport projects it previously ignored.

This Article examines what has changed since 2007 to bring energy takings into the spotlight. These changes include:

- the fracking revolution that began in 2007 and the oil and gas industry's major expansion of pipeline infrastructure in the years since then to bring these new fossil fuel resources to domestic and international markets;[17]
- the rapid development of onshore utility-scale wind energy that requires long-distance transmission lines to integrate renewable energy into the electric grid;[18]
- the successful use of social media to create widespread, national opposition to energy transport projects like the Keystone XL and Dakota Access pipelines;[19] and
- the ability of property rights advocates and environmental groups to find common ground in opposing many of these projects, thus strengthening the lobbying power, attorney resources, and grassroots opposition to such projects.[20]

In this Article, we focus not only on the causes of the current backlash against eminent domain for energy projects, but the potential consequences.21 We are concerned that advocates' arguments for broad limits on the use of eminent domain for energy projects may result in reforms that will not meet environmental and economic goals or, in some cases, even the goals of the advocates. For those states, advocacy groups, and members of the public that support a transition to renewable energy, broad opposition to the use of eminent domain may result in laws that make it more difficult to bring about a clean energy transition. Though support for a clean energy transition is far from universally embraced in the United States, it is notable that many states and advocates that do support such a transition have often been on the front lines of limiting eminent domain. Thus, we suggest ways for policymakers, advocates, and others to reconsider

17. *See infra* Part II.
18. *See infra* Part III.
19. *See infra* Part II.C.
20. *See infra* notes 120–26 and accompanying text.
21. *See infra* Parts IV.B–C.

the role of Kelo-style arguments in the context of energy transport projects and enact reforms that will allow the construction of critical energy projects in a manner that more fully embraces impacted communities and can provide additional procedural rights and compensation for landowners.22 In evaluating these reforms, we draw on foundational property theories both supporting and criticizing current judicial approaches to public use and just compensation.23

Part I introduces the *Kelo* case and the widespread state legislative and constitutional reforms that followed the Supreme Court's 2005 decision. This Part also explores reasons why the *Kelo* reforms left unchanged the ability of private energy companies to exercise eminent domain for energy projects.

Part II details the fracking revolution that began just as the *Kelo* revolution was ending in 2007. It discusses how newly available sources of domestic shale oil and gas have fundamentally changed the United States energy outlook, and details industry efforts to develop the infrastructure necessary to transport these fuels to domestic and international markets.[24] It explores the growing opposition to these energy transport projects, addressing recent controversies over oil and gas pipelines.[25] In doing so, this Part evaluates: the distinct regulatory regimes governing oil pipelines and natural gas pipelines;[26] the role of eminent domain in building these projects;[27] the states and advocacy groups opposing these projects;[28] and how project opponents are increasingly using *Kelo*-type arguments in their efforts, with growing success.[29]

Part III turns to electricity, and explains how new technologies, markets, and regulations may dramatically increase use of wind, solar, and hydropower in the United States.[30] Displacing fossil fuels with these new energy sources would mean cleaner

22. *See infra* Part IV.C.
23. *See infra* Part IV.A.
24. *See infra* Parts II.A–B.
25. *See infra* Part II.C.
26. *See infra* notes 127–30, 154 and accompanying text.
27. *See infra* notes 131–32, 154–58 and accompanying text.
28. *See infra* notes 133–46, 161–62 and accompanying text.
29. *See infra* notes 147–53, 159–60 and accompanying text.
30. *See infra* Parts III.A–B.

air and water and potentially reduced carbon emissions. This alternative path, however, may depend on eminent domain, particularly to build the interstate electric transmission lines necessary to transport wind energy from the Great Plains to population centers and hydropower from Canada to the United States. This Part thus details the barriers electric transmission line companies have faced in building these projects, and why arguments against eminent domain for oil and gas pipelines may apply equally to transmission line projects.[31] While property rights advocates may support eminent domain reform with regard to all energy transport projects, regardless of whether they are designed to transport fossil fuels or renewable energy, many states and environmental advocates may wish to distinguish between the two.

Part IV evaluates the theoretical justifications for eminent domain in the context of energy-related projects.[32] This Part then suggests ways that policymakers can use eminent domain laws to either support or prevent different types of energy transport projects.[33] Finally, this Part suggests changes to policies governing appropriate compensation for eminent domain actions as well as enhanced procedural rights at the federal and state levels.[34] These changes would promote increased fairness and accountability in eminent domain actions for all energy projects. A conclusion follows.

I. EMINENT DOMAIN AND PUBLIC USE IN THE SHADOW OF *KELO*

The Fifth Amendment to the U.S. Constitution states in part: "nor shall private property be taken for public use without just compensation."[35] The Takings Clause of the U.S. Constitution sets the outer limits on the sovereign's ability to obtain private property without the consent of the owner, even if "just compensation" is paid.[36] Since the nation's founding, "sovereigns"—

31. *See infra* Parts III.C–D.

32. *See infra* Part IV.A.

33. *See infra* Part IV.B.

34. *See infra* Part IV.C.

35. U.S. CONST. amend. V.

36. *See, e.g.*, William Baude, *Rethinking the Federal Eminent Domain Power*, 122 YALE L.J. 1738, 1745 (2013) ("Eminent domain is the sovereign's power to take property—paradigmatically land—without its owner's consent.").

the federal government and the states—have exercised eminent domain authority to build roads, bridges, schools, and other projects for "public use."[37] They have also delegated their eminent domain authority to local governments and private parties to build projects those sovereigns have defined by statute as a "public use."[38] State constitutions have similar takings clauses with public use limitations.[39]

For as long as sovereigns and other parties with delegated eminent domain authority have exercised that power, landowners have challenged those actions on grounds that the taking was not for a "public use" or that the payment did not constitute "just compensation."[40] Likewise, for decades there have been debates among legal scholars over the justification for eminent domain authority in general and the definition of public use in particular.[41] Nevertheless, beginning in the early twentieth century, a

37. *Id.*

38. For examples of statutorily defined public uses, see, e.g., Natural Gas Act, Pub. L. No. 75-688, 52 Stat. 821, 821 (1961) (codified as amended at 15 U.S.C. § 717(a) (2012)) ("[B]usiness of transporting and selling natural gas for ultimate distribution to the public is affected with a public interest."); Act of July 25, 1947, Pub. L. No. 80-245, 61 Stat. 459, 459 (codified as amended at 15 U.S.C. § 717f(h) (2012)) (providing for eminent domain authority by a natural gas pipeline company holding a certificate of public convenience and necessity); IDAHO CODE ANN. § 7-701 (West 2018) ("[T]he right of eminent domain may be exercised in behalf of the following public uses: . . . (9) Pipe lines . . . for the transportation of crude petroleum or petroleum products; also for tanks, reservoirs, storage, terminal and pumping facilities, telephone, telegraph and power lines necessary incident to such pipe lines.").

39. *See, e.g.*, Maureen E. Brady, *The Damaging Clauses*, 104 VA. L. REV. 341 (2018) (discussing takings provisions in state constitutions).

40. *See* Alexandra B. Klass, *The Frontier of Eminent Domain*, 79 U. COLO. L. REV. 651, 662–69 (2008) (discussing takings litigation in nineteenth and early twentieth centuries).

41. *See, e.g.*, Thomas W. Merrill, *The Economics of Public Use*, 72 CORNELL L. REV. 61 (1986) (describing how the concept of public use has evolved); *see also* RICHARD EPSTEIN, TAKINGS: PRIVATE PROPERTY AND THE POWER OF EMINENT DOMAIN 161–81 (1985) (describing scope of the public use clause); Abraham Bell, *Private Takings*, 76 U. CHI. L. REV. 517, 545–46 (2009) (giving examples where states have allowed private parties to exercise eminent domain); Lawrence Berger, *The Public Use Requirement in Eminent Domain*, 57 OR. L. REV. 203 (1978) (discussing public use requirement for eminent domain); Frank I. Michelman, *Property, Utility and Fairness: Comments on the Ethical Foundations of "Just Compensation,"* 80 HARV. L. REV. 1165 (1967) (examining compensable harms under the takings clause); Patricia Munch, *An Economic Analysis of Eminent Domain*, 84 J. POL. ECON. 473, 495 (1976) (concluding that eminent

long line of federal and state cases interpreted the public use requirement of federal and state takings clauses quite broadly.[42] These cases equated "public use" with virtually any legislatively declared "public purpose," making these cases difficult for landowners to win. Some of these cases involved takings by private parties to build irrigation ditches, pipelines, transmission lines, and rights of way for industrial development, while others involved takings by governmental entities for roads, bridges, schools, stadiums, urban redevelopment projects, or other stated public purposes.[43]

The one-sided nature of these challenges meant that these cases often carried a low profile, causing a legal academic in the 1940s to lament that the issue of public use, while important, "has never figured in the constitutional cases which have aroused passionate controversy, nor in those whose names are known to the lay public."[44] This all changed in 2005 with Kelo v. City of New London,[45] when property rights advocacy groups like the Institute for Justice successfully brought the issue of public use to the attention of the public as well as state legislatures across the country.

Kelo involved an effort by the City of New London, Connecticut to redevelop the waterfront area of the city in order to "increase tax and other revenues and to revitalize an economically

domain does not ensure that landowners receive fair market value in assembly actions).

42. *See, e.g.*, Falbrook Irrigation Dist. v. Bradley, 164 U.S. 112, 158–64 (1896) (stating that property may only be taken for a public use); Strickley v. Highland Boy Gold Mining Co., 200 U.S. 527, 531 (1906) (defining public use as public welfare); Berman v. Parker, 348 U.S. 26, 36 (1954) ("If the Agency considers it necessary in carrying out the redevelopment project to take full title of the property involved, it may do so."); Haw. Housing Auth. v. Midkiff, 467 U.S. 229, 245 (1984) (holding that state exercise of eminent domain to reduce concentration of land ownership in the state was a public use); ILYA SOMIN, THE GRASPING HAND: *KELO V. CITY OF NEW LONDON* AND THE LIMITS OF EMINENT DOMAIN 55–61 (2015) (discussing court decisions equating public use with public purpose); Klass, *supra* note 40, at 668–74 (discussing Supreme Court's public use decisions).

43. SOMIN, *supra* note 42, at 35–55 (discussing cases); Klass, *supra* note 40, at 668–74 (explaining how courts expanded the definition of public use to include these types of projects).

44. Phillip Nichols, Jr., *The Meaning of Public Use in the Law of Eminent Domain*, 20 B.U. L. REV. 615, 615 (1940).

45. Kelo v. City of New London, 545 U.S. 469 (2005).

distressed city."[46] One component of the redevelopment plan was a new research facility for the pharmaceutical company, Pfizer.[47] After an extensive public planning process that resulted in the city's approval of the redevelopment plan, the city attempted to negotiate purchase agreements with landowners in the area to assemble the necessary property.[48] Several landowners in the redevelopment area refused to sell and the city exercised the power of eminent domain authorized under Connecticut law to obtain those properties.[49] The case reached the U.S. Supreme Court and the Court addressed the question of "whether a city's decision to take property for the purpose of economic development satisfies the 'public use' requirement of the Fifth Amendment."[50] The Court held in a 5–4 decision that the City's use of eminent domain in the case met the "public use" requirement of the Takings Clause.[51]

In the majority opinion, Justice Stevens stressed that the Court had "long ago rejected any literal requirement that condemned property be put into use for the general public" and that the question in the case was whether the city's redevelopment plan served a "public purpose."[52] In finding the public purpose requirement satisfied, the Court gave significant deference to the city's legislative judgment on that issue, describing in detail the city's comprehensive planning effort leading up to the approved plan.[53] In the opinion, Justice Stevens relied heavily on earlier cases in which the Court had upheld the exercise of eminent domain based on public purposes that included private mining, agriculture, and redevelopment of urban neighborhoods and found no "principled way" to distinguish the New London redevelopment project from this precedent.[54] Justice Stevens also emphasized that nothing in the Court's opinion prevented states

46. *Id.* at 472.
47. *Id.* at 473.
48. *Id.* at 475.
49. *Id.*
50. *Id.* at 477.
51. *Id.* at 483–84.
52. *Id.* at 479.
53. *Id.* at 473–74, 479, 482–85.
54. *Id.* at 484.

from providing enhanced protection for private property rights in their own constitutions or by legislative action.[55]

In dissent, Justice O'Connor, joined by Chief Justice Rehnquist, Justice Scalia, and Justice Thomas, argued that economic redevelopment on its own can never constitute a public use that justifies the exercise of eminent domain.[56] She identified three categories of takings that prior cases had held to meet the public use requirement and that deserved judicial deference: (1) transferring private property to public ownership for public uses such as a road, hospital, or military base; (2) transferring private property to other private parties, often to common carriers, for projects that will be open to the public, such as a railroad, stadium, or a public utility project; and (3) transferring private property to serve a "broader public purpose" even if the property will ultimately be placed in private hands, although such takings must be justified by extraordinary need such as addressing an existing harm to society.[57] According to Justice O'Connor, in *Kelo*, the city did not claim the properties being taken were "the source of any social harm" and thus the taking here merely took property put to "ordinary private use" and gave it to another private party for a new "ordinary private use" with some predicted "secondary benefit for the public—such as increased tax revenue, more jobs, maybe even aesthetic pleasure."[58]

Justice Thomas wrote his own dissent rejecting the substitution of "public purpose" for the constitutional "public use" requirement for eminent domain. He concluded that the proper reading of the public use clause would allow the government to take property only if "the government owns, or the public has a legal right to use, the property, as opposed to taking it for any public purpose or necessity whatsoever."[59]

The public, legislative, and judicial reaction to the Court's decision in *Kelo* was unprecedented. Around the country, state legislatures enacted statutes limiting the ability of states and local governments to use eminent domain for economic redevelopment projects and narrowed state definitions of "blight"; state

55. *Id.* at 489.
56. *Id.* at 494 (O'Connor, J., dissenting).
57. *Id.* at 497–98.
58. *Id.* at 499–501.
59. *Id.* at 508 (Thomas, J., dissenting).

supreme courts interpreted public use provisions in state constitutions to limit or eliminate such takings; and state voters enacted referenda in many states to accomplish the same goal.[60] By 2007, over forty states had engaged in post-*Kelo* reform actions.[61] According to Professor Ilya Somin, who has written extensively on the topic, "[t]he *Kelo* backlash led to more new state legislation than that generated by any other Supreme Court decision in history."[62] This is particularly notable, says Professor Somin, because the *Kelo* case itself was a reaffirmation of the status quo—a broad interpretation of public use that had been in place for decades—rather than an abrupt departure from prior precedent.[63]

It is important to note, however, that virtually all of the *Kelo*-related state reforms focused exclusively on *government*-initiated economic development takings and explicitly left in place the power of *private parties* to exercise eminent domain to build oil and gas pipelines, electric transmission lines, and other industrial activities included as "public uses" in state statutes and constitutions.[64] In other words, the advocacy rhetoric regarding "private takings" and related reform efforts were focused predominantly on limiting or prohibiting government acquisition of private property through eminent domain that might ultimately be transferred to new private owners. The post-*Kelo* public conversation and reform efforts were completely silent on what would on the surface appear to be even more "private" takings

60. *See* SOMIN, *supra* note 42, at 135; *see also* 13 POWELL ON REAL PROPERTY § 79F.03 & n.271 (2019) (discussing post-*Kelo* state legislative and judicial action); Dana Berliner, *Looking Back Ten Years After* Kelo, 125 YALE L.J. F. 82, 84–88 (2015), https://www.yalelawjournal.org/forum/looking-back-ten-years-after-kelo [https://perma.cc/PW75-3PLF] (discussing post-*Kelo* state action). *See generally* Ilya Somin, *The Limits of Backlash: Assessing the Political Response to* Kelo, 93 MINN. L. REV. 2100 (2009) (analyzing post-*Kelo* state action).

61. SOMIN, *supra* note 42, at 135.

62. *See id.* Notably, not all scholars agree that *Kelo* itself or the legislative backlash to the case will have a longstanding impact on takings law. *See*, *e.g.*, Bethany Berger, Kelo *and the Constitutional Revolution that Wasn't*, 48 CONN. L. REV. 1429, 1436–37 (2016) (arguing that *Kelo* had little overall impact).

63. SOMIN, *supra* note 43, at 135.

64. *See* Alexandra B. Klass, *Takings and Transmission*, 91 N.C. L. REV. 1079, 1094 (2013) ("[T]hese statutes generally did not put restrictions on eminent domain authority for private projects associated with electricity transmission or other infrastructure development.").

than the redevelopment takings at issue in *Kelo*—eminent domain actions brought by private parties to take private property for a range of energy infrastructure projects.[65]

These private energy and industrial takings have a long history in the United States and avoided any real scrutiny during the *Kelo* reform era that ended in approximately 2007. Many states in the Intermountain West grant eminent domain powers in their state constitutions or in state statutes to private parties to promote mining, milling, and agricultural development.[66] Virtually all states grant statutory eminent domain authority to oil and gas companies to build oil and gas pipelines and associated infrastructure, and to electric utilities to build electric transmission lines.[67] Likewise, nearly a century ago, Congress granted nationwide eminent domain authority to interstate natural gas pipelines that obtain a Certificate of Public Convenience and Necessity from the Federal Energy Regulatory Commission (FERC).[68]

The *Kelo*-inspired reform initiatives either ignored these energy-related private takings or explicitly excluded them from coverage. For instance, post-*Kelo* legislation in Pennsylvania prohibited the use of eminent domain to benefit private parties but created exceptions for, among other purposes, use by a public utility, railroad, or common carrier.[69] Similarly, a ballot initiative in Mississippi limited government exercise of eminent domain for economic development takings except where the property is taken for roads, bridges, public utility projects, and other

65. *See* Bell, *supra* note 41, at 545–46; Klass, *supra* note 64 at 1094–95. Of course, limitations on the use of eminent domain solely for "economic development" may, in some instances, limit the ability of the government to take private property for energy development purposes if that is the economic development in question. *See* State *ex rel.* Jackson v. Dolan, 398 S.W.3d 472, 482 (Mo. 2013) (holding that a port authority project to build a storage facility for oil transport was solely for the purpose of economic development and thus could not use eminent domain based on post-*Kelo* reforms to state law); *see also infra* notes 80–82 and accompanying text.

66. *See* Klass, *supra* note 40 (discussing eminent domain for natural resource development in the Intermountain West).

67. Klass, *supra* note 64, at 1095, 1123–24; Alexandra B. Klass & Danielle Meinhardt, *Transporting Oil and Gas: U.S. Infrastructure Challenges*, 100 IOWA L. REV. 947, 951, 1027–53 (2015).

68. Klass & Meinhardt, *supra* note 67, at 995–98.

69. *See* Klass, *supra* note 64, at 1094–95.

projects to generate, store, or distribute carbon dioxide, natural gas, electricity, hydrocarbons, and the like.[70]

Judicial decisions limiting the use of eminent domain as a matter of state constitutional law around the time of the *Kelo* decision also distinguished between unconstitutional "private" takings—where the government transferred property from one private party to another for economic redevelopment purposes—and other types of constitutional takings that resulted in a transfer of property to private ownership. For instance, just prior to the *Kelo* decision, in 2004, in *Wayne County v. Hathcock*,[71] the Michigan Supreme Court reversed prior precedent[72] and held that a county's exercise of eminent domain to assemble land for a new business and technology park was not a public use under the state constitution.[73] The Court held that the public use requirement of the state constitution prohibited the transfer of condemned property to private entities except in three circumstances: (1) when the private entity generates public benefits whose existence depends on assembly of land; (2) when the private entity "remains accountable to the public in its use of that property"; or (3) when land selected is "itself based on public concern" such as to remedy urban blight.[74]

Notably, the *Hathcock* court's examples for the first two categories of acceptable "private" takings involved transportation and energy. For the first example, which focused on the need for land assembly, the court referred to highways, railroads, and other instrumentalities of commerce that require a straight line which may encourage "holdout" tactics by property owners in the path of the project.[75] Such owners will realize that their land is necessary for the project and refuse to accept an offer even fifty times the value of the property, resulting in a "logistical and

70. *Id.*

71. 684 N.W.2d 765 (Mich. 2004).

72. Poletown Neighborhood Council v. City of Detroit, 304 N.W.2d 455, 459 (Mich. 1981) (holding that the city's decision to use eminent domain to take residential property to assemble land to give to General Motors to build a new manufacturing facility was a public use based on project's purpose of "alleviating unemployment and revitalizing the economic base of the community").

73. *Hathcock*, 684 N.W.2d at 784.

74. *Id.* at 781–83.

75. *Id.* at 781–82.

practical nightmare."[76] As a result, according to the court, "the exercise of eminent domain in such cases—in which collective action is needed to acquire land for vital instrumentalities of commerce—is consistent with the constitutional 'public use' requirement."[77] For the second type of acceptable private taking, the court cited with approval its earlier decision in *Lakehead Pipeline Company v. Dehn* from 1954.[78] In that case, the court had found that a petroleum pipeline could exercise eminent domain because the state continued to exercise "sufficient control" of the pipeline through the pipeline owner's commitment to transport its product in interstate commerce and the state's ability to enforce regulatory requirements.[79]

These examples make clear that the public, legislative, and judicial eminent domain reform at the time of the *Kelo* decision were focused squarely on government-initiated economic development takings and that energy, utility, and transportation takings were not perceived as a problem. To the contrary, such takings were used as illustrative examples of acceptable "public uses" even though the property at issue would be placed in private ownership.[80] But timing is everything. From 2005 to 2007, during the national wave of *Kelo*-related reforms, these private industrial and energy infrastructure projects were not particularly controversial.[81] Much of the necessary infrastructure to transport energy had already been built decades before, the nation was concerned about U.S. dependence on foreign nations for oil and gas supplies, and the case for building any new infrastructure to transport these resources to make them more easily available to the public at affordable prices would appear to meet even a fairly narrow definition of "public use." Indeed, Justice O'Connor in her *Kelo* dissent highlighted these types of takings as classic examples of legitimate public uses.[82]

76. *Id.* at 782.

77. *Id.*

78. *Id.* (citing Lakehead Pipeline Co. v. Dehn, 64 N.W.2d 903 (Mich. 1954)).

79. *Id.*

80. Lehavi & Lich, *supra* note 13, at 1710 (identifying "pipelines and other types of linear infrastructures and utilities" as "Quintessential Public Projects").

81. *See*, *e.g.*, Klass, *supra* note 64, at 1094 (describing a Pennsylvania statute that expressly excluded public utilities from scope of eminent domain reform).

82. Kelo v. City of New London, 545 U.S. 469, 497–98 (2005) (O'Connor, J.,

In 2007, however, as the post-*Kelo* reform efforts were winding down, another national phenomenon was beginning—both the "fracking revolution" and a surge of onshore wind energy development were starting to completely transform the U.S. energy landscape. Soon after, U.S. oil, natural gas, and wind production were at all-time highs, which required new oil pipelines, gas pipelines, and electric transmission lines to transport these new energy resources to markets. Parts II and III detail these developments, as well as their collision course with the *Kelo* case.

II. THE FRACKING REVOLUTION AND U.S. PIPELINE EXPANSION

As the post-*Kelo* reforms subsided, another revolution was building: the fracking revolution. In less than a decade, directional drilling and hydraulic fracturing—colloquially known as "fracking"—has upended U.S. and world energy markets. Oil and gas production in the United States has doubled.[83] Nearly all of this new production has been onshore, unlike the offshore oil and gas that dominated new production for decades.[84] This fracking revolution has turned the United States from the world's biggest oil importer to the world's biggest producer and a center of two-way global oil trade.[85] The United States is still a major crude oil importer, but is now one of the world's biggest oil exporters as well.[86] And the rest of the world is counting on the United States to drive a transition to global natural gas markets: the United States is now approving and building vast export capacity to bring liquefied natural gas to markets in Europe and Asia.[87] These dramatic shifts in oil and gas geography have powered a drive for new transport capacity—new oil and gas pipelines to take this new onshore production to market. And

dissenting).

83. *Crude Oil Production*, U.S. ENERGY INFO. ADMIN., https://www.eia.gov/dnav/pet/pet_crd_crpdn_adc_mbblpd_m.htm [https://perma.cc/KX9Q-XJ7P] (last updated Sept. 30, 2019).

84. James W. Coleman, *Pipelines & Power-Lines: Building the Energy Transport Future*, 80 OHIO ST. L.J. 263, 276–79 (2019).

85. *See* James W. Coleman, *The Third Age of Oil and Gas Law*, 95 IND. L.J. (forthcoming 2020) (manuscript at 5), https://ssrn.com/abstract=3367921 [https://perma.cc/QY7V-YRHS].

86. Coleman, *supra* note 84, at 277.

87. *Id.* at 274–75.

this new investment has run into new opposition that is testing the traditional rules of energy transport and eminent domain.

A. THE U.S. OIL AND GAS BOOM

Until the fracking revolution, nearly all oil extraction had come from conventional oil reservoirs beneath the earth's surface—these conventional reservoirs are permeable layers of rock where oil can flow freely, trapped beneath impermeable rock layers that keep the oil from flowing to the surface.[88] If you drilled through the impermeable layers to the permeable layers, the oil could be pumped out.[89] But petroleum engineers knew that there were also vast quantities of oil and gas held within layers of impermeable shale rock deep under the earth's surface. They also knew that if the impermeable rock were crushed, the oil and gas would be released. But for decades it was considered economically infeasible to unlock this trapped oil and gas—even if you could find such oil-filled impermeable rocks miles beneath the earth's surface, how could you crush enough rock to make drilling that far pay off?

This calculus changed in the late 2000s with advances in directional drilling and hydraulic fracturing. Companies learned how to thread through horizontal layers of impermeable rock precisely, first drilling vertically down a mile or more, turning the wellbore through ninety degrees, and then drilling more than a mile horizontally through layers of rock that are just meters thick.[90] With this horizontal, impermeable shale now threaded, small explosives could make cracks in the rock and extremely high-pressure water could extend those fractures, beginning to release the oil and gas trapped throughout the rock.[91] Fine sand, mixed into the water, would hold these new fractures open, allowing a steady stream of oil and gas to flow back up the well

88. Donald H. Ford, *Controlling the Production of Oil*, 30 MICH. L. REV. 1170, 1176–77 (1932) (explaining oil and gas reservoirs with diagrams).

89. *Id*. at 1171–72 (describing how oil and gas flows out of the reservoir into the well).

90. Coleman, *supra* note 85 (manuscript at 44).

91. Thomas W. Merrill & David M. Schizer, *The Shale Oil and Gas Revolution, Hydraulic Fracturing, and Water Contamination: A Regulatory Strategy*, 98 MINN. L. REV. 145, 153–54 (2013).

and be extracted at the surface.[92] This complex process of horizontal drilling and hydraulic fracturing is generally called "fracking."

Before fracking, U.S. oil production had been falling for almost forty years, from a peak of ten million barrels per day in 1970[93] to less than five million barrels per day in 2008.[94] But fracking quickly transformed U.S. oil production. Three oil fields led the way: the Bakken Shale in North Dakota and the Eagle Ford and Permian Basins in Texas. Each of these fields hit one million barrels per day of oil production in 2012 and 2013.[95] By 2015, U.S. production was nearly back to its 1970 peak, reaching 9.6 million barrels per day in April of that year—even with oil prices as low as $50 per barrel.[96] By April 2018, production had reached an all-time high, 10.5 million barrels per day and rising sharply, with oil prices over $70 per barrel driving new drilling.[97]

Fracking has also transformed U.S. natural gas markets, increasing production by 40% and reducing prices by more than 80%.[98] Fracking had a bigger impact on gas prices, and a smaller impact on gas production, because gas is more expensive to transport than oil.[99] New oil production can be moved to distant

92. Coleman, *supra* note 85 (manuscript at 45).

93. *U.S. Monthly Crude Oil Production Exceeds 10 Million Barrels Per Day, Highest Since 1970*, U.S. ENERGY INFO. ADMIN. (Feb. 1, 2018), https://www.eia.gov/todayinenergy/detail.php?id=34772 [https://perma.cc/PGZ7-NLNF].

94. *Crude Oil Production*, *supra* note 83.

95. U.S. ENERGY INFO. ADMIN., DRILLING PRODUCTIVITY REPORT 5–6, 9 (Oct. 2019) https://www.eia.gov/petroleum/drilling/pdf/dpr-full.pdf [https://perma.cc/8HJ9-8LD5]. The Bakken Shale also extends into portions of Montana and Saskatchewan. *Id.* at 1 (showing map of regions).

96. *Crude Oil Production*, *supra* note 83; *Cushing, OK WTI Spot Price FOB*, U.S. ENERGY INFO. ADMIN., https://www.eia.gov/dnav/pet/hist/rwtcD.htm [https://perma.cc/XFC4-632L].

97. *Cushing*, *supra* note 96.

98. Prices for producers dropped more than 80% from July 2008 to May 2012. *See U.S. Natural Gas Wellhead Price*, U.S. ENERGY INFO. ADMIN., http://www.eia.gov/dnav/ng/hist/n9190us3m.htm [https://perma.cc/R9PW-UABA] (last updated Sept. 30, 2019).

99. *See* James W. Coleman, *The Shale 'Revolution' Is About Gas Prices & Oil Production*, ENERGY COLLECTIVE (July 17, 2014), https://www.energycentral.com/c/ec/shale-revolution-about-gas-prices-oil-production [https://perma.cc/YZ8L-BCP7] ("Increased production of natural gas has had a dramatic effect on natural gas prices because natural gas is hard to transport. If you can't send natural gas by an existing pipeline to an existing market, your next best option may be to cool it into a liquid at −162 °C, load the liquid onto a

markets by rail, pipeline, ship, or truck. By contrast, if gas producers want to reach new markets they must either build multi-billion-dollar air-tight pipelines, or multi-billion-dollar liquefaction facilities that can cool the gas until it becomes a liquid which can be sent overseas on refrigerated ships.[100] As a result, when fracking unlocked gas reserves in Pennsylvania's Marcellus Shale and Texas's Barnett Shale, it quickly flooded the mid-continent market for gas—lowering prices until consumers could find new ways to use gas or producers could build the expensive facilities needed to transport gas to new markets abroad.[101]

Even as oil prices fell over 50% and gas prices over 80%, U.S. production kept rising.102 As oil and gas producers proved they

giant, insulated, quarter-billion dollar vessel and ship it across the ocean, where it can be regasified and burned.").

100. Nancy J. Forbis, *The Shut-in Royalty Clause: Balancing the Interests of Lessors and Lessees*, 67 TEX. L. REV. 1129, 1131 (1989) ("Natural gas is difficult, if not impossible, to store outside a reservoir, and thus producers must either transport gas to a pipeline as it is produced or retain it at the wellhead until they can locate a willing purchaser."); Mark P. Gergen, *The Use of Open Terms in Contract*, 92 COLUM. L. REV. 997, 1018 n.68 (1992); Jacqueline L. Weaver, *Implied Covenants in Oil and Gas Law Under Federal Energy Price Regulation*, 34 VAND. L. REV. 1473, 1518 n.169 (1981) ("Gas is not easily stored above ground and can be transported only by pipeline. Moreover, gas pipelines require large capital investments and can be justified only if the pipeline owner has secure sources of supply under long-term gas purchase contracts.").

101. The cost of transporting natural gas is why, unlike oil, no one talks about the "price" of a unit of natural gas without specifying the location: adjacent gas markets can have drastically different natural gas prices if there is not enough transport connecting the two regions. The midcontinent, defined by a triangle of production from Alberta in the northwest, to Pennsylvania in the northeast, to Texas in the south is the world's largest, and for the past ten years, most affordable, gas market. Yet, adjacent markets in New England and Mexico have, at times, suffered through the highest prices in the world. Naureen S. Malik, *Cold Snap Makes New England the World's Priciest Gas Market*, BLOOMBERG (Dec. 27, 2017), https://bloomberg.com/news/articles/2017-12-26/cold-snap-makes-new-england-the-world-s-priciest-market-for-gas [https://perma.cc/7Q8D-UCSE]; *see also* Adebola S. Kasumu et al., *Country-Level Life Cycle Assessment of Greenhouse Gas Emissions from Liquefied Natural Gas Trade for Electricity Generation*, 52 ENVTL. SCI. & TECH. 1735, 1739 (2018) (showing a spike in natural gas prices in Mexico in mid-2013 from under $5 per million British Thermal Units (MMBTU) to over $15 per MMBTU while U.S. Gulf Coast prices remained low).

102. Natural gas prices fell more than 80% and production kept rising. *Compare Natural Gas Prices – Historical Chart*, MACROTRENDS, https://www.macrotrends.net/2478/natural-gas-prices-historical-chart [https://perma.cc/

could pump more and more at lower and lower prices, the focus of energy markets shifted to transport.103 How would the United States bring this flood of hydrocarbons to market?

B. THE EXPANSION OF OIL AND GAS INFRASTRUCTURE

For years, oil companies focused on energy production: if oil could be produced, there would be a market for it. Of course, increased production has always required increased transport capacity to take new product to market. But in the past, this new production could often use the same pipelines and shipping routes used by previous producers. In recent years the focus of energy companies and energy law has shifted dramatically to energy transport for three reasons.

First, the last decade's oil and gas boom did not fit the usual geography of oil and gas transport, which for years brought oil from the Gulf Coast to the Midwest for refining and gas from the Gulf Coast to the Northeast for use in heating, industry, and electricity production.[104] Instead, massive new production of oil in North Dakota meant that the Midwest now had oil to export.[105] And new gas production in Pennsylvania meant the Northeast had gas to export.[106]

Second, as fracking technology and ruthless competition pushed prices of oil and gas lower, transport costs became a larger share of the price of delivered hydrocarbons.[107] The financial fate of every new fracked well has become increasingly de-

5YJP-HKEN] *with Monthly Crude Oil and Natural Gas Production*, U.S. ENERGY INFO. ADMIN., https://www.eia.gov/petroleum/production/#ng-tab [https://perma.cc/W9LN-4DWV]. Oil prices fell from $104/barrel in July 2014 to $26/barrel in February 2016, which did cause oil production to slow down, and even slightly decline as producers struggled to cut costs for several months—but by September 2016, when prices were only back up to $45/barrel, oil production was again on the rise. *Compare Crude Oil Prices – 70 Year Historical Chart*, MACROTRENDS, https://www.macrotrends.net/1369/crude-oil-price-history-chart [https://perma.cc/96LN-7CGA], *with U.S. Crude Oil Production – Historical Chart*, MACROTRENDS, https://www.macrotrends.net/2562/us-crude-oil-production-historical-chart [https://perma.cc/NH75-YJET].

103. Coleman, *supra* note 84, at 276–79.

104. *Id.* at 272.

105. *Id.* at 276–79.

106. *Id.* at 273.

107. *Id.* at 273–76.

pendent on affordable paths to markets where the well's different oil and gas products can receive a reasonable price.

Third, gas—which is more expensive to transport—is becoming a more important part of energy production and is projected to form a larger share of hydrocarbon consumption in coming decades.[108] For years, natural gas was often seen as a useless byproduct of oil production. Unless it could somehow be transported to a nearby market for fuel, it would simply be re-injected into a reservoir to increase oil production or burned off.[109] At worst, it was a hazardous byproduct of oil production liable to causing blow-outs or explosions. There is a reason that the "oil and gas industry" was once more commonly known as the "oil industry."

Over time, natural gas has become increasingly important to the industry and recent developments have accelerated that trend. For one, fracking targets rock layers where hydrocarbons are trapped in place, rather than free flowing, so oil molecules in the rock have not separated from gas molecules. As a result, oil companies cannot simply target oil molecules; instead, when they produce, they necessarily produce a mix of hydrocarbons from methane, the lightest gas, through heavier gases, to oil.[110] Furthermore, gas transport, while still expensive, is constantly improving to make it possible to bring more and more gas to markets further afield. Finally, to the extent that increased natural gas extraction has environmental benefits such as replacing coal power and backing up intermittent solar and wind power, it requires transportation to markets.[111]

The financial imperative to find transport for the flood of shale oil and gas has created an extraordinary build-out in oil

108. James W. Coleman & Sarah M. Jordaan, *Clearing the Air: How Canadian LNG Exports Could Help Meet World Greenhouse Gas Reductions*, C.D. HOWE INST., Aug. 24, 2016, at 2.

109. Coleman, *supra* note 84, at 275–76.

110. Coleman, *supra* note 85 (manuscript at 45).

111. Natural gas plants, unlike coal, nuclear, and most hydropower plants, are well designed to quickly ramp their power output up and down to ensure that power supplied to the grid matches the power demanded from the grid. As a result, new supplies of natural gas are well suited to serve as back-up power in areas that would like to incorporate more solar and wind power. James W. Coleman, *Beyond the Pipeline Wars: Reforming Environmental Assessment of Energy Transport Infrastructure*, 2018 UTAH L. REV. 119, 148 (2018).

and gas pipelines. In less than ten years, the natural gas industry spent $56 billion on expanding the U.S. natural gas pipeline network.[112] Oil pipelines have also seen dramatic expansion—particularly transporting oil from the Permian basin in Texas and the Bakken shale in North Dakota.[113] It is not surprising that such a massive expansion of pipeline infrastructure, almost all of which requires extensive easements over private land, would engender growing opposition by landowners, property rights advocates and, increasingly, environmental advocates who fear that investing significant resources in new, long-lived fossil fuel infrastructure will result in path dependency and impede the transition to a low carbon energy economy.[114] The next section explores the recent opposition to new oil and gas pipelines as well as how that opposition is articulated within the existing state and federal regimes governing permitting and eminent domain authority for these projects.

C. INCREASED OPPOSITION TO USE OF EMINENT DOMAIN FOR PIPELINES

The United States has a uniquely bifurcated system for approving hydrocarbon pipelines: states approve oil pipelines and decide whether to authorize eminent domain; the federal government makes the same decisions for gas pipelines and related infrastructure such as compression stations and liquefied natural gas terminals.[115] The historic reasons for this division of labor are complex, and can be traced to Congress addressing state barriers to building pipeline transport for natural gas from the Gulf

112. U.S. DEP'T OF ENERGY, NATURAL GAS INFRASTRUCTURE, app. B at 28 (2015), https://www.energy.gov/sites/prod/files/2015/06/f22/Appendix%20B-%20Natural%20Gas_1.pdf [https://perma.cc/ZX7E-WV7T]; *see also* Ganesh Dabholkar, *Pipeline Industry Growth Fueled by Increasing Global Energy Demand, Shale Gas Exploration*, PIPELINE & GAS J., Mar. 2014, at 76, 76–77 (discussing investment in pipelines).

113. *See generally* Christopher E. Smith, *Crude Oil Pipeline Growth, Revenues Surge; Construction Costs Mount*, OIL & GAS J., Sept. 1, 2014, at 114 (describing increasing investment by top oil and gas pipeline companies).

114. *See*, *e.g.*, Mike Lee & Edward Klump, *Pipeline Builders, Gas Drillers Fret About Protesters*, ENERGYWIRE (Mar. 8, 2018), https://www.eenews.net/energywire/2018/03/08/stories/1060075773 [https://perma.cc/AV3P-KHX9] (discussing protestors' attempts to block pipeline construction).

115. Klass & Meinhardt, *supra* note 67, at 1006.

Coast states to the Northeast in the 1930s.[116] Such barriers did not exist for oil, which can be transported not only by pipeline but also by ship, truck, and rail.[117] For natural gas pipelines, FERC decides whether the gas pipeline is needed and, if so, the pipeline is authorized to bring an action for eminent domain to acquire any easements over private property in cases where it is not able to negotiate voluntary agreements with all landowners.[118] For oil pipelines, each state has its own set of laws that determine whether and how an oil (or natural gas liquids[119]) pipeline can be built and whether and how an oil company can exercise eminent domain. In recent years, the use of eminent domain for pipelines under both federal and state law has become controversial, prompting affected landowners, national environmental groups such as the Sierra Club, and local environmental advocacy groups to challenge these projects in court.[120]

Notably, the advocacy groups partnering with affected landowners in these eminent domain challenges to oil and gas pipelines have a very different mission than the advocacy groups that represented Suzette Kelo and drove the post-Kelo reforms in the states. The opponents in Kelo were libertarians attempting to

116. *Id.*

117. *Id.*

118. 15 U.S.C. § 717f(h) (2012).

119. "Natural gas liquids" are hydrocarbons that are intermediate in density between the lightest hydrocarbon, methane, which has only one carbon, and the longer, denser carbon chains that comprise crude oil. These molecules, such as ethane, propane, butane, and pentane, have two to five carbons and may exist as either a liquid or a gas depending on temperature and pressure. They are used in petrochemical plants, burned for space heating and cooking, or blended into fuels. Pipelines that transport natural gas liquids are regulated like oil pipelines, which means they are subject to state permitting and eminent domain laws rather than subject to FERC authority under the Natural Gas Act. *See* Alexandra B. Klass, *Future-Proofing Energy Transport Law*, 94 WASH. U. L. REV. 827, 835 n.23 (2017).

120. *See Beyond Dirty Fuels Initiative*, SIERRA CLUB: OUR WILD AM., https://content.sierraclub.org/ourwildamerica/beyond-dirty-fuels-initiative [https://perma.cc/CC4E-AYHD]; Rimmi Singhi, *Pipeline Challenges in U.S. and Canada Continue Amid Oil Boom*, NASDAQ (Sept. 14, 2018), https://www.nasdaq.com/articles/pipeline-challenges-us-canada-continue-amid-oil-boom-2018-09-14 [https://perma.cc/Q7GV-MYLZ]; Michael Sol Warren, *N.J. Environmentalists Use New Legal Strategy to Fight Pipelines*, NJ.COM (Dec. 3, 2017), https://www.nj.com/news/2017/12/nj_environmental_groups_sue_feds_over_eminent_doma.html [https://perma.cc/6ZSF-F3TH]; *see also infra* notes 136–38, 141–42, 150–53, 156–58 and accompanying text (discussing court decisions).

limit government power over private citizens.121 For them, eminent domain represents government intrusion into individual rights, which needs to be limited by defining public use narrowly.122 By contrast, the primary advocacy groups opposing fossil fuel energy projects come from the other end of the political spectrum.123 They advocate broad government intervention in the energy economy to protect the environment by (among other things) limiting the ability to burn fossil fuels.124 The energy project opponents generally favor government action on behalf of the public interest over private rights.125 As illustrated below, these environmental advocacy groups have strategically adopted many of the arguments of their libertarian predecessors despite the differences between their philosophies and ultimate objectives.126

1. Natural Gas Pipelines

As energy companies have rushed to build new natural gas pipelines, some plaintiffs have argued that, as private companies, pipeline companies should have to make a stronger showing that their proposals are in the public interest.[127] FERC generally applies a market test: it grants a certificate of public convenience and necessity for a natural gas pipeline which, in turn, automatically conveys eminent domain authority through the Natural Gas Act, so long as the company has contracts to transport gas.[128] Pipelines can rely on these contracts to obtain a certificate and exercise eminent domain even when they are

121. *See supra* notes 8–9 and accompanying text (discussing Institute for Justice and other libertarian groups involved in the *Kelo* case and post-*Kelo* advocacy work).

122. *See* INST. FOR JUSTICE, *supra* note 8.

123. *See Beyond Dirty Fuels*, *supra* note 120.

124. *See id.*

125. *See* Warren, *supra* note 120.

126. *See* Ellen M. Gilmer, *Burgeoning Legal Movement Pits Landowners Against Pipelines*, ENERGYWIRE (Sept. 13, 2017), https://www.eenews.net/stories/1060060443 [https://perma.cc/N3AJ-527W] (discussing positions of libertarian groups and environmental advocacy groups in eminent domain challenges to oil and gas pipelines).

127. Complaint ¶¶ 75–77, Berkley v. Mountain Valley Pipeline LLC, No. 7:17-CV-00357, 2017 WL 6327829, (W.D. Va. July 27, 2017).

128. *See* Mountain Valley Pipeline, LLC, 163 FERC ¶ 61,197 at 17–26 (2018) (order on rehearing).

with "affiliate" companies—such as parent or subsidiary companies.[129] FERC rarely denies requests for certification since pipeline companies would rarely bother applying without such contracts in hand. In fact, FERC has only denied a certificate for two pipelines in the last thirty years.[130]

In 2018, FERC requested comments on whether it should revise its policy statement from 1999 that guides its authorization of construction and eminent domain for natural gas pipelines in the light of the significant changes in natural gas production and markets over the past ten years.[131] In the meantime,

129. *Id.* FERC only approves pipelines that can show they are "required by the present or future public convenience and necessity." 15 U.S.C. § 717f(e) (2012). To do this, pipeline developers show that they have contracts—known as "precedent agreements"—with companies that will ship gas on the pipeline once it is built. *See generally* Emily P. Mallen & Katy Lukaszewski, *Pipeline Outlook: How FERC Reliance on Precedent Agreements Could Change*, TEX. LAWYER, Mar. 1, 2018, https://www.law.com/texaslawyer/2018/03/01/pipeline-outlook-how-ferc-reliance-on-precedent-agreements-could-change [https://perma.cc/5S7C-WC6H] (discussing such precedent agreements). Although a pipeline that only transports gas for its own parent or subsidiary company might not seem like a public use, FERC has traditionally given "equal weight to contracts between an applicant and its affiliates and an applicant and unrelated third parties." Statement of Policy, Certification of New Interstate Natural Gas Pipeline Facilities, 88 FERC ¶ 61,227 at 15 (1999) (citing Transcontinental Gas Pipe Line Corp., 82 FERC ¶ 61,084 at 9 (1998)). For a discussion of growing criticism of this approach based on concerns over self-dealing, see Gavin Bade, *Split FERC Approves Spire Pipeline, Brushing Aside Self-Dealing Concerns*, UTIL. DIVE (Aug. 6, 2018), https://www.utilitydive.com/news/split-ferc-approves-spire-pipeline-brushing-aside-self-dealing-concerns/529428 [https://perma.cc/5DHC-EFP7].

130. Jordan Cove Energy Project, L.P., 157 FERC ¶ 61,194 (2016) (order denying rehearing); *see* Gavin Bade, *Climate, Project Need at Center of FERC Pipeline Policy Review*, UTIL. DIVE (July 30, 2018) https://www.utilitydive.com/news/climate-project-need-at-center-of-ferc-pipeline-policy-review/528908 [https://perma.cc/DZ2M-LK6A] (discussing criticism of FERC policy that is seen as too lax with regard to establishment of pipeline "need" and citing report tracking FERC pipeline approvals); Jonathan Crawford & Naureen S. Malik, *U.S. Rejects Multibillion-Dollar Jordan Cove Gas Export Plan*, BLOOMBERG (Mar. 11, 2016), https://www.bloomberg.com/news/articles/2016-03-11/u-s-rejects-veresen-s-5-3-billion-jordan-cove-gas-export-plan [https://perma.cc/H7X9-D67V]; Ellen M. Gilmer, *Is FERC Bent on Approving Pipelines? Judges Weigh Claim*, ENERGYWIRE (Mar. 23, 2018), https://www.eenews.net/energywire/2018/03/23/stories/1060077275 [https://perma.cc/N3AJ-527W].

131. Certification of New Interstate Natural Gas Facilities, 163 FERC ¶ 61,042 (Apr. 19, 2018); Bade, *supra* note 130; Ellen M. Gilmer et al., *Commenters Swarm FERC to Push Reform—And Status Quo*, ENERGYWIRE (July 27, 2018), https://www.eenews.net/stories/1060091321 [https://perma.cc/2DZ4

plaintiffs and a minority of FERC Commissioners began to challenge FERC approval of natural gas pipelines, beginning with three projects: the Mountain Valley, Atlantic Coast, and Penn-East pipelines.[132]

The Mountain Valley Pipeline would stretch approximately 300 miles from northwestern West Virginia to southern Virginia. FERC approved the pipeline and denied a request for rehearing.[133] Commissioner Glick and former Commissioner LaFleur, however, dissented, arguing that the Commission had not done enough to evaluate the environmental impacts of the project, including its contribution to downstream greenhouse gas emissions, and adverse impacts on landowners.[134] Commissioner Glick also dissented on grounds that the pipeline should not be able to rely on transport agreements with affiliate companies to establish that the pipeline is for the "public convenience and necessity" under the Natural Gas Act.[135] In 2017, a group of landowners in Virginia and West Virginia filed suit against FERC and Mountain Valley Pipeline in federal district court in Virginia.[136] The plaintiffs argued that FERC's decision-making process for granting eminent domain fell short of the minimum required by the Supreme Court's holding in *Kelo v. City of New London*.[137] The D.C. Circuit denied this claim in 2019.[138]

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132. Each pipeline is approximately forty inches in diameter and will require permanent easements across numerous parcels of private property in multiple states of approximately fifty to seventy-five feet in width. ATL. COAST PIPELINE, LLC, PROJECT OVERVIEW 1 (2016), https://atlanticcoastpipeline.com/resources/docs/resources/acp-pf1-project-overview.pdf [https://perma.cc/K356-SJCA]; MOUNTAIN VALLEY PIPELINE, https://www.mountainvalleypipeline.info [https://perma.cc/GU7G-RFDS]; *Frequently Asked Questions*, PENNEAST PIPELINE CO., https://penneastpipeline.com/faq [https://perma.cc/ZD72-CX9C].

133. *Mountain Valley Pipeline, LLC*, 163 FERC ¶ 61,197 at 3.

134. *Id.*; *see also* Rod Kuckro, *Commissioner: Time to Weigh Pipelines' Climate Threats*, ENERGYWIRE (Oct. 31, 2018), https://www.eenews.net/energywire/2018/10/31/stories/1060104769 [https://perma.cc/U7V3-VJDB] (discussing Commissioner Glick's public statement that FERC "needs to acknowledge the 'existential threat' posed by climate change and address it in the context of the natural gas projects it reviews").

135. Kuckro, *supra* note 134, at 3; *see also supra* note 129 (describing affiliate companies and precedent agreements).

136. Complaint, *supra* note 127.

137. *Id.* at 3; *see* Kelo v. City of New London, 545 U.S. 469 (2005).

138. Appalachian Voices v. Fed. Energy Regulatory Comm'n, No. 17-1271, 2019 WL 847199, at *2 (D.C. Cir. Feb. 19, 2019) ("Mountain Valley's exercise of

The Atlantic Coast Pipeline would also take gas from West Virginia, transporting it 600 miles to southern North Carolina.[139] FERC approved the pipeline, but former Commissioner LaFleur dissented, arguing that the Commission should have considered further alternatives and should not have allowed the pipeline to rely on transport agreements with affiliate companies.[140] In 2017, a separate group of plaintiffs challenged both the Mountain Valley Pipeline and the Atlantic Coast Pipeline in the U.S. District Court for the District of Columbia.[141] The U.S. Court of Appeals for the Fourth Circuit invalidated key permits for this pipeline in a decision that the Supreme Court will take up in 2020.[142]

In 2018, FERC issued a certificate to the PennEast pipeline project, which would ship natural gas 115 miles from Pennsylvania to New Jersey.[143] Commissioner Glick dissented, arguing that PennEast should not have been able to rely on transport agreements with affiliate companies.[144] Commissioner Glick expressed particular concern with FERC's practice of granting "conditional" certificates that immediately authorize the pipeline to begin eminent domain proceedings against landowners even though the company does not yet have all the information necessary to establish that the pipeline is in the "public interest"—a prerequisite to receiving a FERC certificate.[145] Commissioner Glick argued that there are "significant consequences for

eminent domain authority for purposes of this project poses no Takings Clause problems from either a 'public use' or 'just compensation' perspective.").

139. Atl. Coast Pipeline, LLC, 161 FERC ¶ 61,042 at 1 (2017) (order issuing certificates).

140. *Id.*

141. *See generally* Complaint, Bold All. v. Fed. Energy Regulatory Comm'n, 1:17-CV-1822, 2018 WL 4681004 (D.D.C. Sept. 5, 2017).

142. Cowpasture River Pres. Ass'n v. Forest Serv., 911 F.3d 150, 155 (4th Cir. 2018), *cert. granted sub nom.*, Atl. Coast. Pipeline v. Cowpasture River Pres. Ass'n, 2019 WL 4889930 (U.S. Oct. 4, 2019).

143. PennEast Pipeline Co., 162 FERC ¶ 61,053 at *1 (2018). The D.C. Circuit placed the case on hold until the land acquisition issues in the Third Circuit case are resolved. *See In re* PennEast Pipeline Co., LLC, 938 F.3d 96, 99–100 (3d Cir. 2019); Ellen M. Gilmer, *Court Punts Arguments on PennEast Pipeline Amid Land Dispute*, BLOOMBERG ENV'T & ENERGY REP. (Oct. 2, 2019 10:41 AM), https://www.bloomberglaw.com/document/X8SGKNG4000000; *infra* note 301 and accompanying text.

144. *PennEast Pipeline Co.*, 162 FERC ¶ 61,053 at *3.

145. *Id.*

landowners whose properties lie in the path of the proposed pipeline" and that "Congress did not intend for the Commission to issue certificates so that certificate holders may use eminent domain to acquire the information needed to determine whether the pipeline is in the public interest."[146]

In the past, FERC has been able to sidestep lawsuits challenging its approvals until a pipeline is already constructed. The Natural Gas Act only allows court challenges to FERC approvals after the plaintiff has filed a request for rehearing and that request has been denied.[147] FERC does not decide such requests immediately, frequently extending (or "tolling") its reconsideration of them so long that the pipeline company has completed necessary eminent domain processes under its conditional certificates and construction is already complete.[148] Even then, any challenge must be filed in the D.C. Circuit or the Circuit where the company is headquartered.[149]

As a result of the inability to obtain judicial review before eminent domain and pipeline construction, multiple groups of plaintiffs filed suit in federal district courts in Virginia, D.C., and New Jersey—arguing that their constitutional claims regarding eminent domain were not within the scope of exclusive federal appellate jurisdiction.[150] They argued that unless they could challenge FERC's action in district court, they could not effectively combat the allegedly unconstitutional use of eminent domain; by the time their claim could be adjudicated, their properties would already have been taken.[151] Nevertheless, all of the

146. *Id.*

147. 15 U.S.C. § 717r (2012).

148. *See* Berkley v. Mountain Valley Pipeline, LLC, 896 F.3d 624, 631 (4th Cir. 2018).

149. 15 U.S.C. § 717r(b) (requiring court challenges be filed "in the court of appeals of the United States for any circuit wherein the natural-gas company to which the order relates is located or has its principal place of business, or in the United States Court of Appeals for the District of Columbia").

150. Plaintiff's Brief in Opposition to Defendants' Motion to Dismiss at 13–32, N.J. Conservation Found. v. Fed. Energy Regulatory Comm'n, 353 F. Supp. 3d 289 (D.N.J. 2018); Memorandum of Law in Support of Plaintiffs' Consolidated Response in Opposition to Defendant's Motion to Dismiss at 9–18, Bold All. v. Fed. Energy Regulatory Comm'n, No. 1:17-CV-01822, 2018 WL 549826 (D.D.C. Jan. 22, 2018); Plaintiffs' Response in Opposition to FERC's Motion to Dismiss at 5–7, Berkley v. Fed. Energy Regulatory Comm'n, No. 7:17-CV-00357, 2017 WL 8233861 (W.D. Va. Sept. 15, 2017).

151. *E.g.* Plaintiff's Brief in Opposition to Defendants' Motion to Dismiss,

federal district courts dismissed the cases, following the text of the Natural Gas Act's procedures for judicial review requiring challenges to FERC pipeline orders to be filed in the federal circuit courts.[152] The Fourth Circuit affirmed the decision from the Western District of Virginia, and the D.C. Circuit case is on appeal.[153]

This growing opposition to the alleged unexamined exercise of eminent domain authority for any and all interstate natural gas pipelines is a significant shift away from decades of relative complacency, and has garnered support from at least one current and one former FERC Commissioner. It remains to be seen whether a majority of FERC Commissioners or the federal courts will begin to give greater scrutiny to the use of eminent domain for these projects through revised FERC procedures or new judicial doctrines. Nevertheless, the concerted public opposition to such projects is reminiscent of the growing opposition to the government use of eminent domain for economic development takings a decade earlier, which changed the landscape of eminent domain law.

2. Oil Pipelines

With regard to oil pipelines, historically all states allowed the use of eminent domain for oil pipeline construction with some states, like Illinois, requiring that the company first obtain a certificate of need from the state's public utility commission with others, like Texas, requiring that the company only attest that it would serve as a "common carrier" and transport oil for

supra note 150, at 26 ("During that delay, condemnation of private property proceeds and pipeline construction commences, all without judicial review of whether the preliminary Certificate granted by FERC meets the constitutional standard . . . .").

152. *N.J. Conservation Found.*, 353 F. Supp. 3d at 299; *Bold All.*, 2018 WL 4681004, at *4; *Berkley*, 2017 WL 6327829, *aff'd sub nom.*, Berkley v. Mountain Valley Pipeline, LLC, 896 F.3d 624, *cert. denied*, 139 S. Ct. 941 (2019)..

153. *Berkley*, 896 F.3d 624, *cert. denied* 139 S. Ct. 941; *Bold All.*, 2018 WL 4681004, *appeal filed*, No. 18-5322 (D.C. Cir. Oct. 31, 2018). The New Jersey case was not appealed, but the pipeline's attempts to exercise eminent domain on state-owned land and private land subject to state conservation easements were blocked in a separate case. *In re* PennEast Pipeline Co., LLC, 938 F.3d 96, 99–100 (3d Cir. 2019); *see infra* note 301 and accompanying text.

unaffiliated companies.[154] However, as the oil industry has attempted to build new pipeline infrastructure to accommodate production growth since the advent of fracking, landowner opposition has grown, resulting in more frequent legal challenges and causing state legislatures and state courts to place new limits on the use of eminent domain for oil pipelines. Two states—South Carolina and Georgia—placed temporary moratoria on eminent domain for oil and natural gas liquids pipelines in response to coalitions of landowners and environmental groups opposing the Palmetto Pipeline.[155] Likewise, a landowner challenge to the use of eminent domain for a new oil pipeline in Colorado resulted in the Colorado Supreme Court holding for the first time in 2012 that the state statute granting eminent domain authority for enumerated energy and water transportation infrastructure projects did not extend to oil pipelines.[156] In Kentucky, the state court of appeals held in 2015 that a pipeline proposed to transport natural gas liquids to the Gulf of Mexico for export would not serve Kentucky consumers and thus would not be in "public service" as required by state statute to exercise eminent

154. Denbury Green Pipeline, LLC v. Tex. Rice Land Partners, Ltd., 510 S.W.3d 909, 913 (Tex. 2017); Tex. Rice Land Partners, Ltd. v. Denbury Green Pipeline–Texas, LLC, 363 S.W.3d 192, 197 (Tex. 2012) (discussing TEX. NAT. RES. CODE ANN. § 111.019 (West 2012)); Klass & Meinhardt, *supra* note 67, at 982–88 (discussing different state regulatory regimes for oil pipelines).

155. GA. CODE ANN. § 12-17-1-3 (2018); S.C. CODE ANN. § 58-7-10 (2018). *See* Opinion on Kinder Morgan Pipeline Company's Proposed Pipeline Project Regarding Eminent Domain Issue, Op. S.C. Att'y Gen., 2015 WL 4140804, at *9–12, *14 (July 1, 2015) (concluding that oil pipelines are not "public utilities" under relevant state statute and that delegation of eminent domain authority to a private pipeline company would violate the state constitution because "economic development or public benefit is insufficient in itself to constitute public use for purposes of the Constitution"); Gillian Neimark, *In Georgia and South Carolina, "The Game Has Changed" on Oil Pipelines*, ENERGY NEWS NETWORK (Mar. 14, 2017), https://energynews.us/2017/03/14/southeast/in-and-south-carolina-the-game-has-changed-on-oil-pipelines [https://perma.cc/CZK2-B5GR] (describing how both states enacted temporary moratoria on the use of eminent domain for oil pipelines); *How the Kinder Morgan Palmetto Pipeline was Defeated*, CORP. CRIME REPORTER (Nov. 21, 2016), https://www.corporatecrimereporter.com/news/200/how-the-kinder-morgan-palmetto-pipeline-was-defeated [https://perma.cc/9PLK-RUW6] (interview with executive director of Savannah Riverkeeper regarding landowner and environmental group coalitions).

156. Larson v. Sinclair Transp. Co., 284 P.3d 42, 43 (Colo. 2012) (en banc).

domain.[157] By contrast, in 2019, the Iowa Supreme Court upheld the use of eminent domain under Iowa law to build the controversial Dakota Access pipeline transporting oil from the Bakken shale oil region in North Dakota through South Dakota and Iowa to a transportation hub in southern Illinois.[158] All of these actions illustrate the growing controversy over the use of eminent domain for oil pipelines and the likelihood of future judicial or legislative action either strengthening or weakening its use for a range of energy projects.

One common question that arises under the different state standards for eminent domain is who should be able to define what is a public use? This question may have constitutional dimensions because if a private company has unchecked authority to define public use it may be able to take property from landowners without due process of law.[159] Thus far, the courts have not proven receptive to these claims,[160] but they present thorny theoretical issues that may interest future courts.

This question may become particularly salient in states that proclaim a state policy of transitioning away from fossil fuels. For decades it was beyond question that a fossil fuel pipeline,

157. Bluegrass Pipeline Co. v. Kentuckians United to Restrain Eminent Domain, Inc., 478 S.W.3d 386, 392 (Ky. Ct. App. 2015).

158. Puntenney v. Iowa Utils. Bd., 928 N.W.2d 829 (Iowa 2019). The court adopted Justice O'Connor's dissent in *Kelo* in interpreting the public use clause of the Iowa Constitution, holding that "trickle-down" benefits of economic development cannot constitute a "public use." But it held that an oil pipeline built by a common carrier transporting oil that "is essential to Iowa's economy but isn't produced or processed in Iowa" can exercise eminent domain. In doing so, it distinguished the West Virginia case, *Mountain Valley Pipeline, LLC v. McCurdy*, 793 S.E.2d 850 (W. Va. 2016), and the Kentucky case, *Bluegrass Pipeline Co.*, 478 S.W.3d 386, and rejected the claim that the pipeline could not be a common carrier if it did not serve the "Iowa public." *Puntenney*, 928 N.W.2d at 845–51.

159. *Cf.* Carter v. Carter Coal Co., 298 U.S. 238, 310–11 (1936) (holding that majority of coal industry may not set wages for all coal companies); Washington *ex rel.* Seattle Title Trust Co. v. Roberge, 278 U.S. 116, 118–19 (1928) (determining that state may not require two-thirds approval of nearby landowners to construct a home for the poor); Eubank v. City of Richmond, 226 U.S. 137, 140–41 (1912).

160. *See* Boerschig v. Trans-Pecos Pipeline, L.L.C, 872 F.3d 701, 708–09 (5th Cir. 2017) (rejecting claim that delegation of eminent domain authority to private natural gas company under Texas law for intrastate pipeline violates due process); Cox v. Ohio, No. 3:16-CV-1826, 2016 WL 4507779 (N.D. Ohio Aug. 29, 2016).

whether oil or gas, constituted a "public use" under state law. But growing landowner opposition to oil pipelines and environmental group opposition to all fossil fuel infrastructure has already brought about changes in state law, as shown by court decisions in Colorado and legislative action in Georgia and South Carolina.[161] It is possible that one or more states, through legislation or executive order, may soon declare that addressing climate change is a public use or public benefit, and that new fossil fuel infrastructure is thus not a public use or public benefit. Such an approach is, of course, a very indirect way of addressing the concerns associated with fossil fuel infrastructure and climate change. A more direct way to address the issue would be to create stricter government permitting requirements for fossil fuel infrastructure or even ban the construction of such projects outright. Even the Iowa Supreme Court, in rejecting the challenge to the use of eminent domain for the Dakota Access pipeline, suggested that perhaps "as a matter of policy, a broad-based carbon tax that forced all players in the marketplace to bear the true cost of their carbon emissions should be imposed."[162] But with the broad coalition of advocates and policymakers presently questioning the use of eminent domain for these projects, and emboldened by the *Kelo* case, it is likely that changes to eminent domain law for private projects may precede a more wholesale review of government permitting processes in states that wish to limit such projects based on climate change concerns.

A growing challenge to the use of eminent domain for both oil and gas pipelines is that pipelines are increasingly proposed to transport oil and gas for export to other countries rather than for use in the United States. For such pipelines, it is easier for opponents to argue that there is no "public use" beyond the economic development benefits associated with exporting oil and gas because U.S. citizens will not be "using" that energy.[163] Although *Kelo* affirmed that economic development constituted a

161. *See supra* notes 156 and 155, respectively, and accompanying text.

162. *Puntenney*, 928 N.W.2d at 851.

163. *See* Complaint, Urban v. Fed. Energy Regulatory Comm'n, No. 5:17-CV-01005-JRA, 2017 WL 6461823 (N.D. Ohio May 12, 2017) (challenging use of eminent domain for natural gas pipeline proposed to transport natural gas for export); Ellen M. Gilmer, *Court Scraps Eminent Domain Challenge to Ohio Project*, ENERGYWIRE (Dec. 20, 2017), https://www.eenews.net/energywire/stories/1060069487 [https://perma.cc/7GE5-CUP5] (reporting on court decisions dismissing challenges to use of eminent domain for pipelines proposed to

public use under the U.S. Constitution, the post-*Kelo* legislative and judicial reforms in the states may pose new barriers to the use of eminent domain for such pipelines.[164] This raises the question of whether a pipeline to export oil and gas out of the country or even out of the state simply does not serve a "public use."[165] In 2019, The D.C. Circuit Court of Appeals remanded a natural gas pipeline certificate to FERC and directed the agency to adequately explain why it is lawful to allow the gas company contracts with foreign customers in Canada to serve as evidence of the "market need" required for approval.[166]

Moreover, new alignments between property rights groups and climate change activists—like those that drove opposition to the controversial Keystone XL and Dakota Access pipelines—may spur the federal courts or Congress to adopt further restrictions on eminent domain. Perhaps a challenge to a pipeline could be a vehicle for overturning the *Kelo* case outright.[167] Only

transport natural gas for export).

164. *See* Missouri *ex rel.* Jackson v. Dolan, 398 S.W.3d 472, 481–82 (Mo. 2013) (en banc) (articulating that port authority could not exercise eminent domain to build a new storage facility for oil transport down the Mississippi River because the project was intended to promote economic development and post-*Kelo* legislation in Missouri prohibited the use of eminent domain solely for economic development); Robinson Twp. v. Commonwealth, 147 A.3d 536, 586 (Pa. 2016) (holding that the legislature's delegation of eminent domain authority to natural gas companies to take property for natural gas storage reservoirs was not a public use because a "mere incidental benefit" to the public is not enough to constitute a "public use" under *Kelo* or the Pennsylvania Constitution); Op. S.C. Att'y Gen., *supra* note 155 (finding that "economic development or public benefit is insufficient in itself to constitute public use for purposes of the Constitution").

165. Mountain Valley Pipeline, LLC v. McCurdy, 793 S.E.2d 850, 862 (W. Va. 2016) (citing *Kelo* and finding that a natural gas pipeline company could not conduct surveys within the state because all gas was destined for other states, company had not yet obtained FERC certificate, and, in absence of FERC certificate, company lacked power of eminent domain under state law if no West Virginia customers would receive the gas); *see also* Eliza Griswold, *A Pipeline, A Protest, and the Battle for Pennsylvania's Political Soul*, NEW YORKER (Oct. 26, 2018), https://www.newyorker.com/news/dispatch/a-pipeline-a-protest-and-the-battle-for-pennsylvanias-political-soul [https://perma.cc/75W8-MG5Z] (discussing local opposition to Mariner East Pipeline proposed to transport natural gas liquids for international export and questioning the "public use" for a pipeline that will carry liquids that "will go directly to a foreign company").

166. City of Oberlin, Ohio v. Fed. Energy Regulatory Comm'n, 937 F.3d 599, 599 (D.C. Cir. 2019).

167. SOMIN, *supra* note 42, at xiv (noting that "[l]egislative efforts to restrict pipeline takings have also expanded over the past year" and predicting that

two of the five justices who joined that decision are still on the Court. Some even argue that the federal government, at least, should not have eminent domain authority at all.[168]

III. THE GROWTH OF RENEWABLE ENERGY AND THE NEED FOR ELECTRIC TRANSMISSION INFRASTRUCTURE

Electric utilities and other electric transmission line providers have faced challenges to the use of eminent domain in recent years that are similar to those faced by pipeline companies. This Part explains the significant changes to electricity resources and electricity markets that have occurred since the *Kelo* case was decided. Many of these developments have created new demands for a massive build-out of transmission lines to transport renewable electricity to population centers and a related rise in opposition to the use of eminent domain to build such lines.

A. THE U.S. ELECTRIC GRID

The U.S. electric grid provides electric energy from over 9,000 large electricity generation sources, or "power plants," as well as smaller sources of power, to homes, businesses, and industrial facilities over a complex network of long-distance, high voltage transmission lines and lower voltage distribution lines.[169] The nation's power plants run on fossil fuels—coal, oil, and natural gas—together with nuclear energy and renewable energy—primarily wind, hydropower, solar, and geothermal. The nation's electricity generation mix has evolved over time; since 2007 there has been a significant shift away from coal-fired generation, which has been replaced in large part by low-cost shale gas and renewable power sources.[170]

"left-right coalitions might facilitate further progress in protecting property rights and limiting the use of eminent domain"); Ellen M. Gilmer, *Burgeoning Legal Movement Pits Landowners Against Pipelines*, ENERGYWIRE (Sept. 13, 2017), https://www.eenews.net/stories/1060060443 [https://perma.cc/N3AJ-527W] ("[I]t's possible that they might rethink parts of *Kelo* or maybe even overrule it . . . .").

168. *See generally*, Baude, *supra* note 36.

169. *See How Many Power Plants Are There in the United States?*, U.S. ENERGY INFO. ADMIN., (2018), https://www.eia.gov/tools/faqs/faq.php?id=65&t=2 [https://perma.cc/4H5M-GFRF] (last updated Oct. 22, 2019) (providing data on U.S. electric generating plants over 1 megawatt (MW) as of December 2017).

170. Tyler Hodge, *EIA Forecasts Natural Gas to Remain Primary Energy Source for Electricity Generation*, U.S. ENERGY INFO. ADMIN. (Jan. 22, 2018),

Historically, large vertically-integrated,[171] investor-owned utility companies along with municipal utilities, and rural electric cooperatives produced, transmitted, and distributed the vast majority of U.S. power. Today, however, as a result of federal and state laws designed to encourage competition in wholesale electricity markets, "independent power producers"—companies that produce power for wholesale sale to other power providers but do not have retail customers—generate approximately 40% of the nation's electricity.[172] Investor-owned utilities generate another 40% and municipal utilities, rural electric cooperatives and federal power agencies make up the balance of the U.S. power supply.[173]

The electric energy generated at the nation's power plants is transported over 642,000 miles of high-voltage transmission lines and 6.3 million miles of lower voltage distribution lines to residential, commercial, and industrial end-use customers.[174] The bulk of the U.S. electric grid is alternating current (AC),

https://www.eia.gov/todayinenergy/detail.php?id=34612 [https://perma.cc/9WFB-RBK5]; Cara Marcy, *Nearly Half of Utility-Scale Capacity Installed in 2017 Came From Renewables*, U.S. ENERGY INFO. ADMIN. (Jan. 10, 2018), https://www.eia.gov/todayinenergy/detail.php?id=34472 [https://perma.cc/FV4Q-65WG].

171. A utility is "vertically-integrated" if it owns electricity generation, transmission, and distribution assets. Utilities that are not vertically integrated own transmission and distribution assets but purchase electric energy from independent power producers and other companies that generate and sell electricity in wholesale markets. *Understanding Electricity Market Frameworks & Policies*, ENVTL. PROT. AGENCY, https://www.epa.gov/repowertoolbox/understanding-electricity-market-frameworks-policies [https://perma.cc/HYS4-VBGH].

172. *See* EDISON ELEC. INST., INDUSTRY DATA, http://www.eei.org/resourcesandmedia/industrydataanalysis/industrydata/Pages/default.aspx [https://perma.cc/TTC4-VSRM]. With regard to number of customers served, investor-owned utilities serve 68% of U.S. electricity customers, public power utilities serve 15%, rural electric cooperatives serve 13%, and power marketers (mostly in Texas) serve 4%. *Stats & Facts,* AM. PUB. POWER ASS'N, https://www.publicpower.org/public-power/stats-and-facts [https://perma.cc/LWV8-MGK9].

173. *See* EDISON ELEC. INST., *supra* note 172.

174. U.S. DEP'T OF ENERGY, QUADRENNIAL ENERGY REVIEW: ENERGY TRANSMISSION, STORAGE, AND DISTRIBUTION INFRASTRUCTURE 3–4 (2015), https://www.hsdl.org/?view&did=764791 [https://perma.cc/DH6C-LGUD]; *see also* U.S. DEP'T OF ENERGY, UNITED STATES ELECTRICITY INDUSTRY PRIMER 12–22 (2015) [hereinafter U.S. DEP'T OF ENERGY, INDUSTRY PRIMER], https://www.energy.gov/sites/prod/files/2015/12/f28/united-states-electricity-industry-primer.pdf [https://perma.cc/X5C5-HF2P].

which supports two-way transmission and easy voltage conversion at electric substations from high voltage to low voltage current.[175] But there are plans to increase the now small number of high-voltage, direct current (DC) transmission lines, which transport electric current more efficiently over long distances, to bring onshore wind power from the Great Plains to population centers.[176]

The U.S. grid is made up of three separate "interconnections"—the Eastern Interconnection which consists of the eastern United States to approximately the Rocky Mountains, the Western Interconnection, which runs from the Rocky Mountains to the West Coast, and the Texas Interconnection, which includes most of the State of Texas.[177] Electricity flows freely within each interconnection, but not between them, except through designated high-voltage DC transmission lines.[178]

Since the enactment of the Federal Power Act of 1935, regulatory authority over the nation's electricity system has been divided between the states and the federal government. FERC has authority over wholesale sales of electricity in interstate

175. U.S. DEP'T OF ENERGY, QUADRENNIAL ENERGY REVIEW: TRANSFORMING THE NATION'S ELECTRICITY SYSTEM at A-7 (2017), https://www.energy.gov/sites/prod/files/2017/02/f34/Quadrennial%20Energy%20Review--Second%20Installment%20%28Full%20Report%29.pdf [https://perma.cc/5QKW-XP38].

176. Cara Marcy, *EIA Study Examines the Role of High-Voltage Power Lines in Integrating Renewables*, U.S. ENERGY INFO. ADMIN. (June 28, 2018) https://www.eia.gov/todayinenergy/detail.php?id=36393 [https://perma.cc/6YNR-VBHA]. *See generally* U.S. ENERGY INFO. ADMIN., ASSESSING HVDC TRANSMISSION FOR IMPACTS OF NON-DISPATCHABLE GENERATION (2018), https://www.eia.gov/analysis/studies/electricity/hvdctransmission/pdf/transmission.pdf [https://perma.cc/REQ3-CU8P] (discussing the applications of high-voltage direct current transmission technologies).

177. Sara Hoff, *U.S. Electric System is Made Up of Interconnections and Balancing Authorities*, U.S. ENERGY INFO. ADMIN. (July 20, 2016), https://www.eia.gov/todayinenergy/detail.php?id=27152 [https://perma.cc/64R6-U5ZU].

178. *Id.*

commerce and the transmission of electricity in interstate commerce.[179] States have authority to regulate retail sales of electricity, wholly intrastate electricity transmission,[180] and the approval and operation of individual power plants and electric transmission infrastructure. The federal government regulates the price and reliability of power transmission but states must approve new power lines.[181]

To better coordinate interstate transmission of electricity and increase competition in wholesale electricity markets, FERC issued a series of orders starting in the 1990s, including ones to encourage power providers to form multi-state Regional Transmission Organizations (RTOs) and Independent System Operators (ISO).[182] RTOs and ISOs manage the electric grid on behalf of the electric utilities and other entities that own the power lines and they also oversee wholesale electricity sales within the region.[183] Transmission owners in approximately half the states, covering two-thirds of U.S. electricity demand, have joined RTOs and ISOs.[184] The map below shows RTOs and ISOs in the United

179. New York v. Fed. Energy Regulatory Comm'n, 535 U.S. 1, 6–7 (2002). FERC and the North American Electric Reliability Council (NERC) set rules and standards for power plant operators and transmission line operators to ensure reliability of the power grid and prevent cyber attacks and other security breaches. Municipal utilities and rural electric cooperatives are exempt from regulation under the Federal Power Act and are generally either not regulated under state law or are subject to more limited regulation under state law than investor-owned utilities. JIM LAZAR, ELECTRICITY REGULATION IN THE UNITED STATES: A GUIDE 11–15 (2d ed. 2016), http://www.raponline.org/wp-content/uploads/2016/07/rap-lazar-electricity-regulation-US-june-2016.pdf [https://perma.cc/BFE9-B5A5].

180. Wholly intrastate transmission only exists on isolated power grids such as Alaska, Hawaii, and parts of Texas.

181. Lincoln L. Davies, *Tracing U.S. Renewable Energy Policy*, 43 ENVTL. L. REP. 10,320, 10,322–23 (2013).

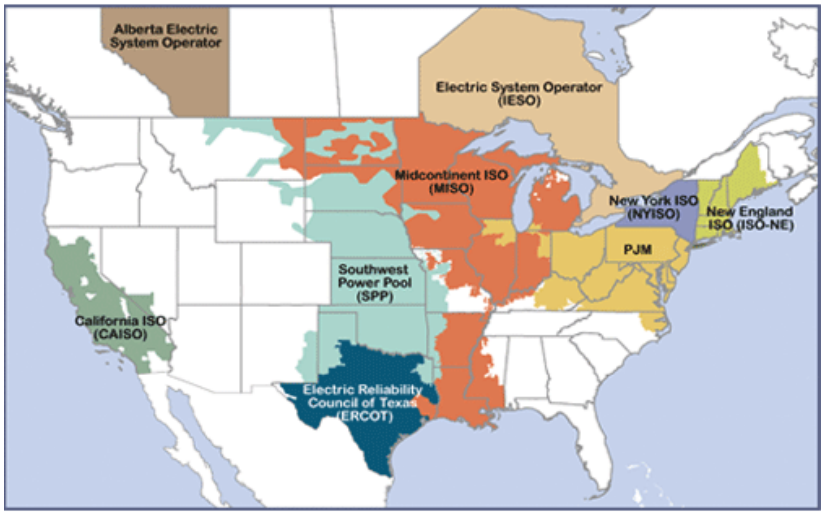
182. *See Regional Transmission Organizations (RTO)/Independent System Operators (ISO)*, FED. ENERGY REGULATORY COMM'N (2019), https://www.ferc.gov/industries/electric/indus-act/rto.asp [https://perma.cc/DK36-REVA]. A visual representation of the RTO/ISO framework can be seen in Figure 1. *Id.*

183. *Electric Power Markets: National Overview*, FED. ENERGY REG. COMM'N (2019), https://www.ferc.gov/market-assessments/mkt-electric/overview.asp [https://perma.cc/ZSM5-98GX].

184. *Id.*

States.[185] In the rest of the country,[186] utilities and other power providers manage their own transmission assets.[187] RTOs and ISOs also engage in transmission expansion planning within their regions and their decisions on transport pricing can make or break power line proposals. But only states can authorize companies to build new power lines and use eminent domain.[188]

Figure 1: RTO/ISO Map



For their part, states also took steps to increase competition in electricity markets starting in the 1990s. Beginning in the late 1990s, many states restructured their electricity markets to increase competition and reduce electricity prices. In most cases, states required investor-owned utilities to sell off their electric generation assets, thus creating new opportunities for independent power producers to generate electricity to sell to the utilities

185. *Regional Transmission Organizations*, *supra* note 182. Utilities and other power providers can join or leave an RTO or ISO voluntarily, which is why the RTO/ISO boundaries do not necessarily follow state boundaries.

186. Primarily the Southeast and Intermountain West.

187. They may buy and sell wholesale power subject to FERC approval. U.S. DEP'T OF ENERGY, INDUSTRY PRIMER, *supra* note 174, at 28.

188. Alexandra B. Klass, *Expanding the U.S. Electric Transmission and Distribution Grid to Meet Deep Decarbonization Goals*, 47 ENVTL. L. REP. 10,749, 10,756–59 (2017).

in wholesale markets.[189] Today, about half of U.S. states are restructured (primarily the Northeast and Mid-Atlantic states plus Illinois, Ohio, and Texas) and the other half are traditionally regulated. In traditionally regulated states, public utility commissions continue to use cost-of-service ratemaking to set electricity rates and profits for vertically-integrated, investor-owned utilities with monopoly territories.[190]

Despite these different state regulatory regimes, investor-owned utilities and other power companies in both traditionally regulated and restructured states still serve monopoly territories when it comes to providing transmission and distribution line services to retail customers. Thus, in all states, utility commissions set the rates these entities may charge customers for transmission and distribution services and determine the profits they earn using cost-of-service ratemaking. Nevertheless, even in the power transmission realm, competition has steadily increased. Since the early 2000s, "merchant" transmission companies have attempted to compete with traditional transmission providers, seeking to build transmission lines in parts of the country with transmission congestion or transport renewable energy to population centers.[191] Unlike utilities and other traditional power providers, merchant transmission companies do not own power plants and do not have retail electricity customers but instead seek to earn a profit by selling space on a transmission line to electricity generators on one end of the line, and electricity wholesalers on the other end of the line.[192]

B. TRANSMISSION EXPANSION NEEDS FOR INCREASED RENEWABLE ENERGY INTEGRATION INTO THE GRID

Power providers are ramping up production from utility-scale solar and onshore wind energy, which is now available at

189. William Boyd & Ann E. Carlson, *Accidents of Federalism: Ratemaking and Policy Innovation in Public Utility Law*, 63 UCLA L. REV. 810, 835–39 (2016).

190. U.S. DEP'T OF ENERGY, *supra* note 175, at A-10 to -11; LAZAR, *supra* note 179, at 11–15, 18–19; *see also* Boyd & Carlson, *supra* note 189 (discussing different models of state electricity regulation).

191. Klass, *supra* note 64, at 1121–23 (discussing merchant transmission line companies).

192. *Id.*

record-low prices.[193] These resources currently make up only about 8% of total U.S. electricity generation, but those percentages are much higher—as high as 30% for 2017—in some wind-rich states in the Great Plains like Iowa and North Dakota.[194] In 2012, the U.S. Department of Energy found that current technology could eventually shift the United States to 80% renewable power.[195] Since that time, wind, solar, and energy storage technologies have advanced significantly and costs to procure these resources have dropped even further.[196]

The United States will need a massive build-out of long-distance transmission lines to integrate this renewable energy into the electric grid. This is because most large-scale wind resources

193. U.S. ENERGY INFO. ADMIN., LEVELIZED COST AND LEVELIZED AVOIDED COST OF NEW GENERATION RESOURCES IN THE *ANNUAL ENERGY OUTLOOK 2019* at 3 (2019), https://www.eia.gov/outlooks/aeo/pdf/electricity_generation.pdf [https://perma.cc/A6VP-PDHL]; LAZARD, LAZARD'S LEVELIZED COST OF ENERGY ANALYSIS—VERSION 11.0 at 7, 10, 21 (2017), https://www.lazard.com/media/450337/lazard-levelized-cost-of-energy-version-110.pdf [https://perma.cc/22Q6-TFCL]; *Local Coal in Wyo. May Not Be So Cheap*, ENERGYWIRE, (July 2, 2018), https://www.eenews.net/energywire/2018/07/02/stories/1060087465 [https://perma.cc/MZB7-DDL4] (showing that even in Wyoming, locally available coal may be a more expensive fuel to generate electricity than wind because of dropping wind costs).

194. U.S. DEP'T OF ENERGY, 2017 WIND TECHNOLOGIES MARKET REPORT, EXECUTIVE SUMMARY, at vii–xii (2018) [hereinafter 2017 WIND TECHNOLOGIES MARKET REPORT], https://energy.gov/sites/prod/files/2018/08/f54/2017_wind_technologies_market_report_8.15.18.v2.pdf [https://perma.cc/4WHT-7SX8]; *Wind Turbines Provide 8% of U.S. Generating Capacity, More than Any Other Renewable Source*, U.S. ENERGY INFO. ADMIN. (May 2, 2017), https://www.eia.gov/todayinenergy/detail.php?id=31032 [https://perma.cc/2UDQ-VZ3G] (reporting on national and state wind statistics). Offshore wind in the Atlantic Ocean is also, as of 2018, available at record-low prices. *See, e.g.*, U.S. DEP'T OF ENERGY, 2017 OFFSHORE WIND TECHNOLOGIES MARKET UPDATE 18 (2018) https://www.energy.gov/sites/prod/files/2018/08/f54/71709_0.pdf [https://perma.cc/Z6AQ-29U9]; Benjamin Storrow, *Cheap Offshore Wind Offers Hope for U.S. Industry*, CLIMATEWIRE (Aug. 6, 2018), https://www.eenews.net/stories/1060092787. Although offshore wind has its own challenges, it generally does not require multi-state transmission lines and thus is beyond the scope of this Article.

195. NAT'L RENEWABLE ENERGY LAB., RENEWABLE ELECTRICITY FUTURES STUDY, EXECUTIVE SUMMARY 2 (2012).

196. *See* 2017 WIND TECHNOLOGIES MARKET REPORT, *supra* note 194; U.S. ENERGY INFO. ADMIN., *supra* note 193; LAZARD, *supra* note 193; *see also* Benjamin Storrow, *Coal Disappears in the Heartland as Renewables Get Cheaper*,CLIMATEWIRE (Sept. 21, 2018), https://www.eenews.net/climatewire/stories/1060099221.

are far from population centers and not well served by existing transmission lines. The challenge is less dire with regard to utility-scale solar energy, which is well located in the desert Southwest near large cities in Arizona, Nevada, and California, but will nevertheless be underutilized without new transmission. And the full promise of renewable energy will require enough transmission to bring widely-distributed solar and wind resources to the same markets: solar power peaks at mid-day and wind power peaks at night, so together they can provide more constant power. Although some experts argue for a greater reliance on distributed energy and micro-grids to avoid the need for large-scale transmission investments,[197] studies show that long-distance transmission will remain an important component of a reduced carbon electric grid for both the short and long term.[198]

197. *See, e.g.*, JON WELLINGHOFF ET AL., A ROADMAP TO THE CAISO TRANSMISSION PLANNING PROCESS 2 (2018), http://grid-8990.kxcdn.com/wp-content/uploads/2018/04/Alternative-Transmission-Solutions-in-CAISO.pdf [https://perma.cc/836E-V2FE]; Shelley Welton, *Non-Transmission Alternatives*, 39 HARV. ENVTL. L. REV. 457 (2015); Alex Eller, *Distributed Energy Technologies Challenge Conventional Thinking Around Grid Planning*, ENERGY STORAGE NEWS (Feb. 6, 2018), https://www.energy-storage.news/blogs/distributed-energy-technologies-challenge-conventional-thinking-around-grid [https://perma.cc/6AFL-UGJ3]; Brett Feldman, *Non-Wires Alternatives: What's Up Next in Utility Business Model Evolution*, UTIL. DIVE (July 12, 2017), https://www.utilitydive.com/news/non-wires-alternatives-whats-up-next-in-utility-business-model-evolution/446933 [https://perma.cc/6S6X-THBV].

198. *See, e.g.*, JUDY CHANG & JOHANNES PFEIFENBERGER, THE BRATTLE GROUP, WELL-PLANNED ELECTRIC TRANSMISSION SAVES CUSTOMER COSTS: IMPROVED TRANSMISSION PLANNING IS KEY TO THE TRANSITION TO A CARBON-CONSTRAINED FUTURE 16 (2016) https://brattlefiles.blob.core.windows.net/files/5813_well-planned_electric_transmission_saves_customers_costs_ppt.pdf [https://perma.cc/7HSE-MECW]; E. INTERCONNECTION PLANNING COLLABORATIVE, PHASE 2 REPORT: INTERREGIONAL TRANSMISSION DEVELOPMENT AND ANALYSIS FOR THREE STAKEHOLDER SELECTED SCENARIOS AND GAS-ELECTRIC SYSTEM INTERFACE STUDY 2–17 (2015) https://www.eipconline.net/s/19-Phase-II.pdf [https://perma.cc/SX9C-F8E8]; Alexander E. MacDonald, et al., *Future Cost-Competitive Electricity Systems and Their Impact on U.S. CO_2 Emissions*, 6 NATURE CLIMATE CHANGE 523–31 (2016); Peter Behr, *DOE Searches for Certainty in the Grid's Future*, ENERGYWIRE (Nov. 16, 2018), https://www.eenews.net/energywire/stories/1060106443 [https://perma.cc/94D9-RPC6] (discussing DOE National Renewable Energy Laboratory's "Interconnections Seam Study," which explores the benefits of "an overlay of high-voltage direct-current (HVDC) lines [that] would be built across much of the U.S., allowing surplus solar power from the southwestern U.S. to meet peak afternoon loads in the Midwest and Great Plains wind power to reach the West Coast"); Marcy, *supra* note 176.

C. REGULATORY APPROVAL OF TRANSMISSION LINES AND EMINENT DOMAIN

Despite the interstate, regional scope of the modern U.S. electric grid and wholesale electricity markets, the regulatory approval and delegation of eminent domain authority for building new interstate and intrastate electric transmission lines remains firmly with the states, subject to narrow exceptions for transmission lines on federal lands, certain hydropower connections, and the like.[199] Although Congress attempted in the Energy Policy Act of 2005 to transfer some transmission line approval authority (also known as "siting" authority) from the states to FERC for interstate lines in regions with significant transmission congestion, courts interpreted that authority very narrowly and it has not been utilized.[200]

In most states, the legislature has granted the state public utility commission or state public service commission the authority to approve the "need" for a new transmission line through a process that evaluates the economic and environmental impacts of the line.[201] Such determinations of need are generally a precursor to a finding that the line is also a public use justifying eminent domain.[202] If the state regulatory authority determines that new transmission is needed within the state to meet reliability needs, obtain lower electricity prices by reducing congestion, or meet state-mandated climate or other public policy goals, it grants a certificate of need or a certificate of public convenience and necessity and, in some cases, a separate siting permit or routing permit that sets the precise location of the line.[203] In virtually all states, receipt of the required certificate or siting permit also grants the transmission owner the power of eminent domain in the event it is not able to reach voluntary agreements

199. *See* Klass, *supra* note 188, at 10,756–59.

200. *See, e.g.*, Alexandra B. Klass & Jim Rossi, *Reconstituting the Federalism Battle in Energy Transportation*, 41 HARV. ENVTL. L. REV. 423, 452–56 (2017) (discussing transmission line siting provisions of Energy Policy Act of 2005 and court decisions).

201. Klass, *supra* note 188, at 10,757.

202. *See, e.g.*, Ill. Landowners All., NFP v. Ill. Commerce Comm'n, 90 N.E.3d 448 (Ill. 2017) (discussing relationship between need determination for certificate of public convenience and necessity and public use determination for use of eminent domain).

203. Klass, *supra* note 188, at 10,757.

with all landowners for the easements necessary to build the line.[204]

Such blanket designations of public use by statute for particular projects made sense at a time when transmission lines were built to serve new electricity demand. These lines were needed to connect new retail customers to the electric grid and to connect the new power plants electric utilities built to serve the growing demand of these new customers. For decades electricity demand continued to grow as utility customers acquired new electric devices such as televisions, refrigerators, air conditioners, and garage doors and then, in later years, computers, cell phones, tablets, and the like.

However, since *Kelo*, new issues have arisen in the electric transmission realm. Not all transmission line builders today have in-state retail electricity customers to serve.[205] Since approximately 2010, utility commissions and courts have had to address whether merchant transmission line companies have the right to obtain state certificates of need and exercise eminent domain authority to build transmission lines or whether those rights are reserved for traditional transmission providers such as investor-owned utilities, municipal utilities, and rural electric cooperatives.[206] In many states, the statutes delegating such authority are ambiguous, and were written in a way that did not contemplate the existence of a company that would seek to build a transmission line without also either owning electric generation assets in the state or serving retail electricity customers in the state.[207]

204. *Id.*

205. *See, e.g.*, Klass, *supra* note 64, at 1107–08 (discussing court decisions reviewing the propriety of power companies exercising eminent domain authority to build transmission lines that would send electricity primarily to other states); *Project Overview*, NEW ENG. CLEAN ENERGY CONNECT, https://www.necleanenergyconnect.org/project-overview [https://perma.cc/7FZP-PS6X] (describing a proposed transmission line that would transport Canadian hydropower through Maine to Massachusetts).

206. Klass, *supra* note 64, at 1107–08.

207. *See id.* (discussing state statutory and regulatory barriers for merchant transmission line companies); Klass & Rossi, *supra* note 200 (same); *see also Ill. Landowners All.*, 90 N.E.3d at 451 (finding that Rock Island Clean Line, a merchant transmission line company, could not seek a certificate of public convenience and necessity to build a transmission line in the state); Concerned Citizens v. Ill. Commerce Comm'n, 112 N.E.3d 128, 135 (Ill. App. Ct. 2018) (applying *Illinois Landowners Alliance* to hold that Grain Belt Express Clean Line could

Such a narrow scope of public use often does not match the scope of new transmission lines that are designed to transport renewable energy in one direction across several states.[208] Under such a narrow analysis, these lines may constitute a public use for the states sending or receiving the low carbon or low-price electricity but not for the states in between that will host the line but will receive little or no electricity from it.[209] Finally, both merchant transmission companies and traditional electricity providers are building lines to accommodate a shift in electric generation resources from nearby coal and natural gas plants to utility scale wind and solar energy that may be located several states away and require long distance transmission.[210] Are lines to accommodate this regional shift in generation resources a public use?

To the extent that existing state laws hinder these projects, the ability to integrate large amounts of renewable energy into the grid may be compromised or at least significantly delayed. As a result, many experts have called for Congress to transfer at least some siting authority for interstate lines to FERC, as was done for interstate natural gas pipelines in the early 20th century, or to create a regional approach to siting transmission lines, perhaps using RTOs and ISOs as the approval authority.[211] To date, however, this authority remains squarely with the states.

Historically, environmental groups often opposed the siting and construction of high-voltage transmission lines because of their visible impact on parkland and other scenic and natural areas.212 In more recent years, however, such groups have often, but not always, supported building these lines—particularly ones proposed to transport large amounts of wind energy that

not seek a certificate in Illinois because it did not yet own, control, or manage plants, equipment, or property in the state to be used in the sale or provision of electricity in the state).

208. Klass, *supra* note 64 at 1107–08.

209. *Id.*

210. *Id.* at 1096–97.

211. *See infra* note 287 and accompanying text.

212. *See, e.g.*, Nat'l Parks Conservation Ass'n v. Semonite, 916 F.3d 1075 (D.C. Cir. 2019) (resolving a lawsuit by conservation groups alleging that the federal government failed to adequately evaluate the adverse environmental and scenic impacts associated with a proposed electric transmission line project that would cross the historic James River in Virginia).

would displace coal-fired electricity and other fossil fuels, thus helping to decarbonize the nation's electricity grid.213

Despite the renewable energy benefits associated with these new electric transmission lines, states, counties, and landowners often continue to oppose such lines because of their impact on local land values and aesthetics.[214] Although merchant transmission line companies and other transmission line builders often pay enhanced land values for easements as well as generous taxes and other payments to local communities, many still argue that these projects impose excessive harms on local landowners as compared to the benefits that flow to other states.[215] These benefits run to the energy-exporting states, which see increased economic development associated with building new renewable energy plants, and also run to the importing states, which can use the renewable electricity to reduce their citizens' electricity bills and meet any carbon reduction or renewable energy goals

213. *See, e.g.*, Amanda Durish Cook, *Environmental Groups Divided on Cardinal-Hickory Creek Line*, RTO INSIDER (May 5, 2019), https://rtoinsider.com/groups-divided-cardinal-hickory-creek-line-115657 [https://perma.cc/YA8A-SDNV]; Russell Gold, *Investors are Building Their Own Green-Power Lines*, WALL. ST. J. (Apr. 6, 2017, 5:30 AM), https://www.wsj.com/articles/investors-are-building-their-own-green-power-lines-1491471009 (reporting on several proposed long-distance transmission lines designed to transport wind energy in the southwest United States and noting that "[e]nvironmental groups generally support the renewable-energy focus of these projects"); Nichola Groom Reuters, *Power Line Opponents Give Renewables Their Keystone Moment*, ST. LOUIS POST DISPATCH (Oct. 20, 2015), https://www.stltoday.com/business/local/power-line-opponents-give-renewables-their-keystone-moment/article_735111ea-98d7-52b5-88b1-b4ec048c4b1b.html [https://perma.cc/47VXV4JA]; Bob Mayti, *New York Unveils Major Transmission Project to Boost Renewables*, S&P GLOB. (July 24, 2017, 9:38 AM), https://www.spglobal.com/platts/en/market-insights/latest-news/electric-power/072417-new-york-unveils-major-transmission-project-to-boost-renewables [https://perma.cc/4SK4-G9XZ] (reporting on environmental group support for transmission line); *Support Renewable Energy That Protects the Wild*, NAT. RES. DEF. COUNCIL, https://www.nrdc.org/issues/support-renewable-energy-protects-wild [https://perma.cc/5EXX-YRQ3].

214. *See, e.g.*, Alexander v. First Wind Energy LLC, No. 2:11-CV-00364-GZS, 2012 WL 681838, at *5 (D. Me. Feb. 28, 2012) ("At the core, Alexander's action is animated by a personal concern for the scenic quality of the western mountains in which she lives."), *report and recommendation adopted*, No. 2:11-CV-364-GZS, 2012 WL 966029 (D. Me. Mar. 21, 2012), *aff'd*, No. 12-1488 (1st Cir. Oct. 23, 2012).

215. NO TO N. PASS, http://www.notonorthernpass.com [https://perma.cc/GR33-3VA9].

the state or its municipalities have enacted.[216] These mismatches between local costs and regional or national benefits, with a focus on the use of *Kelo*-style arguments in disputes over the use of eminent domain for these projects, are discussed below.

D. TRANSMISSION LINE EMINENT DOMAIN AS A "PRIVATE TAKING"

Although landowners have challenged the use of eminent domain for transmission line projects for as long as these projects have been built, such lawsuits were generally unsuccessful. In virtually all states, legislation clearly allows investor-owned utilities and other electricity providers to exercise eminent domain authority by designating such projects as a "public use" or otherwise granting eminent domain authority once the transmission line company obtains any required siting permits or certificates.[217] For nearly a century, electricity providers built transmission lines to serve new customers as electricity demand continued to grow regionally and nationally. It was fairly easy for state legislatures to declare that providing electricity to state citizens is a public use. As noted earlier, post-*Kelo* legislation in the states did not alter these laws. Nevertheless, since the *Kelo* case, landowners have increasingly raised *Kelo*-style arguments in efforts to portray these projects as "private" takings. They have been aided not only by the public outcry over *Kelo* but also by the changing nature of electric transmission line projects since the *Kelo* case was decided in 2005.

In the post-*Kelo* years, landowners in several states have opposed the use of eminent domain for new transmission lines, arguing that the taking is a "private use" use rather than a "public use" either because management of the line will be transferred to an RTO or because the electricity flowing through the line will benefit electricity customers within a multi-state region in addition to or instead of solely benefitting in-state citizens.[218] For instance, in Oklahoma, landowners challenged the use of eminent domain for a transmission line designed to send wind energy

216. *See, e.g.*, Square Butte Elec. Cooperative v. Hilken, 244 N.W.2d 519, 530 (N.D. 1976).

217. *See* Klass, *supra* note 64, at 1155–60 app. A (discussing eminent domain laws for transmission lines in all 50 states).

218. *Id.* at 1112–14.

generated in the state to the Southwest Power Pool (SPP) RTO and provide additional reliability services for the regional grid.[219] In rejecting the argument that the line was not for a public use, the Oklahoma Court of Appeals held, in *Oklahoma Gas & Electric Co. v. Beecher*,[220] that the test was not whether 51% or more of the power would go to Oklahoma residents but instead "whether the primary intended beneficiary, considering *all* the factors in the case, is the Oklahoma public, and not private or out-of-state entities."[221] The court reasoned that even if the utility's customers would only use 22% of the electric capacity of the line through 2020 and the rest would be used by out-of-state customers, Oklahoma customers were still the primary intended beneficiaries.[222] This was because Oklahoma customers would benefit "as end consumers of electricity, as well as by the availability of more reliable, efficient, and economical electricity because of regional control and tariff reimbursements by any out-of-state entities using the line."[223]

Likewise, in Montana-Dakota Utilities Company v. Parkshill Farms,[224] the South Dakota Supreme Court addressed whether a public utility providing electricity to customers in South Dakota, North Dakota, Montana, and Wyoming could exercise eminent domain to build a 163-mile, 345-kilovolt high-voltage transmission line in partnership with another utility that would run through North Dakota and South Dakota.[225] In rejecting the landowners' challenge that the project was not a "public use," the court found that when it comes to public utility projects, the use is "public" if the project is for the benefit of the public and the public has the right to "make use of the service offered at reasonable rates and without discrimination."[226]

219. Okla. Gas & Elec. Co. v. Beecher, 256 P.3d 1008, 1010 (Okla. Ct. App. 2010).

220. *Id.*

221. *Id.* at 1012 (emphasis in original).

222. *Id.*

223. *Id*. The court also compared the project to an Oklahoma interstate highway that constitutes a public use even if it may "be used by more out-of-state drivers of vehicles than Oklahoma citizens." *Id.*

224. 905 N.W.2d 334 (S.D. 2017).

225. *Id*. at 336.

226. *Id*. at 339; *see also* Grice v. Vt. Elec. Power Co., 956 A.2d 561, 571 (Vt. 2008) (challenging eminent domain for transmission line on grounds that the transmission services "do not directly benefit individual Vermonters and do not

In each of these cases, the state courts rejected the argument that the transmission line in question was a private use rather than a public use.[227] However, in each case the condemning authority was a traditional electricity provider proposing a transmission line that would provide at least some direct benefits to in-state residents by making new energy resources available for direct consumption by state residents or by providing enhanced grid reliability in the state.[228] As more lines are proposed by merchant transmission companies that do not engage in in-state retail sales, or that involve the transport of energy primarily for export through DC lines, many of the traditional public use justifications for transmission lines fall away, leaving courts with more difficult decisions.

For instance, states, cities and, increasingly, investor-owned utilities and other power providers are adopting aggressive plans to transition their generation fleets to renewable energy production in order to move towards a lower carbon electric grid. In 2016, the Massachusetts legislature enacted "An Act to Promote Energy Diversity" setting forth procurement requirements for renewable energy in the state.[229] The law created a competitive bidding process for the state's public utilities to obtain 1,200 MW of clean energy generation that could consist of hydropower, onshore wind, and solar resources.[230] The law also required the procurement of 1,600 MW of offshore wind intended to spur development of that industry.[231]

benefit all citizens").

227. *Mont.-Dakota Utils. Co.*, 905 N.W.2d at 344; *Grice*, 956 A.2d at 571.

228. *Mont.-Dakota Utils. Co.*, 905 N.W.2d at 336; *Grice*, 956 A.2d at 565.

229. H.R. 4568, 191st Gen. Ct. (Mass. 2016).

230. *Id.*

231. *See* Press Release, Governor's Press Office, Governor Baker Signs Comprehensive Energy Diversity Legislation (Aug. 8, 2016), https://www.mass.gov/news/governor-baker-signs-comprehensive-energy-diversity-legislation [https://perma.cc/JDN6-GA5B]. In 2018, one of the state's largest utilities, National Grid, announced a new "Northeast 80x50 Pathway Plan" to reduce greenhouse gas emissions for New York and New England, including aggressive renewable energy procurements. NAT'L GRID, NORTHEAST 80X50 PATHWAY, http://news.nationalgridus.com/wp-content/uploads/2018/06/80x50-White-Paper-FINAL.pdf [https://perma.cc/2AGG-XKZA]; *see* Rod Kuckro, *National Grid Plans to Cut Carbon by 80% by 2050*, ENERGYWIRE (June 18, 2018), https://www.eenews.net/energywire/stories/1060084833; Robert Walton, *National Grid Targets 80% Carbon Cut Across Buildings, Transport, Power*, UTIL. DIVE (June 18, 2018), https://www.utilitydive.com/news/national-grid-targets

In response to the 2016 Massachusetts legislation, the state issued a "Clean Energy" Request for Proposal and accepted a bid from Eversource Energy, the state's largest transmission and distribution utility, and Hydro-Québec in Canada, to bring over 1,000 MW of Canadian hydropower to the state over a new, high-voltage DC transmission line called Northern Pass.[232] Northern Pass would run 192 miles from Québec, through New Hampshire, to Massachusetts.[233] The state required the power to be delivered by 2020 and had selected Northern Pass as the preferred route to deliver the hydropower because it was furthest along in the permitting process and thus was most likely to be able to meet the 2020 deadline.[234]

However, the line faced opposition in New Hampshire over its impact on scenic areas and the local economy,[235] so the com-

-80-carbon-cut-across-buildings-transport-power/525839 [https://perma.cc/2VNT-EUQM].

232. The applicant seeking approval for the line was Northern Pass Transmission LLC, a wholly owned subsidiary of Eversource. *See* EDISON ELEC. INST., TRANSMISSION PROJECTS: AT A GLANCE 67–68 (Dec. 2016), https://www.eei.org/issuesandpolicy/transmission/Documents/InterstateTransmissionProjects.pdf [https://perma.cc/6UUN-PQLC]; *see also* MASS. CLEAN ENERGY, https://macleanenergy.com [https://perma.cc/NU7K-23KM] (discussing RFP process).

233. *Northern Pass*, N.H. PUB. RADIO, https://www.nhpr.org/topic/northern-pass [https://perma.cc/U4LR-UP7L].

234. Garry Rayno, *Written Order Outlines Northern Pass' Deficiencies*, N.H. CTR. FOR PUB. INT. JOURNALISM (Mar. 30, 2018), http://indepthnh.org/2018/03/30/northern-pass-3 [https://perma.cc/J9FX-H7L3].

235. *See* Erin Ailworth, *Transmission Projects Aim To Tap Canadian Hydroelectricity*, BOS. GLOBE (July 20, 2014, 12:00 AM), https://www.bostonglobe.com/business/2014/07/19/proposed-transmission-projects-aim-tap-canadian-hydroelectricity/YoVY80MLZ6DVYTxZz401EJ/story.html [https://perma.cc/Z6RT-HDQK] (explaining that opposition to the project was based in part on concerns that the line would allow Canadian hydropower to compete with local renewable energy producers in New England electricity markets); David Brooks, *From a Procedural Point of View, Rejection of Northern Pass Was Unusual*, CONCORD MONITOR (Feb. 3, 2018, 11:46 PM), https://www.concordmonitor.com/northern-pass-antrim-wind-SEC-15294541 [https://perma.cc/P9BA-6E5L]; Meg Dalton, *Exhibit Seeks to Preserve History of Northern Pass Opposition*, ENERGY NEWS NETWORK (Aug. 2, 2018), https://energynews.us/2018/08/02/northeast/exhibit-seeks-to-preserve-history-of-northern-pass-opposition [https://perma.cc/AV3H-MFEF]; Julian Spector, *The Controversy Surrounding Massachusetts' $1.6B Hydropower Transmission Line*, GREEN TECH

pany responded by agreeing to route 60 miles of the line underground as it traveled through the White Mountain National Forest and other sensitive areas; to convert some of the power from DC to AC so it could be used in New Hampshire; and also to contribute nearly $300 million to the New Hampshire economy in the form of jobs, state and local taxes, energy cost savings, and programs for tourism and other economic development.[236] Northern Pass obtained numerous permits for the project, including a Presidential Permit from the U.S. Department of Energy for the international border crossing, and yet the New Hampshire Site Evaluation Committee voted to deny a siting permit for the project in 2018 on the grounds that Eversource had not established that the project would not "unduly interfere with the orderly development of the region."[237] Even with the modifications described above, the project had been subject to constant attack by landowners and environmental groups over its impact on the scenic resources of the state. Opponents of the project contended it was "neither green nor clean" and that the project proposers would "turn New Hampshire into a giant extension cord to Southern New England."[238]

Massachusetts quickly pivoted to a new project to import Canadian hydropower to the state, this one in partnership with Central Maine Power, the largest public utility in Maine and a subsidiary of Avangard.[239] The proposed transmission line to

MEDIA (Jan. 31, 2018), https://www.greentechmedia.com/articles/read/massachusetts-hydro-power-transmission-line-controversy [https://perma.cc/NR6L-ATPW].

236. John Koziol, *Blocked Transmission: Northern Pass Defeat Leaves Some Towns Unhappy*, N.H. UNION LEADER (Aug. 18, 2019), https://www.unionleader.com/news/business/energy/blocked-transmission-northern-pass-defeat-leaves-some-towns-unhappy/article_ea10fee7-e0ff-5c06-9eee-91ee9917bbd2.html [https://perma.cc/NA9D-B8PW].

237. N.H. SITE EVALUATION COMM., DECISION AND ORDER DENYING APPLICATION FOR CERTIFICATE OF SITE AND FACILITY 6 (2018), https://www.nhsec.nh.gov/projects/2015-06/orders-notices/2015-06_2018-03-30_order_deny_app_cert_site_facility.pdf [https://perma.cc/7G28-WBXC]; *see also* Appeal of N. Pass Transmission, LLC, No. 2018-0468 (N.H. July 19, 2019) (affirming decision of Site Evaluation Committee).

238. NO TO N. PASS, *supra* note 215.

239. *Lawmakers Propose Bill to Buy CMP, Emera and Create Consumer-Owned Utility Central Maine Power*, WGME (Jan. 28, 2019), https://wgme.com/news/local/lawmakers-introduce-bill-to-buy-maines-largest-electricity-companies [https://perma.cc/MK92-G3HD].

carry the power is the New England Clean Energy Connect, a 145-mile high-voltage DC transmission line from Québec to Massachusetts through Western Maine, solely owned and managed by Central Maine Power.[240] Opposition to the project came primarily not from environmental groups, but from other New England power providers, particularly natural gas and wind generators. Maine power providers argued the line was not cost-effective for Maine electricity customers and "would smother power generators in Maine while handing cash to Canada."[241] In a filing with the Maine Public Utility Commission, these parties claimed it was "abundantly clear" that "the project has been proposed solely to meet a Massachusetts policy goal; it has nothing to do with meeting the needs of Maine ratepayers, and the primary long-term benefits of the project will accrue to Hydro-Québec and Central Maine Power shareholders."[242]

Neither regulators nor courts have addressed the issue of eminent domain in connection with transmission lines associated with Massachusetts' hydropower procurements from Canada as of 2019. Arguments for and against the use of eminent

240. NEW ENG. CLEAN ENERGY CONNECT, *supra* note 205; *see also* Benjamin Storrow, *Mass. Regulators Approve Hydro-Québec Contract*, CLIMATEWIRE (June 27, 2019), https://www.eenews.net/climatewire/stories/1060660439 (discussing project).

241. *See* Saqib Rahim, *Quebec-to-New England Line Clears Hurdle in Mass.*, ENERGYWIRE (June 24, 2018), https://www.eenews.net/stories/1060090137 [https://perma.cc/7SAW-JVZS] (reporting on Massachusetts' regulatory agency's approval of power purchases from proposed line but noting continued opposition in some sectors in Maine).

242. Tux Turkel, *Unexpected Foes Emerge to CMP's Power Plan*, PORTLAND PRESS HERALD, Mar. 28, 2018; *see also* Adrianne Appel, *Avangrid Confident on Approval of New England Hydropower Project*, BLOOMBERG (June 14, 2018, 4:37 PM), https://news.bloombergenvironment.com/environment-and-energy/avangrid-confident-on-approval-of-new-england-hydropower-project-1; *Defeated in N.H., New Hydro Line Could Go Up in Maine*, ENERGYWIRE (July 9, 2018), https://www.eenews.net/energywire/2018/07/09/stories/1060088047 [https://perma.cc/ZTR4-53HX] (discussing potential opposition to Maine transmission line from local environmental groups who say "the environmental benefits may be oversold—and impacts on the landscape undersold."); Storrow, *supra* note 240 (discussing split among environmental groups with some opposed to the project on grounds that it gives "a green light to ship taxpayer money out of the country instead of investing in more affordable, more resilient solar and wind energy right here in the region" while other environmental groups hailed it as allowing the region to "shut down dirty oil and gas plants across New England, which will lead to lower emissions and more stable electricity prices for families and businesses").

domain, if they arise, will likely be similar to the ones in the cases discussed in the prior section, with some potential important differences. With regard to the similarities, the arguments surrounding private use versus public use and in-state benefits versus out-of-state benefits will be central in any action for eminent domain for any transmission line (whether a merchant line or a public utility line) to bring large amounts of hydropower from Canada to Massachusetts.

What is the "public use" to residents of the state of Maine? Certainly, the company building the line would benefit financially from the project either through transmission sales, recovery of investment costs plus a rate of return from customers, or both. So too will Hydro-Québec, a crown corporation in Canada,[243] which will profit from the hydropower sales. The benefits to Maine through direct electricity procurement are in dispute; opponents claimed there was no evidence the line was needed to meet growth in electricity demand in the state.[244] Many of the economic benefits through jobs, taxes, or community development funds may well fall into the "economic development benefits alone" category that has come under scrutiny in many states in a post-*Kelo* world.

But perhaps there are other public uses or public purposes associated with the project for purposes of determining whether eminent domain is justified. Is lowering greenhouse gas emissions a public use? Even if the transmission line is mostly serving power users in Massachusetts, Massachusetts' goals of transitioning away from fossil fuels and lowering greenhouse gas emissions will benefit citizens around the world, including in Maine.[245] More concretely, expanded transmission infrastructure and increased diversity of power sources will improve grid reliability, resilience, and cyber-security on a region-wide basis

243. *See About: Company at a Glance*, HYDRO-QUÉBEC, http://www.hydroquebec.com/international/en/about [https://perma.cc/Y4D2-J76B].

244. *See, e.g.*, NAT. RES, COUNCIL OF ME., CMP TRANSMISSION LINE PROPOSAL: A BAD DEAL FOR MAINE 1 (2019) https://www.nrcm.org/wp-content/uploads/2019/09/cmp-facts-4-pager.pdf [https://perma.cc/37PA-3774] (describing the proposal as a "shell game to sell existing hydropower to Massachusetts" and "no new generation capacity will be built as part of this transmission project").

245. NEW ENG. CLEAN ENERGY CONNECT, *supra* note 205.

and may reduce electricity costs throughout the region, including in Maine. Must the Maine legislature expressly embrace these benefits for the power line to be deemed a public use?

Importantly, the question of whether long-distance transmission lines that increase the penetration of utility-scale renewable energy into the U.S. electric grid are a public use will be an issue even in states that do not yet have strong carbon reduction policies. A growing number of large, investor-owned electric utilities in such states have announced plans for billions of dollars of investment in new, utility-scale renewable energy.[246] In many regions of the country, prices for utility scale wind and solar energy are below that of both existing and new fossil fuel generation.[247] These renewable energy resources can provide significant cost savings for a utility's electricity customers as well as profits for utilities, which can earn a rate of return on these new investments.[248] In addition, utilities have learned they must be responsive to their large corporate and municipal customers that are demanding more and more renewable energy in order to meet self-imposed sustainability and decarbonization goals as well as their own customers' or citizens' demands for sustainable products or "green" power.[249] Many of these utility-

246. Jonathan Gardiner, *Clean Energy Investment Trends, 3Q 2018*, BLOOMBERG NEF (Oct. 9, 2018), https://data.bloomberglp.com/bnef/sites/14/2018/10/BNEF-Clean-Energy-Investment-Trends-Q3-2018.pdf [https://perma.cc/5VD7-P8HE].

247. Megan Mahajan, *Plunging Prices Mean Building New Renewable Energy Is Cheaper than Running Existing Coal*, FORBES (Dec. 3, 2018, 7:40 AM), https://www.forbes.com/sites/energyinnovation/2018/12/03/plunging-prices-mean-building-new-renewable-energy-is-cheaper-than-running-existing-coal [https://perma.cc/BE3R-XWYG].

248. Silvio Marcacci, *Cheap Renewables Keep Pushing Fossil Fuels Away from Profitability—Despite Trump's Efforts*, FORBES (Jan. 23, 2018, 8:00 AM), https://www.forbes.com/sites/energyinnovation/2018/01/23/cheap-renewables-keep-pushing-fossil-fuels-further-away-from-profitability-despite-trumps-efforts [https://perma.cc/2RVR-XJ8K]; Krysti Shallenberger, *AEP Proposes $4.5B to Buy 2 GW Oklahoma Wind Farm*, UTIL. DIVE (July 27, 2017), https://www.utilitydive.com/news/aep-proposes-45b-to-buy-2-gw-oklahoma-wind-farm/447989 [https://perma.cc/A7MX-QN2V] (discussing low cost of utility scale wind energy).

249. *See, e.g.*, Morgan Chilson, *In the Wind: Westar Launches Push to Meet Business Green Energy Needs*, TOPEKA CAP. J. (July 11, 2018, 9:41 PM), https://www.cjonline.com/news/20180711/in-wind-westar-launches-push-to-meet-business-green-energy-needs [https://perma.cc/3TML-Q5JW] (discussing ap-

led renewable energy projects will require new interstate transmission lines that will likely face litigation over whether they constitute a public use.[250]

For instance, Xcel Energy, a large, investor-owned utility with electric generation, transmission, and retail customers in the Upper Midwest (Minnesota, North Dakota, South Dakota, and Wisconsin); Colorado; Texas; and New Mexico[251] is already a leader in integrating wind power into its system. But in 2017

proval of Kansas utility program designed to allow businesses to access renewable energy in order to meet corporate sustainability goals); Bill Ritter, Jr., *Market Forces Are Driving a Clean Energy Revolution in the US*, CONVERSATION (Apr. 20, 2018, 6:37 AM), http://theconversation.com/market-forces-are-driving-a-clean-energy-revolution-in-the-us-95204 [https://perma.cc/X6KL-M8WG]; Mason Smith et al., *The Shifting Winds of Near-Term Renewable Energy Demand Drivers*, UTIL. DIVE (Apr. 17, 2018), https://www.utilitydive.com/spons/the-shifting-winds-of-near-term-renewable-energy-demand-drivers [https://perma.cc/5BLB-J4JT] (discussing how corporate demand for green energy is now driving growth of renewable electricity as much or more so than state policies); Jeffrey Tomich, *Midwest Regulators Approve Wind Subscription Program*, ENERGYWIRE (June 2, 2018), https://www.eenews.net/energywire/stories/1060087209 [https://perma.cc/M8NJ-SPUQ] (reporting on Missouri Public Service Commission approval of utility request for green tariff program to respond to utility customers' demands for clean energy); Elisabeth Weise, *Tech Firms like Google, Amazon Push Power Companies Toward Solar and Wind, a Blow to Coal*, USA TODAY (Apr. 22, 2018), https://www.bcse.org/tech-firms-like-google-amazon-push-power-companies-toward-solar-and-wind-a-blow-to-coal-april-22-2018 [https://perma.cc/LH5M-TJCG].

250. For a discussion of the extent to which new corporate demand for renewable energy will require expanded transmission infrastructure, see DAVID GARDINER & ASSOC., WIND ENERGY FOUND., TRANSMISSION UPGRADES AND EXPANSION: KEYS TO MEETING LARGE CUSTOMER DEMANDS FOR RENEWABLE ENERGY 6 (2018), https://windsolaralliance.org/wp-content/uploads/2018/01/WEF-Corporate-Demand-and-Transmission-January2018.pdf [https://perma.cc/8623-TRKN] (concluding that significant transmission line expansion is needed to meet growing corporate demand for renewable energy and that such grid expansion will provide increased grid reliability, greenhouse gas emission reduction benefits, and cost savings to all electricity customers) and WIND SOLAR ALL., CORPORATE RENEWABLE PROCUREMENT AND TRANSMISSION PLANNING: COMMUNICATING DEMAND TO RTOS NECESSARY TO SECURE FUTURE PROCUREMENT OPTIONS 5 (2018), https://windsolaralliance.org/wp-content/uploads/10/Corporates-Renewable-Procurement-and-Transmission-Report-FINAL.pdf [https://perma.cc/6UY2-8ELT] (encouraging corporate consumers of renewable energy to become engaged with regional transmission planning organizations to ensure that sufficient transmission expansion occurs to meet desired renewable energy procurement).

251. *Who We Are*, XCEL ENERGY, https://www.xcelenergy.com/company/corporate_responsibility_report/who_we_are [https://perma.cc/M5CN-Q73P].

it announced that it planned to invest billions of dollars in new wind projects and accompanying transmission lines.[252] The plans include at least twelve new wind farms in seven states, adding 3,700 MW of new wind capacity to the company's system, and increasing its wind portfolio 55% by the end of 2021.[253] Xcel cites the low cost of wind energy and the reduction of carbon emissions as the driving forces behind this shift.[254] Xcel has also filed a proposed resource plan in Colorado that includes the early retirement of 600 MW of coal-fired generation and installation of 1,800 MW of wind and solar generation, along with new transmission investments, again citing cost savings to customers and carbon reduction benefits.[255] Although some transmission capacity on the Colorado system will be made available through coal plant retirements, the company states it will need to build additional transmission lines to bring wind energy from the most beneficial resource areas of the state and ensure system reliability.[256]

Other utilities are moving forward with similar renewable energy projects that will undoubtedly require more transmission. Nevada Energy announced a plan in 2018 to add 1,000 MW

252. Robert Walton, *Xcel Energy's $1.6B Wind Plan Advances with New Mexico Approval*, UTIL. DIVE (Mar. 22, 2018), https://www.utilitydive.com/news/xcel-energys-16b-wind-plan-advances-with-new-mexico-approval [https://perma.cc/W3HK-8CSV].

253. *Wind* Power, XCEL ENERGY, https://www.xcelenergy.com/energy_portfolio/renewable_energy/wind [https://perma.cc/Y6MC-YPCY]; Walton, *supra* note 252.

254. *Wind Power*, *supra* note 253.

255. XCEL ENERGY, 2016 ELECTRIC RESOURCE PLAN 120-DAY REPORT PUBLIC VERSION (CPUC PROCEEDING NO. 16A-0396E) (2018), https://www.sierraclub.org/sites/www.sierraclub.org/files/blog/Proceeding%20No%20%281%29.pdf [https://perma.cc/8CW2-BXCJ] (detailing Colorado Energy Plan Portfolio); *see also* Aldo Svaldi, *Xcel Energy Power Plan Would Cut Carbon Emissions by Half, Use Renewable Sources for 55 Percent of Power*, DENVER POST (June 7, 2018, 3:14 PM), https://www.denverpost.com/2018/06/06/xcel-energy-power-plan-would-cut-carbon-emissions-by-half-use-renewable-sources-for-55-percent-of-power [https://perma.cc/DT3D-G4MR]; Robert Walton, *Xcel Details Plans to Shut 660 MW Coal, Build 1.8 GW Renewables in Colorado*, UTIL. DIVE (June 7, 2018), https://www.utilitydive.com/news/xcel-details-plans-to-shut-660-mw-coal-build-18-gw-renewables-in-colorado [https://perma.cc/9UCM-XTRB].

256. XCEL ENERGY, *supra* note 255, at 22.

of utility-scale solar to its portfolio, doubling its current renewable generation capacity.[257] Rocky Mountain Power received preliminary state commission approval in Idaho, Wyoming, and Utah, for 1,150 MW of wind facilities and associated transmission lines at a cost of $2 billion.[258] Alliant Energy in Iowa plans to spend more than $2 billion on new renewable energy and double its number of wind sites by 2030.[259] And in Michigan, DTE Energy's 2018 Renewable Energy Plan seeks to double its renewable energy capacity by 2022, primarily through the addition of $1.7 billion in utility-scale wind investments.[260]

While some of these recent proposals are in states that have adopted strong renewable portfolio standards or carbon reduction policies, many are not. Instead, investor-owned utilities are responding not only to state policies favoring renewable energy but also market trends and customer desires.261 Undoubtedly, the issue of eminent domain will arise in connection with the transmission line component of these projects. That would require these new lines to be a "public use" under state statutes and constitutions.

States could decide that transmission lines to accommodate a power company's shift to renewable energy resources would be a "public use" and "public purpose" because of the benefits of lower electricity costs for customers, greater fuel diversity and

257. Supply Side Plan, Transmission Plan, Economic Analysis, Distribution Planning, and Financial Plan at 4–8, Application of Nevada Power Co. and Sierra Pacific Power Co. (Pub. Util Comm'n Nev. June 1, 2018), http://pucweb1.state.nv.us/PDF/AxImages/DOCKETS_2015_THRU_PRESENT/2018-6/30452.pdf.

258. Robert Walton, *Idaho Approves $2 Billion, 1,150 MW in Wind Projects*, UTIL. DIVE (July 31, 2018), https://www.utilitydive.com/news/idaho-approves-2-billion-1150-mw-in-wind-projects [https://perma.cc/CFF8-SFHQ].

259. Robert Walton, *Alliant Plans to Eliminate Coal, Cut Emissions 80% by 2050*, UTIL. DIVE (Aug. 3, 2018), https://www.utilitydive.com/news/alliant-plans-to-eliminate-coal-cut-emissions-80-by-2050/529267 [https://perma.cc/X4PM-TMEY].

260. *DTE Energy To Double Renewable Energy Capacity by Early 2020s*, DTE ENERGY (Mar. 30, 2018), http://newsroom.dteenergy.com/2018-03-30-DTE-Energy-to-double-renewable-energy-capacity-by-early-2020s#sthash.VjUH8Aes.dpbs [https://perma.cc/NR25-2D8W].

261. *See supra* note 249 and accompanying text (discussing utility responses to companies across the country demanding more access to renewable energy to meet corporate sustainability goals and demands for "green" products and services).

grid reliability, and reduced carbon emissions, as well as a financial hedge against future federal or state carbon regulations. But other states might dispute many or all of these benefits. This raises the question of who or what decides the issue of "public use." Is it a single state's governor, or a single state's legislature, or an investor-owned utility working in the interests of its electricity customers and shareholders? What if there are conflicts among those decision-makers? Can a utility or other condemning authority use a state's carbon reduction goals or a renewable portfolio standard to establish a public use? Or is more required? In the past, virtually all companies and governments could agree that grid reliability and expanding electricity service were public uses. The same consensus does not currently exist with regard to energy transition. The next Part addresses these questions and provides a framework for answers.

IV. EMINENT DOMAIN REFORM FOR ENERGY PROJECTS

How should eminent domain be used for energy transport projects built by private companies? In other words, if eminent domain is appropriate for energy transport infrastructure, how should it be invoked? Moreover, if a state wants to encourage or discourage a particular type of energy transport, how might it change its eminent domain laws to accomplish this goal? Finally, what procedures should minimize the harm that it causes to private landowners and ensure that it is used only when necessary?

This Part begins to answer these questions within the context of current disputes over eminent domain for energy projects. First, it evaluates the theoretical justifications for eminent domain. Second, it applies this theory to the question of which energy projects should merit eminent domain. Third, it focuses on the procedures regulators must settle on for invoking eminent domain in a way that maximizes its benefits and limits its costs. In addressing each of these points, this Part evaluates a range of potential new policies governing the determination of public use, just compensation, procedural rights, and landowner engagement that may help address some of the present-day conflicts surrounding eminent domain for energy transport projects.

A. THEORETICAL JUSTIFICATIONS FOR EMINENT DOMAIN

As long as the state has existed, it has had the power to take private land. It has been justified as an "eminent" and inherent aspect of sovereignty or as a necessary corollary of the state's protection for private property.[262] But since at least Magna Carta, some sovereigns have promised to provide compensation for the land taken.[263] The U.S. Constitution's Fifth Amendment promises that the government will not take property "without just compensation."[264] And modern scholars believe that even this more limited power must be justified based on pragmatic grounds.[265] After all, both conventional wisdom and conventional legal theory provide that what makes a property right different than a contract right is that it may not be simply denied in return for compensation.[266] Thus, property rights are more than an entitlement to compensation while eminent domain is an uncomfortable exception to this rule.[267]

Why are governments sometimes allowed to turn a property right into a mere right to compensation? There are at least four possible factors that have been used to justify eminent domain, separately or in tandem: (1) necessity to achieve aggregate economic benefits; (2) dispersing benefits to a wider group; (3) supporting critical infrastructure; and (4) limited impact on landowners.

1. Necessity To Achieve Aggregate Economic Benefit

In the context of economic infrastructure, the most common justification is efficiency, or, more precisely, the necessity of eminent domain to assure efficient construction of infrastructure.[268]

262. Bell, *supra* note 41, at 526–27 (citing William Michael Treanor, *The Origins and Original Significance of the Just Compensation Clause of the Fifth Amendment*, 94 YALE L. J. 694, 694 (1985)).

263. 1 STATUTES OF THE REALM 7 (1235–1377) ("No constable or other royal official shall take corn or other movable goods from any man without immediate payment, unless the seller voluntarily offers postponement of this.").

264. U.S. CONST. amend. V.

265. Bell, *supra* note 42, at 527–28.

266. Guido Calabresi & Douglas A. Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089, 1092 (1972).

267. EPSTEIN, *supra* note 42, at 161–66, 169–70.

268. Bell, *supra* note 41, at 529.

Sometimes public infrastructure will require property subject to bilateral monopoly—the infrastructure cannot be built without one piece of land, which the government or construction company must purchase from its owner.[269] The owner may attempt to hold out for the entire economic surplus from the infrastructure proposal, so this bilateral monopoly raises transaction costs and may entirely prevent construction of efficient projects.[270] This problem is exacerbated in the case of linear projects like highways, transmission lines, and pipelines, where the condemning authority must assemble easements across potentially hundreds of parcels of land, multiplying the potential for holdouts, and justifying the use of eminent domain.[271]

Imagine an electric transmission line proposal that is expected to provide a transmission company—Lightning Energy Transport Co.—with a $200 million per year profit, save consumers $100 million per year, and ensure $50 million per year in extra profits for power producers. Further imagine that Lightning has negotiated voluntary easement agreements covering the entire approved route, with the exception of a single farm, held by a farmer named Holdor. How much money should Holdor ask for? If his farm is the only routing option for the power line, why not ask for nearly the entire profit that would otherwise go to Lightning? In fact, why not ask for the extra savings and profits that would otherwise accrue to the gas producers and consumers as well? After all, shouldn't the power line go forward as long as it provided *some* profit to Lightning, the power producers, and consumers? Why shouldn't the rest go to Holdor?

Some might call that result unfair, but the more serious problem is that the transmission line might never be built and all of the economic benefits it would otherwise provide to producers, consumers, Lightning, and Holdor himself might be forgone. Holdor would like to receive the entire economic surplus from

269. *Id.* at 529–31.

270. *Id.*; Louis Kaplow & Steven Shavell, *Do Liability Rules Facilitate Bargaining? A Reply to Ayres and Talley*, 105 YALE L. J. 221, 223 (1995); *see* Wayne Cty. v. Hathcock, 684 N.W.2d 765, 781–82 (Mich. 2004); *supra* notes 75–77 and accompanying text; *see also* Merrill, *supra* note 41, at 61, 75 (discussing justifications for eminent domain in the context of the difficulty of assembling multiple parcels of land for an oil pipeline because each landowner "is a monopolist, effectively dominating a resource needed to complete the project" and "may be tempted to bargain strategically to appropriate some of the pipeline profit").

271. Bell, *supra* note 41, at 529–31, 546, 558–61.

the transaction, but he does not know how much surplus there is and may be tempted to hold out for more than is, in reality, available. Linear infrastructure projects like power lines and pipelines present the danger of repeated bilateral monopoly transactions with each landowner—especially when an energy company must stick to an approved route. That is, without eminent domain, the logic that leads Holdor to hold out would apply to every landowner along the route.

Note that this justification—avoiding the bilateral monopoly in constructing infrastructure projects—is equally applicable whether infrastructure projects are built by a private company or by the government. In fact, we might be somewhat more concerned about bilateral monopoly shutting down efficient private projects. Private companies presumably will only build projects when they will create economic surplus; government by contrast, might be less constrained by a profit motive.[272] And the text of the Constitution does not explicitly limit eminent domain to land taken for "public use"—instead it simply says that when land is taken for public use "just compensation" must be paid.[273]

2. Dispersing Benefits to a Wider Group

U.S. courts have long insisted that eminent domain is only available for "public use," but, as noted, have interpreted that term so broadly that it does not substantially narrow the government's authority. By contrast, the post-Kelo reforms tried to limit the use of economic development takings where the only justification was increased tax revenue. But what about the more traditional uses of eminent domain which represent the government's judgment that the project is simply a more efficient way to provide an "economic" service such as a road or canal, airport or school, pipeline or electric transmission line?

Perhaps a project should be deemed for public use whenever it has a sufficient benefit to a broad cross-section of the public. But how can one measure whether this benefit is broadly distributed enough? If benefits are measured simply in dollar terms then, again, private company projects might be seen as providing the most "public use," because they generally are only pursued if profitable. Even if a utility constructed a power line entirely for its own use, it could be for public use on the assumption that it

272. Merrill, *supra* note 41, at 85.

273. U.S. CONST. amend. V.

would mean higher payments to power producers or lower costs for power consumers.

One could argue that for a project to provide "public use" it must benefit a wide swath of customers. But such a requirement can present tricky questions. Should the breadth of a project's benefits be determined by how many companies use a particular facility? Or should it count consumers and producers that are incidentally benefited? Could a pipeline built for public use become a non-public use if a single company suddenly purchased a number of upstream producers?

3. Supporting Critical Infrastructure

The conventional wisdom also seems to assume that some economic services are fundamentally public, while others are not. Transport, power, heating, education, and healthcare are conventionally described as critical services but other services are not. But what about an amusement park or a lazy-river? They may be for the enjoyment of the public; but are they the type of "public use" that could justify subjecting landowners to eminent domain?

For decades, these questions have arisen when governments attempt to use eminent domain to build professional sports stadiums.[274] Should the government weigh the importance of the economic activity it is enabling when it allows for eminent domain? What about services, such as trails for bikes and electronic scooters, that some view as recreational and others view as alternative transport supporting a transition away from dependence on automobiles?

4. Limited Impact on Landowners

Another possible factor that could be considered is the severity of harm from a species of eminent domain. Should the government be more ready to authorize eminent domain when, as with most pipelines and power lines, it will only require easements and not destruction of a house? Surely, some of the outrage over the *Kelo* decision was the notion that the government

274. *See, e.g.*, Steven Chen, Note, *Keeping Public Use Relevant in Stadium Eminent Domain Takings: The Massachusetts Way*, 40 B.C. ENVTL. AFF. L. REV. 453 (2013) (discussing the use of eminent domain to build sports stadiums); Peter Montine, Note, *Forced Turnovers: Using Eminent Domain to Build Professional Sports Venues*, 9 WASH. J.L. TECH., & ARTS 331 (2014).

could take Suzette Kelo's home and bulldoze it. A subsequent film dramatizing the case made this plain. Its title: "Little Pink House."[275] Its tagline: "She fought for her home. And yours."[276] Advertisements for the movie featured an excavator poised ominously over the house.[277] If the necessity of eminent domain must be weighed against the costs it imposes on landowners, perhaps there should be a higher standard for eminent domain that, as in the *Kelo* case, requires taking homes rather than easements.

Such a standard might also have implications for what kinds of easements are granted. Perhaps easements for overhead infrastructure such as visible power lines or telecommunications infrastructure should be required to meet a higher standard than easements for underground infrastructure such as pipelines and underground power lines.

These criteria loom large in any analysis of the use of eminent domain. The following sections apply these criteria specifically in the context of eminent domain for energy transport infrastructure.

B. JUSTIFICATIONS FOR EMINENT DOMAIN FOR ENERGY PROJECTS

Pipelines and electric transmission lines, like roads, railroads, and other linear infrastructure, present the archetypal bilateral monopoly and holdout problems that typically justify eminent domain.[278] Project owners must submit a proposed route to

275. LITTLE PINK HOUSE (Korchula Productions 2017).

276. Press Kit, Korchula Productions, Little Pink House (2017), http://littlepinkhousemovie.com/assets/LittlePinkHouseMovie-PressKit.pdf [https://perma.cc/JA5D-K87K].

277. *Id.*

278. *See, e.g.*, Kohl v. United States, 91 U.S. 367, 371 (1876) ("If the right to acquire property for [government functions] may be made a barren right by the unwillingness of property-holders to sell . . . the constitutional grants of power may be rendered nugatory, . . . This cannot be."); Chi. & N.W. Transp. Co. v. United States, 678 F.2d 665, 667–68 (7th Cir. 1982) (discussing bilateral monopoly concerns and eminent domain); Pliura Intervenors v. Ill. Commerce Comm'n, No. 4-14-0592, 2015 WL 2451757 (Ill. App. Ct. May 19, 2015) (granting oil pipeline eminent domain authority under state statute upon evidentiary showing of large number of holdout landowners and good faith negotiations on the part of the pipeline); Cty. of Wayne v. Hathcock, 684 N.W.2d 765, 766 (Mich. 2004) (discussing need for eminent domain by private parties to address bilateral monopoly and assembly problems); EPSTEIN, *supra* note 41, at 161–66, 169–

a state or federal regulator to demonstrate the need for the pipeline or transmission line and establish that its environmental footprint will not be too damaging. This requirement severely limits the route that the pipeline or transmission line can follow, which potentially gives every landowner in its path monopoly power to insist on outsized benefits in return for an easement to cross the property. Eminent domain helps solve this problem by assuring that no single landowner can hold out for significantly more than the easement's adjudicated market value.[279] And eminent domain for pipeline and transmission line projects often does not require taking a landowner's home—instead, they will only have to put up with an easement for a pipeline in the ground or a transmission line overhead. Nevertheless, even if such takings do not eliminate the landowner's occupancy of the land, energy transport easements interfere with a landowner's enjoyment of their property in many ways. For instance, many energy transport projects can segment the landowner's property in harmful ways, pipelines can expose residents to the potential adverse effects of oil and gas leaks and spills, and the sight of clear-cut easements or power lines may fundamentally alter the character of a landowner's cherished views. Moreover, such "partial takings" are inherently difficult to value, resulting in more uncertainty surrounding whether landowners have in fact received just compensation.[280]

Importantly, not all pipelines and transmission lines provide equally wide benefits to the public. For instance, some may be designed to export power from the state or country. Imagine a transmission line designed to carry wind power from Oklahoma, across Arkansas, to consumers in Tennessee. A variety of consumers would benefit in Tennessee. But in Oklahoma, only wind producers would benefit. And in Arkansas, the primary economic benefit would be to parties in the transmission line's path

70 (discussing scope of the public use clause); Bell, *supra* note 41, at 529–31, 546, 558–61 (discussing holdout and bilateral monopoly problems as justifications for both government and private eminent domain); Abraham Bell & Gideon Parchomovsky, *Partial Takings*, 117 COLUM. L. REV. 2043, 2051 (2017) (noting that partial takings, such as easements, "paradigmatically implicate the core justifications for the existence of a power of eminent domain" because of their high transaction costs and holdout problems).

279. For a discussion of the merits of the fair market value approach to just compensation, see *infra* notes 312–13 and accompanying text.

280. Bell & Parchomovsky, *supra* note 278, at 2052–54.

that would be paid for their easements as well as potential tax benefits to local counties; such benefits—if they are even viewed as such by landowners—would presumably not be enough to justify involuntary use of eminent domain. Similarly, an oil or gas pipeline for domestic or international export might only benefit producers in the exporting state—is such a benefit wide enough to justify eminent domain? Note that one problem with demanding a widespread in-jurisdiction benefit is that it would seem to inherently disfavor interstate electric transmission lines, which are needed to move the United States to clean energy sources.[281] Moreover, for all types of energy infrastructure, once a project is designed to export the energy resource rather than to distribute it to in-state or in-country citizens, it becomes more difficult to justify it as a public use apart from its "economic development" benefits, which may prove problematic in a post-*Kelo* world.[282]

Finally, does energy provide the kind of publicly necessary service that justifies eminent domain? Power and natural gas are typically provided by utilities that are subject to regulation, which makes them responsible to make reliable service widely available. Perhaps that marks their products as providing an inherently public benefit. Oil might also be considered a fundamental public use, given the public's overwhelming dependence on oil in the transportation sector. On the other hand, if a jurisdiction was particularly concerned about climate change, it might judge that fossil fuels no longer provide a public benefit.[283] Thus, the propriety of eminent domain for energy transport may depend on state-by-state policy.

The question then arises whether a state-by-state approach to public use for different energy resources is appropriate in our federalist system of government, or whether the interstate flow of energy is so important to the national economy and citizen

281. *See supra* Part III (discussing the need for expanded electronic transmission infrastructure for renewable energy).

282. *See supra* note 129 and accompanying text (discussing whether such projects are a public use).

283. *See supra* notes 155, 161–62 and accompanying text (discussing the possibility that states would find that addressing climate change was a public use and public benefit and that eminent domain for fossil fuel projects was therefore not a public use or public benefit).

well-being that it must be a public use in every state.[284] Scholars have long debated whether the United States has ever had a "national energy policy" or merely a patchwork of laws and policies governing various energy resources and markets.[285] Putting those general debates aside, it is clear that Congress determined in the Natural Gas Act of 1938 that the national interest in the interstate flow of that resource justifies nationwide eminent domain for interstate natural gas pipelines.[286] Congress has, to date, not made that determination for the flow of oil or electricity, leaving eminent domain for interstate oil pipelines and interstate electric transmission lines overwhelmingly to the states.

For years, scholars and other experts have argued that Congress should eliminate or significantly reduce the ability of states to block interstate electric transmission lines by creating federal siting and eminent domain authority, enhancing regional authority, or imposing federal standards on state permitting procedures, similar to those in the Telecommunications Act of 1996 governing the siting of cell phone towers.[287] Proponents of

284. For a discussion on the evolving meaning of "public use," see *infra* Part IV.C.1.

285. *See, e.g.*, Davies, *supra* note 181, at 10,321–24 (discussing scholarly debates over U.S. national energy policy or lack thereof).

286. *See* Klass & Meinhardt, *supra* note 67, at 994–99 (discussing justifications given for creation of federal authority over interstate natural gas pipeline siting and eminent domain).

287. *See, e.g.*, 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, 741–48 (2010) (arguing for expanded federal authority over interstate electric transmission lines); James J. Hoecker & Douglas W. Smith, *Regulatory Federalism and Development of Electric Transmission: A Brewing Storm?*, 35 ENERGY L.J. 71, 85–91 (2014) (discussing state law barriers to new electric transmission infrastructure); Alexandra B. Klass & Elizabeth J. Wilson, *Interstate Transmission Challenges for Renewable Energy: A Federalism Mismatch*, 65 VAND. L. REV. 1801, 1859–65 (2012) (evaluating alternatives to exclusive state authority over the siting of interstate transmission lines); Jim Rossi, *The Trojan Horse of Electric Power Transmission Line Siting Authority*, 39 ENVTL. L. 1015, 1017 (2009) (outlining political interest in expanding transmission infrastructure); Joel F. Zipp, *Amending the Federal Power Act: A Key Step Toward an "Energy Security and Supply Act of 2009" for the New Administration*, 21 ELECTRICITY J. 6, 7 (2008) (arguing that FERC should have "plenary authority" over electric transmission facilities). For a discussion of the Telecommunications Act of 1996 and its potential application to electric transmission line siting as well as renewable energy generation facilities, see Alexandra B. Klass, *The Electric Grid at a Crossroads: A Regional Approach to Siting Transmission Lines*, 48 U.C. DAVIS L. REV.

greater federal or regional authority stress that the modern U.S. electric grid is regional and national in scope, and thus a state-based approach to determinations of public need and public use no longer matches the physical contours of the grid even if it did when the grid was first built. Although there are certainly benefits to a federal or regional approach, there appears to be no will in Congress to make such a dramatic change, which would meet with strong resistance by virtually every state. Even beyond the political difficulties, there remain real questions about whether a federal desire for streamlined oil, gas, and electric transmission infrastructure should always override state preferences regarding the protection of land and natural resources and the types of energy resources to promote or restrict. As a result, the remainder of this Part focuses on the states, and how they can develop more specific policies to accelerate or impede development of energy transport infrastructure. Some may trigger constitutional concerns, such as discrimination against interstate commerce, but there remains significant leeway for action.

C. REVISED POLICIES FOR EMINENT DOMAIN FOR ENERGY PROJECTS

Given the past decades of ferment, first in government use of eminent domain for economic development[288] and now in increased use of eminent domain by private companies for energy transport,[289] this section looks at past and future responses for lawmakers. The variety of potential approaches reflects the different theories of when eminent domain can and should be used and also whether policymakers wish to make the use of eminent domain easier or more difficult for certain types of projects.

For instance, states that want to expand oil and gas transport infrastructure to promote resource production have tools available to streamline the process or define public use in ways that support those projects.[290] Likewise, states that wish to increase the use of renewable energy resources—particularly

1895, 1951–52 (2015) and Ashira Pelman Ostrow, *Process Preemption in Federal Siting Regimes*, 48 HARV. J. ON LEGIS. 289, 293 (2011).

288. *See supra* notes 42–43 and accompanying text (explaining that the phrase "public use" is traditionally read broadly).

289. *See supra* notes 46–63 and accompanying text (discussing *Kelo* and its aftermath).

290. *See infra* Part IV.C.1.

in electricity—and phase out fossil fuels can make eminent domain easier for favored projects and more difficult for disfavored projects through legislation.[291] Moreover, one or more states may attempt to prevent neighboring states from interfering with state preferences that may provide public benefits that cross state lines. Finally, policymakers can adjust the requirements for just compensation and increase landowner procedural rights. This Part uses several examples to illustrate these points and lays the groundwork for a more robust evaluation of public use and just compensation in the context of eminent domain for energy transport projects.

1. Redefining "Public Use" for Energy Transport Projects

First, states could decide as a matter of policy that some energy projects represent a "public use" while others do not. For example, states like California, New York, Massachusetts, Oregon, and others that are aggressively seeking to phase out fossil fuels may decide that fossil fuel transport is no longer a public good.[292] On the other hand, states that are opposed to further renewable power imports or exports could block the use of eminent domain for projects that would transmit power from such sources. States could also declare that power transport only supports "public use" if the state public utility commission finds that it serves certain values such as increasing the reliability, affordability, or sustainability of the power grid. Depending on how those considerations were defined, it could potentially benefit one energy source over another. As a result, eminent domain would act as a policy tool, just like mandates or tax incentives, to support favored sources. Although the dormant Commerce Clause and other federal constitutional provisions place some limits on state action,[293] there is still significant room for a more

291. States also may have an interest in encouraging infrastructure that enables more renewable power production in other states because carbon dioxide is globally distributed so lowering carbon emissions anywhere benefits all jurisdictions impacted by climate change. James W. Coleman, *Unilateral Climate Regulation*, 38 HARV. ENVTL. L. REV. 87, 107 (2014).

292. One California Public Utility Commission decision found no need for a new natural gas pipeline based on the trend away from fossil fuels and toward renewable energy. San Diego Gas & Elec. Co., No. A1509013, 2018 WL 3304539 (Cal. Pub. Util. Comm'n June 21, 2018).

293. *See infra* notes 306–07 and accompanying text (outlining dormant Commerce Clause issues relating to interstate transmission lines).

nuanced approach to public use and eminent domain that reflects the growing diversity of state preferences in this arena.

For instance, a state law that allowed the use of eminent domain for projects to transport oil, gas, or renewable energy resources for in-state use but not for out-of-state use would likely be vulnerable to a dormant Commerce Clause challenge. By contrast, a state law that allowed the use of eminent domain for projects that would facilitate the use of renewable energy and prohibited the use of eminent domain for fossil fuel projects generally would be less vulnerable to a dormant Commerce Clause challenge because the state would be promoting a general environmental protection policy rather than discriminating between in-state and out-of-state uses of the energy resource in question.[294]

As another example, in states like Texas, pipeline companies can decide for themselves that eminent domain is necessary as long as they show they will make the pipeline available to other customers.[295] Is this much deference to pipeline companies acceptable? That determination by the pipeline company is subject to judicial review if there is a challenge to the use of eminent

294. *See, e.g.*, Rocky Mountain Farmers Union v. Corey, 913 F.3d 940, 944–45, 948–49 (9th Cir. 2019) (upholding California's Low Carbon Fuel Standard and rejecting arguments that it violated the dormant Commerce Clause). *See generally* Alexandra B. Klass & Elizabeth Henley, *Energy Policy, Extraterritoriality, and the Dormant Commerce Clause*, 5 SAN DIEGO J. CLIMATE & ENERGY L. 127 (2013–2014) (discussing dormant Commerce Clause analysis in the context of state energy policy). Such a policy might still be invalidated if it discriminated between power-line projects based on the types of power that they facilitated, given that the power transported across the state would be identical regardless of its source—that is, such a policy would discriminate between products based on how they were produced elsewhere. James W. Coleman, *Importing Energy, Exporting Regulation*, 83 FORDHAM L. REV. 1357, 1371–72 (2014); *cf.* North Dakota v. Heydinger, 825 F.3d 912, 919 (8th Cir. 2016) (finding undue extraterritorial reach when state statutes require "people or businesses to conduct their out-of-state commerce in a certain way" (quoting Cotto Waxo Co. v. Williams 46 F.3d 790, 793 (8th Cir. 1995))).

295. Denbury Green Pipeline–Tex., LLC v. Tex. Rice Land Partners, Ltd., 510 S.W.3d 909 (Tex. 2017); Tex. Rice Land Partners, Ltd. v. Denbury Green Pipeline–Tex., LLC, 363 S.W.3d 192 (Tex. 2012); Klass & Meinhardt, *supra* note 67, at 984; *Pipeline Eminent Domain and Condemnation*, R.R. COMM'N OF TEX., http://www.rrc.state.tx.us/about-us/resource-center/faqs/pipeline-safety-faqs/faq-pipeline-eminent-domain-and-condemnation [https://perma.cc/YNG4-CKS6].

domain, but that review is very deferential—akin to the deference given to a state agency determination of public use.[296] When a landowner in Texas challenged this process, the U.S. Court of Appeals for the Fifth Circuit found in 2017 that the delegation of eminent authority to a private party under those circumstances does not violate the non-delegation doctrine or due process protections.[297] Texas may support this level of deference because of the importance of the oil and gas industry to the state. But other states could decide to reduce or eliminate the power of pipeline companies to make such public use determinations to slow down certain types of fossil fuel development or, in the alternative, to enhance the power of transmission lines companies to make such determinations to support renewable energy development.

States have historically lumped many different types of energy infrastructure projects together when it comes to eminent domain—treating oil pipelines, gas pipelines, and power lines alike. The public and legislative reaction to the *Kelo* decision illustrates that lawmakers can eliminate or significantly weaken eminent domain authority for certain types of projects.[298] Just as lawmakers and voters reduced or eliminated the use of eminent domain for economic development takings a decade ago in many states, there may be reason to make similar changes with regard to eminent domain for certain energy projects. As noted earlier, using eminent domain law to shape energy policy choices is a less direct approach than revising government permitting laws to make such projects harder or easier to build.[299] But it is certainly true that targeted revisions to eminent domain law may

296. Boerschig v. Trans-Pecos Pipeline, 872 F.3d 701, 708–09 (5th Cir. 2017) (finding that Texas delegation of eminent domain authority to oil companies to build pipelines does not violate non-delegation doctrine or due process and is subject to limited judicial review); *see also* Cox v. Ohio, No. 3:16CV1826, 2016 WL 4507779, at *9–10 (N.D. Ohio Aug. 29, 2016) (rejecting claim that Ohio legislative delegation to pipeline company to select route and initiate eminent domain proceedings for oil pipeline without regulatory oversight violates landowners' civil rights under 42 U.S.C. § 1983 (2012) or violates the non-delegation doctrine).

297. *Boerschig*, 872 F.3d at 708–09.

298. See *supra* note 60–65 and accompanying text (explaining the state legislative backlash after *Kelo* and its limits).

299. *See supra* note 287 and accompanying text (outlining scholarly articles that favor expanding federal jurisdiction).

be more politically feasible in many states, which may make it a more likely focus of legislative attention in the short term.

Notably, states like Georgia and South Carolina have expressly limited eminent domain for oil pipelines,[300] and New Jersey has blocked a gas pipeline project that attempted to use eminent domain to acquire state-owned land as well as private land subject to state conservation easements.[301] Furthermore, New York has used its Clean Water Act authority to attempt to stop certain natural gas pipelines,[302] and New Hampshire has used its siting authority to block an interstate electric transmission line.[303] Perhaps it is preferable for states to enact new policies that cover an entire category of energy transport project, like Georgia and South Carolina in the case of oil pipelines, rather than by selected denials of disfavored projects through the permitting process, like New York and New Hampshire. Proceeding

300. *See supra* note 155 and accompanying text (discussing legislation in Georgia and South Carolina).

301. *In re* PennEast Pipeline Co., LLC, 938 F.3d 96, 99–100 (3d Cir. 2019) (holding that natural gas pipeline companies may not use eminent domain to acquire state property interests because the Natural Gas Act did not abrogate state sovereign immunity nor did the Natural Gas Act delegate to private parties the federal government's exemption from state sovereign immunity). The United States District Court for the District of Maryland also recently reached a similar decision. Columbia Gas Transmission, LLC v. 0.12 Acres of Land, No. 1:19-CV-01444-GLR (D. Md. Aug. 21, 2019) (unpublished).

302. *See* Constitution Pipeline Co. v. N.Y. State Dep't of Envtl. Conservation, 868 F.3d 87, 103 (2d Cir. 2017) (upholding New York's denial of Clean Water Act Section 401 water quality certification for Constitution Pipeline), *cert. denied*, 138 S. Ct. 697 (2018); Klass & Rossi, *supra* note 200, at 425–26 (discussing New York's denial of certification under Section 401 of the Clean Water Act to attempt to block the Constitution Pipeline). Notably, litigation has continued over the limits of state authority to block interstate natural gas pipelines through the use of Section 401 of the Clean Water Act, particularly with regard to the time in which the state has to act on the pipeline's request for Clean Water Act certification. *See, e.g.*, N.Y. State Dep't of Envtl. Conservation v. Fed. Energy Regulatory Comm'n, 884 F.3d 450, 457 (2d Cir. 2018) (finding New York waived its authority to provide water quality certification under Section 401 of the Clean Water Act for the Millennium Pipeline by failing to act on the request within one year as provided by the statute); Constitution Co., 168 FERC ¶ 61,129 (Aug. 28, 2019) (finding on remand that New York did in fact waive water quality certification authority despite earlier finding to the contrary in light of new decision from D.C. Circuit Court of Appeals in *Hoopa Valley Tribe v. Fed. Energy Regulatory Comm'n*, 913 F.3d 1099 (D.C. Cir. 2019)).

303. *See supra* note 237 and accompanying text (discussing New Hampshire Site Evaluation Committee's denial of siting permit for proposed Northern Pass transmission line through the state).

in this manner would allow states to engage in policy experimentation and groups of states may ultimately find consensus on how to proceed rather than each acting on their own through separate permitting processes governing individual projects. Moreover, if no consensus emerges among the states, and the barriers to infrastructure investment in renewable energy projects, fossil fuel projects, or both, are perceived as too high, the argument becomes even stronger for federal intervention and potential preemption of state authority for certain types of infrastructure. In any event, this process would move the debates out of the agency permitting process and into the legislative arena, which may result in a more public evaluation of costs and benefits.

One might argue that competing state policies to encourage or discourage different types of energy transport infrastructure will result in the inefficient use of energy resources and will discourage investment in critical infrastructure projects. While that is certainly true, this criticism minimizes the reality that such competing and contrasting policies in the states already exist when it comes to renewable energy and fossil fuel generation facilities—through differences in renewable portfolio standards, tax incentives for fossil fuel or renewable energy development, and the like. It may be that in this time of energy transition, a variety of state approaches to energy transport are not only defensible but helpful for long-term policy development.

2. Addressing Neighboring State Barriers to Energy Projects

Second, new state policies governing public use for energy projects may run into competing policies in neighboring states. For instance, a state may have enacted energy policies such as a renewable portfolio standard or a carbon reduction mandate. To meet those goals or mandates, the state may wish to import renewable energy from neighboring states or countries. In the context of Massachusetts's desire to import hydropower from Quebec, discussed in Part III, Massachusetts may attempt to rely on its existing energy policies or enact new ones to demonstrate that energy transport has wider benefits than the narrow economic benefits received by energy producers and consumers. For example, even if Maine's power producers and consumers would receive little benefit from a new transmission line that brought hydropower from Quebec to Massachusetts, eminent domain could be justified by the project's potential to address climate

change. If the project allowed Massachusetts to replace fossil fuels with hydropower, the reduced greenhouse gas emissions would benefit every person on the planet, including Maine citizens.[304]

For its part, Maine might argue that Massachusetts does not have the right to make that policy determination for Maine and require Maine businesses and citizens to accept a transmission line that they do not want in order to serve Massachusetts' climate policy goals. However, as the electricity will be flowing in interstate commerce, Massachusetts may argue that the dormant Commerce Clause of the U.S. Constitution requires that states not unduly limit the use of eminent domain to support interstate commerce.[305] The prohibitions of the dormant Commerce Clause that forbid states from discriminating against interstate trade or unduly burdening interstate commerce might place some constraints on a state's authority to ignore out-of-state benefits of interstate transmission lines.[306] If states were forced to consider the wider benefit from power transmission, it would make review of interstate power lines more like review of interstate natural gas pipelines, which are frequently justified based on their benefits to consumers and producers in different states. Although the Natural Gas Act of 1938 represents a Congressional mandate for a consideration of costs and benefits with a nationwide scope when it comes to interstate natural gas pipelines, the dormant Commerce Clause may potentially prompt a similar evaluation when it comes to interstate electric transmission lines.[307] Moving in this direction would also provide a judicial correction to the current status quo that favors natural gas transport over power transport.

304. For a discussion of "public use" and how it can be used as a policy tool to shape energy choices, see *supra* Part IV.C.1.

305. *Cf.* Coleman, *supra* note 294, at 1371–72 (discussing application of the dormant Commerce Clause to state policies banning import of coal-fired power and to state renewable portfolio standards that preference in-state energy resources over out-of-state energy resources).

306. Or. Waste Sys., Inc. v. Dep't of Envtl. Quality of Or., 511 U.S. 93, 108 (1994) (finding that Oregon's law that charges more for out-of-state waste violates the dormant Commerce Clause); Alexandra B. Klass & Jim Rossi, *Revitalizing Dormant Commerce Clause Review for Interstate Coordination*, 100 MINN. L. REV. 129, 161–64 (2015) (discussing how state laws blocking certain interstate transmission line projects may violate the dormant Commerce Clause).

307. *See* Klass & Rossi, *supra* note 306, at 161–62 (discussing how state laws

3. Policy Experimentation with Enhanced Compensation and Procedural Rights

Third, states can continue experimenting with different compensation methods or procedures to balance some of the costs and benefits of eminent domain for energy transport.[308] The Fifth Amendment says that landowners must be paid "just compensation" for their land, which has typically been interpreted as "fair market value."[309] But calculating fair market value is challenging—after all, eminent domain is necessary because the parties could not agree on a price for the land. In theory, states or the federal government could limit eminent domain and protect landowners by requiring above-market compensation.[310] If a pipeline or power line truly promises massive benefit, perhaps burdened landowners should receive a premium.[311] Government actors can shift the costs and benefits of eminent domain through a variety of policies, including enhanced compensation options, expanded landowner rights regarding the scope of the parcel to be acquired through eminent domain, expedited review of public use determination prior to physical occupation of the property, and encouraging the condemning authority to engage in greater community involvement before any eminent domain action. Each of these options is discussed below.

a. Enhanced Compensation

States could demand greater compensation for the use of eminent domain for some or all energy transport projects. Scholars including Richard Epstein, Thomas Merrill, Lee Anne Fennell, Michael Heller, Rick Hills, Nestor Davidson, Christopher Serkin, and James Krier have long discussed the concern that

that prevent non-incumbent utilities from building transmission lines in or through the state may violate the dormant Commerce Clause). *But see* LSP Transmission Holdings v. Lange, 329 F. Supp. 3d 695, 707–10 (D. Minn. 2018), *appeal argued*, No. 18-2559 (Oct. 18, 2019) (rejecting dormant Commerce Clause challenge to state "right of first refusal" law governing the right to build electric transmission lines in Minnesota).

308. *See infra* note 315 and accompanying text.

309. United States v. 564.54 Acres of Land, 441 U.S. 506, 511–13 (1979) ("Under this standard, the owner is entitled to receive 'what a willing buyer would pay in cash to a willing seller' at the time of the taking." (quoting United States v. Miller, 317 U.S. 369, 374 (1943))).

310. EPSTEIN, *supra* note 41, at 174.

311. *Id.*

the standard fair market value approach to just compensation may systematically undercompensate landowners for their property where the land may have a high subjective value to the owner or where it would be unfair to award the entire surplus value of the land transfer to the condemnor.[312] Some of these scholars have suggested that courts or legislatures could address such under-compensation concerns through awarding landowners a fixed percentage over fair market value (e.g., 125%, 150% of fair market value) as part of the condemnation award.[313] After the Kelo case, several state legislatures adopted these proposals and enacted reforms that require enhanced compensation of a fixed percentage over fair market value for condemnation of a primary residence or agricultural land.[314] States could require a similar type of enhanced landowner compensation for energy transport projects that are disfavored by state policy. And should landowners receive any kind of funding to support legal challenges to eminent domain? Some states also encourage condemning authorities to offer landowners more money by awarding attorney's fees to landowners when a court awards just

312. *Id.* at 173–74 (discussing just compensation in context of private takings for public use); Nestor M. Davidson, *Property and Relative Status*, 107 MICH. L. REV. 757, 810 (2009) (critiquing the traditional fair market value approach to just compensation); Lee Anne Fennell, *Taking Eminent Domain Apart*, 2004 MICH. ST. L. REV. 957, 961–62 (2004) (discussing ways in which landowners receive incomplete compensation in eminent domain proceedings); Michael Heller & Rick Hills, *Land Assembly Districts*, 121 HARV. L. REV. 1465, 1477–78 (2008) (evaluating arguments supporting and opposing landowners' entitlement to a percentage of the land's increased value after condemnation); James E. Krier & Christopher Serkin, *Public Ruses*, 2004 MICH. ST. L. REV. 859, 865–72 (2004) (suggesting adjustments to just compensation to more fairly compensate affected landowners); Merrill, *supra* note 41, at 83, 86 (discussing the fairness of awarding to the landowner the increase in the land's value after condemnation).

313. EPSTEIN, *supra* note 41, at 174 (suggesting awarding landowners 150% of fair market value in some circumstances); Merrill, *supra* note 41, at 90–91 (describing enhanced compensation options but expressing concerns); *see also* Brian A. Lee, *Just Undercompensation: The Idiosyncratic Premium in Eminent Domain*, 113 COLUM. L. REV. 593, 601–18 (2013) (critiquing theories of undercompensation and arguing against awards of fixed percentages above fair market value).

314. *See* Lee, *supra* note 313, at 634–35 (discussing laws in Michigan, Indiana, Missouri, Iowa, Connecticut, and Rhode Island); Katrina M. Wyman, *The Measure of Just Compensation*, 41 U.C. DAVIS L. REV. 239, 257 n.61 (2007) (citing laws in Michigan, Indiana, Kansas, and Missouri).

compensation in an amount greater than the authority's last offer.[315]

Another option is for states to require that condemning authorities give landowners a stake in the revenues received by any pipeline or transmission line that crosses their lands or otherwise tie compensation to the value of the project rather than the fair market value of the land.[316] Such arrangements are common in the energy resource extraction context, where landowners receive significant, annual payments for oil and gas wells located on their property or for hosting wind turbines.[317] Such payments are made as a matter of contract law, and reflect enhanced landowner bargaining authority as a result of state allocation of resource ownership, the lack of eminent domain authority, or both. The same is true for rights-of-way across tribal lands, where utilities and pipeline companies do not have eminent domain authority and must obtain the tribe's consent to access the land.[318]

315. *See, e.g.*, MINN. STAT. § 117.031 (2018) (providing for award of attorneys' fees, litigation expenses, expert fees, appraisal fees, and other costs to landowner if the final judgment or award is more than 40% greater than the last written offer of compensation by the condemning authority prior to filing the petition for eminent domain or if a court determines the taking is not for a public use); IND. CODE §§ 32-24-1-14 to -15 (2018) (providing for award of expenses, including attorneys fees, if damages awarded are greater than last written settlement offer); *see also* Wyman, *supra* note 314, at 256 (discussing proposals for reforming just compensation awards).

316. *See* Kelianne Chamberlain, *Unjust Compensation: Allowing a Revenue-Based Approach to Pipeline Takings*, 14 WYO. L. REV. 77, 87–99 (2014) (summarizing a variety of potential state reforms for just compensation for pipeline takings, including percentage enhancements over fair market value, annual payments, and revenue-based approaches focused on the value of the project rather than the value of the easement).

317. *See*, *e.g.*, ALEXANDRA B. KLASS & HANNAH J. WISEMAN, ENERGY LAW: CONCEPTS AND INSIGHTS 47–50 (2017) (discussing royalty payments for oil and gas leasing); Coleman, *supra* note 85 (manuscript at 55) (describing how royalties align incentives between energy companies and landowners); Jennifer Oldham, *Wind Is Considered the New Corn for Struggling Farmers*, BLOOMBERG ENV'T & ENERGY REP., (Oct. 13, 2016, 12:00 AM), https://news.bloomberglaw.com/environment-and-energy/wind-is-considered-the-new-corn-for-struggling-farmers (discussing landowner payments for wind turbines).

318. Pub. Serv. Co. of N.M. v. Barboan, 857 F.3d 1101, 1108–09 (10th Cir 2017); *see also* Paul E. Frye, *Section 1813 of the Energy Policy Act of 2005: Implications for Tribal Sovereignty and Self-Sufficiency*, 42 TULSA L. REV. 75, 80 (2006) ("No law permits condemnation of tribal trust lands."); Phil McKenna, *Wisconsin Tribe Votes to Evict Oil Pipeline from Its Reservation*, INSIDE CLIMATE NEWS (Jan. 16, 2017), https://insideclimatenews.org/news/10012017/

In those situations, tribes have in some cases negotiated long-term right-of-way payments that include tens of millions of dollars in annual payments based on the value of the gas or other resource to be transported through the pipeline in addition to the fair market value for the pipeline easements.[319] Likewise, when the federal government grants rights-of-way to wind and solar companies on federal lands, the payment for the right-of-way includes a "Megawatt Capacity Fee" that "reflects the industrial use value of the land to generate electricity" in addition to an annual acreage rent.[320]

In the transmission line context, compensation could reflect the reality that the wind farm or other electricity generation project cannot be built without the accompanying transmission line. Based on this fact, compensation for the transmission line could be tied to the value of the project as a whole (generation plus transmission), thus giving the landowners who would host the

dakota-access-pipeline-standing-rock-enbridge-line-5-native-american-protest [https://perma.cc/G8LM-5D8P] (reporting on a tribe's refusal to allow an oil pipeline to remain on tribal land after pipeline easement expired).

319. *See, e.g.*, Prepared Testimony of H. Lynn Dougherty at 100–20, El Paso Natural Gas Co., Notice of Rate Change, Docket No. RP08-426-000 (Fed. Energy Regulatory Comm'n June 30, 2008), https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=11731413 (detailing prepared testimony on gas pipeline right of way costs through Navajo Nation that include annual payments of $18 million tied to consumer price index); WILLIAMS CO., 2012 ANN. REP. 83 (2012), https://investor.williams.com/sites/williams.investorhq.businesswire.com/files/report/file/145316.pdf [https://perma.cc/V5P8-6WN8] ("We are required to make a fixed annual payment [to the Jicarilla Apache Nation] of $7.5 million and an additional annual payment, which varies depending on per-unit [natural gas liquid] margins and the volume of gas gathered by our gathering facilities subject to the right-of-way agreement . . . . The variable portion to be paid in 2013 based on 2012 gathering volumes is $7.3 million and is included in the table for year 2013."); *Jicarilla Apache Nation and Enterprise Announce Long-Term Right-of-Way Agreement*, BUS. WIRE (June 8, 2009, 9:00 AM EST), https://www.businesswire.com/news/home/20090608005493/en/Jicarilla-Apache-Nation-Enterprise-Announce-Long-Term-Right-of-Way [https://perma.cc/GJ4E-XEU5] (reporting on right of way agreement across tribal land for gas pipeline infrastructure that involves both "a fixed price component" as well as opportunities for the tribe "to benefit from changing market conditions for energy commodities").

320. Instruction Memorandum from Assistant Director, Energy, Minerals, and Realty Management, U.S. Bureau of Land Mgmt., to All Field Office Officials, Acreage Rent and Megawatt Capacity Fees (Years 2016–2021) for Solar and Wind Energy ROW Grants and Leases (Sept. 14, 2017), https://www.blm.gov/policy/im-2017-096 [https://perma.cc/Y5FZ-WKVB].

transmission line a stake in the entire project akin to that given to landowners who host the wind turbines or other electricity generation facilities.[321]

The same rationale can apply to the importance of pipelines to the overall oil and gas project. Along those lines, in 2017, a bill was introduced in the West Virginia legislature to provide compensation for pipeline easements taken by eminent domain based on the value of the gas flowing through the pipeline over time rather than a one-time easement payment based on the fair market value of the land to be taken.[322] Laws of this type may better recognize not only the value of the land to the owner, but also the value of the land to the project proposer. Although historically just compensation has not been based on these considerations, states can change that as a matter of policy.

b. Expanded Landowner Option Rights for Parcel Acquisition

Another option to enhance landowner bargaining authority in the eminent domain context is to give landowners the right to demand that energy companies seeking to acquire easements by eminent domain purchase the entire estate rather than merely the easement the company desires for the project. Minnesota created this requirement, colloquially known as the "Buy the Farm" law, for electric transmission lines in the 1970s in the wake of controversial transmission line expansion projects at that time.[323] Professors Abraham Bell and Gideon Parchomovsky

321. *See, e.g.*, Conference Materials, Nicholas P. Laurent et al., Compensation in Power Line and Pipeline Cases: New Thoughts on an Old Subject (2017), http://utcle.org/elibrary (search "Nicholas Laurent" and "2017") (suggesting alternative means of compensating for eminent domain for pipelines and power line easements, including through royalties).

322. H.B. 3011, 2017 Leg., Reg. Sess. (W.Va. 2017); *see also* Linda Harris, *Pipeline Bills Aim to Protect Landowners, Not Making Much Headway*, STATE J. (Feb. 26, 2018), https://www.wvnews.com/statejournal/energy/pipeline-bills-aim-to-protect-landowners-not-making-much-headway/article_da60a1a0-391e-55f2-a341-df0401926ec0.html [https://perma.cc/P78G-P662] (discussing the debate around the bill); David McMahon, *Debating 'Public Use' and Its Worth to Landowners*, STATE J. (Mar. 6, 2017), https://www.wvnews.com/statejournal/debating-public-use-and-its-worth-to-landowners/article_4813c3e7-6d24-58f4-bd6c-b94c8bb2e301.html [https://perma.cc/6MYX-D4AJ] (discussing the bill).

323. MINN. STAT. § 216E.12, subdiv. 4 (2018); Great River Energy v. Swedzinski, 860 N.W.2d 362, 367–68 (Minn. 2015) (upholding landowner's election that a public utility purchase the entire fee interest rather than an easement interest under "Buy the Farm" law); N. States Power Co. v. Aleckson, 831

have suggested that similar requirements be imposed for all cases of "partial takings."[324] States could adopt such a requirement for all types of energy transport projects, or selected ones.[325] States also could demand that easements be of limited term so that they would have to be periodically renegotiated or, if necessary, re-established with a new valuation in new eminent domain proceedings.[326] Such limited term easements may be particularly attractive in light of the present-day uncertainty regarding what our energy future will look like—it remains unclear how long the nation will wish to continue to rely on oil pipelines, gas pipelines, and even long-distance transmission lines as the country transitions to a more renewable, flexible, and in some cases, localized, energy future.[327] There are many such possibilities to improve compensation for eminent domain or to reallocate bargaining authority between landowners and condemning authorities.[328]

N.W.2d 303, 308 (Minn. 2013) (applying and interpreting the "Buy the Farm" law); Tom Teigen, *CapX2020 and "Buy the Farm": Putting Property Rights to the Test*, CTR. FOR RURAL POL'Y & DEV. (2014), https://www.ruralmn.org/rmj/rmj_winter2014/capx2020-and-buy-the-farm [https://perma.cc/5W7K-YVJB] (discussing Minnesota's "Buy the Farm" law).

324. Bell & Parchomovsky, *supra* note 278, at 2062 (discussing ubiquitous nature of partial takings and difficulties of adequately determining just compensation for such takings).

325. *See, e.g.*, MINN. ENVTL. QUALITY BD., INTERAGENCY REPORT ON OIL PIPELINES 84–85 (2015) (reporting on suggestion that the Minnesota "Buy the Farm" law be extended to oil pipelines in the state).

326. Chamberlain, *supra* note 316, at 100–01 (suggesting that required revenue-based payments will promote greater use of term easements that revert to the fee owner upon abandonment of project).

327. *See* Eller *supra* note 197 and accompanying text (discussing greater focus on micro-grids).

328. *See, e.g.*, Michael Diamond, *'Energized' Negotiations: Mediating Disputes over the Siting of Interstate Electric Transmission Lines*, 26 OHIO ST. J. ON DISPUTE RESOL. 217, 243–45 (2011) (giving examples of condemnation reform in Minnesota, Missouri, Utah, and other states); Janice Nadler & Shari S. Diamond, *Eminent Domain and the Psychology of Property Rights: Proposed Use, Subjective Attachment, and Taker Identity* 14–15 (Nw. Univ. Sch. L. Scholarly Commons, Working Paper No. 160, 2008), https://scholarlycommons.law.northwestern.edu/facultyworkingpapers/160 [https://perma.cc/C2CD-UZWJ] (outlining reform proposals that include percentages above fair market value, price increases based on time owned, seller naming the price but then being forced to stick to that price, and more creative ideas).

c. Expedited Review of Public Use Determinations

As noted in Part II, another currently contested question is whether landowners should be allowed to challenge the use of eminent domain in court before it is exercised on their land. FERC's practice of tolling requests for reconsideration means that natural gas pipelines are often built before landowners can get a court to hear their objections to the use of eminent domain.[329] To date, FERC and federal courts have rejected landowner challenges to this practice, as well as facial challenges to Congress's delegation of broad eminent domain authority to natural gas pipelines companies holding a FERC certificate.[330] But there are signs that this may change: in a recent concurrence, Judge Millett on the D.C. Circuit Court of Appeals strongly criticized this practice as "Kafkaesque" because it leaves "homeowners in seemingly endless administrative limbo while energy companies plow ahead seizing land and constructing the very pipeline that the procedurally handcuffed homeowners seek to stop."[331] Both FERC and Congress should consider whether the burden that eminent domain imposes justifies judicial review before it is imposed to build interstate natural gas pipelines. The same goes for state policymakers in the context of oil pipelines, electric transmission lines, and intrastate natural gas pipelines.

d. Improved Community Involvement

Finally, project proposers may be able to increase acceptance of eminent domain from landowners by creating more early community involvement in decisions on energy

329. Berkley v. Mountain Valley Pipeline, LLC, 896 F.3d 624, 630 (4th Cir. 2018) (discussing plaintiffs' argument that FERC tolling orders effectively preclude judicial review of propriety of eminent domain prior to pipeline's construction).

330. *Id.*; Berkley v. Mountain Valley Pipeline, LLC, No. 7:17-cv-00357, 2017 WL 6327829, at *8 (W.D. Va. Dec. 11, 2017); Ellen M. Gilmer, *Appeals Court Tosses Major Challenge to FERC Eminent Domain Use*, ENERGYWIRE (July 26, 2018), https://www.eenews.net/stories/1060091229 [https://perma.cc/Q37V-9K6L]; *see also* Mountain Valley Pipeline, LLC v. Simmons, 307 F. Supp. 3d 506, 525 (N.D. W. Va. 2018) (granting Mountain Valley Pipeline's motion for immediate possession over landowner objections); Mountain Valley Pipeline, 136 FERC ¶ 61,197, at 34–50 (June 15, 2018) (granting petitioner's motion over landowner objections in an order on rehearing).

331. Allegheny Def. Project v. Fed. Energy Regulatory Comm'n, 932 F.3d 940, 948 (D.C. Cir. 2019).

transport.[332] Because eminent domain is such a salient exception to the rule that property rights may only be relinquished voluntarily, it may be particularly important to find ways to ameliorate the psychological shock it may present.[333] One option is for greater use of "community benefit agreements," which have been used for large-scale urban redevelopment projects (such as the Atlantic Yards redevelopment in New York City) as well as for wind energy development projects in some states.[334] Such agreements involve payments by the developer to the community to be used for property tax reductions, economic development projects, land and natural resources conservation, tourism, or reductions in energy costs.[335]

One benefit of the *Kelo* revolution was that it provoked a very public conversation in state legislatures and beyond about the potential need to rebalance the costs and benefits of public projects through enhanced compensation and additional procedural protections for landowners. The present day controversies over the use of eminent domain for energy transport projects have the potential to create a similar conversation that may, in turn, prompt energy transport companies, lawmakers, and regulators to create new ways to include landowners in these projects and reduce conflict from the start.

332. *See, e.g.*, Alexandra B. Klass, *Expanding the U.S. Electric Transmission and Distribution Grid to Meet Deep Decarbonization Goals*, *in* LEGAL PATHWAYS TO DEEP DECARBONIZATION IN THE UNITED STATES 527, 544–45 (Michael B. Gerrard & John Dernbach eds., 2019) (describing approaches to reduce landowner opposition to electric transmission line projects).

333. *See* Brandon Gerstle, *Giving Landowners the Power: A Democratic Approach for Assembling Transmission Corridors*, 29 J. ENVTL. L. & LITIG. 535, 548–55 (2014) (arguing for increased public involvement in eminent domain decisions).

334. *See* ME. STAT. tit. 35-A, § 3451(1-B) (2018) (defining "community benefit agreement"); Edward W. De Barbieri, *Do Community Development Agreements Benefit Communities?*, 37 CARDOZO L. REV. 1773, 1788–90 (2016) (discussing arguments against community development agreements); LeRoy C. Paddock & Max Greenblum, *Community Benefit Agreements for Wind Farm Siting in Context, in* SHARING THE COSTS AND BENEFITS OF ENERGY AND RESOURCE ACTIVITY 155, 164–70 (L. Barrera-Hernandez et al. eds., 2016) (discussing how community benefit agreements can be helpful in the wind farm context); PUB. L. CTR., SUMMARY AND INDEX OF COMMUNITY BENEFIT AGREEMENTS (2011), https://lawektron.tulane.edu/uploadedFiles/Institutes_and_Centers/Public_Law_Center/Summary%20and%20Index%20of%20%20Community%20Benefit%20Agreements.pdf [https://perma.cc/BS7M-GQ8L].

335. *See, e.g.*, Paddock & Greenblum, *supra* note 334, at 160–61.

CONCLUSION

Energy transport has never been more important. The United States is experiencing simultaneous unprecedented booms in the production of oil, gas, and wind and solar power. New technology has kept this boom going while energy prices remain low. This new abundance of domestic energy can deliver massive economic and environmental benefits to the United States if it can be brought to market. But the need for new transport is running into old disputes about property rights—most notably, the problem of eminent domain and public use. States and the federal government must think carefully about how to navigate these disputes, using tools that help them build the energy system of the next century. This Article evaluates the impact of the *Kelo* case and post-*Kelo* state action on present-day energy transport projects. It suggests approaches that lawmakers can use to ensure that eminent domain laws governing energy transport projects reflect evolving policies governing energy transition as well as landowner compensation and procedural rights.